

भारत सरकार/Government of India
ग्रामीण विकास मंत्रालय/Ministry of Rural Development
ग्रामीण विकास विभाग/Department of Rural Development
ग्रामीण आजीविका विभाग/ Rural Livelihoods Division
(<https://rural.gov.in>)

सातवीं मंजिल, एन.डी.सी.सी-II भवन/7th Floor, N.D.C.C -II Building
जय सिंह मार्ग, नई दिल्ली-01/Jai Singh Road, New Delhi-01
दिनांक/ Dated: 20th May, 2024

To

The Chief Executive Officer / State Mission Director,
State Rural Livelihoods Mission,
All States / Union Territories


Subject: Compendium of advisories/guidelines on farm livelihoods component under DAY-NRLM

Ma'am/Sir,

I am directed to share the compendium of advisories/guidelines on Farm Livelihoods component under DAY-NRLM. The compendium covers the key advisories /guidelines issued since inception by the Ministry on implementing the farm livelihood interventions under DAY-NRLM.

Encl.: As above.

Yours faithfully,


रमन वाधवा/(Raman Wadhwa)
उप-निदेशक (प्रशासन)/Deputy Director (Admin)

Copy to:

1. PPS to Additional Secretary, Rural Livelihoods, MoRD, GoI, NDCC II Building, New Delhi.
2. PPS to Joint Secretary, Rural Livelihoods-I, MoRD, GoI, NDCC II Building, New Delhi.



Ministry of Rural Development
Government of India



Compendium of Key Advisories/Guidelines on Farm Livelihoods Interventions Under DAY-NRLM

**Ministry of Rural Development
Government of India**

Version 2.4

April 2024

Content

I. Sustainable Agriculture

Sr.	Subject of the Advisories/Guidelines	Release Date	Page no.
1	Millet intensification program under DAY-NRLM	24-Apr-23	1
2	Advisory on Agri Nutri Garden	10-Dec-19	18
3	Custom Hiring Operationalisation Manual	02-Aug-19	42
4	Call Down list of TSA organic farming	20-Sep-19	71
5	Guidelines on Farmer Field School	03-Mar-20	74
6	Advisory on roll-out of organic village clusters under DAY-NRLM	21-Aug-18	96

II. Animal Husbandry

Sr.	Subject of the Advisories/Guidelines	Release Date	Page no.
1	Guidelines on the implementation of the Livestock Cluster	19-Apr-23	220
2	Handbook of animal husbandary practices and cow comfort book	31-Jul-23	244
3	Guidelines on the Promotion of Backyard Poultry	25-Sep-20	560
4	Guidelines on the promotion of backyard Pig Rearing	01-Feb-21	572
5	Guidelines on the promotion of Backyard Duck Rearing under DAY-NRLM	10-Jun-21	594
6	Guidelines on backyard Goat rearing	04-Nov-20	606
7	Livestock Strategy under DAY-NRLM	30-Aug-14	615

III. MKSP (Mahila Kisan Sashaktikaran Pariyojana)

Sr.	Subject of the Advisories/Guidelines	Release Date	Page no.
1	Operational guidelines on the implementation of the Integrated Farming Cluster	28-Jun-23	618
2	Advisory on Fund Release Protocol for Integrated Farming Cluster	11-Jan-24	642
3	Revised Guidelines on Mahila Kisan Sashakti Karan Pariyojana	05-Feb-24	647
4	Guidelines on Integrated Farming Cluster	25-Sep-20	693
5	Mahila Kisan Sashaktikaran Pariyojana (MKSP) – revised funding pattern	25-Nov-16	707
6	Transition of Mahila Kisan Sashaktikaran Pariyojana (MKSP) to Annual Action Plan (AAP) mode	25-Feb-16	708

IV. Value Chain Development

Sr.	Subject of the Advisories/Guidelines	Release Date	Page no.
1	RBI master circular on financing producer groups/producer organisations	16-04-2024	745
2	Farm value chain development through promotion of Producer Enterprise and release of funds to Produce Enterprise	11-Apr-22	739
3	Use of Enterprise solution by PE, FPOs developed by FDRVC	18-Oct-21	1019
4	RBI Master Circular with opening of account of Producer Groups	15-Oct-20	774
5	Guidelines for release of funds to Producers Enterprises	03-Nov-20	804
6	Advisory on the promotion of Producers Groups for providing marketing support to small and marginal women farmers under DAY-NRLM	23-Feb-21	814
7	Guidelines on financing Producers Collectives.	24-May-19	838
8	Guidelines farm value chain for Producers Enterprises under NRETP	20-Sep-19	848
9	Guidelines of Mahila Kisan Sashaktikaran Pariyojana for Value Chain Development.	14-Aug-18	887
10	Guidelines on Producers Enterprise under DAY-NRLM	13-Dec-17	928

V. Sub-Sector Development

Sr.	Subject of the Advisories/Guidelines	Release Date	Page no.
1	Guidance note for Sub-sectors	28-Sep-23	1021

VI. NRETP (National Rural Economic Transformation Project) – Farm Livelihoods Component

Sr.	Subject of the Advisories/Guidelines	Release Date	Page no.
1	Advisory on Environment Management Framework under NRETP	07-May-21	1094
2	Advisory on HR placement for NRETP implementation.	15-Apr-19	1146

VII. Capacity Building Activities

Sr.	Subject of the Advisories/Guidelines	Release Date	Page no.
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1	Guideline for Master CRP	09-Aug-21	1183
2	Creation of State Resource Person (SRP) pool and their grading	23-Nov-16	1222

VIII. Convergence with Line Ministries/Departments

Sr.	Subject of the Advisories/Guidelines	Release Date	Page no.
1	Convergence with the Ministry of Fisheries	13-Dec-22	1225
2	Guidelines for promoting Nutri-Garden with MGNREGA	04-May-20	1230
3	Joint Advisory for promotion of Moringa Drumstick in convergence with DAY-NRLM SRLM	30-Sep-21	1257
4	Advisory on the promotion of FPO through convergence	24-Jul-20	1261
5	Joint Advisory & Department of Animal Husbandry and Dairying	19-Oct-20	1609
6	Convergence between DAY-NRLM and the Department of Animal Husbandry, Dairying and Fisheries, Government of India	01-May-17	1614
7	Development of community infrastructure under MGNREGA for livelihood interventions under DAY-NRLM	18-Dec-17	1618
8	Convergence between MKSP of DAY-NRLM and PKVY of Ministry of Agriculture and Farmers Welfare.	09-Jan-18	1625
9	Collaboration with TRIFED, Ministry of Tribal Affairs	12-Mar-18	1629
10	Synergy between DAY-NRLM and MGNREGA to facilitate construction of Vermi / NADEP compost pits for mahila kisan households.	06-Dec-16	1636
11	Convergence between DAY-NRLM and Schemes/Programs/Mission of Department of Agriculture, Cooperation and Farmers Welfare (MoA&FW)	28-Oct-15	1642

IX. Partnerships

Sr.	Subject of the Advisories/Guidelines	Release Date	Page no.
1	Collaboration with BFIL (Bharat Financial Inclusion Limited)	15-Mar-24	1666
2	Collaboration with Buddha Institute	11-Sep-23	1679
3	Recognition of Intellectap as NRLM Support Organisation (NSO)	22-Sep-23	1685
4	Collaboration with Harvest Plus	18-Sep-23	1692

Sr.	Subject of the Advisories/Guidelines	Release Date	Page no.
5	Collaboration with IDH (India Hub Pvt. Ltd.)	14-Nov-23	1700
6	Collaboration with PRADAN	30-Aug-22	1709
7	Recognition of FDRVC (Foundation for Development of Rural Value Chain) as NSO	29-Jul-20	1717
8	Support from FDRVC to States on farm & non-farm value chain development.	09-Sep-20	1719
9	Guidelines on Tripartied Agreement with ICAR NRLM RCRC	02-Mar-21	1720
10	Recognition of TDF (Tasar Development Foundation) as NSO	06-Mar-18	1729
11	Partnership with Central Silk Board	12-Sep-16	1731

X. Miscellaneous

Sr.	Subject of the Advisories/Guidelines	Release Date	Page no.
1	Shift in booking of professional support staff cost at District level.	18-Apr-21	1733
2	Advisory on Diversification of Farm Livelihoods	15-Apr-20	1740
3	Advisory on promotion of Sustainable Livelihoods for SHG households under DAY-NRLM	21-Oct-21	1751
4	Advisory on the formation and functioning of VO Livelihoods Sub Committee	15-Apr-20	1783
5	Advisory functions of FLH - CRPs	27-Apr-20	1800
6	Advisory on the promotion and functioning on SRPs under NRLM	01-Feb-21	1817
7	Documentation of best practices	10-Jul-17	1826
8	Key output indicators on farm livelihoods intervention under DAY-NRLM.	22-Jan-18	1832
9	Advisory on the training & capacity-building architecture	04-Aug-16	1835
10	Master advisory on Farm Livelihood interventions under DAY-NRLM	29-Dec-15	1842

फाइल संख्या/File No. K-11060/01/2021-22/LH/ValueChain(E-376746)

भारत सरकार/Government of India
ग्रामीण विकास मंत्रालय/Ministry of Rural Development
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जय सिंह मार्ग, नई दिल्ली-01/Jai Singh Road, New Delhi-01
दिनांक/ Dated: 24th April, 2023

To,

The State Mission Director/Chief Executive Officer,
State Rural Livelihoods Mission,
All States and UTs

Subject: Strategy for "Millets Intensification" Program.


Dear Madam / Sir,

As you are aware Millets play an important role in the livelihoods of the SHG members, particularly in rain fed areas. DAY – NRLM organised National Conference on Millets in the month of March, 2023. Strategy note has been prepared based on the deliberations in the National Conference. Strategy note for "Millets Intensification" program are attached for kind perusal.

The strategy note provides broad contours for promotion of Millets across the India. You are requested to provide strategy note specific to your state by 15th May 2023.

Encl: As above

Yours faithfully,


रमन वाधवा/ (Raman Wadhwa)
उप-निदेशक (प्रशासन)/Deputy Director (Admin)
24/04/23

Copy to:

1. PPS to Additional Secretary, RL



MILLETS INTENSIFICATION PROGRAM STRATEGY NOTE FOR DAY - NRLM

CONTEXT

The benefits of reviving millets in rainfed landscape are well known. Among others, promotion of millets plays an important role in:

Crop systems diversification for improved resilience to climate change, improve soils and, fodder & feed production for livestock

Trigger local circular economies and enterprises

Diversification of food systems for attaining the nutritional goals

Reduce the water and ecological foot print in the supplementary nutrition programs and Public Distribution Systems

Millets can potentially play a catalysing role in diversifying and increasing nutritional density of our food systems. At the same time - millets being the niche crops of the marginal lands, help in crop diversification and improving gross value from the marginal rainfed lands.

A national workshop was organised by DAY - NRLM & GIZ facilitated by RRA Network on 27 - 28th, March, 2023 in New Delhi to deliberate on the strategies for DAY - NRLM to promote intensification of millets into food production systems of the small holders using the large social capital base available in the form of women SHGs and their federations. Representatives from 16 States/ SRLMs contributed to the deliberations facilitated by the experts drawn from different parts of the country.

The workshop deliberated on four themes viz.,

1. Millets production and Seed system
2. Decentralized processing and enterprise development
3. Nutrition security and dietary diversification through millets for SHG members
4. Engagement with millets market

Draft strategy evolving from the workshop is detailed in this note. This strategy document is prepared taking the inputs from the deliberations consolidated by a small group for the consideration of DAY - NRLM.



MILLETS INTENSIFICATION PROGRAM

Purpose of the Program:

Though the program initially focuses on millets intensification, it paves way for integrated crop systems diversification including revival of minor pulses, oilseeds, tubers and other nutritionally important and forgotten foods into the crop systems and in the diets of the local communities following principles of natural farming.

Promotion of consumption of millets in the SHG member households, production in their farms and strengthening the local circular economies resulting from cultivation, primary and secondary processing and value added enterprises.

The program aims to substantially contribute to improving the nutritional outcomes, ecological restoration and economic growth of the local economies. (connect to SDGs)

Increasing Production:

1. Landscape approach to Millets

Intensification in Crop Systems: Millets are low demanding crops (in term of water and nutrients). They are best promoted in their landscape niches (uplands, fallow lands, rice-fallows etc.) and as intercrops or relay crops or border crops or pure crops where they have comparative advantage. Millets promotion can be a strategic driver for bringing greater value to upland regions. Several of the millets are early maturing and are good candidates for intercropping or diversification of crop systems. Millets can also play a potential role in reviving fallow lands to cultivation as the cost of production is low and benefits are early.

2. Millets Cafeteria approach – let

Community Chose which millets to grow

and where: It is better not to externally choose the type of millets to be promoted in specific areas; even if the choice is based on tradition. Considering the diversity of millets, introducing all types of millets in a given area in a smaller area and leaving the choices to people will be a good strategy. Diversity of millets brings in nutritional diversity and has greater strength in millets intensification. 'Millets Cafeteria' as an approach is evolved by one of the KVKs to introduce all types of millets in a plot of land in small size beds. It introduces all types of millets to the local community - in terms of familiarization of the grains, their agronomy, productivity and also their use in consumption (through food festivals).

3. Millets in Rows:

Encourage each farmer to Integrate millets into crop systems (about 40 to 50 rows) in their existing crop systems in an appropriate way – for their self-consumption is the best and risk free way of reviving / integrating millets into local crop systems.

4. Millets agronomy:

The various experiences across the country suggest achieving higher yields through a combination of applying the principles of SRI, natural farming and local agronomic innovations. Support to farmers in progressively shifting from the current low yielding practices to high yielding natural farming methods is an important strategic element. Encourage farmers to move from mono cropping to intercropping and mixed cropping systems. Millets can also be part of Agri- Nutrition gardens.



5. Community Managed Seed Systems for Millets: Experience suggests that the locally adapted landraces or selections made from them are best suited for achieving higher productivity under sustainable millet intensification methods/ natural farming. Having high seed to grain multiplication ratio, millets seed systems can be established faster and the systems can be managed by SHGs. As the areas allocated to millets are generally marginal lands with varying agroecological conditions, adaptation of the varieties to specific local conditions is important. Participatory selections from the local landraces and their local multiplication is a sound strategy for supportive seed systems. “Start with what is locally available or accessible” – is the best approach than to seek certified seed.

Enabling Easy Processing

6. Clean Harvesting and Easy threshing: Mix of sand and soil with millets while harvesting is a major problem in processing. Introducing clean harvest

methods and small handy threshers for millet processing will help in easing the work intensity. Make these available in equipment hiring centers run as SHG enterprises.

7. Small Processing Facilities at habitation & CLF levels: Small scale millet processing units – at habitation scale (using mixie-dehullers) and at CLF level for bulk processing for supply to local markets (small millet processing units) are important in making millet processing easier and to retain by-products within the local economy. Enable these enterprises to evolve in scale with the increase in consumption demand and supply to ensure their viability. Develop ToT for operating processing unit machines, Quality control and quality assurance in millet processing and establish basic repair and maintenance centers at CLF/FPOs/PGs. Constitute panel of experts who can provide back end support to Krishi Udyog Sakhis and TSAs.

Enterprise & Market Development

8. Enable Local Circular Millet

Economies: Targeting household consumption to reach up to 5 kg millets per month, i.e., 60 kg per year within a CLF to outreach about 1000 households provides a strong basis for millets economy. This may require about 150 acres of millet cultivation, a processing unit and enables supply of value added products. The co-benefits of millets intensification – increased nutrition, crop diversification and increased economic/ enterprise opportunities can be simultaneously achieved. This is a good metric for setting up medium term targets for the program.

9. Bouquet of Enterprises: Millet promotion catalyses several enterprises – seed, equipment hiring for farm operations and threshing, nano-dehullers at habitation or groups level, millet primary processing units at CLF level and value added enterprises – millet snacks and other value added foods. Active promotion of such enterprises at CLF level enhances the potential for enterprises.

10. Procurement, Storage and Marketing:

As the marketable surplus increase – CLF / PG /PE/FPO marketing teams can be trained in FAQs, storage of material, establishing market linkages and price discovery. Storage infrastructure is crucial for such initiatives as also financial linkages with Banks. Aggregation and consistent supply to local millet enterprises is necessary to stabilize local consumption.

11. Strengthening Millet Market Systems:

- The program makes efforts to strengthen capacity of the CLFs chosen for the program (existing or newly formed) to operate in the millet markets.

- The CLF will be equipped with basic procurement infrastructure (moisture meters, weighing scales, tarpaulins etc.); trained in quality standards/ FAQs, the good practices in procurement and establishing linkages with financial institutions.
- The primary focus of market development/ access is through promotion of staple consumption in regular diets and accessing the markets for supply of primary processed – millet rice, ravva and flour.
- Value added products may be promoted where such capacity exists.
- The Market channels to be pursued include, among others, the following:
 - Demand within the SHG members of the CLF – through intensive engagement at the group level.
 - Developing purpose or age-specific food items to serve special needs of children, pregnant and lactating women, diabetic diets etc., and their promotion within the CLF area and outside. Training on such millet recipes and promoting local enterprises is important.
 - Engaging with the eateries- tiffin centres, hotels, food-trucks, caterers, bakeries in the CLF area and in the nearer peri-urban and urban areas.
 - Accessing institutions (hostels, canteens, government offices, Banks, schools, health care centers– for increasing demand and establishing supply channels.
 - Exploring bulk supplies to organised retail markets
 - Establishing linkages with traders and bulk buyers for marketing of raw or processed millets.
 - Supplies to ICDS, Mid-Day-Meal and PDS – where such linkages are established and pilot programs are initiated.

- Include millet menu in the already existing outlets where SHGs are supplying food.
- Over time appropriate models of accessing warehousing and related finance will be developed for avoiding distress sale and to ensure consistent supply to various millet based enterprises.
- The CLFs will be trained to be market-ready to support in procurement of millets for Public Distribution System, when millets are introduced into the PDS.

12. Millets Promotion in Urban Markets:

- Building awareness and convergence with the Urban/ peri-urban SHGs in increasing demand and establishing supply channels; this includes supplying to urban outlets established by SRLMs.
- Promotion of Millet Cafes, value added product enterprises in urban and peri-urban centres through SHGs promoting popular consumption of millets increasing its market demand.

13. Establishing Assured Markets for initial 3 years:

To break the mismatch between 'production & consumption' or supply and demand – a pilot program with Anganwadis in introducing millets in

ICDS or with Mid-Day-Meal program for 3 to 4 years will generate assured demand for farmers to produce and processing enterprises to establish. This also introduces millets to mothers and children and help their promotion in household consumption.

Enhancing Consumption:

1. Recipe Competitions and millet food festivals are the best starting points for increasing household consumption. Revive millet traditions and introduce new recipes.
2. Engage with Anganwadis and Supplementary nutrition programs: Introduction of millets into Anganwadis (ICDS) / Mid-Day-Meal / welfare hostels and other State nutrition programs even for about 2 to 3 years helps in assuring demand to strengthen value chain. Besides, a generation of children and mothers get used to millets in their diets.
3. Engage with local eateries / tiffin centers: enhances consumption demand for local millet processing enterprises to supply in addition to popularizing millets in local food systems. Introduction of millets in govt. supported food outlets, e.g. Ajevika Didi Café, Aahar Kendra etc.



Millet Intensification in Food Systems

Experience suggests that promotion of millets require simultaneous effort in increasing consumption demand and production within a geographical area. The processing needs to evolve in scale with the increasing consumption/ production.

Millet intensification in food systems is primarily a process of:

1. **convincing households to consume millets** in their regular diets
2. **evolving recipes** that build on the tradition but are integrated into the current consumption patterns
3. convincing households **to integrate millets into their crop systems;** for self-consumption to start with and generating surplus for markets as the demand increase.
4. **Make millets cultivation easier** – by establishing institutionalized support systems managed by SHGs in the areas of: seed systems, agronomic knowledge, farm equipment and processing as enterprises.

The Millet Intensification Program of DAY NRLM focuses on the above four aspects. The following are the strategic elements of the program.

14. The program is built upon the social capital base of women SHGs – as producers, consumers, and entrepreneurs.
15. Cluster Level Federation as an Implementation Unit of the program.
16. Increasing consumption demand, production, establishing processing facilities and market development needs to proceed simultaneously and comprehensively developed within in a CLF geography. Excessive focus on production without related efforts on the others lead to market glut or value chain bottlenecks or supply constraints.





Monitoring, Evaluation, Learning (MEL) & Knowledge Management

The Millet Intensification Program may have a dedicated Web Portal that integrates mobile-GIS-Web databases and dashboards. CLF will be the unit level for implementation and assessment. The Web Portal may also be a knowledge portal providing agronomic practices, millet recipes, enterprise connects and market linkages across the State. The databases may also be developed for use in aggregation and marketing.

Scale and Scope of the Millet Intensification Program:

The Millet Intensification Program targets to strengthen the millet ecosystem. Following are the key numbers for Millet Intensification Program:

Indicator	Target
No of districts	128
No of Blocks	1,000
No of clusters	1200
No of Villages	12,000
Area in Acres	2,85,228
No of Producer groups	10,000
No of Mahila Kisan in PGs	3,47,800
No of Mahila Kisan adopted improved practices	1,53,100
No of Mahila Kisan adopted inter-crop models	1,37,900
No of MKs adopted improved varieties	68,400
No of biodiversity blocks for Participatory Varietal Trails	1,000
No of Primary processing centers established	10,000
No of secondary processing centers established	1,000
No of Millet enterprises	5,000

Selection Criteria for the Program Implementation Blocks

Rainfed areas and tribal areas with millet traditions are most suitable for the program to start with. Blocks that have higher incidence of upland rainfed areas, with higher current fallows may be given priority.

The program may have a two pronged strategy:

- **Intensive Blocks:** where concerted efforts are made over a 5 year time period to achieve substantial inclusion of millets in the local diets and farms.
- **Extensive engagement:** with all the SHGs in the country – where general awareness about millets, basic knowledge of the recipes, nutrition is taken up.

The selection criteria for CLF (after selection of Districts and Blocks) includes – their institutional performance indicators/ rating, level of preparedness for market engagement and millet traditions in the area.

Program Components:

The Millet Intensification Program shall have the following program components:

1. Enhancing production and productivity of millets in diversified crop systems with agroecological farming methods
2. Promoting primary processing and value added enterprises
3. Strengthening market systems and linkages
4. Strengthening Community level Institutional capacities
5. Enhancing consumption demand
6. Monitoring, evaluation and learning

Program Implementation Architecture:

1. Implementation Unit: The program will be implemented by the Cluster Level Federations selected for the purpose. BMMU will support CLF in implementing the program.



Level	Demand Side	Production & Marketing
Cluster (CLF)	<ul style="list-style-type: none"> Nutrition & food systems diversification with millets; awareness with SHGs. Engagement with ICDS Food festivals, recipe competitions. Developing local millet enterprises for local processing for consumption and value addition 	<ul style="list-style-type: none"> Identifying niches in the landscape, Promoting millets in farms for self-consumption Millets cafeteria- demos & farmers engagement with millet intensification Establishing seed systems Procurement, processing and market links
Block Mission Management Unit	<ul style="list-style-type: none"> Liaison with the Block level departments and programs Promotion of millet consumption in SHGs outside program CLFs (extensive engagement) Promoting millets in peri-urban/ local eateries Liaison with ICDS, MDM and other nutrition programs Support CLC in the demand side initiatives 	<ul style="list-style-type: none"> Liaison with the Block level agriculture department and programs Promotion of millets production and support seed systems in SHGs outside program CLFs (extensive engagement) Support the millet processing enterprise and their market linages Support CLF in the establishing procurement and supply channels.
District Mission Management Unit	.. similar functions at the district level..	.. same functions at the district level
	One data management person in the district team	
State Mission Management Unit	.. similar functions at the State level..	.. similar functions at the State level..





Ecosystem of Support Services for Millet Intensification:

While the program implementation is internalised into the NMMU/SRLM's institutional architecture, it is important to source expertise and experience on technologies and processes. Millets are highly diverse, location specific and touch upon a wide range of subjects – from machines to recipes.

DAY - NRLM may follow approach of establishing Ecosystem of Support Services (ESS) for millets to support the CLFs and other functionaries working on ground. The purpose of these ESS is the following:

1. Provide curated technical support through sourcing from multiple sources
2. Training of the CLFs on the programmatic aspects
3. Developing communication material and modules
4. Establishing linkages among multiple stakeholders; including markets
5. Knowledge hub – enabling documentation, learning and knowledge dissemination.

The ESS are decentralised in their approach and are organised in a network mode coordinated by a network node. They will serve as a one-stop place for sourcing linkages and expertise for CLFs and others.

The thematic areas in which ESS for Millet Intensification will be established include:

1. Community Managed Seed Systems (already in process)
2. Millets production systems (all ready in process synthesising the ICAR – AICRIP experiences and various CSO and NF experiences in the country)
3. Support for primary processing enterprises & machines (this is already in the process- as 'Millet Mentor')
4. Recipes and nutrition related expertise & local valued added products (already available as a part of Odisha Millets Mission)

Substantial progress has been made by the RRA network in establishing the ESS on the above themes. It may evolve further. DAY - NRLM may work with RRA Network in establishing ESS for Millets. RRA Network will bring in various players (practitioners, industry, startups, researcher in the arena across States into a coordinated mechanism to lend support to the Millet Intensification Program of DAY - NRLM in a decentralized manner

Action plan:

Component	Activity	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Increasing Production	IEC material on Indigenous cropping systems	■	■							
	Training manual on Millet production systems		■	■						
	Seed replacement with improved varieties		■	■	■					
	Improved agronomic practices			■	■	■				
	Promotion of Indigenous cropping systems		■	■	■	■				
	Training of Krishi Sakhis		■	■						
	Deployment of Krishi Sakhis		■	■	■	■	■			
Seed systems	Training on Land race mapping and PVTs	■	■	■						
	Seed melas		■							
	Mapping of local varieties		■	■						
	Seed selection and Multiplication		■	■	■	■	■			
	Seed storage and sales						■	■	■	
Enabling easy processing	Primary processing units (CHCs)				■	■	■			
	Small Processing Facilities				■	■	■	■	■	■
Enterprise and Marketing Development	Mobilisation of Mahila Kisan into PGs	■	■	■						
	Scoping study for identification of potential for enterprises				■	■	■			
	Establishment of enterprises					■	■	■	■	■
Enhancing Consumption	Recipe Competitions and millets food festivals						■			
	Engage with local eateries / tiffin centres					■	■	■	■	■
	Engage with Anganwadis and Supplementary nutrition programs							■	■	■

Notes

(367798)

File No. K-11060/02/2019/NRLM (Livelihoods)/Part1
Government of India
Ministry of Rural Development
Department of Rural Development
(RL Division)

7th Floor, NDCC – II Building
Jai Singh Road, New Delhi – 110001
Date: 10th December, 2019

To,

The SMD/CEO,
All State Rural Livelihoods Mission

Subject; Advisory on Agri-nutrition garden

Dear All,

I am directed to say that DAY-NRLM has come up with an advisory on agri-nutrition garden which is an important constituent of farm livelihoods intervention. One of the integral component of farm livelihood intervention under DAY- NRLM, is assuring year-round household-level food and nutritional security by optimally using the resources available to the poor smallholders. Mahila Kisan Shasaktikaran Pariyojana (MKSP), launched in 2010-11 under DAY-NRLM has a stated objective of securing health and nutrition at the household level and more particularly for women and children. DAY-NRLM under its farm livelihoods intervention works with women farmers for the promotion of Agri-nutrition garden by involving them and thus increases the success rate manifolds.

Till September 2019, 28.71 lakhs households have been supported in promotion of Agri-nutrition garden across the country through DAY-NRLM, Farm livelihoods interventions. In these years, we have seen many good practices emerging across the country in Agri-nutrition garden. In this context it is being felt that an advisory on Agri-nutrition garden outlining its element will be useful.

This advisory will serve as a reference document for rolling out kitchen gardens (Hereafter the Agri-Nutri gardens) in the respective State Rural Livelihood Missions (SRLMs).

Enclosure: Advisory on Agri-nutrition garden

Yours faithfully



(HR Meena)

Deputy Secretary in Govt. Of India

Advisory on promotion of Agri Nutri Garden under farm livelihoods

DAY-NRLM recognizes that the poor have multiple livelihood activities, and therefore, the mission focuses on enhancing and expanding the existing livelihoods of the rural poor. More than 70% of the rural poor are dependent on agriculture either as farmers or as agricultural labourers. Livestock rearing is the complementary activity in agriculture as another significant livelihood activity of the poor with small ruminants and poultry forming the major chunk of the livelihood basket. In forest fringe areas, the forest dwellers depend on the collection, value addition, and sale of Non-Timber Forest Produce (NTFP). Along with it, DAY-NRLM has been actively involved in promoting fishery and allied activities for livelihoods promotion. One of the integral component of farm livelihood intervention under DAY- NRLM, is assuring year-round household-level food and nutritional security by optimally using the resources available to the poor smallholders. Mahila Kisan Shasaktikaran Pariyojana (MKSP), launched in 2010-11 under DAY-NRLM has a stated objective of securing health and nutrition at the household level and more particularly for women and children. DAY-NRLM under its farm livelihoods intervention works with women farmers for the promotion of agri-nutrition garden by involving them and thus increases the success rate manifolds.

Till September 2019, 28.71 lakhs households have been supported in promotion of agri-nutrition garden across the country through DAY-NRLM, Farm livelihoods interventions. In these years, we have seen many good practices emerging across the country in agri-nutrition garden. In this context it is being felt that an advisory on agri-nutrition garden outlining its element will be useful.

1. Why is Nutrition Garden required?

The centrality to the actions of DAY-NRLM are women coming from marginalised sections of the socioeconomic strata. The biggest issue affecting them related to poverty is food security and malnutrition. As mothers, they carry on the legacy of malnutrition, hunger, and therefore unhealthy current and future generations. The cycle of malnutrition is cyclic and affects generations. For example, if an adolescent girl is malnourished, then after marriage, there is a certainty that the girl will also become a malnourished pregnant woman. Generally, a malnourished child is born to such a mother. The child, even after growing up does not escape the cycle of malnutrition. The malnourished girl born from such a mother repeats the cycle of malnutrition. Though, the livelihood interventions are targeted towards income enhancement and food security it leaves out the crucial missing link of proper nutrition at the household level.

According to the World Health Organisation (WHO), having low dietary diversity at the household level is one of the reasons for malnutrition. Therefore, ensuring dietary diversity at the household level would help people to come out of the malnutrition cycle. One of the crucial components, thus, is to raise a nutrition garden in the backyard of each of the

household. At DAY-NRLM, the combination of fruits and vegetables, which are locally consumed and grown. This advisory will serve as a reference document for rolling out kitchen gardens (hereafter the Agri-Nutri gardens) in the respective State Rural Livelihood Missions (SRLMs).

Figure 1 Requirements for proper nutrition

Carbohydrates: Provides energy in terms of glucose to perform daily tasks (rice, wheat, ragi, maize, other cereals and starch-based food)

Fats: Other sources of energy and maintain the lubrication (animal fat, vegetable oil, egg yolk, meat, fish, cashew among others)

Protein: Primary role of protein in the diet is for healing injured tissue and for growth and development in the body (poultry, meat, eggs and fish, and plant proteins such as nuts, seeds, beans and legumes)

Vitamins and Minerals: Help perform bodily functions adequately and help the body fight diseases and immune system (fresh fruit and vegetables)

The purpose of the establishment of nutrition garden is to grow fruits and vegetables suited to the local agro-climatic condition for tackling malnutrition. Apart from growing the vegetables and fruits, rearing livestock, supplies the required animal protein in terms of milk, eggs, and meat for complete nutritional needs of the household. The Agri-nutri gardens are designed as such that, while ensuring food for the house, it does provide some additional income, as and when needed. According to a report published in 2010-11, the Food and Agriculture Organization has reported that about 70% reduction in complications related to deficiency of Vitamin-A is possible by the promotion of nutrition gardens.

2. Objectives of promotion of Agri-nutri garden

- 2.1. Ensuring adequate nutrition available in the household to avert malnutrition among family members (especially women and children)
- 2.2. Providing round the year availability of nutritious fruits, vegetables, milk, egg, and meat and reduce dependence on the market. Bringing food diversity at household level.
- 2.3. Availability of quality food material free from chemical substances, reducing toxicity and enhancing nutrition
- 2.4. Reduction of expenditure on food items and expenses related to health; therefore, increasing cash flow for an improved socio-economic condition

3. Agri-Nutri garden under DAY-NRLM

To promote supplemental food production among the underprivileged and poor people in rural areas, DAY- NRLM supports the Agri-Nutrition garden model to improve nutrition security and supplement household income. The primary objective behind this model is to

help improve the nutrition status of small and marginal farmers and their families, providing them with an assorted mix of fruits and vegetables for most time of the year. Communities, which are appreciable to the idea of rearing poultry birds and small ruminants are encouraged to rear animals on a low scale, which fulfils dietary requirements and provides an income as and when needed.

Agri-Nutri gardens can be established and maintained on a small patch of land with minimum technical inputs; hence, these gardens provide the rural resource-poor communities with a platform for innovations in supplementary food production as well as an opportunity to improve their livelihoods. Family labours, especially the efforts of women, becomes particularly important in the management of these gardens. Empowered with a reasonable minimum amount of skills and knowledge, these women members of rural families can easily fight crop losses and other negative implications, thereby making Nutrition gardening a successful initiative. Besides, the significant use of organic farming practices makes these garden environment-friendly as well.

Nutrition gardens are cost-effective, practical and efficiently meet the balanced dietary requirements of rural households as well as add substantially to the family income. Crops are selected considering the everyday food habits and climatic conditions of the implementation areas, and with the larger goal of ensuring availability of wholesome and nutritious food.

4. Pre-implementation phase for Agri-nutrition Garden

- 4.1. **Exposure:** The Livelihoods teams of the SRLMs along with CRPs should go on exposure to see successful models on Agri-nutri gardens in their vicinity. The exposure should be arranged to a location where various models are on display.
- 4.2. **Situational Analysis:** The livelihood team can quantify and assess the situation of the homestead land of each of the beneficiaries. The team then would prepare a database containing information about: the soil type, water availability at the homestead, number of animals/ birds reared by the household to ascertain the amount of bio-manure availability, and the food and nutrition security condition of the family if the need may be the date of Anganwadi Centres on status nutrition of the children and women of the house. It would be wise to record the PDS availability, Midday Meal available to the children, and the availability of nutritious food for the pregnant and lactating women. A matrix may be developed to understand the calendar of food and nutrient availability (as per the box above detailing requirements for proper nutrition) for the household and to identify lean months in the terms of availability.
- 4.3. **Information and knowledge dissemination:** At the monthly meeting of the VO, the livelihood subcommittee along with the SRLM staff shall discuss the importance of the Agri - nutri garden. In this meeting, the presence of CRP is essential, as they will

be the ones helping the beneficiaries in setting up Agri-nutri gardens and growing vegetables and crops. This discussion must happen at the CLF and SHG level to ensure the importance of the initiative to provide food and nutrition security.

5. Agri-nutri garden design for different types of beneficiaries

The livelihood team, in consultation with experts (practitioners, NRPs, scientists from KVK/ agricultural universities, leading CSOs), should design appropriate Agri-nutri gardens suitable to the geography and landholding of the farmers. In bigger states, where there are different agro-ecological zones and altered food habits, multiple designs should be prepared before implementation.

Various designs and models are provided in the guideline, for example. The state teams must compile a ready reckoner of different models of the Agri-Nutri garden. If there is an aberration (land and water availability), common sense may be applied for designing a particular intervention, with the approval of the concerned beneficiary. The Krishi Sakhi after analysing the data on land and water availability of the specific beneficiary should suggest the model that the beneficiary should adopt. This list created at each of the SHG should generate metadata, indicating the number of different models under implementation at various levels (SHG, CLF, VO, Block, SRLM, NRLM).

5.1 The Design principle of Nutrition Garden

The basic design principle is to establish a year-round supply of seasonal fruits and vegetables, including leafy greens in the homestead by using household-level wastewater and food waste (for manure).

- 5.1.1. A multi-tier design principle may be adopted to get the maximum from the same area. The principle behind the multi-tier design is photo-tropism i.e. different plants require different light, so multi-tier structure is best suited to harvest maximum sunlight.

Example:

First-tier: Root or tuber crops such as carrot, beetroot, ginger, etc. comes under this category. These plants require minimal sunlight.

Second-tier: Creepers, which cover the soil such as bottle gourd, cucumber etc. Creepers will act as live mulch.

Third tier: Leafy vegetables such as spinach, coriander, Amaranthus etc.

Fourth tier: Vegetables such as Brinjal, Tomato, chillies etc.

Fifth tier: Perennial Castor and Perennial Red gram etc.

Sixth tier: Papaya, drumstick, clustered apple, guava etc.

Seventh-tier: Fruit crops such as Mango, cashew, etc. These plants require maximum sunlight.

- 5.1.2. Perennial plants such as a drumstick, banana, papaya, curry leaf, gooseberry,

- mango, guava, custard apple, and sapota etc., should be located on one side of the garden. Usually, they should be planted at the rear end of the garden, so that they may not put a shadow over other crops.
- 5.1.3. Small spaces can be utilised for growing different short-duration varieties such as coriander, Amaranthus, fenugreek, mint, etc. These crops can be cultivated in different seasons.
 - 5.1.4. The fence surrounding the garden can be utilised for growing creepers and gourds such as sponge gourd, bitter gourd, snake gourd, cowpea etc.
 - 5.1.5. The inclusion of trellis in for creepers and shade-loving under the trellis-like broccoli, spinach etc.
 - 5.1.6. The compost pits should be placed in the corner of the garden.
 - 5.1.7. There should be corner pits to collect the utilised household water (bathing water, Nutrition waste etc.)
 - 5.1.8. The garden should be divided into small plots with raised bunds. In the bunds, one can grow root crops such as onion, turmeric, ginger etc.
 - 5.1.9. Medicinal plants should be integrated into this nutritional Garden like Tulasi, Kalmegh, aloe vera etc.
 - 5.1.10. Monocot – Dicot crop combination to maintain equilibrium for soil fertility
 - 5.1.11. Companion crops: Companion planting in gardening and agriculture is the planting of different crops in proximity for any of some various reasons, including pest control, pollination, providing habitat for beneficial creatures, maximising use of space, and to otherwise increase crop productivity. A list is given in Annexure.
 - 5.1.12. Crop diversity to manage pests
 - 5.1.13. The inclusion of livestock (backyard poultry and goat rearing) in the household nutritional security system.
 - 5.1.14. Planting vegetables in the gunny bags for the poorest households who do not have land for a nutritional garden.

5.2 Major Intervention for Nutritional Garden

In agro-ecological practices in farm livelihoods under DAY- NRLM emphasis is on the following significant areas:

5.2.1 Seed

- 5.2.1.1 Use of only native quality seeds, in some cases, high yielding varieties can be taken up.
- 5.2.1.2 In no case, HYV or GM seeds should be promoted.
- 5.2.1.3 While purchasing the seeds from the market, expiry date and % of germination should be checked.
- 5.2.1.4 All the seeds and seedlings should be treated with Bijamrut/ cow urine before sowing.
- 5.2.1.5 Seed selection should be carried out with either plain water or brine solution
- 5.2.1.6 Mahila Kisans may be trained in the preparation of good quality seeds from their

garden.

5.2.1.7 Every year seed production should be promoted at each household to avoid dependency on external sources.

5.2.1.8 Seeds should be selected from a healthy plant/ healthy, disease-free fruits.

5.2.2 Soil

Usage of mulching, green manure to increase the soil moisture and organic matter.

5.2.3 Plant nutrient management

5.2.3.1 No chemical fertilisers or chemical pesticides should be used.

5.2.3.2 Kitchen waste should be used for the preparation of compost.

5.2.3.3 Small FYM pits/ corner should be promoted to prepare compost from kitchen waste/ leaf litters. The landless farmers can also do the FYM in the earthen pots/ plastic drums.

5.2.3.4 All households, including the landless family, should have a practice of vermicomposting in a small earthen pot/ plastic drum or any old big sized utensils.

5.2.3.5 Ghan Jeevamrut or jeevamrut can also be applied to the plant for better & healthy growth.

5.2.3.6 Small Bhu-Nadep should be promoted to prepare compost from farm waste/ leaf litters

5.2.3.7 Green manures: Sowing seeds of green manure help to protect the soil and gives extra fertility and more production.

5.2.3.8 Other sources: Ash, oilseed cake, hair etc. are all resources which can be added to the soil to increase fertility as well as helping to prevent pests and diseases.

5.2.4 Water management

5.2.4.1 All the household wastewater (bath/ kitchen) can be collected through a ditch/ pit in the garden. It can do the watering of the plants.

5.2.4.2 At the time of land preparation of the agri-nutrition garden, the small irrigation and drainage channels should be made for better management of available water.

5.2.4.3 Pitch irrigation or drip irrigation should be adapted to avoid excess use of water/ for optimal use of water

5.2.4.4 Small dug well/ drums may be used to store water.

5.2.4.5 Mulching: It prevents the sun and wind from drying the bare soil.

5.2.4.6 Green Manures: Also cover the soil, and so help in conserving water.

5.2.4.7 Windbreak: Wind will dry out the soil, so stopping the wind helps to conserve soil moisture.

5.2.4.8 Provide shade: In the hot season, trees can provide shade to the Agri-nutrition garden. A few small trees, such as Leucaena, mulberry, moringa (drum stick), Persian lilac, or even fruit trees in the fence or within the garden can be used for this. As well as giving shades, these trees can also provide other benefits such as

firewood, fodder or mulch materials.

5.2.4.9 Mist collection; Mist collects on the leaves of the trees around and within the agri-nutrition garden and drips onto the soil for conserving the moisture.

5.2.4.10 Irrigation: By only putting a little water over a wide area, only the surface will be kept moist. This can cause roots to stay near the soil surface, and in intense sun, they can dry out quickly. So, it's much better to irrigate less area with more water, so the moisture goes more in-depth in the soil. Then this area will not need watering for a long time during the hot season, water in the evening or at night and not in the daytime. Collecting and using wastewater from the kitchen can be enough to water the garden. Also, direct water from the communal tap stand can be used in Agri-nutrition garden.

5.2.5 Plant protection

The Agri-nutrition garden needs protection from the very start. It should not be possible for livestock to enter the area. A permanent fence should be made. Thorny plants can be cut and used to create a fence, but the best method is to plant a living fence to protect the garden.

The crop within the garden will also need protection from any damage by pest and diseases. There are many ways to do the same as mixed cropping, rotations, liquid manure, bio-pesticides etc. For that:

5.2.5.1 The weeds should be uprooted as and when seen in the garden.

5.2.5.2 Each household should adopt the preparation and use of Pot Manure (Matka Khad), which acts as both manure and bio-pesticide.

5.2.5.3 Biopesticides like neemastra, brahmastra, and agneyastra should be applied in case of pest/disease attack.

5.2.5.4 All the seed materials should be treated through Bijamrut or with cow urine

5.2.5.5 Light trap, yellow sticky trap or water trap or pheromone trap may be used to trap insects.

5.2.5.6 Plantation of Marigold around the border will help in trapping insects.

5.2.5.7 A detailed list is given in Annexure

5.3 Agronomic practices

5.3.1 Site selection for agri-nutrition garden

If there is already an agri-nutrition garden then there is a need to improve rather than search for a new site

The following factors need to be considered for a new site:

5.3.1.1 How to protect the garden from livestock, who can graze?

5.3.1.2 How can you bring water to the site and irrigate it?

5.3.1.3 The quality and fertility of soil needs to be managed.

5.3.1.4 How can the site be easily accessed from the house?

5.3.2 Land preparation

5.3.2.1 The raised nursery bed should be promoted to avoid damage of the nursery from the rain.

5.3.2.2 Nursery beds may be covered with locally available materials like paddy straw or broad leaves

5.3.2.3 Adequate FYM/ Vermicompost/ NADEP compost should be added to the field during land preparation.

5.3.2.4 Ridges and furrow method should be adopted to check the excess use of water, manure and to avoid soil erosion.

5.3.2.5 Irrigation and drainage channel should be given in between the sub-plots.

5.3.2.6 The landless farmers can use gunny bags to grow crops. The central opening at the top can be used for non- creeper vegetables. Some holes can be made in the gunny bags. In these side holes, the creeper plants can be planted for optimum use of the gunny bags. The gunny bags should be filled with soil and bio manures like FYM/ Compost/ Matka Khad/ vermicompost.

5.3.3 Sowing and planting

5.3.3.1 Line sowing with proper spacing will increase productivity.

5.3.3.2 All the plantation crops like banana/ papaya/ lemon/ custard apple should be planted in the border of the agri-nutrition garden

5.3.3.3 All the creeper plants should be planted near to the plantation crops/ trees/ near to the hedges

5.3.3.4 Proper spacing should be maintained between the plants and between the rows.

5.3.3.5 Mulching may be promoted to conserve the soil moisture.

5.3.4 Selection of crops

5.3.4.1 There should be at least three to five plantation crops to be planted in the garden.

5.3.4.2 The plantation crops are Papaya, Drumstick, Lemon, Custard apple, guava, pomegranate, curry leaf etc.

5.3.4.3 There should be at least three creepers/ climbers to be planted in the garden. Example: Pumpkin, bitter gourd, bottle gourd, ridge gourd, pointed gourd, small gourd, spine gourd. Tomato, Malabar spinach etc.

5.3.4.4 The common leafy vegetables like Amaranthus (both dark and green) & Malabar spinach, vegetables like brinjal, okra and spices like chilli should be cultivated round the year.

5.3.4.5 Each agri-nutrition garden should have plants representing from legume crops

5.3.4.6 At least two to three tuber crops should be planted in the garden. Example: Yam, Radish, elephant foot yam, taro, sweet potato etc.

5.3.4.7 Minimum one to two beans should be planted. Example: cluster bean, broad

bean, common bean, kidney bean, French bean, cowpea, lima bean, sword bean, ridge bean, field beans, lablab beans, runner beans etc.

5.3.4.8 A detailed list is given in Annexure.

6. Models for Agri-nutri garden

If seeds and seedlings are planted too wide, the interspace will go waste, and this space will be used by weeds to grow. Weeds use precious water and compost, and also wastes labour in their removal. Besides the water and compost lost, needs to be replaced. This is why it is better to plant vegetable plants densely. But if only one variety is grown, it will compete with itself for space above and below the ground, and so will not be beneficial. It is better to plant a mix of small and large types, to make different layers of crops on the same bed. These will also have different layers of roots in the soil. This means many plants can be grown in a small space, but there is no competition between crops for space, water and nutrients. As small vegetables are harvested for food, this makes space for the long lasting vegetables, while in between new seedlings can be planted. Some of the models in use for the agri-nutrition gardens are as followed:

6.1 Rectangular model

Seven parallel raised bed plots of 10-20 ft. Length and 3-4 ft. Width to be prepared across the yard. At the four corners four circular mounds to be dug. Around the garden, fruit plants which are lesser in height and are less shrubby should be planted, e.g. papaya, lemon, and guava among others to be planted.

It should be noted that plants like banana or papaya should be planted on the eastern or southeastern side of the garden. This will allow appropriate sunshine to fall on the garden. Plants with larger canopy, i.e. drumstick, guava, custard apple need to be planted on the west or northwestern direction.

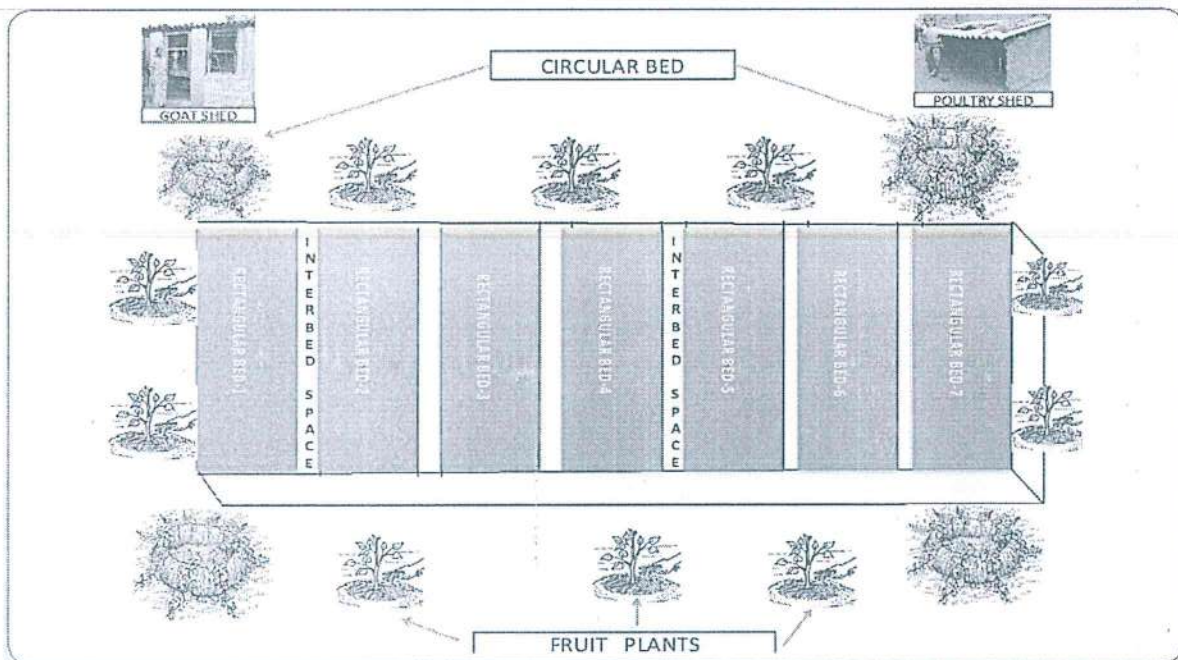


Figure: Rectangular model for Aqri-nutrition garden

6.2 Circular model

In this model a circle would be made, and four mounds at the four corners will be made. Around the garden, fruit plans which are lesser in height and are less shrubby should be planted, e.g. papaya, lemon, and guava among others to be planted. It should be noted that plants like banana or papaya should be planted on the eastern or southeastern side of the garden. This will allow appropriate sunshine to fall on the garden. Plants with larger canopy, i.e. drumstick, guava, custard apple need to be planted on the west or northwestern direction.

1. The diameter of the garden should be 1 meter.
2. With a 0.5-meter tape should be used with a centre point and a circle should be marked around it
3. Pulverize the soil with hoe/ plough.
4. The plots should be prepared against the direction of the hoe.
5. Farmacyard manure/ Compost should be mixed, and mound should be made around the circle

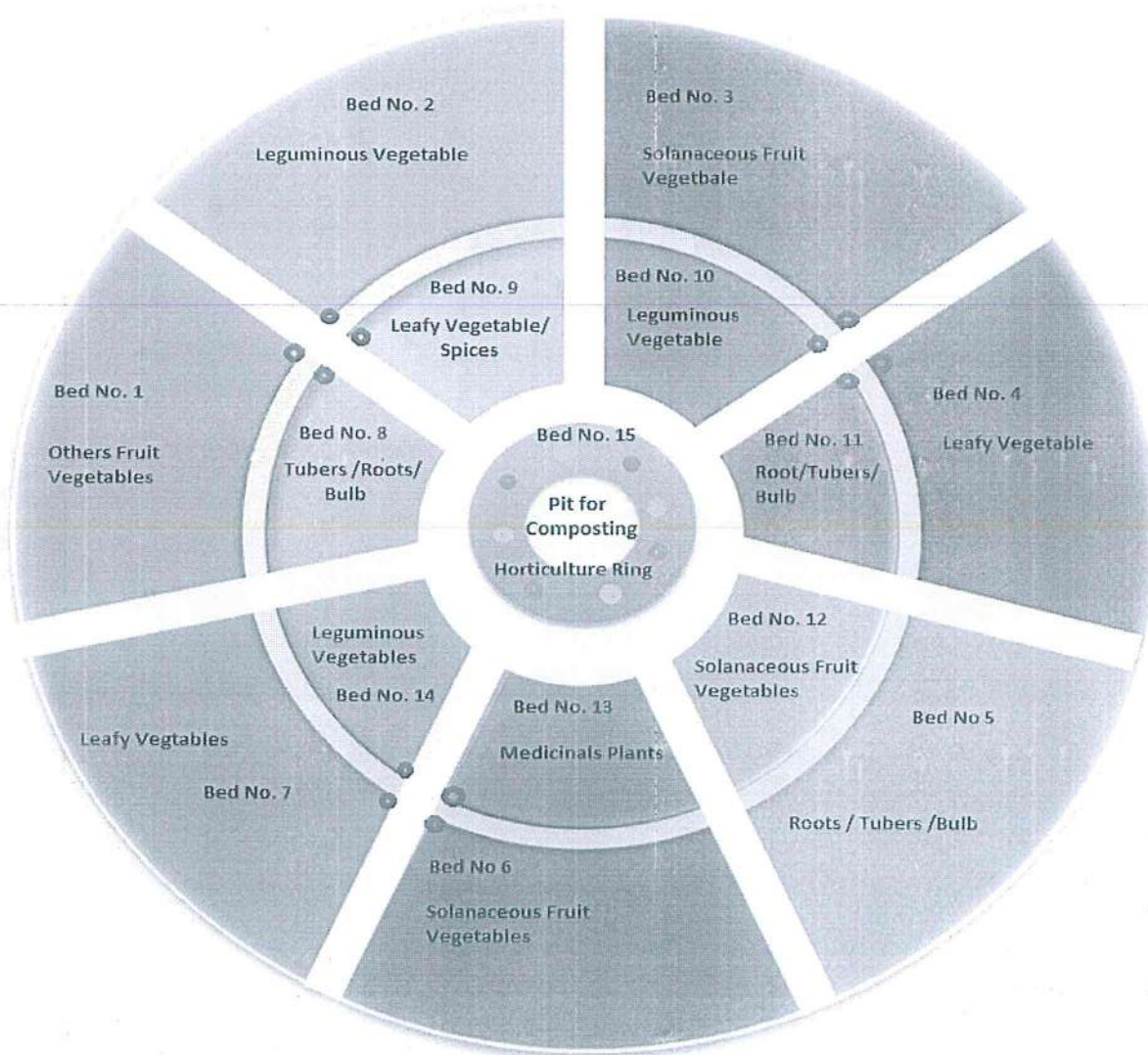


Figure: Circular model for agri-nutrition garden

6.3 Nutrition Garden for landless

Raised Garden	Creepers (bitter gourd, cucumber, ridge gourd, long beans, beans, ivy gourd, and spike gourd, Amaranthus, and spinach can also be grown	In an earthen pot or polythene soil, rice bran, FYM/ Compost in the ratio of 3:1:2 The creepers can be supported with tape, wire, or bamboo sticks
Hanging garden	Vegetable and other leafy vegetables	Pots can be hanged from the roof with the same composition of soil mixture. Is beneficial to keep off cattle
Drum garden	All vegetables	A drum is cut into 2 equal halves where soil mixture is kept for the growth of vegetables

6.4 Nutri garden with a Gunny bag

- 6.4.1. Select a sunlit place
- 6.4.2. Fill the gunny bag with clay loam soil and FYM/ compost
- 6.4.3. Mark 4 holes around the gunny bag at equal distances, the holes should be above 1 foot off the ground level.
- 6.4.4. Put a Bamboo stick in the middle of the bag to facilitate irrigation and drainage of excess water.
- 6.4.5. To settle the soil, pour water for 2 to 3 days
- 6.4.6. Put 4 seeds of 2 different types of creeper in each hole
- 6.4.7. At the top of the gunny bad 2 plants of either tomato/ chilli/ or brinjal can be put.
- 6.4.8. Irrigate the bag in every 2 days to keep the bag moist
- 6.4.9. Keep it off limits from animals and children
- 6.4.10. For the creepers make the facility for trellis, the creepers will start fruiting after 45 days and continue fruiting for 45 days
- 6.4.11. A household would be able to get adequate amounts of vegetables from 2-3 gunny bags

7. Importance of animal protein and its benefits

For growing children and the pregnant and lactating mothers, there is a significant need to provide in terms of milk, egg, and meat to fight malnutrition. From eggs, 12 essential vitamins and minerals are sourced apart from choline, which helps in the development of the brain and more so among the children. Eggs are a great source of protein, which aids in the formation of new tissues and repairing of old tissues. One egg has equal amount of protein as with 30 grams of animal meat. In a week, one should consume about 3 to 4 eggs. Pregnant women should not consume raw or half cooked eggs. Poultry meat is also a good source of protein which is white meat. According to the estimates, one normal human should consume 180 eggs and 12 kgs of animal meat. The faeces and droppings of poultry and goat act as a good source of fertilizers for the Agri-nutrition garden and also help in recycling of roughages.

Recommended consumption of egg for growing children and women

Category of special need	Egg requirement (weekly)	Egg requirement (annual)
Children (6 months to 3 years)	3	156
Children (3 years to 6 years)	5	260
Adolescent girl (10 years to 19 years)	4	208
Pregnant and lactating women	3	156

Therefore, the intervention at the household should be such that each member (children and women), should at least have 120 eggs a year (every 3 days) and have chicken twice a month (26 birds) and sell 12 birds in the market to earn additional income.

7.1 Backyard poultry for household nutrition

The basic tenets of backyard poultry are

- 7.1.1. Secure the birds by the construction of a shed from predators, heat, and rain, while having a litter to soak up the bird droppings (can be sold as manure rich in phosphorous)
- 7.1.2. Apart from scavenging give the birds some balanced feed.
- 7.1.3. Each bird should at least have 200 ml of fresh water per day.
- 7.1.4. Deworming in every 3 months (i.e. 4 times year)
- 7.1.5. 4 times the vaccination of Ranikhet/LaSota, and 2 times vaccination of bird flu. The estimated cost for all the vaccination and deworming per year is about Rs.10.

The scale and operation of backyard poultry

- 7.1.6. Each female bird gives about 50 eggs per year, while giving 3 to 4 eggs at a time.
- 7.1.7. If a household rears 4 birds, the household will get 200 eggs per year.
- 7.1.8. The household should consume 120 eggs and use the rest 80 for hatching.
- 7.1.9. With an 80 % success in hatching, there will be 64 chicks.

- 7.1.10. Out of the 64 chicks, 60% will become full-size birds at the age of 6 to 8 months; i.e. 38 full-size birds.
- 7.1.11. The household should consume 26 birds, and sell the rest 12 birds. The birds will at least fetch a price of Rs.300 providing an income of Rs. 3,600 in the household. The expenses on balanced feed are about Rs.500, and the cost on deworming and vaccination is about Rs. 500. Therefore, the net income from poultry is about Rs. 2,600.

7.2 Improved goat rearing for household nutrition

The basic tenets of improved goat rearing are

- 7.2.1 Secure the goat shed from predators, heat, and rain, with proper drainage (the goat dung can be composted and used as high manure, the market price of the manure is very high with proven bio-availability)
- 7.2.2 Balanced feed for the animals.
- 7.3.3 Each goat should have fresh water.
- 7.3.4 Deworming in every 4 months (i.e. 3 times year)
- 7.3.6 Vaccination against 4 deadly diseases (PPR, Goat Pox, Enterotoxemia, and Foot and Mouth Disease)

The scale and operation of improved goat rearing

- 7.3.7 In 24 months (at an interval of 8 months), one female goat gives birth to 5 kids, while there is a chance that 2 kids might die due to complications/ natural sequences.
- 7.3.8 The sale price of the three goats in the 24 month cycle is approximately Rs. 9,000 (kids: in the first birth - 16 months, second birth- 8 months, and the third birth- 0 to 1 month).
- 7.3.9 If a household rears 2 goats, the income is Rs. 9,000 per annum. The cost of deworming and vaccination is Rs.120 per year per goat (includes the cost of Krishi Sakhi). Therefore, the price of the whole herd is Rs.480-Rs.500 per annum for the household. Apart from it, the cost of balanced feed per year is about Rs.300.
- 7.3.4 Therefore, the net income from the enterprise is Rs. 8,200

8. Funding and Convergence

Funding for Agri-nutrition garden: The budgetary requirement of formation of Agri-nutrition garden is low which can be taken as a loan by Mahila Kisan from the SHG. There is no need to keep a separate budget for the promotion of the same.

Different schemes are under implementation, which supplies inputs and planting materials for agriculture. The SRLF block team may arrange such linkages for procurement of inputs. If needed personal assets for in-situ soil and water conservation may be created under the MGNREGS.

Annexure

1. Crop combination in nutrition garden

Plot	Season	Main Vegetable	Supplementary vegetable		
Raised beds	Kharif/ Rainy	Brinjal/ Eggplant	Radish, Amaranth Leaf		
		Chilli	Marigold, Coriander		
			Okra	Long beans/ Okra	
			Pumpkin/ ash gourd, bottle gourd, pointed gourd, bitter gourd, ridge gourd, Snake gourd, cucumber	Water spinach	
			Rabi/ Winter	Tomato, Onion	Spinach
				Beans	Coriander, Mint
	Carrot	Fenugreek			
	Zaid/Summer	Cabbage/ Cauliflower	Radish		
		Okra	Long bean		
		Brinjal/ chilli	Guar bean		
Circular bed	Kharif/ Rainy	Brinjal + Long beans + Bitter Gourd/ Snake Gourd			
		Chili + Long beans + cucumber/ pumpkin			
			Okra + Long bean + Ridge gourd / Malabar Spinach		
			Brinjal + Scarlet gourd/ Ivy gourd +Water spinach		
			Rabi/ Winter	Tomato + Bean + Spinach	
	Zaid/Summer		Ivy gourd + Water spinach + Coriander / mint / fenugreek		
			Okra + Malabar spinach		
			Guar Bean + Amaranth leaf		
			Brinjal + Bean		

2. Examples of good co-crop

Crop name	Companion crop	Enemy crop
Beans, Green peas	Almost all vegetables	Onion and garlic
Brinjal, chilli, tomato	Onion, pulses, radish, carrot, coriander, Holy Basil, and marigold	Mustard and Rapeseed
Pumpkin	Pulses, Onion, and marigold	Coriander and Holy Basil

3. Examples of better intercropping

Cabbage	Radish, carrot, turnip, beetroot
Potato	Amaranthus, carrot, radish, wild spinach
Tomato	Radish, carrot, and Amaranthus
Onion	Amaranthus and wild spinach
Garlic	Coriander and other leafy vegetables
Pumpkin	Kharif radish
Maize	Cucumber, pumpkin, Long beans, and watermelon

4. Planting distance (plant to plant and row to row) in cms

Vegetable	Row to row	Plant to plant
Brinjal	75	60
Chili	60	45

Vegetable	Row to row	Plant to plant
Tomato	75	60
Bean	45	30
Long beans	45	30
Water spinach	25	20
Radish	25	20
Carrot	25	20
Guar bean	60	45
Okra	75	60
Pumpkin/ bottle gourd	150	120
Ridge gourd/ snake gourd/ cucumber/ ivy gourd/ bitter gourd/ Malabar spinach	120	90
Tree based fruits		
Drumstick	700	600
Lemon	500	400
Mango	1000	800
Papaya	300	250
Banana	300	250
Custard apple	700	600
Guava	800	600

5. Vitamin information

Type	Vegetables	Vitamins and Minerals
Leafy vegetables	Amaranthus, spinach, Malabar spinach, water spinach, pumpkin leaves, drumstick leaves	Vitamin A, C, and K, Folate, and Iron+ Dietary Fibres
Red coloured vegetables	Pumpkin, Tomato, carrot, among others	Vitamin A
Other	Brinjal, bottle gourd, snake gourd, bitter gourd, and cucumber	Vitamin A and C + Potassium
	Beans, flat green beans, drumstick	Protein, iron, calcium, Folate, Phosphorous
Tuber	Potato, sweet potato, turnip	Carbohydrates, Potassium, and fibre

6. Planting time and period

Vegetable	Months	Days
Bottle gourd	February- March, May-June	140-150
Beans	November-January	90-130
Bitter gourd	March-May	90-125
Ridge gourd	February- March, May-June	120-150
Brinjal	May-June, October-November, January-February	120-150
Chili	February-May	210-240
Long bean	June- September	90-105
Coriander	June-September, October-November	30-40
Cucumber	June-October, January-February	90-100

Vegetable	Months	Days
Carrot	September-November	90-100
Okra	Round the year except the cold winter months	100-110
Pumpkin	February- March, May-June	90-125
Snake gourd	February- March, May-June	135-180
Radish	September-January	45-60
Tomato	October-November, January-February	90-145
White Amaranthus (Kharif)	March-April, October-November	40-100
Red Amaranthus (Rabi)	March-April, October-November	40-100
Amaranthus (White and red)	October-January	30-40
	March-October	40-100

7. Cultivation techniques of common vegetables

Vegetable	Season	Method of planting	Spacing	Seed rate	Pit size	Fertilizer management (for 1 cent area)	Duration of crop	Duration of crop
Amaranthus viridis	All	Seeds should be mixed with sand and broadcast in beds	-	10-15 gms/cent	-	Farm Yard manure 100 kgs or compost 50 kgs with 2 kgs of neem cake	-	Varies according to variety
Ash gourd hispida	July-Nov April	Seeds to be dibbled in pits	2.5 x 2 mts	3-4 seeds/pit	30 x 30 cms	1 kg of FYM and 100 gms neem cake	Compost or vermicompost 250-500 gms / plant	140-150 days
Beans Phaseolus vulgaris	July- January	Seeds to be dibbled in pits	2 x 2.5 mts	3-5 seeds/pit	30 x 30 cms	1 kg of FYM and 100 gms of Neem cake per pit	Vermicompost- 500 gms / pit	6-7 months
Bitter gourd Momordica charantia	Dec – Mar	Seeds to be dibbled in pits	2 x 2 mts	3-5 seeds/pit	0.5 x 0.5 x 0.5 feet	1 kg of FYM and 100 gms of Neem cake per pit	Vermicompost – 500 gms/pit	90-125 days
Bottle gourd Lagenaria siceraria	July-Aug Nov	Seeds to be dibbled in pits	2 x 2.5 mts	3-5 seeds/pit	1 x 1 x 1 feet	1 kg of FYM and 100 gms of Neem cake per pit	Vermicompost- 500 gms/pit	120-150 days
Brinjal Solanum melongena	Dec-Jan	Sown in nursery and transplanted after 28-30 days	75 x 60 cms	2 gms/cent	-	100 kgs of FYM and 1-1.5 kgs of Neem cake	Groundnut cake – 1 kg/cent	165-180 days
Carrot Daucus carota	July-Feb	Seeds to be sown in ridges	30 x 10 cm	16 gms/cent	-	100 kgs of FYM and 1-1.5 kgs of Neem cake	Vermicompost 10 kg /cent	100-120 days
Chilli Capsicum annuum	Nov-April	Sown in nursery and transplanted after 40-45 days	30 x 30 cms	5-6 gms/cent	-	Farm Yard manure 100 kgs or compost 50 kgs with 2 kgs of neem cake	25 kgs vermicompost with 4 kgs of well decomposed poultry manure	210-240 days
Cluster beans- Cyamopsis tetragonoloba	July-Aug Dec	Seeds to be sown in the ridges	45 x 30 cms	40-50 gms/cent	-	Farm Yard manure 100 kgs or compost 50 kgs with 2 kgs of neem cake	-	90-105 days
Coriander Coriandrum sativum	June-July Nov	Seeds to be sown in ridges	20 x 15 cm	50-100 gms/cent	-	100 kgs of FYM and 1-1.5 kgs of Neem cake	Vermicompost 10 kg /cent	30-40 days
Cucumber Cucumis sativus	June-July April	Seeds to be sown in ridges	60-90 cms	4 gm/cent	-	100 kgs of FYM and 1-1.5 kgs of Neem cake	Neem cake – 1 kg/cent	90 – 100 days

Curry leaf <i>Murraya koenigii</i>	June-July	Seedlings to be raised in the nursery. One year old seedlings to be transplanted in the main yield	10-12 feet	-	1.5 x 1.5 x 1.5 feet	3 kgs of FYM and 300 gms Neem cake before planting	-	20 years
Drumstick <i>Moringa oleifera</i>	June-July	Cuttings to be planted in pits	10-12 feet	-	1.5 x 1.5 x 1.5 feet	3 kgs of FYM and 300 gms Neem cake before planting	-	10 years
Lady's finger <i>Abelmoschus esculentus</i>	Jan-Feb July-August	Direct sowing in the main field	30 x 30 cms	40 gm/cent	-	100 kgs of FYM and 1-1.5 kgs of Neem cake	Neem cake -- 1 kg/cent	100-110 days
Pumpkin <i>Cucurbita maxima</i>	July-Jan April	Seeds to be dibbled in pits	2 x 2.5 mts	3-5 seeds/pit	1 x 1 x 1 feet	1 kg of FYM and 100 gms of Neem cake per pit.	Compost or vermicompost 250-500 gms / plant	Varies according to variety
Radish <i>Raphanus sativus</i>	June-July Plains	Seeds to be sown in ridges	15 x 10 cm	40 gm/cent	-	100 kgs of FYM and 1-1.5 kgs of Neem cake	Vermicompost 10 kg /cent	45-60 days
Ribbed gourd <i>Luffa acutangula</i>	July-Dec April	Seeds to be dibbled in pits	2 mts between pits	3-4 seeds/pit	-	1 kg of FYM and 100 gms of Neem cake per pit	Vermicompost- 500 gms/pit	125 days
Snake gourd <i>Trichosanthes cucumerina</i>	July-Dec April	Seeds to be dibbled in pits	2 x 2.5 mts	3-5 seeds/pit	30 x 30 cms	1 kg of FYM and 100 gms of Neem cake per pit	Vermicompost- 500 gms/pit	135-180 days
Tomato <i>Lycopersicon esculentum</i>	Dec-Jan June Oct-Nov	Sown in nursery and transplanted after 28-30 days	60 x 75 cms	2 gm/cent	-	100 kgs of FYM and 1-1.5 kgs of Neem cake	Groundnut cake -- 1 kg/cent	125-145 days
Vegetable cowpea <i>Vigna unguiculata</i>	June-July Mar	Seeds to be sown in ridges	45 x 15cm x 30 cm	80 gm/cent	-	1 kg of FYM and 100 gms of Neem cake per pit	Vermicompost- 500 gms/pit	75-90 days
Watermelon: <i>Citrullus lanatus</i>	Dec-May	Seeds to be dibbled in pits	2 x 2mts	3-4 seeds/pit	30 x 30 cms	1 kg of FYM and 100 gms of Neem cake per pit.	Compost or vermicompost 250-500 gms / plant	120 days

8. List of plants to be planted based on nutrition

Nutrition	Vegetable/ fruit
Proteins	Broccoli, Spinach, Banana , Strawberry, Water melon
Calcium	Almond, Broccoli, Chinese cabbage, Kale, Orange
Iron	Dark leafy greens , carrot
Vitamin A	Asparagus, Cauliflower, Cabbage, Carrot, Lettuce, Mango, Sweet potato
Thiamin	Green leafy vegetables (Asparagus, Avocados, Broccoli, Cabbage)
Riboflavin	Mushroom, Plantain, Spinach , Apple, Tamarind
Niacin	Asparagus, Broccoli, Mushrooms, Pea nuts
Vitamin C	Grape fruit, Guava, Lemon, Sweet potato, Tomato , Water melon , Drum stick leaves, spinach
Total Folate	Asparagus, Broccoli, Lettuce, Spinach , Strawberries , Beets
Vitamin B Complex	Amaranth
Copper	Yam and radish
Zinc	Sweet Potato
Iodine	Tapioca

9. Companion crops

Vegetable	Companion Plant	Don't Plant Together
Asparagus	Tomatoes	None
Beans (Bush or Pole)	Celery, corn, cucumbers, radish, strawberries and summer savory	Garlic and onion
Beets	Bush beans (not pole beans), cabbage, broccoli, kale, lettuce, onions, garlic	Pole beans
Cabbage Family (cabbage, broccoli, kale, Brussels sprouts)	Beets, celery, dill, Swiss chard, lettuce, spinach, onions, potatoes	Pole beans
Carrots	Beans, tomatoes	None
Celery	Beans, tomatoes, cabbages	None
Corn	Cucumber, melons, squash, peas, beans, pumpkin	Tomatoes
Cucumber	Beans, corn, peas, cabbage	None
Eggplant	Beans, pepper	None
Melons	Corn, pumpkin, radish, squash	None
Onions	Beets, carrots, Swiss chard, lettuce, peppers	All beans and peas
Peas	Beans, carrots, corn, cucumbers, radish, turnip	Garlic, onions
Potatoes	Beans, corn, peas	Tomatoes
Squash	Corn, melons, pumpkins	None
Tomatoes	Carrots, celery, cucumbers, onions, peppers	Corn, potatoes, kohlrabi

10. Care of poultry birds

1. The birds can be fed with maize, broken rice, bajra, jowar, ragi, and rice bran
2. Mix the feed with little bit water for making a mash before giving it to the birds
3. For getting more and bigger eggs the birds should be fed with dried fish powder, scallop/snail powder, earthworm, and termites.
4. Waste food items in the house should be given to the birds.
5. It is advisable to keep the birds in a secured space free from predators while letting them gain weight in the confined space.
6. The chicks up to the age of 21 days, can be kept in bamboo baskets for protection and safekeeping.
7. The birds can be kept inside a bamboo made enclosure or a separate shed according to the financial condition of the rearer.
8. The shed can be made with locally available raw material (timber and bamboo), each bird needs a space of 1 sq ft, and the shed must not be overcrowded.
9. The shed should be well lit with ventilation. There must be facility to clean the shed on a timely manner
10. Nearby shrubs should be cleared to check snakes. Application of ash and lime keeps the lice and ticks in check.
11. MGNREGS has the provision of creation of individual livelihood asset (here the poultry shed) with the following estimates
 - a. 14 female birds, with the sole purpose of eggs: 44 sq ft. = Rs. 30,000
 - b. 48 large indigenous birds: 70 sq ft. = Rs. 36,000
 - c. 48 large indigenous birds: 118 sq ft. = Rs. 52,000
12. Market: The birds should always be sold by weighing and not by mere estimation of weight.

11. Care of goats

1. Each adult goat consumes about 2 to 3 kgs of green leaves/ fodder
2. *Ficus racemosa*, *Acacia nilotica*, *Ficus spp.*, *Azolla*, *Stylo hemata*, *Napier grass*, *gliricidia*, *Ficus spp.*, *radish leaves*, *jackfruit leaves*, *moringa leaves*, *mango leaves*, *maize leaves* are nutritious fodder for the goats. The leaves can be dried to give during the lean season.
3. The cover of legumes is a good source of protein and can be given to the goats.
4. Use of mineral mixture for the goats will increase the shine on the animal, increase milk yield, help in pregnancy, increase urea content in the dung, and helps to avoid the animal drinking its urine.
5. Black salt can be given to animals who have improper digestion and is underweight. It helps lactating animals.
6. Urea Molasses Block should be given to animals having mostly dry fodder.
7. The newborn kid should be wiped off at the nose and mouth portions.
8. The umbilical cord should be cut at a distance of 4.6 cms with a new blade with the application of iodine for 5 days.
9. The newborn should always be fed with colostrum for immunity.
10. The tits of the lactating animal should be washed with Dettol or potassium permanganate.
11. The goat is a very adaptable animal for accommodation. However, it is good to have a separate goat shed if reared for an economic purpose as it protects the animal from predators and nature. It keeps the animal clean and hygienic, hence less susceptible to diseases. This helps the animal to rest and recuperate.
 - a. The shed should have a proper roof to a height of 8 to 9 feet to protect from sun, heat, and rains,
 - b. The floor should have a slope for easy drainage
 - c. The walls should not have any opening to protect from snakes
 - d. Every day, the shed should be cleaned and the dung and urine to be used for making compost
 - e. An enclosure could be made to keep the goats during daytime and deworming and vaccination.
 - f. A water pane and a feeder can be kept for the animals
12. MGNREGS has the provision for the creation of individual livelihood asset (here the goat shed) with the following estimates
 - a. 3 does and 6 other goats: 45 sq ft. = Rs. 34,000
 - b. 5 does and 10 other goats: 97 sq ft. = Rs. 43,000
13. Market:
 - a. The castrated bucks should be sold within the age of 2 years.
 - b. Goats with growth issues, old female and diseased goats should be sold off immediately
 - c. Healthy Does should be bought at the age of one year
 - d. The buck should have equal testicles and should not be aggressive while mating
 - e. Inbreeding should be avoided at any cost.

F. No. K-11060/01/2019/NRLM(Livelihoods) (E- 366609)

Government of India
Ministry of Rural Development
Department of Rural Development
(RL Division)

7th Floor, NDCC II Building
Jai Singh Road, New Delhi-110001
2nd August, 2019.

To

The State Mission Director of all SRLMs

Sub: Custom Hiring Centres (CHCs) Operationalization Manual

Madam / Sir,

I am to say that DAY-NRLM has been promoting the CHCs under the farm livelihoods promotion strategy wherein the primary focus is on productivity enhancement and also on drudgery reduction of women farmers. So far more than 10,000 CHCs/tool bank have already been established in the country and these units are being managed by the women SHG members. Custom hiring of agricultural equipment is seen as an appropriate institutional arrangement which can promote mechanisation of agrarian operations on small farms. It is being envisaged that an adequately managed CHC should be a self-sustaining business model.

To bring a common understanding on establishment of CHC under DAY-NRLM, this Ministry has approved a manual on operationalization of Custom Hiring Center (CHCs). The "CHC Operationalisation Manual" is attached herewith for your kind information.

Encl: CHC operationalization Manual

Yours faithfully,


(Anita Baghel)
Director (RL)

Copy to Principal Secretaries of all States

Custom Hiring Centres (CHCs) Operationalisation Manual

1. Why CHC and the need for it?

Under Farm Livelihoods interventions, the core focus has been to promote sustainable agriculture, where the inputs are localised, risks are mitigated, productivity is enhanced, and food and nutritional security is ensured. Hence the net income of the family is increased. In sustainable agriculture, NRLM is focused on the agroecology by promoting low-cost, sustainable practices such as Non-chemical Pest Management (NPM), Integrated Nutrient Management, the inclusion of cultural practices, resilient climate practices, soil health improvement/ management, in situ water conservation, diversified poly crop model, and promoting the indigenous variety of seeds.

DAY-NRLM recognises the issue of *drudgery* related to women in farm operations. It has underpinned the fact that the tasks, which involve the highest stress and drudgery, are allocated to women, e.g., transplanting, weeding, manual irrigation, and harvesting of crops. Long hours of exposure to such strenuous tasks affect adversely to women health. Therefore, one of the primary focus has been on the *reduction of drudgery* in farming operations for women, by enabling access to affordable farming equipment for women farmers.

In rural India, farm productivity suffers because of the plethora of issues, and one amongst those is absence and timely availability of farmer-friendly agricultural equipment. Usually, small and marginal farmers do not own equipment required for different farming operations and typically borrow/rent them from well-off farmers in their village. However, the equipment is available to them only when they are not in use by the owners. This dependency many times, is detrimental to the intercultural operations and adversely affects the yield. But the cost of such equipment is not affordable by smallholders in many cases or does not make any economic sense to buy them. It calls for sharing of the cost of equipment by innovative institutional arrangements.

In the recent past, custom hiring of agricultural equipment is seen as an appropriate institutional arrangement, which can promote mechanisation of agrarian operations on small farms. Tool Banks or Custom Hiring Centres (CHC) store such required equipment centrally for the smallholders and make those available at affordable rates. Since its inception, DAY-NRLM has focused on the promotion of CHCs, primarily as a means of drudgery reduction for the women. So far about 10,000 CHCs are in operation across the country. The women SHG members are successfully managing all these CHCs.

It is being envisaged that an adequately managed CHC should be a self-sustaining business model. From the rental revenue it generates, the manager of the CHC, i.e., the CRP/ CSPs (Krishi Sakhi/ Pashu Sakhi) would be able to earn an income, the equipment can be maintained/ repaired/ replaced, and further resources can be procured for the users as per need and requirements. The objective would be to keep the inventory of equipment such that there is optimum usage of the equipment during the season, without letting it remain idle.

The DAY-NRLM has been helping set up such CHCs along with the promotion of agro-ecology across the country. The CHCs have been set up with budgets allocated through the Annual Action Plan, Mahila Kisan Shasaktikaran Pariyojana (MKSP), and through convergence with Sub-Mission on Agricultural Mechanisation (SMAM). The CHCs have been found beneficial for improving productivity and reduction of drudgery; there is a need for a guideline for the establishment, operation, and management of such CHCs. This document may be referred to as a reference document; however, the SRLMs may add up essential items felt necessary according to the local conditions.

2. Custom Hiring Centres under DAY-NRLM

2.1: The uniqueness of the CHCs promoted by the DAY-NRLM is the CHCs are initiated and managed by Community based Organisation for sustainability. It is based on the local needs of the women farmers with an intention to reduce drudgery. The focus on storing of women friendly equipment in the CHC is another plus point of the DAY-NRLM promoted CHCs.

A CHC is a convenient, one-stop solution for farm equipment needs of constituent SHG members (women farmers/ Mahila Kisan) under the DAY-NRLM. It is meant to offer rental of agricultural equipment at affordable rates. The CHCs would not be uniform in composition across the country and should be customised as per the local agricultural requirements of the fellow women farmer and the crops cultivated in the region. The clientele base also would determine the quality and power inputs of the equipment. However, the fundamental objective would be to provide equipment which is women farmer friendly, cost-effective, locally repairable and would be used by a large number of farmers. A CHC at a nascent stage should have few equipment or small tools, which are easily maneuverable and housed with any existing house/ facility of the Village Level Organisation.

2.2: The concept of equipment hire is not new, which started during the 1960s in the name of Agro Service Centres (ASC). The ASCs provided inputs and equipment as a one-stop solution under the aegis of government, private companies, and CSOs. The primary difference, however, has been in the ownership of the facility, functioning, and location of the centres. CHC is community owned, managed, created as per the need of the community with a focus on storing equipment and not on other inputs such as fertilizer or pesticides. While specifying the scope makes the operation smoother, it allows the farmers to be satisfied with their smallholder specific equipment needs. The equipment stored, are enlisted with participatory processes as per the low cost, ease of handling for women farmers, with a strong focus on sustainability. Primarily the CHC should engage in hiring out agricultural equipment on a rental basis. Before the start of the activities of the CHC, one should be cautious in management, cost, benefit, and sustainability of related activities.

3. Objectives of setting up a CHC under DAY-NRLM

- a) Reduce the drudgery of women by the supply of women-friendly mechanical equipment
- b) To make available various farm equipment to small and marginal women farmers

- mobilised under DAY-NRLM
- c) Lower the factor of production cost related ownership of the otherwise expensive equipment
 - d) Ensuring equipment availability in an entrepreneurship mode with an articulated business plan, so that it is operated sustainably

4. Users of CHC

The primary users of the CHC are the women farmers (Mahila Kisan) who are also the SHG members mobilised under the umbrella of DAY-NRLM. The essential criteria would be that the farmer is part of the agro-ecological extension mechanism under DAY-NRLM. However, the equipment is available to other *farmers (non-members of women SHG)* on a first come first serve basis and at the sole discretion of the management of the CHC, i.e., VO livelihood subcommittee.

5. Planning for Setting up of CHC

5.1 Groundwork

Before deciding on setting up of a CHC three key issues need to be determined; i.e.

- a) Where to set up the CHC?
- b) What are the equipment (the inventory) need to be stored in the CHC?
- c) To ensure the sustainability of the operations, who will manage it?

Necessary pre-conditions, which are of an advantage in setting up of a CHC:

- d) If there is a space available for free/low of cost (VO building, Panchayat, unused/ vacant spaces)
- e) Availability of good quality CRP (Krishi Sakhi/ Pashu Sakhi)
- f) There is no formal/ informal market available for rental of equipment

5.2 Area of Operation & Composition of custom hiring Centre

Custom hiring centres will be established as per the SRLM AAP in villages having low farm power availability and large area under small and marginal holdings. There are certain groundworks, which needs to be taken up before setting up of CHC. In every village, where farm livelihoods have been taken up as an intervention should have a CHC, depending on the population of the village. It is also assumed that the village organisation (VO) has been formed and a VO level livelihood subcommittee is already in place. The formation of a CHC can be an entry point activity for initiating farm livelihood activity of the village. Before the setting up of a CHC, a thought out business plan should be in place. The concerned SRLM may identify the villages and incorporate the list in their Annual Action Plans. Therefore, the SRLM is deciding on the number of CHCs to be set up and the villages as per their rollout plan and should put it in their annual action plan.

- a) Each CHC will have the capacity to cover a minimum area of 2 ha/day and at least 50 ha in a cropping season. Machines can be hired for entire operations from land development to residue management
- b) Each CHC will be set up on specific crop based, cost-based and cluster-based approach

- c) Each CHC will have small crop specific machinery suitable for the local requirement for mechanised farming under small and marginal holdings.
- d) In feasible CHC locations following interventions may be taken up which may help demonstrating the activity and also generating additional income:
 - a. Composting activities such as NADEP compost pit, vermi compost & other bio-fertiliser/concoction production.
 - b. Plastic waste management through activities like shredding, pressing etc.

The following parameters may be chosen for setting up custom hiring centres:

- e) Low farm equipment availability.
- f) Small and marginal operational Holdings
- g) Less productivity of food grains but potential to enhance productivity.
- h) The SHGs and VOs promoted under the DAY-NRLM to have convergence with the Ministry of Agriculture, and Farmers Welfare implemented Sub-Mission on Agricultural Mechanization (SMAM) to avail the benefits of SMAM in a transparent and time-bound manner.
- i) The SRLMs through their Annual Action Plan should estimate the physical outreach and financial requirement for establishing CHCs.
- j) ICAR institutes /SAUs and KVKs functioning in the district should be used for imparting training to the farmers and extension personnel.

6. Management and governance of the CHC

- a) The ownership of the CHC is vested with the VO/CLF.
- b) On behalf of the VO, the livelihood subcommittee will look after the governance of the CHC and formation of laws and statutes.
- c) The day to day running of the CHC may be entrusted to the Krishi Sakhi for smooth operation and sustenance of the revenue model; therefore, the capacity of Krishi Sakhi to operate the CHC should be assessed as she has to maintain the books of records properly. This will also ensure the sustainability of the CRP.
- d) The Krishi Sakhi has to closely interact with the VO livelihood subcommittee for any damage, repair, replacement of any equipment.
- e) The Krishi Sakhi will present the performance of the CHC before the VO every month.
- f) There should be a proper grievance redressal mechanism to be handled by the VO

7. Choice and Inventory of equipment

7.1: A **need assessment** exercise through a participatory process with the women SHG members in the village, who are engaged in the agriculture to be conducted in the village to understand the type and number for each equipment for particular CHC at the village level; A soil testing kit may be kept at the CHC level. The block level livelihood staff of the SRLMs should identify the areas of the low ratio of farm power availability /areas with a large number of small and marginal holdings for implementation of farm mechanization components. If a Pashu Sakhi is operating in the same area and is performing vaccination

services, a small refrigerator may be kept at the CHC subject to availability of adequate power supply to maintain the cold chain.

7.3: The block SRLM staff along with VO level livelihood subcommittee should do a **benchmarking of the existing rates of the hire** of equipment for hire in the area.

7.3: Inventory of equipment: The block livelihood staff would also collect a long list of equipment suitable for the area by consultation with the target beneficiaries, agriculture department, KVK, or both. Necessary care should be taken for the choice of equipment to cover essential agricultural operations, (land preparation, intercultural operation, water management, plant protection, harvesting, and post-harvest activities). The inventory of the equipment at the initial stage can be in the form of a *tool bank*, where there could be of few mechanical weeders (appropriateness should be checked), sprayers, dusters, and winnows for post-harvest operations. The decision of the inventory (depends upon the needs assessment, equipment inventorisation, and demand of the community) should remain with the livelihood subcommittee of the Village Level Organisation; consultation may happen with the livelihood sub-committee of the federation and block level staffs of the SRLM. If the constituent farmers under the VO have more than 50 acres of land under farming in the area, then the inventory of the equipment may increase as per the requirement. For example, the weeding in paddy as per line transplanting or the System of Rice Intensification, there is an element of weeding for 3 to 4 times during the plant growth period. If the area under paddy is 10 acres; and the total person-days required for weeding is 20 person-days; the window for finishing the operation is five days; then the CHC should have at least four mechanical weeders with a provision of a spare weeder in case of breakage. A similar exercise is required for inventorying the equipment and the numbers needed at the particular CHC. Similarly, the expansion of the inventory of equipment is dependent on the number of farmers and the area under cultivation. The inclusion of some members/ demand from the community in the VO should entail in expansion in the inventory of the equipment of the CHC.

Table 1 Category of equipment

Value \ Usage	Low	Medium	High
Low	X	X	X
Medium	√	√	X
High	√√	√	√

There should be a conscious decision on the equipment to be stored, and the above matrix is an indicator where the low value and high usage equipment should be stored for sure. Equipment with the high cost and low usage should be avoided. The access to that equipment is not there with the smallholders. The equipment, which is of high value and high usage, should be maintained with the utmost care. All moving parts should be adequately oiled. Every CHC should have a list of critical equipment needed for agricultural operations during the peak season. A detailed list of equipment for the different

agricultural operations has been provided in the revised operational guidelines of the SMAM. Detailed pattern of assistance/ subsidy has been provided in the document with special provision for SC, ST, Small & Marginal farmers, Women, and NE States beneficiary.

Table 2 Suggested type of equipment for CHC

Classification of the CHC	Number of farmers	Size of operation	Tillage operation	Sowing operation	Intercultural operation	Irrigation Operation	Spraying Operation	Post-harvest activity and Miscellaneous
Small	10-20	Tool bank	X	Dibbler, simple seed drills	Weeders	X	Sprayers and dusters	Winnow, separator
Medium	20-50	CHC	Ploughs, levellers, pulverisers	-Do-	Power Weeder. Mechanical weeders, pruners	Portable pump sets powered by preferably solar energy)	-Do-	Harvesters, reapers
Large	50-100	CHC	Power tiller/ Tractor	Transplanter	-do-	-do-	-Do-	All above+ Grader/ Sorter
*Wherever possible, use of renewable energy, i.e. solar, wind, hydel should be promoted								

7.4 Exposure visits for VO livelihood subcommittee and CRPs

The state may organise exposure visit/s of some of the VO level livelihood subcommittee members and the CRPs to any nearby operating CHC. Some of the state livelihood team members along with few community leaders may be sent to CIAE, Bhopal or for NE states RRTC, Umran, Meghalaya or any established CHC run by agricultural universities, NGOs, or by the department of agriculture.

7.5 Procurement of equipment

Standard community procurement norms of DAY-NRLM shall be followed. The procurement of equipment should be from the approved suppliers/manufacturers. However, only tested equipment from either Farm Machinery Training & Testing Institutes (FMTTIs) or designated Institute from Department of Agriculture are eligible for subsidy¹ for establishing the custom hiring centre under SMAM. Detailed list of equipment and extent of financial assistance is provided as annexure (Page number 36: Component No. 3: Financial Assistance for Procurement of Agriculture Machinery and Equipment) in the

¹ <https://farmech.dac.gov.in/farmfaqs.htm>

recently revised Operational Guidelines of the Sub Mission on Agricultural Mechanisation (2018-19)².

Also, some equipment, which might not be useful and relevant in the locality may be changed by seeking permission from the appropriate authorities, e.g. in an undulating terrain, where there are smallholders, and there is a provision of tractor; the VO may request for relevant machinery such as power tiller, reaper, or thresher, which would be economically viable and appropriate. For small tools and equipment community procurement manual of the DAY-NRLM may be consulted, whenever applicable.

7.6 Insurance of equipment

Equipment with high value such as tractor, power tiller, reaper, and harvester which can be insured from an insurance company should be insured as per norms. Government of India has repealed the Dangerous Machines (Regulation) Act, 1983, Act No. 35, the year 1983 vide Gazette of India Notification no. 4 of 2018 dated 5.1.2018. Hence, to look into the safety aspects of the farmers/operators while operating various agricultural machinery, it is advised that the users/ CRPs may be suitably encouraged to obtain “Pradhan Mantri Suraksha Bima Yojna” for himself/herself and also for the actual operator who operates his/her agricultural machinery. “Pradhan Mantri Suraksha Bima Yojna” which covers the various benefits to the person insured like death, total irrecoverable loss of eyes, hand or feet, etc. during operation of any agricultural machinery. It can also be extended under “Pradhan Mantri Jeevan Jyoti Bima Yojana” which provides coverage in case of death due to any reason for persons between the age group of 18 to 50 years.

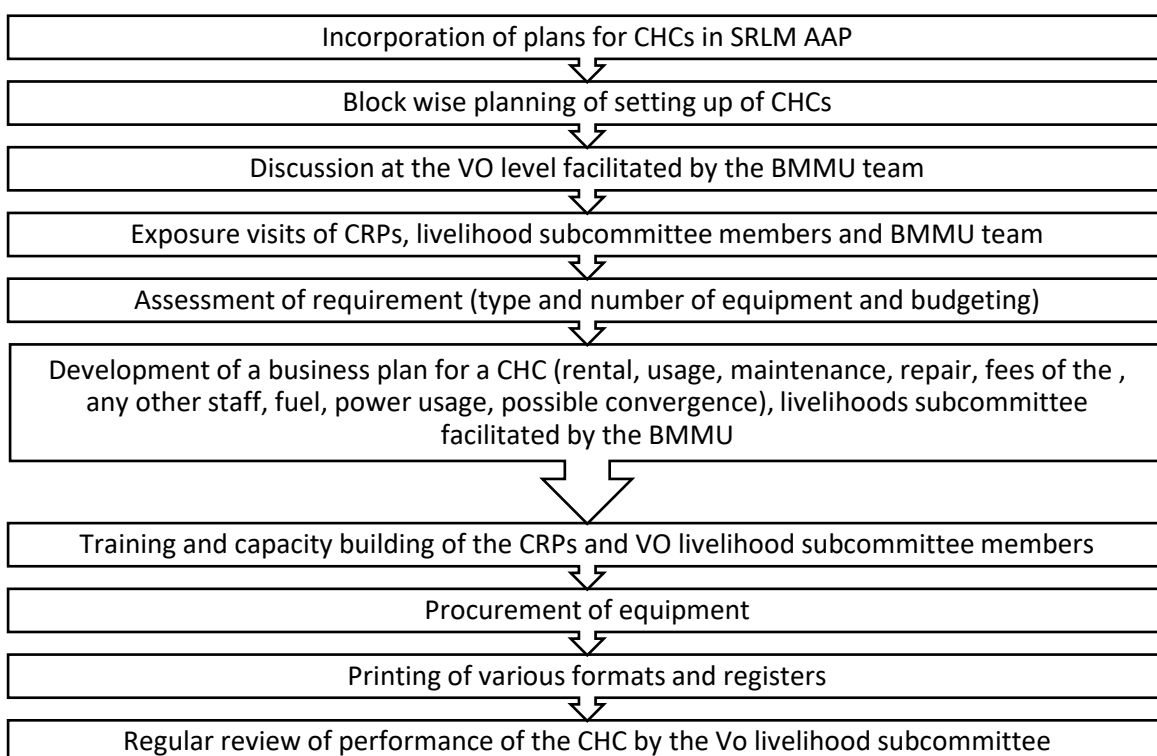


Figure 1 Steps for establishment of the CHC at a VO

² [https://farmech.dac.gov.in/SMAMNewGuidLine/FF%20PDF%20SMAM%20FF%20\(REVISED%202018-19\).pdf](https://farmech.dac.gov.in/SMAMNewGuidLine/FF%20PDF%20SMAM%20FF%20(REVISED%202018-19).pdf)

7.7 The housing of the CHC and storage of equipment

The block staff along with VO will decide where the CHC would be housed. The place for housing should be secured with proper well-secured doors and windows and adequate lock and key mechanism. The entry should be large enough to move equipment in and out of the CHC. Provision of electricity is preferred, with well-lit conditions. The facility could be rented, and the rent should not exceed 10% of the projected rental revenue. Subsequently, the VO may take up the matter with the Gram Panchayat to set up the shed under MGNREGS. If a VO building exists, or is proposed to be constructed, and planned to be built, then provision should be made for CHC within the premises. Ideally, the floor should be cemented, raised, to prevent flooding or intrusion of reptiles or wild animals. The flooring should not be damp, and the facility should be well ventilated. The premises should have a big/ wide courtyard to store/ keep large equipment, including tractors, power tillers, reapers. The CHC should be preferably accessible from the side of a motorable road. All the equipment should be vertically stored. All moving parts must be lubricated and appropriate application of solutions to be used to control corrosion of equipment.

7.8 Demonstration and training of CRPs on handling and maintenance of the equipment

As the equipment procured and used by the women farmers could bring in some unfamiliarity for the CRP, they will require some training in this regard. The training to make the CRPs understand about repair, maintenance and other nuances must be done in advance. The training and capacity building of the CRPs can be done in the arrangement of support from agricultural universities, Krishi Vigyan Kendras (KVKs), and other competent agencies present in the district/ state.

Crop-specific operations approach may be adopted in the same plot of land. At least one demonstration may be carried out in each crop. The demonstration site should be easily accessible for the farmers and the extension workers. It should not be in an isolated field. The selected site should be the representative of the soil type of the area. The demonstration should be conducted with the help of the Agricultural functionaries/State Agricultural Universities, ICAR Centres through their Regional Research Stations/KVKs located in the area.

The exposure and training on CHC have a detailed curriculum and various topics under the Sub Mission on Agricultural Mechanization scheme. Under the *annexure IV-A* of the recently revised Operational Guidelines of the Sub Mission on Agricultural Mechanisation (2018-19) the topics are mentioned. Under the Annexure IV B of the same guideline trade based skill development training are mentioned. The User level topics on equipment dealing are provided for free. Topics such as Management, Repairing, and overhauling of equipment training are provided for a fee. A state-wise detailed list of training institute is provided in the document, however, for entire north east there is a lone training centre at Gangtok, Sikkim.

The training topics of importance for DAY-NRLM supported CHC are as per the following

1. Introduction to various equipment
2. Moving parts, moving parts, breakage issues, lubrication, and safe handling
3. Correct way of operation for drudgery reduction and efficient operation
4. Maintenance and repair basics
5. When to repair an equipment
6. Proper storage and record keeping

The training component related to management and record keeping aspects of the CHC can be dealt separately by the SRLMs. The details of the curriculum has been provided in Annexure-5.

8. Issuance of equipment, return, maintenance, repair, and replacement procedure

Equipment at the CHC will only be **available to the villagers** where the CHC is located.

8.1 Issuance of equipment

- a) Villagers will have to register their demand for equipment/type/ and the days of the requirement at the CHC with a requisition slip and the CRP records it in Requisition Register. It will have the date and time of booking, the need for the equipment (date, days, hours), and the payable amount for the same. They will be provided with the equipment according to the recorded list on a first come first serve basis. The priority would always be given to the SHG members; if the supply is exceeding the demand or there is the availability of equipment, nonmembers could be given the equipment.
- b) An availability register of the equipment should be maintained. The SRLM may develop a format as per one example provided as annexure. The members should be encouraged to register their minimum 3 days in advance and a maximum 6 days in advance clearly stating the exact date of hire and the number of days of hire. Any overwriting in the register should be avoided.
- c) The rental of the equipment needs to be decided by the CHC management as per the local prevailing rates of hire. It is mentioned earlier that the block level teams should do a benchmarking before setting up of the CHC. As most of the potential users of the CHC are smallholders, their requirement of use can be limited for a few hours. Also, the same equipment can be used by another farmer/s on the same day. Therefore, hourly charges may be fixed for the equipment, where the lease value of the equipment should never be more than the prevailing market rates. The Rental for one day of the equipment will have to be paid in advance. In case, the farmer is not able to pay in advance, an application from her concerned SHG may be presented to the CHC for late payment of the fees. For the user who is not part of the DAY-NRLM promoted SHGs, caution money needs to be collected, which is refundable during the time of the return of the equipment. One day rent for the equipment will be charged for 24 hours. Receipt of rent will be provided. Farmers are urged to demand the rent receipt from Krishi Sakhi.
- d) The farmer cannot keep the equipment for more than the fixed number of days. If the equipment is retained for an extended period, one and half times rent will be payable from the first day. However, in case of breakdown, excessive rainfall, power cuts regular rent will be applied.
- e) Krishi Sakhi will not be responsible for injury caused due to improper and negligent use of the equipment by the farmer.

- f) The farmer is responsible for taking the equipment from the Centre and returning it in good condition at the Centre. The situation is to return the equipment in the same state/condition. At the time of the issue of the equipment, the shape of the equipment needs to be reviewed by the Krishi Sakhi and the renting farmer. In case of any problem, it would be noted in the issue register and the receipt voucher issued to the farmer.

8.2 Return policies

- a) At the time of return, the condition of the equipment is reviewed again, and assessment is done for any possible damage to the equipment. The farmers will repair damage caused to the equipment due to misuse or improper use of their cost.
- b) Complaints and suggestions on the functioning of CHC can be given in writing in the register available at CHC. The Krishi Sakhi will consult VO, and higher level organisation or sometimes BMMU improves the functioning of CHC.

8.3 Maintenance and repair of equipment

All the hired equipment should be returned to the CHC after cleaning and suitable to be given to the next user. Also, there is a requirement to understand the moving parts and need to maintenance and repair of it. If maintenance is not done regularly and properly, the equipment will become useless. The moving parts must be covered at all times and care must be taken to lubricate it properly.

In case the equipment is beyond repair and need to be replaced, the CRP should inform the CHC management subcommittee about the irreparable condition of the device and need of replacement. The VO should follow the same procedure of community procurement for replacement of the same. Maintenance of the equipment needed to be done regularly by the Krishi Sakhi; however, any major maintenance, exceeding 20% of the cost of the equipment must be reported to the CHC subcommittee.

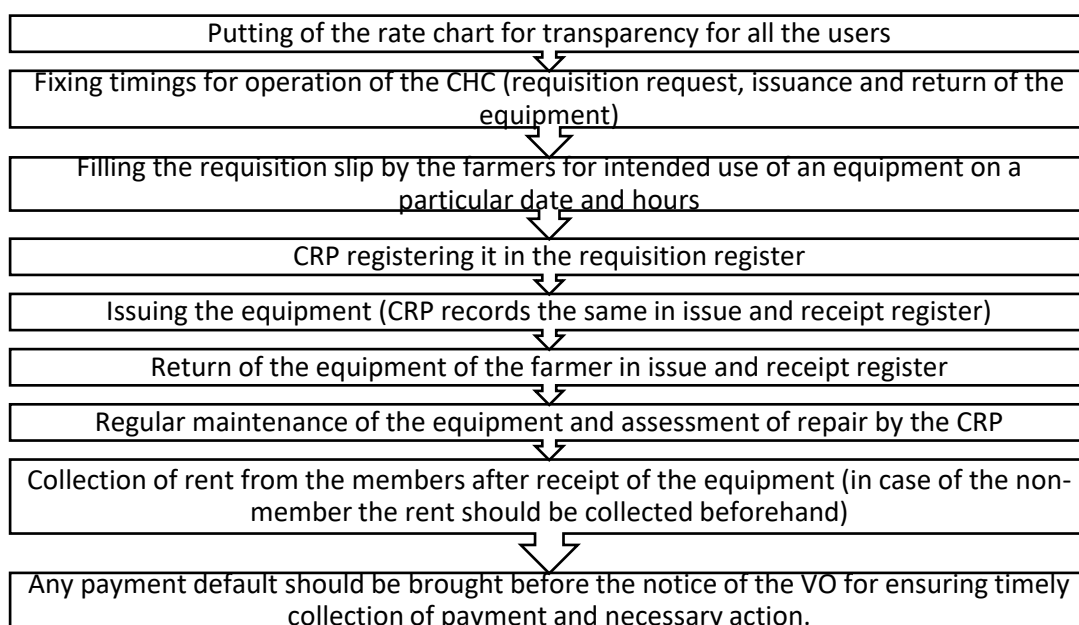


Figure 2 Standard Operating Procedure of a CHC

The **net revenue** is collection from rentals subtracted with the running cost of the CHC. The net revenue needs to be deposited to the VO regularly. It is understood that the lease of the equipment is a season-specific activity and hence if required the fees need to be deposited to the charges in a weekly manner. The VO, in turn, would be depositing the money in their existing bank account. A separate ledger should be maintained at the VO level for income and expenses of the CHC. As per the revenue of the CHC and the amount of time spent by the Krishi Sakhi for the operation of the CHC an honorarium should be decided as per the VO.

There should be a proper **incentive-based system** for the CRP to **generate resources** from the CHC to sustain their activities. The model should be such that up to a certain level of revenue, there is an incentive for CRP to generate incremental revenue. This revenue should be calculated after deducting the operational cost.

Ideally, not more than 40%-50% of the revenue of the CHC should be the honorarium for the CRP; 15%-25% for repair and maintenance; and rest for replacement or procurement of new equipment. The Krishi Sakhi should give the invoices and requests for maintenance and repair of the equipment to the CHC management subcommittee. The funds for maintenance and repair should be immediately delivered to the Krishi Sakhi by a fast track process. For replacement of the equipment, a decision should be taken in the VO meeting, and a resolution adopted to replace equipment.

9. Running of the CHC

9.1 Record keeping and accounting procedure

- i. Regarding record keeping and maintenance, training and capacity building should be done for the CHC management subcommittee members and the Krishi Sakhis done at the block level, supervised by the block level livelihood teams.
- ii. The accounting procedures for maintenance of the books would be as per the general norms set and implemented by the DAY- NRLM

Registers/ records to be maintained at the CHC

Various books of records, registers, need to be kept at the CHC level for smooth operations, reporting, monitoring, and evaluation. The different documents need to be kept at the CHC are

- a) **Rules and statutes of the CHC:** The book would state the membership clause for the CHC. The membership fees that need to be collected. The regulations of hire, repair, and maintenance of the CHC. The charges for hire of different equipment. The role of the CRP, the livelihood subcommittee, and the SHG members would be given in details in the document.
- b) **Asset register:** As per the (GAAP) an asset register is a list of the assets owned by the CHC. It contains details about each of the equipment, their value, and

location. The register shows the quantity and value of the different equipment stored in the CHC.

- c) **Cash book and ledger:** A **cash book** is a financial journal that contains all **cash** receipts and payments (with Receipt and payment vouchers), including bank deposits and withdrawals for the CHC. Entries in the **cash book** are then posted into the general ledger.
- d) **Suggestions / Complaint register:** For grievance redressal, there should be a register, which will have the suggestions and complaints of the users. This needs to be reported in the monthly VO meeting, where the suggestions and complaints must be discussed and way forward should be drawn.
- e) **Equipment Requisition register:** The register will record the demand for equipment/type/ and the days of the requirement at the CHC with a requisition slip and a **Requisition Register** from the villagers
- f) **Availability, Booking, and Movement register (Equipment wise):** The objective of this register is to use all the equipment optimally, have a time slot for maintenance and repair for each of the equipment, booking of the equipment and collect hire charges for the equipment. Other registers deemed necessary by the CHC

The CRP should maintain all the books of records and be verified every month by the VO livelihood subcommittee.

9.2 Liaising and convergence

- a) All the villagers and farmers will extend their cooperation in the smooth functioning of the CHC.
- b) **Convergence:** DAY-NRLM has always emphasized the need for convergence as a non-negotiable strategy. The SRLM will facilitate the convergence for setting up of CHCs. There is a circular to facilitate the *Convergence of National Rural Livelihoods Mission (NRLM), MORD and the Schemes/Programmes/Missions of Department of Agriculture, Cooperation and Farmers Welfare, MOA&FW on File # 1-1201 I/23/2012-SGSY(C) dated 28th October 2015*. This circular also has the details on subsidy about each of the equipment. For an already existing CHC which has stored equipment, feels the need for expansion in inventory, can do so by convergence. The shed of the CHC may be built in convergence with **MGNREGS**. Any such project implemented by the state governments may also be considered. Other such schemes if are run by any state or central governments in the area may be considered for accessing equipment or establishment of the CHC. There should be strong convergence between SRLMs and **SMAM** for availing the subsidy and procure necessary equipment. Necessary support to the VOs and livelihood sub-committee may be provided with by the livelihood staff of the SRLM. The local banks should provide assistance to the CBOs in insurance of the women farmers and CRPs.

9.3 Funding

The funding for the CHC as per the size will be phase wise. While the first tranche will help facilitate test the management skills of the VO in running of a CHC. The livelihood subcommittee along with the block level staff of SRLM should have a grading based on equipment usage hours/ days in %, revenue collected, and the growth in a number of farmers using the CHC. As mentioned earlier under SMAM, the subsidy is available for the purchase of equipment in convergence with the MOA&FW. Funding may be sourced for the establishment of CHC from “Infrastructure and Marketing Support Fund for Livelihoods” [mentioned in the framework of DAY-NRLM (Page no.27)], which seeks to ensure that the infrastructure needs for the major livelihoods activities of the poor are met with. For operationalisation of the CHCs, all help must be extended by the block level livelihood teams to the VO livelihood sub-committee and the VO at every step.

Annexures

Annexure – 1: Roles of the Livelihood subcommittee

- i. The decision of housing/ storage of the equipment for the CHC;
- ii. All the operating rules and norms should be decided and approved in a VO meeting.
- iii. Framing rules and regulations for CHC (Hiring process, rentals, maintenance, repair, and replacement)
- iv. Procurement of equipment for CHC approved at the VO level; The purchase of equipment should be taken up following the community procurement manual of DAY- NRLM. In case of high-value motorised equipment covering the equipment with insurance should be done. Any other statutory provision for the equipment should be obtained. The VO should ensure that the person driving a tractor should have a driving license.
- v. Assign responsibilities for the Krishi Sakhi and monitoring of the Krishi Sakhi monthly on the performance of the CHCs
- vi. There should be a record of transactions; the details of the registers should be maintained.
- vii. A set of registers and documents to be maintained in CHC and tracking of the same during the VO meetings every month.
- viii. Storage, repair, and replacement of the equipment with the inputs from the Krishi Sakhi to the CHC.
- ix. All the payments regarding repair of equipment, the rental of the building, etc. should be made by the CRP with approval from the livelihood subcommittee.
- x. Collection of cash from the Krishi Sakhi, handling of the rentals and depositing in the bank, payment to the Krishi Sakhi for her services to maintain the CHC, allocation of funds for maintenance, repair, and replenishment of the equipment.

However, monthly stock taking and auditing is mandatory and should be done by the VO/ Livelihood sub-committee.

Annexure – 2: Roles of the Livelihood subcommittee *Roles of the Krishi Sakhi in running of the CHC.*

- i. Abiding by the lending rules of the equipment set by the VO livelihood subcommittee.
- ii. The issue of the equipment to the farmers on a first come, first serve basis, receipt of the equipment, assessment of damage, maintenance, repair, and replacement/ acquisition of new equipment of the equipment.
- iii. Maintain different books of records of the CHC (viz. Assets register, demand register, issue register, cash book, vouchers among others)
- iv. **Monthly reporting** (revenue and expenditure of the previous month, stock, and performance indicator (maximum and minimum used equipment, payment status, equipment damaged by member while in use) among others.

Collection of rental from the users, depositing it into the VO's bank account.

Annexure – 3 Formats for CHC related registers and records

3.1 Meeting Minutes Register

The meeting minutes may be recorded in the regular register of the community institution or a separate register can be utilized for the purpose.

3.2 Purchase Invoice Register

The following is a tentative format for a Purchase Register. It may be modified as per requirement.

Date of Purchase	Details of Equipment with company, model, make etc	Number of Units procured	Price per Unit	Total Cost	Remarks	Signature of Procurement Committee Lead	Signature of Treasurer

3.3 Assets Register

The following is a tentative format for Asset Register. It may be modified as per requirement.

S. No.	Name of the Asset	Description	Purchase Date	Purchase Cost of the Asset	Signature of the CHC In-Charge

In case of multiple assets of the same make and type, the entry should be as "Name of the asset-1" and so on. This will provide the total number of assets in the CHC.

3.4 Requisition Form

To be filled up by the applicant

Name of farmer (in case of SHG member please write SHG member name)	
Identity (Aadhar No. / Voter id card No.)	
SHG Member / non- member	
If SHG member, Name of SHG	
Village name	

Equipment(s) is/are requested to hire:				
Sr.	Name of equipment	Requisition for date	Duration of requisition (no. of hours)	Purpose
1.				
2.				
3.				

Undertaking

I, Sri/Smt..... undertake to use the equipment for my own production and not for subletting. I shall return the cleaned equipment in good condition after completion of the duration mentioned above. For its use in additional duration I shall pay the additional cost as per the tariff fixed. I shall be responsible for miss handling, damage and loss of the equipment and bear the cost of the repair of the equipment or cost of the equipment as the case may be.

Signature of Customer

Date:

Official Use

Requisition No. (number as per the sr. no. in the register)	
Booking Date	Booking time:
Amount deposited (Rupees)	

Usage of equipment				
Sr.	Name of equipment	Duration of usage (no. of hours)	Area (Acre)/ Volume of Use (Kgs):	Total Payable amount (Rupees)
1.				
2.				
3.				
Total				

Hiring Charges Settlement			
Amount (Rupees)	Receivable	Amount Payable (Rupees)	Signature of Recipient

Signature of Person in-Charge of CHC

Undertaking

I, Smt/Sri..... undertake to use the equipment for my own production and not for subletting. I shall return the cleaned equipment in good condition after completion of the duration mentioned above. For its use in additional duration I shall pay the additional cost as per the tariff fixed. I shall be responsible for miss handling, damage and loss of the equipment and bear the cost of the repair of the equipment or cost of the equipment as the case may be.

I am paying a leasing amount of RS. _____ against the expected total amount of Rs.

_____.

Signature of Customer and Date

Signature of Witness and Date

(Official Use)

Name of Equipment:

Duration of Use:

Leasing Cost:

Advance paid:

Remaining amount:

To be paid:

Signature of Person in-Charge of CHC

3.5 Issue and Receipt Register

The register should have the following tentative field. It may be modified as per requirement.

S. No.	Name of Field	S. No.	Name of Field
1	S. No.	12	Total Amount to be Paid (in RS.)
2	Name of Farmer	13	Amount Deferred (in RS.)
3	Name of Village	14	Cash Received (in RS.)
4	Name of Group	15	Credit Amount (in RS.)
5	Date of Work	16	Signature of Customer
6	Name of Equipment/ Machine	17	Signature of CHC In-Charge
7	Duration of Work (in Hrs and Min)	18	Amount received as final settlement
8	Area Covered (Acre)/ Volume (Qtls)	19	Date of settlement
9	Advance Amount (in RS.)	20	Signature of Customer
10	Cost of Leasing (In RS.)	21	Signature of CHC In-Charge
11	Cost of Transportation (in RS.)		

3.6 Log Book

The following is a tentative format for a Log Book. It may be modified as per requirement.

Date	Name of Equipment	No. of Hours Utilized	Quantity of Fuel Consumed	Any other Expenditure made for operating the equipment	Signature of the Operator

3.7 Cash Book

Regular Cash book may be utilized for the purpose

3.8 Requisition Register

Insert Date (duration of booking in hours)						Booked for					
S r.	Date of requisition	Time of requisition	Name of farmer	Whether a women SHG member (yes/no)	Name of equipment	date (s)	Hours	Payable amount (INR)	Charges deposited in advance (amount)	Signature of farmer	Signature of CHC manager
1											

3.9 Monthly Availability, Booking, Movement Register (Category of Equipment wise)

Name of equipment :							
Machine no.	Name of farmer	booking (for dates)	booking (hours)	Actual engagement date	Actual engagement hours	Settlement Amount (INR) received if any	Signature of CHC Manager

3.10 List of equipment according to their agricultural operations:

Agricultural Operation	Equipment
Pre Tillage operation	
Tillage operation	
Sowing operation	
Intercultural operation	
Irrigation Operation	
Spraying Operation	
Post-harvest operation and Miscellaneous	

3.11 Rent Card of CHC (From 10 am of day 1 to 9 am of day 2)

Sl.	Equipment	Rent for SHG Members	Rent for Non- SHG Members
1		30	30
2		10	10
3		10	10
4		10	10
5		20	20
6		10	10
7		03	03
8		03	03
9		03	03
10		10	10

* All figures in Indian Rupees

VO may decide on the charges for members and nonmembers. Proactive display for transparency.

Annexure 4 Display Material

4.1 Display Board (to be placed outside CHC)

Name of Custom Hiring Centre

Name of the VO

Village-----GP-----P.O-----

Block-----Dist-----

Name of the 1st person In-Charge:

Contact No of 1st person In-charge:

Name of the 2nd person In-Charge:

Contact No of 2nd person In-charge:

Working Days:

Working Hours:

Date of Commencement:

Supported by:

4.2 Poster on Leasing for Machines and Equipment at CHC

S. No.	Name of Machine/ Equipment	Leasing Rate* (Per Hour/ Per Day/ per Acre)	Max period for Hiring**	Remarks

* Some high utility/ high demand equipment may be leased out on a per hour basis while the other lower end equipment may also be leased out on a per day basis. The same needs to be clearly defined.

** Given the demand for specific equipment, the max hiring period may be limited to cater to larger number of members.

Conditionalities for Leasing

Some of the following conditionalities (more can be added) may be presented on the poster to ensure awareness;

- a. The member leasing the equipment should understand the following conditionalities clearly before leasing equipment.
- b. The member should ensure that the equipment is in good working condition before taking it on lease. It is responsibility of the member to return it cleaned and in the same condition.
- c. The “Rates of Leasing” and “Maximum Period for Hiring” should be well understood by the member leasing the equipment. The member should clearly mention the period of hiring even if “Maximum Period for Hiring” is not applicable for equipment.
- d. If the member exceeds the period hiring, a leasing rate of ___% would be applicable. If the members exceeds the max period of hiring for equipment, a leasing rate of ___% will be applicable for the extra period.
- e. In no case should the member replace the equipment or any part of the same. In such a case, the member will have to get the original equipment or any part of the same.
- f. In case of fuel operated equipment, the member should have a clear understanding of the type of fuel. No cheaper alternative should be used for operating the equipment like Kerosene. In such cases, the entire cost of repair will have to be borne by the member.
- g. Any damage or loss has to be immediately reported to the CHC/ representatives.

Signature

Chair-Person / Person In-Charge of CHC

(Name of Community Institution)

Annexure 5- Training topics on CHC for VO Livelihood subcommittee members and CRPs

Collaboration should be done with the SMAM for training on Operations, technicalities, maintenance, management, differentiating the machines, and use of the machines. This has been provided in the main document. The SRLM should schedule training programmes intended for the Livelihood subcommittee members and CRPs and should be scheduled for at least 4 days as per the indicative following topics

A. Refresher on DAY-NRLM, its importance on agro-ecological practices

1. Women as a farmer (land rights, i.e. 98% land ownership with male), role division (60% of the work is done by women), no recognition as a farmer
2. Role of NRLM in promoting agro ecological practices (seed, soil, water, and NPM) through MKSP and AAP. Promotion of improved livestock rearing practices. Evolution of NRLM activities, objectives of NRLM for enhanced income

B. Agricultural operations and question of drudgery reduction

1. Different agricultural operations, role of women and use of machine (land preparation, nursery raising, transplantation, irrigation, weeding, application of manure and pesticide, crop cutting, other post-harvest operations, transportation, and storage. Need of various equipment for raising livestock in smallholder household.
2. Issues affecting women as a farmer, drudgery and its implication on women health
3. Need of equipment at different stages, availability, and applicability
4. Need of equipment as per the local crop and livestock requirements

C. CHC History, use and its importance for smallholders

1. Why CHC, history of CHC/ Agro service Centre, and need of it?
2. Concept of usage and value of the equipment and need for keeping high usage equipment

D. Pre-establishment needs for a CHC

1. Decision on CHC membership, users, and admission of nonmembers for hiring of equipment, rules, regulations and procedures
2. Inventorying of equipment as per the need of the CHC (number of users, area under crops, etc.)
3. Fixing of rates of the equipment as per the local prevalent rates/ usage and value of the equipment
4. Detailing the usage, required maintenance, repair norms, and replacement procedures
5. Selection/ Identification of facility for storage and establishment of CHC
6. Selection of the CRP/s for management of the CHC based on capability to handle people, proven leadership, education, ease of handling books and records

E. Establishment of the CHC

1. Norms and process for procurement (as per the NRLM norms of getting quotation, following the SMAM norms) etc. for the equipment

2. Housing of the equipment, requisition by farmers for equipment, movement issues and handling for hourly usage of farmers
3. Return of the equipment, inspection for its condition and procedures for fine collection and the procedure

F. Introduction to management and governance of the CHC

1. Various records to be handled in the CHC (voucher, cash book, requisition slip, asset movement register, cash receipts among others), on field practice of the records to be maintained.
2. Reporting format for the CRP for monthly VO meeting on usage, maintenance, repair, replacement of equipment, collected revenue, operational issues, grievances among others
3. Collection of revenue, maintenance of books, procedure for deposition of the revenue in the bank and allocation for usage while underlining the importance of “net profit”
4. Sub-committees stance of expansion, convergence with other schemes for CHC related operational issues and running the CHC as an enterprise with a business plan.

G. Recordkeeping and maintenance of books of accounts

Introduction and practice in keeping of the following records for the CHC

Rules and statutes of the CHC, Asset register, Cash book and ledger, Suggestions / Complaint register, Equipment Requisition register, Availability, Booking, and Movement register (Equipment wise)

H. Exposure visit (optional) to nearby KVK, CHC, Agro Service Centre for practical demonstration of an existing CHC/ Agro Service Centre

Annexure 6- Model CHC Plan

Before setting up of CHC a business plan with must be done with help of the SRLM. The following model is suggested by NABARD for a model Custom Hiring Centre and is essentially suited for areas where paddy is cultivated predominantly. The CHC may comprise the following machinery:

- i. 35 hp tractor - for tillage operations, traction source and transport
- ii. Power tiller – for tillage operations in small farms, traction source for small equipment and agri input transport for short distance.
- iii. Multi-crop Power thresher
- iv. Winnowing:
- v. Self-Propelled Reaper
- vi. Sprayers:
- vi. Repairing tools

The cost of the unit works out to Rs. 15.50 lakh, which includes cost of construction of a workshop of 500 sq. ft. The land cost which is not considered in the project may however, be treated as margin. Provision of a workshop shed has been made for parking the machinery, carryout day-to- day repair, maintenance and service works.

Income and Expenditure

While the major income is generated out of custom hiring, recurring cost involved are fuel/ lubricant cost for the machinery, driver charges, repair maintenance charges, labour, interest on bank loan and insurance are the major recurring cost taken in the economics. The details of assumptions leading to the income and expenditure are indicated and the statement of income and expenditure is given below.

Financial viability of the project:

The financial viability assessment is given below:

- Net Present Worth @ 15 % discounting factor = Rs. 343432
- Benefit Cost Ratio = 1.08 : 1
- Internal Rate Return =23.4%.
- Average Debt Service Coverage Ratio = 1.49:1

Custom Hiring Centre - With Combine Harvester

Sl.	Items of Investment	Cost (Rs.)
1	Tractor - 35 hp	4,90,000
2	Trailer	1,10,000
3	Implements	
a	Mould Board Plough	26,000
b	Cultivator - 9 tyne	30,000
c	Cage Wheel - 18"	30,000
d	Disc harrow	30,000
e	Seed Drill	30,000
f	Accessories	12,000
	Sub Total	7,58,000

Sl.	Items of Investment	Cost (Rs.)
4	Transplanter	2,00,000
5	Power Tiller - 13 HP	1,50,000
6	Multi Crop Power thresher with electric motor	80,000
7	Winnower	8,000
8	Self-Propelled Reaper - 3.5 HP	90,000
9	Sprayer : Powered - 1 No.	8,000
10	Sprayer : Manual - 2 No.	5,000
11	Servicing tools	4,000
12	Tools for repairing of machines	22,000
	Sub Total	5,67,000
		0
1	A shed for keeping the tools and machinery – 500 sq. ft. @ Rs. 450	2,25,000
	Total Cost for Unit	15,50,000

Usage of the equipment

Sl.	Item	Unit	Rental Cost /	Annual Working	
1	Annual usage of tractors			hiring	Nos.
	a) Agricultural Operations	Rs. Per hour	600	Hrs	700
	b) On transportation work	Rs. per day	750	days	150
2	Annual usage of Power tiller	Rs. Per hour	300	Hrs	700
4	Annual usage of Power sprayer	Rs.per day *	80	days	60
5	Manual sprayer	Rs. Per day	50	days	60
6	Annual usage of Power thresher	Rs.per day *	750	days	90
7	Annual usage of winnower	Rs.per day *	120	days	45
8	Annual usage of Reaper	Rs. Per hour	250	Hrs	400
9	Diesel Price	Rs. Per lit.	65		
10	Lubricant Cost	Rs. Per lit.	180		
11	Diesel Requirement for tractor	litres per	3		
12	Diesel Requirement for power tiller	litres per	1.5		
14	Diesel Requirement for reaper	litres per	0.5		
15	Monthly income from repair of agricultural machinery	Rs.per month	10,000		
16	Lubricant requirement	% of Diesel	2.5		
17	Interest on term loan (% p.a.)	12.50%			

*Fuel and labour arranged by the beneficiary who hires the machinery from the Custom Hiring Centre

** Fuel is arranged by the beneficiary who hires the tractor from the Custom Hiring Centre

Annual Recurring Cost for Custom Hiring Centres

Sl. No	ITEM	COST	
		Full capacity	75 % during Ist
1	Tractor		
	Driver's Salary @ Rs.7000 per month	84000.00	63000.00
	Fuel Cost	136500.00	102375.00
	Lubricants @10% of fuel cost	13650.00	10237.50
	Repair and maintenance charges @ 10 % of cost of tractor and equipment	75800.00	56850.00
	Sub Total	309950.00	232462.50
2	Power Tiller		
	Driver's Salary @ Rs. 7000 per month	42000.00	31500.00
	Fuel Cost	68250.00	51187.50
	Lubricants consumption @ 10 % fuel	6825.00	5118.75
	Repair and maintenance @ 10 % of	15000.00	11250.00
	Sub Total	132075.00	99056.25
4	Power Thresher		
	Repair and maintenance @ 10 % of the cost of power thresher *	8000.00	6000.00
	Sub Total	8000.00	6000.00
5	Winnower		
	Repair and maintenance @ 10 % of the cost of winnower *	800.00	600.00
	Sub Total	800.00	600.00
6	SELF PROPELLED REAPER		
	Driver Salary @ Rs. 7000 per month	21000.00	15750.00
	Fuel Cost	13000.00	9750.00
	Lubricants consumption @ 10 % fuel	1300.00	975.00
	Repair and maintenance @ 10 % of	9000.00	6750.00
	Sub Total	44300.00	33225.00
7	SPRAYER		
	Repair and maintenance cost @ 10 % of the cost of sprayer *	1300.00	975.00
	Sub Total	1300.00	975.00
8	Other recurring cost		
	Salary for the skilled mechanic and helper to be employed for repairing work @ Rs. 5000/- and Rs.3000/- per	96000.00	72000.00
	Insurance premium @ 2% of	11340.00	11340.00
	Sub Total	107340.00	83340.00

	TOTAL RECURRING COST	603765.00	455658.75
	INCOME PER ANNUM FROM THE CUSTOM HIRING CENTRE		
			(Amount in Rs.)
	ITEM	Full capacity Utilisation	75 % during 1st year
1	tractor	532500	399375
2	power tiller	210000	157500
4	power thresher	67500	50625
5	winnower	5400	4050
6	reaper	100000	75000
7	sprayers	7800	5850
8	repairing of machinery	120000	90000
	TOTAL INCOME	1043200	782400
	NET INCOME	439435.00	326741.25
	* the power and labour are arranged by the beneficiary hiring the equipment.		

CALCULATION OF NPV, IRR & BCR											
											(Amt in Rs.)
Sl	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1	Capital Cost	1,550,000									
2	Recurring Cost	455,659	603,765	603,765	603,765	603,765	603,765	603,765	603,765	603,765	603,765
3	Total Cost	2,005,659	603,765	603,765	603,765	603,765	603,765	603,765	603,765	603,765	603,765
4	Benefits	782,400	1,043,200	1,043,200	1,043,200	1,043,200	1,043,200	1,043,200	1,043,200	1,043,200	1,043,200
5	Salvage value considering the rate of depreciation as 10 %										155,000
6	Total Benefits	782,400	1,043,200	1,043,200	1,043,200	1,043,200	1,043,200	1,043,200	1,043,200	1,043,200	1,198,200
7	Net Benefits	-	439,435	439,435	439,435	439,435	439,435	439,435	439,435	439,435	594,435
9	Discounting Factor	15%									
10	NPV Benefit @ 15 % DF	Rs.	5,047,110								
11	NPV Cost @15% DF	Rs.	4,249,195								
12	NPW @15% DF	Rs.	797,916								
13	BCR	1.19	:1								
14	IRR	33.6%									

File No: J-11060/02/2019-RL
Government of India
Ministry of Rural Development
(National Rural Livelihoods Promotion Society)

7th Floor, NDCC-II Building, Jai Singh Marg
New Delhi-110001.
Dated 20th September 2019.

To

The State Mission Directors/CEOs
All SRLMs.

Subject: Empanelment of Technically Qualified Consultancy Service Providers for State Rural Livelihoods Mission (SRLM) for Promoting Organic Farming -Reg.

Madam/Sir,

Reference to above subject, in order to facilitate the State Missions to quickly hire the service of Agencies for promoting Organic Farming, Ministry of Rural Development had carried out empanelment of qualified agencies and have completed the process of Technical evaluations. SRLM only have to complete the financial evaluation of empanelled agencies based on their requirements.

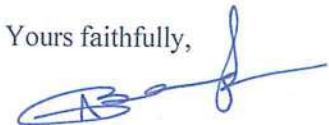
1. Based on the Technical Evaluation, following six agencies have been found to be technically qualified:
 - (i) APOF Organic Certification Agency (AOCA);
 - (ii) International Competence Centre for Organic Agriculture;
 - (iii) Sheel Biotech;
 - (iv) ISH Agritech Pvt Ltd;
 - (v) Bio-cert International; and
 - (vi) Sikkim State Co-operative Supply and Marketing Federation.

Contact details of agencies are provided in the Annexure-1. Copy of the RFP is also provided for reference.

2. It may be noted that validity of the empanelment will be for a period of 3 years till 20th August, 2022, unless terminated earlier. The empanelment may be extended for another one year based on performance assessment.
3. SRLMs shall hire the services of an empanelled agency following Least Cost Selection Method. Since, this Ministry has already completed the technical evaluation, SRLMs will be required to undertake following steps to procure an agency from the list of empanelled agencies.
4. SRLM to finalise the Terms of Reference stating clearly:
 - a. Objective: What is the particular assignment for such as certification, capacity building, etc.
 - b. Scope of work: Details of entire support required by SRLM
 - c. Duration of the assignment;
 - d. Team required, including the role, education and experience requirement – segregated into Key and Non-key professionals;

- e. Reporting and other deliverables with timelines
 - f. Payment Milestones.
5. Issue a letter of invitation to all the six agencies along with the requirement (Terms of Reference), seeking: (i) Short technical response against the TORs; (ii) financial bids (in a separate sealed envelope); (iii) letter of confirmation for the availability and willingness to bid for services; (iv) CVs of proposed Key and Non-key professionals; and (vi) a power of attorney.
 6. SRLM may provide at least 2-weeks' time to the agencies to respond to the letter of invitation. It may be noted that along with the letter of invitation, a draft contract may also be circulated to all the agencies. *Copy of draft contract is attached as Annexure- II.*
 - i. SRLM may also seek copy of the Technical proposal submitted to this Ministry for reference. It may be noted that since the technical evaluation has already been completed, there is no need to undertake any technical evaluation at the SRLM level. However, any issues related to staffing and other services, methodology etc., may be discussed and agreed during the technical negotiations and the decisions should be documented clearly.
 - ii. In the letter of invitation, SRLM may indicate last date and time for submission of Financial Proposals. Further, proposals received within the deadline may be opened publicly on the same day and minutes of the financial proposal opening meeting shall be documented.
 - iii. Agency offering Least Cost will be invited for technical negotiations. At the time of technical negotiations, availability of key and non-key staff may be obtained from the consultant and draft contract may be negotiated and agreed.
 - iv. After signing the contract, copy of the same may be forwarded to this Ministry for information.
 7. In case of any difficulty or clarifications required, SRLMs may write to the undersigned with a copy to email ID- procurementnrlps@gmail.com

Yours faithfully,



(Anita Baghel)
Director (RL)

Encl.:

1. Contact details of Agencies
2. Copy of letter sent to empanelled consultants
3. Copy of the RFP
4. Copy of draft contract

Empanelment of Consultancy Services Providers for State Rural Livelihoods Mission (SRLM) for Organic Farming.

List of Empaneled Consulting Firms

S. No	Name of Consulting Firms	Authorized Signatory	Contact Details
1	APOF Organic Certification Agency(AOCA).	Mr. Nirmal Dhaker	APOF Organic Certification Agency Row House no A , Shroff Suhana , Veerbhadra Nagar, Baner. Pune 411045 Maharashtra Ph: Mob: 8806230301,8630966818 Email ID- info@aoca.in tc@aoca.in
	International Competence Centre for Organic Agriculture.	Mr. Manoj Kumar Menon	294/22 7 th cross 1 st block -jayanagar Bengaluru 56001 Mob: 9900252181 Email ID- info@iccoa.org
3	Bio-cert International Pvt Ltd	Mr. Dilip Dhaker	701, Pulkharj Corporate opp Navlakha Bus Stop Indor MP 452001 9691111120 Email ID- admin@biocertinternational.com
4	Sheel Biotech	Mr. N R Bhateshwar	RZ. 2705/30 Sheel House Main Jagdamba Road Tughlakabad Extension , New Delhi - 110019 Mob: 9953799205 Email ID- info@sheelbiotech.com sheel@ndfvsnl.net.in
5	ISH Agritech Pvt Ltd	Mr. Parkashchand Jain	ISH Agritech Pvt Ltd J 11 Dhavantri Appoartment MOG line Near Gangwal Bus Stand Indor-452002 M P Mob: 9926425031 Email ID- ishagritech@gamil.com
6	Sikkim State Co-operative Supply and Marketing Federation.	Dev Raj Deewan	SIMFED, Above Sangram Bhawan , Development Area Gangtok East Sikkim M 8967305710 Phone No 03592-203432 Email ID md@simfed.in Dewandr.g.m@simfed.in

K-11060/02/2019/NRLM (Livelihoods)/Part1

Government of India
Ministry of Rural Development
Department of Rural Development
Rural Livelihoods Division

7th Floor, NDCC-II Building,
Jai Singh Marg,
New Delhi-01

Dated: 03rd March, 2020

To

The All State Mission Director

Subject: Guidelines on Farmer Field School (FFS) in DAY-NRLM

I am directed to say that DAY NRLM has been promoting farmer field school under farm livelihoods component. It is an institution mechanism of delivering the best practices knowledge and skill to the farmers .To make the extension mechanism effective and organized, innovative platforms like Farmer Field School (FFS) or Krishi/Pashu Pathshala is envisaged for capacity building of farmers.

To bring a common understanding on establishment of farmer field school under DAY-NRLM, the ministry has approved a guidelines on operationalization of farmer field school. The "guidelines on farmers field school" is attached herewith for your kind information.

Encl. Guidelines on farmer field school

Yours faithfully,



(H.R. Meena)

Deputy Secretary to the Government of India

1. PPS to JS (RL-1)

Guidelines on Farmer Field School (FFS) in DAY-NRLM

1. Rationale

Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM) has been strengthening farm-based livelihoods by interventions in agro-ecological practices, improved livestock rearing, sustainable Non-Timber Forest Produce (NTFP) collection, and value addition. It has a standard mechanism of knowledge dissemination with a step by step process. The process is comprised of National Resource Persons (NRPs) having subject domain expertise in various themes, who train the State Level Resource Persons (SRPs). The NRPs and the SRPs train the Community Resource Persons (CRPs) viz. Krishi and Pashu Sakhi, who is the last mile of extension for DAY-NRLM. CRPs are entrusted with the responsibility of training the subject matter and transfer the relevant skills to the women farmers (Mahila Kisan). The tasks of the CRPs on training is not only limited to skill transfer and on-field demonstration of best practices, but also in helping the Mahila Kisan to adopt various practices. So far, the extension mechanism has been externally driven, person-specific, with individual styles of communication. To make the extension mechanism effective and organised, innovative platforms like Farmer Field School (FFS) or Krishi/Pashu Pathshala is envisaged for capacity building of farmers in more productive and participatory. It is envisaged that the CRPs or Master CRPs (mCRP) will be the facilitator for an FFS.

A farmer field school is a Group Extension Method based on adult education techniques. It is a school without walls that teach necessary agro-ecology/livestock and management skills to make farmers expert in their farms. Traditional top-down technology and information transfer systems may play some role in agricultural development, but the intensive capacity building is required for the creation of independent learned farmers. Thus, Farmer Field Schools represent a significant step forward in agricultural education and extension. The main agenda of the concept of FFS is to adequately address the farmers' learning needs through adult learning techniques, participatory, and inclusive.

FFS is a forum of a group of women farmers (Mahila Kisan) at the village level who get together to practice, study and share their experiences, issues, and best practices to other members in the group. Typically, at an FFS, the topics covers include whole gamut of issues from Agroecology (soil, seed, water, and plant protection), organic agriculture, animal husbandry (General Management, feed management, Health management and breed management) advanced technologies used in agriculture, different support programs to improve agricultural and animal husbandry productivity, availing agricultural and livestock finances, marketing support among others that group members think relevant. The method of extension in FFS provides an opportunity for learning by doing and learning by sharing. It teaches necessary agricultural and livestock management skills that make the participating farmers, experts in their farms and eventually influencing larger communities. In this context, it is being felt that a

guideline on Farmer Field School outlining its element will be useful for the operationalisation of FFS under DAY-NRLM.

The FFS approach was first developed by the Food and agriculture organisation of the United Nations (FAO) in South East Asia as a way for small scale farmer to investigate and learn for themselves the skill required for and benefit from being obtained from, adopting practices in their agricultural/ horticulture fields.

FFS is a forum where farmers and facilitators debate, observations and experiences are shared, present new information from outside the community for improved production with the adoption of scientific practices.

- Farmer Field School (FFS) is a non-formal educational activity.
- All learning is a group activity and is field experience-based.
- Empowers farmers to solve their field problems by themselves.
- Fosters participation, interaction, and joint decision making.
- Farmers learn by carrying out activities through constant observation.
- Preparing collective action points that they could immediately implement in their farms.
- Collectively reviewing the progress of their farms, and resolving the issues, if any.

2. The composition of an FFS

In the context of DAY-NRLM, usually, an FFS should comprise of 10 to 30 women farmers who meet regularly during the production cycle (for crop, livestock and NTFP harvesting) experimenting as a group with new, and adopt improved production practices, access better marketing information, latest technologies, and other farming-related options as required. The trainer/facilitator of the FFS should be a CRP/m-CRP, dealing with the particular subject, i.e., agriculture, livestock, NTFP, fishery etc. The training is a regular affair, where after the training session, farmers continue to meet and share information regularly. For agroecological practices:

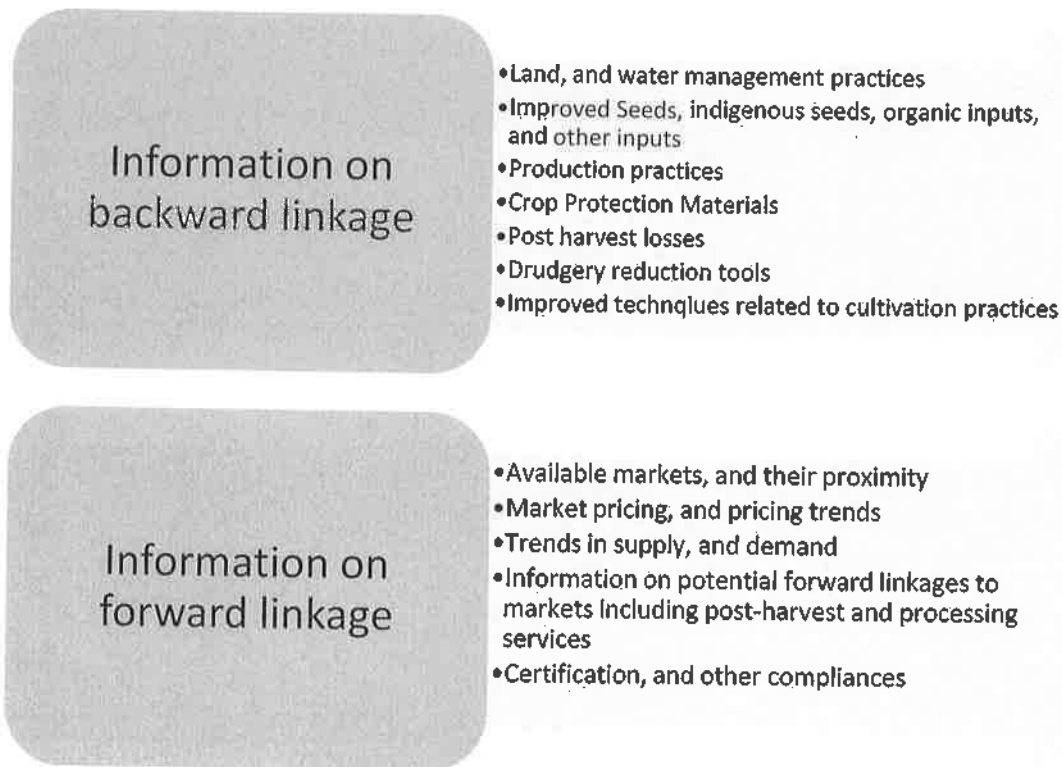


Figure 1 Typical discussion points in FFS (Krishipathshala) for agro-ecological practices

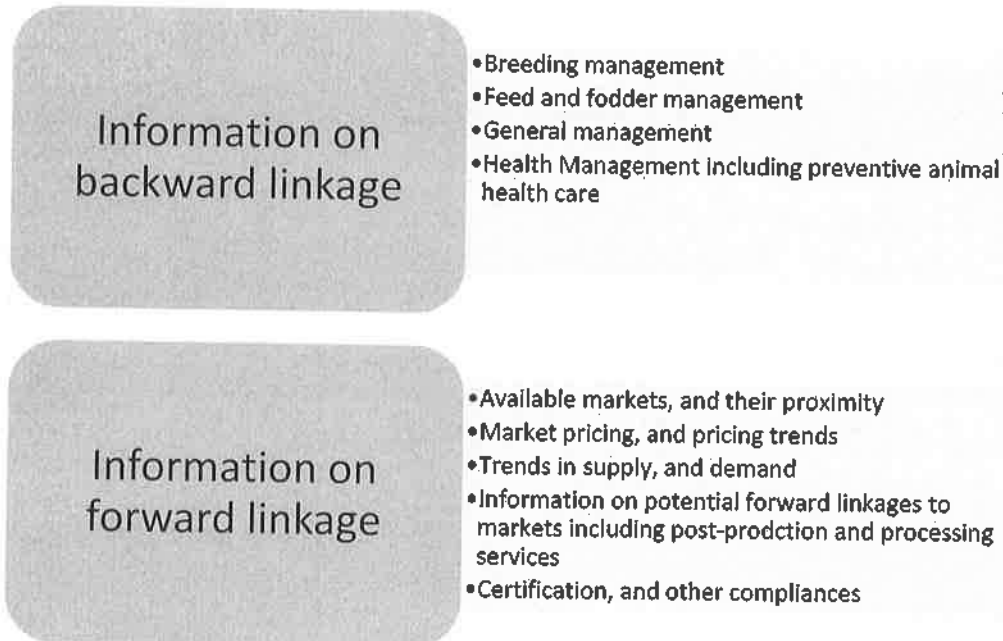


Figure 2 Typical discussion points in FFS (Pashupathsala) for sustainable livestock practices

To summarise, FFS as an extension methodology is a dynamic process that is practised and controlled by the farmers to transform their observation into action to create a more scientific understanding of the crop/livestock and the agro-ecosystem. A farmer field school is, therefore,

could be seen as a process, not a goal.

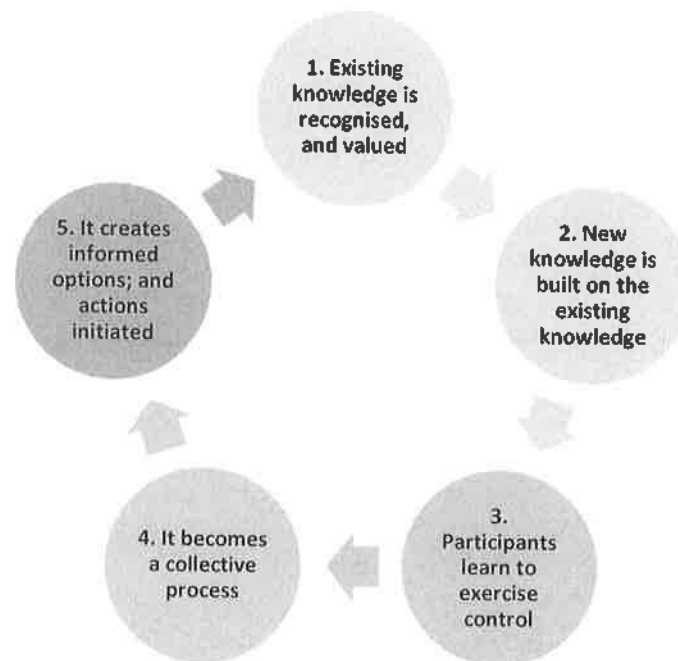


Figure 3 Process of FFS

3. Why FFS?

FFS is established on the principles of adult and non-formal education, experiential learning, conscientisation, and emancipatory learning. FFS thus plays a much broader role in society than merely a vehicle for agricultural development.

An FFS brings together a group of farmers to engage in the process of hands-on field-based learning over a season/production cycle as a time-bound activity, with a beginning and an end. For Krishi Pathshala (agricultural FFS), activities may cover "seed to seed" while in livestock-based FFS (Pashu Pathshala) they may cover "egg to egg" or "calf to calf." This initial primary learning cycle aims to strengthen farmers' skills and knowledge for critical analysis, to test and validate new practices and to assist in making informed decisions on-field management. The activities may extend to the market, i.e., seed to market (*Beej se Bazar*) too.

The first primary FFS learning cycle aims primarily to improve knowledge of field production and productivity (technical objectives) and to build a group of farmers with a better understanding of ecology and improved analytical skills, who are thus able to plan and implement post-FFS activities that will continue to enhance agricultural and livestock development.

The domain of learning through FFS

- FFS allows farmers to generate vital knowledge and localised solutions to problems.
- Farmers are the source of knowledge and at the same time leaders of transformation. The opportunities for farmers to transform their farming systems and environment towards not only future food and nutrition security but also environmental protection are tremendous, through improving not only their knowledge and skills base but also their perceptions.
- The FFS programs are to be re-positioned to contribute to the development of the rural economy, effectively address food security and nutrition issues

The (Table 1) mentions the critical domain of learning, generally followed in an FFS.

Table 1 Domain of learning in an FFS

Domain of learning	Characteristics
Technical	<ol style="list-style-type: none"> 1. Goal: Useful prediction and control of farming-related issues 2. Aims at technical control of the farms 3. Implementation of action points decided collectively during FFS
Practical	<ol style="list-style-type: none"> 1. Goal: the significance of interactions among the farmers 2. Understanding and meaning of social processes with other farmers/community members 3. Characterised by communicative action among the FFS participants
Empowerment/Emancipation	<ol style="list-style-type: none"> 1. Goal: able to differentiate between elements that are beyond farmers' control and, to expand their area of operation 2. Internal and environmental factors that inhibit the control over their own decisions 3. Characterised by self-reflective action 4. Critical thinking

4. Learning cycle in FFS

The primary learning cycle also aims at enhancing participants' *group cohesion* so that they can better work as a group, analyses questions or problems critically, draw on their own experience and observations and the experience and knowledge of others, create a consensus, and prepare for follow-up action once the FFS learning cycle finishes.

4.1. Agro-ecosystem analysis

The cornerstone of the FFS methodology is agro-ecosystem analysis (AESA), a field-based study of the interactions observed between crop/livestock and other biotic and abiotic factors co-

existing in the crop/livestock field (e.g., between plant/animal growth and pests, diseases, weeds, water, soil and weather conditions). The purpose of the AESA is for FFS participants to appreciate the value of numerous field observations and analyse ecosystem developments, problems and opportunities encountered in the field and improve decision-making skills regarding farm management, building on critical group discussion to reach improved shared understanding of different components and their interactions in agroecosystems.

The process is holistic, and farmers work in sub-groups of four to five persons making detailed field observations, discussing results, and analysing the field situation by producing a summary. Each sub-group presents to the plenary for further critical discussion to reach a consensus group-decision for field management for the week to come. Usually, this exercise takes about two to three hours and is done at weekly intervals throughout the season or learning cycle so that the problems and decisions being studied overlap with similar issues in the participants' fields, thereby increasing the motivation for learning and the possibility to test the practice. AESA is a four-stage process of distinct activities that align with the experiential learning cycle, as shown in Figure 3, followed by an explanation.

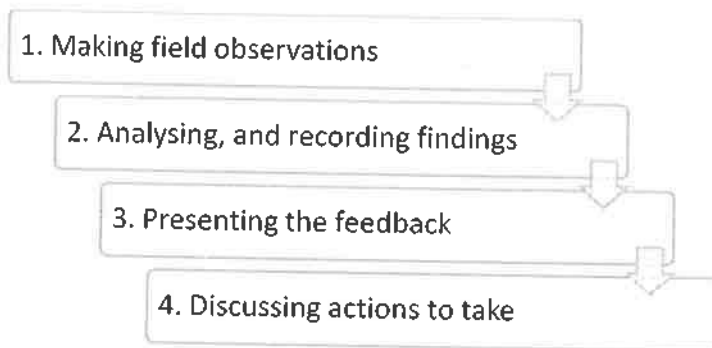


Figure 2 Agroecosystem analysis

4.1.1. AESA processes

- a) **Making field observations** - in sub-groups, farmers make observations in the field based on a range of monitoring indicators. Emphasis is on observing the interactions between various factors in the agro-ecosystem.
- b) **Analysing and recording findings** - each sub-group structure reflects on, records and interprets their results from the field, including making drawings of the field situation and elaborate decisions and recommendations.
- c) **Presenting the summary of findings** - In plenary, each sub-group presents their findings and analysis and conclusions. Feedback and questions from the other groups require the group to defend their decisions with logical arguments.
- d) **Discussing actions to be taken** - In a plenary, the participants synthesise the presentations and collectively agree and decide what steps to implement based on the decisions they have made.

4.2. *Special topic*

In addition to AESA and group dynamics, each FFS session determines a unique topic of interest for the group at the particular crop growth stage. Specific questions often involve small experiments to highlight specific technical issues related to crop production, marketing, etc.

With a backdrop of the particular topic, the farmer participants usually discuss, or facilitated to consider the following:

- a) What do they already know about the situation/topic?
- b) What do they want to know about the situation/topic?
- c) What are the information/situations where knowing more about the situation/topic would help them?
- d) FFS may invite specific subject matter specialists/experts to infuse outside / updated knowledge/solutions to the challenges identified. The role of such an expert is not prescriptive instead of exploratory / facilitate access to updated technology/skill and knowledge from outside to try and customise before adoption.

5. **Non-negotiables in FFS**

The learning process and knowledge generation are central to FFS and FFS programs:

- a) FFS are based on fields (or animal farms) through which to learn and experiment;
- b) Structured hands-on, experiential learning methodology is primarily used;
- c) Adult learning cycles emphasise observation, critical analysis, sharing and debate, conclusion/decision and implementation to enhance knowledge and decision-making skills that combine existing knowledge and improved higher-order knowledge and skills;
- d) Learning is a continuous process - regular meetings are held at critical crop/enterprise development stages to correspond with the decision-making of farmers/pastoralists;
- e) Through practices | development of skills and competencies is the main focus;

Building trust and strengthening groups to develop:

- a) Critical analysis skills;
- b) Feedback and evaluation skills;
- c) Planning skills;
- d) Basics of group work and collaboration (group dynamics exercises that enhance their presentation skill on findings, issues, etc.).

Facilitation of the learning process: competent master trainers and facilitators (technical, methodological and organisational skills).

For running the FFS successfully, it is essential to have competent facilitators with adequate experience and expertise in facilitating. She should be able to bring out the experiences of the FFS participants and facilitate the whole process effectively. Furthermore, the facilitator should

ensure that the group activities are inclusive and participatory. This would significantly improve the learning outcome of the FFS.

6. Essential elements of FFS in DAY-NRLM:

6.1. The group of people (10-30 in number) who have a common farming interest, forms the core of a Farmer Field School. The FFS tends to strengthen existing groups or may lead to the formation of new groups. Here the women farmers would be the constituent of the group from the same hamlet/ village. Learning by doing is the training approach used. Farmers learn by carrying out for themselves the various activities related to the particular farming practice they want to study and learn about. This could be compared to annual crops, livestock/fodder production, orchards or forest management. The critical thing is that farmers conduct their field studies. Their training is based on comparison studies (of different treatments) and field studies that they, not the extension/ research staff conduct. In doing so, they become experts on the particular practice they are investigating.

6.2. Regular Group Meetings: In the context of DAY-NRLM, the women farmers must attend the FFS *on a weekly* (for short duration crops), fortnightly (for long duration crops) or monthly (for plantation crops and livestock) basis according to regular schedules defined and agreed by the FFS participants. Another farm/forestry management practices the time between each session would depend on what specific activities need to be done, or be related to critical periods of the year when there are vital issues to observe and discuss in the field.

Training is related to the seasonal as well as a monthly cycle of the practice being investigated. For example, annual crops would extend from land preparation to harvesting. For fodder production would include the dry season to evaluate the quantity and quality at a time of year when livestock feeds are commonly in short supply. For tree production and such conservation measures as hedgerows and grass strips training would need to continue over several years for farmers to be able to see for themselves the full range of costs and benefits.

6.3. Learning materials are learner-generated: Farmers generate their learning materials, from drawings of what they observe in the field trials themselves. These materials are always consistent with local conditions, are less expensive to develop, are controlled by the learners, and thus can be discussed by the learners with others. Learners know the meaning of the materials because they have created the documents.

6.4. Group dynamics/team building: Training includes communication skill-building, problem-solving, leadership, and discussion methods. Farmers require these skills.

6.5. The Field is the laboratory, and it provides most of the training materials like plants, pests, livestock and other facilities. In most cases, communities offer a study site with a shaded area for follow-up discussions. All learning is based on the field. The field is where the farmers learn. Working in small sub-groups, they collect data in the area, analyse the data, make action decisions based on their analyses of the data, and present their conclusions to the other farmers in the field school for further discussion, questioning, and refinement.

6.6. Approach: Farmer's field school (FFS) is a critical activity for the transfer of technology and the sharing of best practices. Farmers upgrade their knowledge by sharing observations and experiments.

6.7. The curriculum: The curriculum usually follows the natural cycle of the subject, be it crop, animal, or soil. This allows all aspects of the matter to be covered in parallel with what is happening in the field. An exhaustive range of topics to discuss in FFS is mentioned (annexure-A) wherein the relevant topics will be identified and discussed based on need and relevance with season.

6.8. CRPs: The Community Resource Persons (**CRP-LH**)/Krishi Sakhi/Pashu Sakhi/ MCRPs nurtured by the SRLMs, will serve the fellow Mahila Kisans by training and providing extension services. The quality of extension service delivery to Mahila Kisan by CRPs is ensured through formal training of CRPs by the trained Resource Persons in multiple doses as per demand. The role of the trainers is very much that of a facilitator rather than a conventional teacher. Once the farmer knows what it is they have to do, and what it is that they can observe in the field, the extension worker takes a back seat role, only offering help and guidance when asked to do so. Presentations during meetings are the work of the farmers, not the extension worker, with the members of each working group assuming responsibility for presenting their findings in turn to their fellow farmers. The extension worker may take part in the subsequent discussion sessions but as a contributor, rather than a leader, in arriving at an agreed consensus on what action needs to be taken at that time.

In summary, the Guiding principle for the farmers' field school is:

Parameter	Agriculture	Livestock
Guiding principle	Promote Sustainable Agriculture in alignment with Agro-ecological Practices (AEP)	Deliver low cost primary veterinary care to small and marginal farmers
Interventions	Agro-ecology concepts enhance knowledge on climate, soil, seeds, cropping, agronomy, disease and pest management, harvest and post-harvest management practices.	Knowledge of breeds and breeding, feed and fodder, housing, vet care, ethnoveterinary practices.

7. Guidelines for the CRP to conduct the FFS at the field

7.1 The CRP should form the FFS groups on two components, i.e., agriculture (KrishiPathshala) and livestock (PashuPathshala). The KrishiSakhi shall handle the Krishi Path Shala, and the PashuSakhi should handle the PashuPathshala.

7.2 The group should be formed by those who are doing a particular activity; it may happen that one farmer may not be doing a specific crop. However, it is encouraged that she should attend the FFS to gain knowledge and use it in the future.

- 7.3 The CRPs plot should serve as the demonstration site and meeting place for the FFS. The animal shelter of the CRP, the crop field of the CRP, should serve as demonstration plots. It may happen that the particular CRP is not doing a specific crop can choose another farmer's plot for demonstration
- 7.4 The details about each FFS group member should be kept in the register about land details (area, irrigation status), soil test report (optional), crops grown (area and production), seeds and inputs used. This data should be updated for each cropping season. Similarly, for livestock rearing, the details about the number of animals (breed), feed and fodder details, deworming, and vaccination status should be mentioned. It can be revised every three months.
- 7.5 The record format should have an attendance sheet, where the record should be kept for each meeting. It also should record the discussion points, problems, and possible solutions.
- 7.6 A crop calendar may be developed with the various operations and record whether the farmer follows the intercultural practices (deep summer ploughing, land levelling, bund making, seed treatment, nursery preparation, transplantation, weeding, Non-Chemical Pest management practices, application of organic manure and pesticides). The help sought from fellow farmers and the CRP if the farmer has followed the advice or not.
- 7.7 The meeting should have a specific topic to be dealt with as per the above intercultural practices. The CRP should start with the topic and explain the theory of the particular subject (technology and skill related to the topic. Discussions among the farmers should be on a specific topic; their previous experience in dealing with the issue, their doubts and apprehensions should be addressed by the CRPs. Peer learning is a crucial process to be followed in conducting this meeting. Ideally, the session should last from 45 minutes to one hour. The meeting decorum should be as per the NRLM standards (i.e., like an SHG meeting).
- 7.8 In each FFS meeting, the place and time for the next meeting should be pre-decided and accepted by the group members. Each meeting should end with the fixing of the next meeting.
- 7.9 As mentioned the farmers learn from each other; it should be mandatory to devote field visits after each FFS meeting to learn from each other on the best practice, e.g., the usefulness of pheromone trap in pest control. The focus should be on to address problems one farmer is facing, and the group, along with the CRP, should explore possible solutions and suggest the best one to handle the issue.
- 7.10 The CRP should record all the learnings and discussion points of the day on the register. During the monthly VO meeting, the livelihood subcommittee should review the learning and discussion points reported by the CRP.

7.11 The remuneration (if any) for the CRPs for conducting the FFS should be as per the SRLM norms and can be provided through the VO/CLF/GPLF.

8. Principles for KrishiSakhi

8.1 KrishiSakhi emphasises the importance of growing healthy crops through following Agroecological practices in the local context and gradual movement towards organic farming. She facilitates the FFS meeting and field visits in keeping these in mind and the subjects and activities to be centred on locally feasible practices. She will use the flip charts, video shows apart from field visits as and when required.

8.2 She assigns the farmers to observe their crops regularly, which helps in informed decision making for appropriate interventions to be made quickly for water, soil, and plant management. Inputs used are based on agro-ecological and economic assessment. At the initial stages of FFS, she might have extensive involvement in implementing these processes within, however as the FFS approaches towards graduation, the farmers will be equipped with the necessary skills and knowledge to practice these on their own.

8.3 In her entire journey with FFS, her aim should be to make the farmers experts. Expertise implies a basic understanding of the agro-ecological system, decision-making processes, adoption of improved practices and sharing of experiences. She might use simple rules and directives during the FFS meetings, which may provide short term benefits to the participants as it improves the learning process.

9. Principles for Pashu Sakhi

9.1 Pashu Sakhi works on the principles of “prevention is better than cure” and the adoption of best practices for the Mahila Kisan with the tag line being the central theme. She should always be carrying the reference materials with her during the FFS meetings and make sure that the materials are accessible to every participant. Furthermore, she emphasises the importance of record-keeping at the farmer level, and she might regularly monitor the records at the initial stage of the FFS.

9.2 Pashu Sakhis, who are a “livestock extension cadre” at the village level, primarily works as an awareness campaigner and connecting link with livestock department for providing basic knowledge about the breed, breeding, general management, feed and fodder management, health management, first aid and ethnoveterinary treatment.

9.3 She can facilitate the promotion of ethnoveterinary practices with the participants by the help of Pashu Vaidyas locally available. The indigenous knowledge of the veterinary health care system acquired by traditional herbal healers (Pashu Vaidyas) is orally transformed from one generation to other that includes the popular beliefs, knowledge, skills, methods and practices.

10. Steps for implementation of FFS in NRLM:

The primary responsibility of implementing the FFS lies with the CRPs (Krishi Sakhi/ Pashu Sakhi/ Matsya Sakhi). Therefore, it would be required that the block level staff of the SRLM are directly involved in the activity for implementation of FFS. Constant handholding is expected from the block level staff apart from occasional support from the State Resource Persons (SRP) and National Resource Persons (NRPs). The steps envisaged in rolling out of the FFS are as per the following:

10.1 The state and block-level staff of the SRLM must go through an orientation (by NRPs) and exposure to the FFS method conducted in the vicinity.

10.2 The Block level team should train the CRPs in all aspects of it before the commencement of the FFS. The SRLMs should ensure that CRPs are graded (qualifying CRPs to select) before the beginning of the FFS programme.

10.3 Selected CRPs may be taken for exposure to nearby FFS, wherever in the vicinity promoted by NGO/ KVK/ATMA or the department of agriculture and to make sure that the sphere of learning should be centred around organic cultivation methods.

10.4 The livelihood subcommittee of the VO must be oriented about the procedures of FFS, and the special meeting must be conducted for information and norm-setting.

10.5 During the initial phase of 6 months, the CRPs must be supported during the FFS events in the field by block-level staff (who are oriented).

10.6 The concerned SRLMs may develop standard templates that include FFS meeting register, standard crop production practices, pest, and disease monitoring sheets, crop harvest record sheets etc. All the records and books required for the conduction of FFS must be supplied through the block level teams.

10.7 There has to be a training event and initial handholding support for the CRPs on the books of records and its maintenances before introducing the records.

10.8 VO should take stock every month on the status – achievements, challenges, etc. of the FFS in operation.

10.9 Fund allocation for the FFS: Farmer field school in principle should not be a cost centre but for an initial span of six months, some funds may be allocated for FFS management (books of records, training materials etc.).

11. Monitoring and Performance evaluation:

The livelihood sub-committee of Village Organisation (VO) will regularly monitor the progress of FFS. The CRP will appraise the VO livelihood sub-committee in its regular monthly meeting with respect to: (a) number of meeting conducted, (b) participation of FFS members, (c) major topics discussed, (d) follow up action taken by the CRP, (e) impacts in terms of adoption of

practices, (f) new practices tried and its result etc. in an organised manner. The SRLM may design a format for such reporting. VO livelihood sub-committee will conduct field review randomly to oversee the progress.

Performance evaluation of FFS will be done by VO livelihoods sub-committee at village level as well as MIS based monitoring system in terms of adoption of practices by Mahila Kisans.

12. Cost of establishing FFS / Pashu Pathsala:

FFS / Pashu Pathsala is a Group Extension Method based on adult education technique. It is a school without walls that teaches necessary agro-ecology, improved livestock rearing, NTFP management practices and various skills to make farmers expert in their farms. The farm of the CRP, existing farmers field, some of the best plots, farms of the village or surrounding villages will be used for on-field learning, thus SRLMs need not to create such demonstration farm specifically for the FFS / Pashu Pathsala. Moreover, the CRPs will act as the facilitator of the FFS / Pashu Pathsala, thus for promotion of FFS / Pashu Pathsala, the SRLM need not to allocate any budget as such.

13. Training and capacity building of Facilitator (CRP):

The existing active CRPs of a village will act as the Facilitator of FFS / Pashu Pathsala. The CRPs are the SHG members, essentially practitioners (agriculture, livestock, NTFP), have adopted the practices in her field, have the ability and willingness to support fellow farmers. After the selection they undergo field based induction, village entry and structured basic trainings (mostly practice based trainings – on field as well as off field) by the master-CRPs, SRPs, local resources with continuous on-field handholding supports and they in-turn train and provide necessary field supports to the Mahila Kisans through FFS / Pashu Pathsala in adoption of practices on Agro-ecology, Livestock and NTFP. The abstract of the basic training module has been presented below:

Modules No	Duration (days)	Topics covered
1	10	LH perspective, Mahila Kisan, Skill of facilitation, Agro-ecology, Agri-nutrition Garden (ANG), Soil, Seed, Water Management, Plant protection, Agronomic practices.
2	7	LH perspective, Skill of facilitation, Agro-ecology, Agri-nutrition Garden, Farmers Field School (FFS), Soil, Seed, Plant Protection, Agronomic Practices.
3	8	Agro-ecology, ANG, Soil, Seed, Water Management, Plant protection, Agronomic Practices.
4	8	Value-chain intervention, ANG, Farm Mechanization, FFS, Soil, Plant

Modules No	Duration (days)	Topics covered
		Protection, Agronomic Practices, Farm Mechanization.
5	7	ANG, Plant Protection, Agronomic Practices, Application of Learning, Situation Analysis game.
6	6	Entrepreneurship, Seed, Application of Learning, Comprehensive village entry (planning) exercise.
7	4	Climate change, Climate Resilient Agriculture.
8	5	Cost-benefit analysis of improved practices and crops, Integrated Farming Systems.

In addition to the above basic training, the Facilitators may undergo various other trainings from local resources like RSETI, KVK to augment their skill and knowledge to conduct FFS / Pashu Pathsala classes more effectively.

14. Operational cost of FFS/Pashu Pathsala (compensation of CRPs):

Every SRLM has its own payment and incentive structure against hiring the services of CRPs. It is advised that the facilitators of FFS / Pashu Pathsala who are the CRPs to be paid per FFS / Pashu pathsala class basis at a rate decided by the SRLMs.

15. Records to be kept in Farmer Field School:

A. Types of records: These are some of the records that need to be kept in a FFS:

15.1 Comparative Study records: These tracks the data about the FFSs studies/experiments in a systematic manner. The information collected enable informed conclusions to be made at the end of the study/experiments. This can be done in Physical records books too.

15.2 Physical record: This book records and track the daily activities of the FFSs and helps the members to follow up on the action points. They produce specific information for key FFSs activities which may include crops, livestock, fisheries and other household enterprises. Some of the physical records include inventory and activity sheets, production records, land records, livestock/poultry records and marketing records. This can be done in Physical Record book. The records may be kept in the format provided as annexure-B.

15.3 FFS training calendar: At the beginning of a year, each FFS should develop in consultation with the group members an FFS activity calendar including topics of discussions at different crop seasons/animal rearing seasons. This calendar needs to be in a printed form and will act as a reference for conducting FFS meetings. In addition to the activity calendar, the FFS can take up any other activities for discussion and follow up action as and when the situation demands.

15.4 Group information record/book: this is a record of daily attendance and primary baseline data of each member of the field school.

15.5 Minutes book: This record allows the group to track decisions for easy follow up.

It is essential to mention here that some of the records discussed above may be kept together in one register at each of the FFS. For example, the Group information/record book, physical record book, member information, attendance can be designed to keep in one register.

B. Keeping of records:

It is the responsibility of the facilitator of the FFS to keep all the records updated and preserve all such updated records at the FFS for future reference and uses.

Annexure-A

Agro-ecological practices to discuss in FFS

A wide range of agro-ecological practices is being promoted to make agriculture sustainable. These practices are aimed at improving soil health-increase soil microbial activities, increase water holding capacity, prevent seed-borne disease, the early establishment of healthy seedlings, control of weeds, pest, and disease.

The overall strategy is to use the local materials (bio-mass: both plant and animal origin) available in farming households and all our villages, minimise dependence on external agri-inputs and reduce cultivation cost as an immediate gain. In long run to address multiple issues viz. **production** - diversified food basket (minor millets, millets, cereals, pulses, oilseeds, vegetables, and fruits), **social**- create rural employment, reduced health risk for farm workers and pesticide-free food for the consumer; **environment**- groundwater recharge, improve water and air quality.

The activities are selected to influence farmers' measurable behaviour changes. For example, some of the specific topics are;

1. Soil Health: Improve the organic carbon content through the addition of well-decomposed biomass. It provides a suitable medium for harbouring microorganisms that facilitate nutrient uptake. The result, the soil is transformed into a living medium-

The Living Soil: Specific interventions: 1) NADEP, 2) Vermin Compost, 3) Ghana Jeevamrut 4) Green manuring 5) Azolla in rice cultivation, 6) Tank silt application, (7) different methods of preparing compost and bio-manure

2. Seeds: Quality seeds is a valuable input that contributes to crop yield. The small and marginal farmers are constrained to replace seed every year. So whatever seeds they use is sorted through winnowing and brine solution and purified using cow urine and cow dung (Beejamrut) which have fungicidal properties and helps control seed-borne diseases.

Specific interventions: 1. Physical purity tests 2. Brine solution treatment 3. Germination test 4. Non-chemical seed treatment 5. Quality seed production, preservation and conservation of local variety seeds. 6. Development of a list of climate resilience varieties of crops

3. Production-nurturing young and healthy seedlings for optimisation of plant population: Monsoon centric agriculture most often disrupts timely farm operation throughout the cropping season especially in the early stages of crop establishment - sowing, nursery and transplantation. These abruptions have been studied are being referred to as climate change-induced phenomena, now being widely appreciated as the greatest threat to the agriculture-based economy. Several easy to adopt practices have been promoted to take care of the above situation.

Specific interventions: 1. Direct seeded rice 2. Nursery- split type, raised bed nursery, poly house/shade net 3. Provision of temporary water harvesting structure- Jalkund, mobile pumping

4. Trauma less-transplantation in Line and spacing 5. Minimise competition for resource during vegetative growth. Variety-specific seed rate and spacing to be maintained need to be emphasised which significantly improve the productivity of crops. 6. Seed bank

4. Weed control: Non-chemical weed control make nutrients available to field crops and increase in final yield.

Specific interventions: 1. Mulching 2. Weeding, mainly farm mechanised weeding like the use of weeders for both (dryland and wetland weeders) 3. Brass-cutters 4. Other practices

5. Disease and pest control: Farmers in the last three decades have been exposed to a wide range of industrial inputs (insecticides and pesticides) to control pests and diseases. Continuous use of these inputs has disturbed the agroecology in our villages and more specifically in farming. The pesticides no doubt control disease and pests but at the same time eliminates beneficial organisms that take care of the Mother Nature. A beneficial microorganism that farmers do not recognise easily, but earthworms, spiders are higher-order organisms long identified as farmer's friends but have been drastically reduced/eliminated due to continuous exposure or overuse of technical inputs. Besides, these harmful chemicals get into the food chain and become the root cause of many ailments in human as well as animals. The overall strategy is to understand the natural dynamics and popularise practices that control and bring back the balance between the harmful and harmless organisms (insects and pest).

The control methods are chosen those optimise cost and its effect while minimising adverse effects. Examples of different control options are:

5.a Cultural Control

Using crop rotations (breaks pest life cycles, often improves tilth and fertility), cultivation techniques, sanitation and other farm practices that reduce persistent pest problems. Crop rotation is an example of a commonly implemented cultural control which is often factored into farming systems to break the cycle of increasing pest and disease populations. Soil preparation, good quality seed and management of weeds that can harbour aphids are also important cultural controls. If the crop can be established quickly and the plants are growing well, problems with establishment pests will be reduced. Some of the cultural control practices are as follows:

- Field Selection: Select a planting site that is ideal for the crop but unfavourable for the pest itself.
- Summer ploughing, deep ploughing, etc. that controls weed and improves soil structure, thus retaining more moisture in the soil
- Supply of balanced soil nutrition, especially organic composts
- Pruning, defoliation, thinning and topping (of the dead, diseased, or infected portion can significantly reduce the pest problem)
- Proper irrigation (frequency and methods) and drainage practices
- Field Sanitation by cleaning field borders, timely weeding, etc.
- Reuse of crop residue by conservation tillage techniques

- Introduction of trap crops
- Practising crop rotation on a planned basis
- Preparation and uses of 5% Neem Seed Kernel Extract, Neemastra, Agneyastra, Brahmastra, Panchagavya, etc.
- Introduction of NPM shop

5. b Mechanical and Physical Control

Use of, mechanical weeder, cutter, mowers to control the weed population before its flowering reduces the chance of providing co-lateral hosts for many pests and diseases.

Handpicking: Hand destruction or removal of insects and egg masses ensures quick and positive control. This method is especially useful with foliage-feeding insects such as bugs, and beetles.

Traps and Attractants: pheromone traps, light traps, yellow sticky stripe, barrier trenching, mouse traps etc. For pest monitoring and control sticky traps, which use an adhesive to capture insects; pheromone traps, which uses male chemical attractants to draw certain species of pests into the trap; and insect blacklight traps, which use ultraviolet light to lure and capture certain flying insects.

Water Pressure Sprays: A forceful stream of water will sometimes dislodge insects such as aphids and spider mites from foliage and plant stems.

5.c Biological Control, Here natural enemies, deterrents, and others are used to control pests. Natural enemies are organisms that kill or otherwise reduce the numbers of another harmful organism. Natural enemies that limit pests are critical components of many integrated pest management programs, particularly in protected crops. The most important natural enemies of insect and mite pests include predators, parasites, and pathogens. Examples of these are ladybird beetle which preys on many aphid species and parasitic wasps which prey on whitefly. Identification of beneficial insects and developing a compendium of such beneficial insects available in the village will be beneficial as reference materials for discussion in FFS.

5. d Organic plant protection; Organic pesticides should be given priority in controlling pests and diseases as these pesticides are prepared from various plant extracts

- These are poisonous for pests but are bio-friendly and not toxic to the environment.
- These are mostly used for multi pest and disease control.
- These are cheaper; the farmer can prepare themselves.
- These do not persist in food or do not cause any harm while eating the food produced.
- Establishment and operation of NPM shop

Improve Livestock rearing practices to discuss in Pashu Pathsala:

a) Breed and Breed management: The focus is on knowledge of local races available, their characteristics which can be adopted in the local area for enhancing productivity. The awareness of methodology to inhibit inbreeding and selective breeding needs to be spread among the masses through these PashuSakhis.

Specific interventions: Preventing inbreeding practices through better adoption of Artificial insemination, creating awareness about the importance of germplasm in breeding for improving productivity, buck rotation, conservation of local breeds, etc.

b) General management: This includes housing, hygiene, Care of pregnant and newborn animal, induction, casting, disbudding, colostrum feeding, general anatomy and physiology. The general observation is 1q various contagious disease can be prevented by proper hygiene and housing facility. Besides, the knowledge of the protocol for care and management of animals during their different phases of life help in better upkeep of the animal. Pashu Sakhis are being trained in these aspects to cater to the various elements of the same to the community.

Specific intervention; the house of animals owned by the members should have proper drainage, space, waste disposal system ventilation and cleanliness. The newly born cattle should have their horn disbudded, and suitable management facility should be available for newborn and pregnant animals.

c) Feed and fodder management: Feeding constitutes the bulk (70%) of investment in the animal, and thus its control is of paramount importance to reduce the expenditure on the feed of the animal. The role of the Pashu Sakhi will be to spread the knowledge of ration balancing based on the feed and fodder available in local area and season so that the cost of feeding can be reduced.

Specific intervention: The knowledge of maintenance, production and pregnancy ration based on the available local fodder should be known to the Mahila Kisan. Apart from this, cultivation of green fodder, practices on the preservation of fodder by promoting fodder banks may be practised by each farmer. The availability of land under fodder should also show an upward trend.

d) Heath management: Under the aegis of health, the focus is on prevention and first aid. Prevention through Deworming and Vaccination to reduce both morbidity and mortality in the animal population. Undertreatment, we plan to introduce first-aid care and ethnoveterinary medicine through the PashuSakhis so that the critically ill animal can be provided care at the doorstep of the farmer till the arrival of a veterinarian.

Specific intervention: Regular deworming and vaccination as per the schedule. Besides, PashuSakhis should be well versed in carrying out first aid and ethnoveterinary treatment.

Annexure-B

1. Format for physical record:

Name of farmer field school: Name of Krishi Sakhi Name of Mahila Kisan Group no. Plot No. Problem addressed:		Date: Week No.
General information Variety: Date planted: Age of crop: Spacing: Fertiliser: Weather: Time of observation: Plant population: Germination%	Measurement Length of leaves: Width of leaves: No.of leaves: No.of diseased leaves: No.of dead leaves: Length of plant: No.of pods:	Treatment Treatment schedule: Management practices:
Insect pests Pests seen:	Plant drawing	Natural enemies Natural enemies seen:

Observations Soil moisture: Diseases: Insect pests: Plant health: Deficiency: Weeds: Predators:	Recommendations What management practices should be applied?
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2. Format for sustainable livestock practices:

Name of farmer field school: Name of Pashu sakhi Name of Mahila Kisan Group no. Problem addressed:		Date: Week No.
General information Breed: Weight Date Checked: Age of animal: Stage of productivity: Housing & Hygiene Feed and fodder Preventive health care	Treatment done if any already Treatment schedule: Date of last vaccination Date of last dewormin Management practices:	
Observations Skin : General health; Productivity (milk/egg)	Recommendations What management practices/treatment should be applied?	

File No: K-11067/03/2018/NRLM(Livelihoods)/Part1 (360063)

Government of India
Ministry of Rural Development
Department of Rural Development
(RL Division)

7th Floor, NDCC II Building,
Jai Singh Marg,
New Delhi – 110001

Dated 21.08.2018

To,
The Principal Secretaries of all States

Subject –Advisory for roll-out of organic village clusters under DAY-NRLM

Sir/Madam

In order to guide the State Rural Livelihoods Missions in implementation of organic village clusters, an advisory has been developed for the roll-out of organic village clusters under DAY-NRLM. The approved advisory is attached herewith for information and guidance.

Yours faithfully,



(Nita Kejrewal)

Joint Secretary to the Govt. of India
Ph.: 011-23461754

Encl: As above

Cc: CEOs / SMDs of all States

Advisory for Roll out of Organic Village Clusters under Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY - NRLM)

In the Union budget speech for financial year 2018-19, Hon'ble Finance Minister announced that organic farming would be promoted with the women farmers of the Self Help Groups (SHGs). DAY-NRLM has been strengthening livelihoods by interventions in agro-ecological practices, improved livestock rearing, and sustainable Non-timber forest produce (NTFP) collection and value addition. Under the Mahila Kisan Sashaktikaran Pariyojana (MKSP), which is a component of the DAY-NRLM, until March 2018, more than 34 lakh Mahila Kisans have been supported. Organic farming is the next logical progression as it moves towards organic certification and marketing to enable farmers to get better market access. Organic farming provides an opportunity to increase the income of the small and marginal women farmers. All the States are expected to seriously drive this agenda of rolling-out of organic village clusters.

The States have identified a total of 1,646 organic village clusters to be developed, the details of the same have been given as Annexure -1.

To develop the strategy for roll out of the organic villages cluster, consultations were held with State Rural Livelihood Missions (SRLMs), Food and Agriculture Organization of the United Nations (FAO), National Centre of Organic Farming (NCOF), National Resource Persons, MKSP Partners, and industry experts.

Based on these consultations, this Ministry has developed this advisory in order to guide the SRLMs in developing the implementation plan for the development of organic village clusters. The SRLMs should refer to the advisory during the planning and implementation of the organic village clusters.

Activities to be taken up by the States for rollout of organic village clusters

All the states should start the rollout of organic village clusters immediately in a programmatic manner with clear strategy and implementation plan. The activities to be taken up by the States in order to rollout implementation of organic village clusters are:

1. Identification of organic village clusters (selection of village clusters)
2. Placing qualified staff for implementation of the programme
3. Technical Support Agencies (TSAs) and partnerships for implementation support
 - 3.1. TSA for organic farming and certification
 - 3.2. Partnerships
 - 3.2.1 Field level implementation with existing MKSP partners
 - 3.2.2 Partners with non-financial obligation
4. Identification of Mahila Kisan
5. Identification of Resource Persons (Community Resource Persons (CRPs) and Master Trainers)
6. Initiating Organic Certification Process - Certification is an essential component for market pull for the produce, hence it is essential and non-negotiable that all clusters would be certified organic.

7. Training and capacity building of Project staff and CRPs
8. Consultations at state and district level for collaboration with other institutions and line departments for convergence with existing schemes like Paramparagat Krishi Vikas Yojana (PKVY).

The strategic steps for implementation of organic village clusters are elaborated below:

1. Identification of organic village clusters

1.1 Selection of villages

The criteria have been circulated to the SRLM vide *DO No: K11067/06/2018/NRLM (Livelihoods) /Part2 dated January 25th, 2018*. While identifying the villages and organic village clusters, the clusters of villages satisfying any of following criteria may be given preference -

- a. Areas already under implementation of MKSP or areas where SRLM has implemented farm livelihoods initiatives for promotion of agro-ecological practices
- b. Areas where Community Managed Sustainable Agriculture (CMSA) has been implemented successfully by the SRLMs
- c. Areas under Mission Antyodaya implementation
- d. Areas where the producers' groups and the producers' enterprises are keen to move to organic cultivation, certification and marketing
- e. Areas where there has been a significant creation of livelihood assets such as vermicomposting, water conservation structure through convergence with MGNREGS or otherwise.
- f. Rurban clusters
- g. Areas where village organizations have been promoted
- h. Dry land areas or rainfed areas
- i. Areas where traditionally agriculture activities are taken up with low usage of chemical/ inorganic inputs

1.2 Selection of clusters

Each state would identify the organic village clusters by using the following criteria:

- a. An organic village cluster of 5-7 villages, which are contiguous, are to be selected for achieving scale of operation.
- b. The cluster would generate a significant marketable surplus of agriculture /horticulture produce and NTFP.

1.3 Phasing strategy

Most of the States have already identified organic village clusters for the rollout. States should prepare a phasing plan for development of these organic village clusters for focused implementation and oversight. The SRLMs may take up 25% of the clusters to begin with.

2 Placement of qualified staff for implementation of the programme

Organic farming requires technical understanding and experience on organic farming, certification, and marketing of the organic products; therefore, qualified and experienced

human resource is required to drive the implementation of organic village clusters. Each state would deploy a qualified team of farm livelihood professionals for rollout of organic clusters at the block level. If the SRLM has already positioned a dedicated team of professionals for Farm Livelihoods at the block and cluster level, they would be given the responsibility of rolling out the organic cluster. They would be given the necessary training on organic farming. In the absence of a dedicated farm-livelihoods team, having the requisite qualification and experience, recruitment should be done immediately for the block level teams.

2.1 Project Manager at the State level

The state would appoint a dedicated person at the State at the level of a Project Manager for overall coordination of organic village clusters.

Qualification - The Project Manager (Organic Farming) should preferably have a degree in agriculture or allied sciences with minimum 6 years of experience in agriculture or farm based livelihoods promotion. Experience in organic farming, certification and marketing would be given preference. In case there is non-availability of a candidate with a degree in agricultural or allied sciences, a person with a regular Master's degree and relevant experience in agriculture of 8 years shall be considered for the position.

Role of Project Manager, Organic farming– S/he would manage overall implementation of the project in the State under the guidance of the State Project Manager (SPM) / State Mission Manager(SMM) Livelihoods. The role would include coordination with TSA, Regional Council (RC), planning for training and capacity building, liaising with other line departments and institutions and regular monitoring.

2.2 Block coordinator

Each Block should preferably have at least 4 organic village clusters and the overall responsibility for implementation at the block level would remain with the Block coordinator.

Qualification - The Block coordinator should preferably have a degree in agriculture or allied sciences with minimum 2 years of experience in agriculture or farm based livelihoods promotion. Experience in organic farming, certification and marketing would be given preference. In case, there is non-availability of a candidate with a degree in agricultural or allied sciences, a person with a regular Master's degree and relevant experience in agriculture of 4 years may be considered for the position.

Role of the block coordinator – S/he would manage the field implementation of the project including training and capacity building, liaising with the Regional Council (RC) at block level, the formation of local groups as per the Participatory Guarantee Systems (PGS) or third party certification, ensuring accurate and timely upload of data on PGS portal / tracenet, suitable translation from local vernaculars to Hindi/English for portal upload, market linkage and convergence.

2.3 Cluster coordinator

A Cluster coordinator would be responsible for 2 organic village clusters and would be responsible for overall implementation. They would be supporting the Block Coordinator for overall rollout of organic village clusters.

Qualification - The Cluster coordinator (organic farming) should preferably have a 2-year diploma in agriculture/ horticulture science offered by an Indian Council of Agricultural Research (ICAR) accredited institution, in case diploma holders are not available, SRLMs may consider science graduates with minimum 2 years of experience in agriculture based activities, while additional diploma in organic farming or experience in organic farming would be preferred.

Role of cluster coordinator- S/he would be required to manage the field implementation of their respective clusters by providing technical assistance, training and capacity building, formation of local groups as per the PGS or third party certification, ensuring proper documentation of the Local Groups(LGs), data uploading in the PGS portal / tracenet as per Hindi/English translation from vernacular forms, ensuring that regular peer reviews are undertaken and other compliances essential for PGS / third party certification (whichever applicable). He would be responsible for ensuring that the farmers receive all the support for following all the recommended protocols for organic farming.

2.4 Data Entry Operator

Data and traceability is key for organic certification and there are various data formats that need to be on the online portals (PGS-India / Tracenet). The data is to be updated for every Mahila Kisan for each season and in a time bound manner. One data entry operator should be placed at the block level. The Data Entry Operator should have essential computer knowledge and experience, and should be provided adequate training for data entry. S/he should be conversant in local language and English.

3 Technical Support and partnerships for implementation support

3.1 Technical Support Agency for organic farming and certification

As Organic farming requires specialized knowledge and skills across the value chain, NRLM would require high quality technical support for organic villager clusters from production, certification to marketing. SRLMs may identify a Technical Support Agency/ies (TSA) with demonstrated experience in promotion of organic farming including certification and organic production marketing. The expected roles of the TSA are but not limited to:

- i. Support the SRLM and help in preparation of strategic and implementation planning
- ii. Technical training of project staff on certification and record keeping
- iii. Developing guidelines and rollout plan for certification
- iv. Development of training modules
- v. Training and capacity building of field implementation agencies
- vi. Responsible for registration of groups for certification process - In case of PGS certification, the Technical Support agency should be a Regional Council (RC).

- a. The RCs who are permitted to certify organic production for every State are listed on the PGS India website (<https://pgsindia-ncof.gov.in/RcList.aspx>).
- b. The SRLM should refer to the PGS-India guidelines which clearly states the role and responsibilities of the RCs (https://pgsindia-ncof.gov.in/pdf_file/PGS-India%20Operational%20Manual.pdf).
- c. In case of suspension or cancellation of the Certifying status of the RC, there remains an issue of cancellation of certification of the farmers as well. Therefore, SRLMs should conduct due diligence on the certification experience of the TSA.
- d. The cost of certification given in PKVY guidelines (*Page 21, Table 15, subcomponent B – PGS certification through Regional Councils*) would be used as the cost norm (*attached as Annexure II*).
- vii. Handholding support at field level/ field verification
- viii. Support in successful market linkage for the organic produce

3.2 Partnerships for implementation

As mentioned in section 2 above, roll-out of organic farming requires technical knowledge regarding various organic farming practices and therefore, qualified and experienced human resource is required to drive the implementation of organic village clusters. In case the SRLMs are presently not in a position to recruit staff directly, they may take the support of MKSP partners or other agencies for providing field implementation support.

3.2.1 Field level implementation with existing MKSP partners

It is expected that, as the existing MKSP partners have been implementing agro-ecological practices since few years and have developed adequate skills and social capital, SRLMs may consider using the MKSP partners as field implementation Agencies for Organic Village Clusters. Therefore, the partnership may be forged with MKSP partners to provide training and capacity building support in the community. For this purpose, SRLMs may refer DO letter S-11062/02/2015/NRLM (Livelihoods) /Part II dated February 25, 2016.

3.2.2 Non-financial partnerships

SRLM may collaborate with other agency/ies for adoption of Organic Blocks for promotion of organic cluster on a non-financial arrangement. In such a case, the agency would be able to position competent manpower in the block. It is expected that the agency would work with SRLM and would be under the overall supervision of SRLM team. The training and capacity building would be taken up by the SRLMs through CBOs and supported by the agency. *No fund release would be made to the agency, either through the SRLM or the Community Based Organisations (CBOs), in this case.* While selecting such agencies necessary due diligence may be done by SRLMs to assess their competencies and other credentials and ensure that they are aligned with the philosophy of farm livelihoods interventions under DAY-NRLM.

4 Identification of Mahila Kisan

The women farmers interested to take up organic farming would be selected based on the following criteria -

- a. SHG members having agriculture as core livelihoods and have been supported under MKSP interventions or SRLM led agro-ecological interventions

- b. Women farmers who are practicing, at least partly sustainable agricultural practice (using more organic inputs than inorganic inputs).
- c. In case, a woman farmer who is currently using chemical inputs is keen to move on to the organic mode of farming, then such farmer should be selected in consultation with the VO.

4.1 Non-negotiable

- a. Women farmers selected should be SHG members under DAY-NRLM
- b. No individual subsidy would be given to the participants of the organic village cluster. For procuring organic inputs the farmers should access credit through the SHGs.
- c. In States where agro-ecological practices intervention has not started yet, the points 1.1 (h) and 1.1 (i) would be followed.

5 Identification of Community Resource Persons and Master Trainers

5.1 Identification of CRPs

There is a need to have a pool of Community Resource Persons, who will be engaged in farmer-to-farmer extension and conduct the Farmer Field Schools (FFS), through which the organic farmers would be trained in organic farming practices and production of non-chemical inputs among many other activities. One Krishi Sakhi would be identified for every 5 Local Groups. The Krishi Sakhis already engaged in the agro-ecological practices, with SRLM or MKSP partners may be identified as CRPs for organic farming. The role of the Krishi Sakhi would include –

- a. Conducting FFS - Each cluster should have at least one FFS and each FFS would have at least 24 meetings in a year
- b. Collection of farmer information in the formats prescribed for organic certification

The CRPs would be given repeated doses of training and every SRLM would prepare monthly and yearly training calendar for the same. These CRPs would work very closely with organic clusters coordinators.

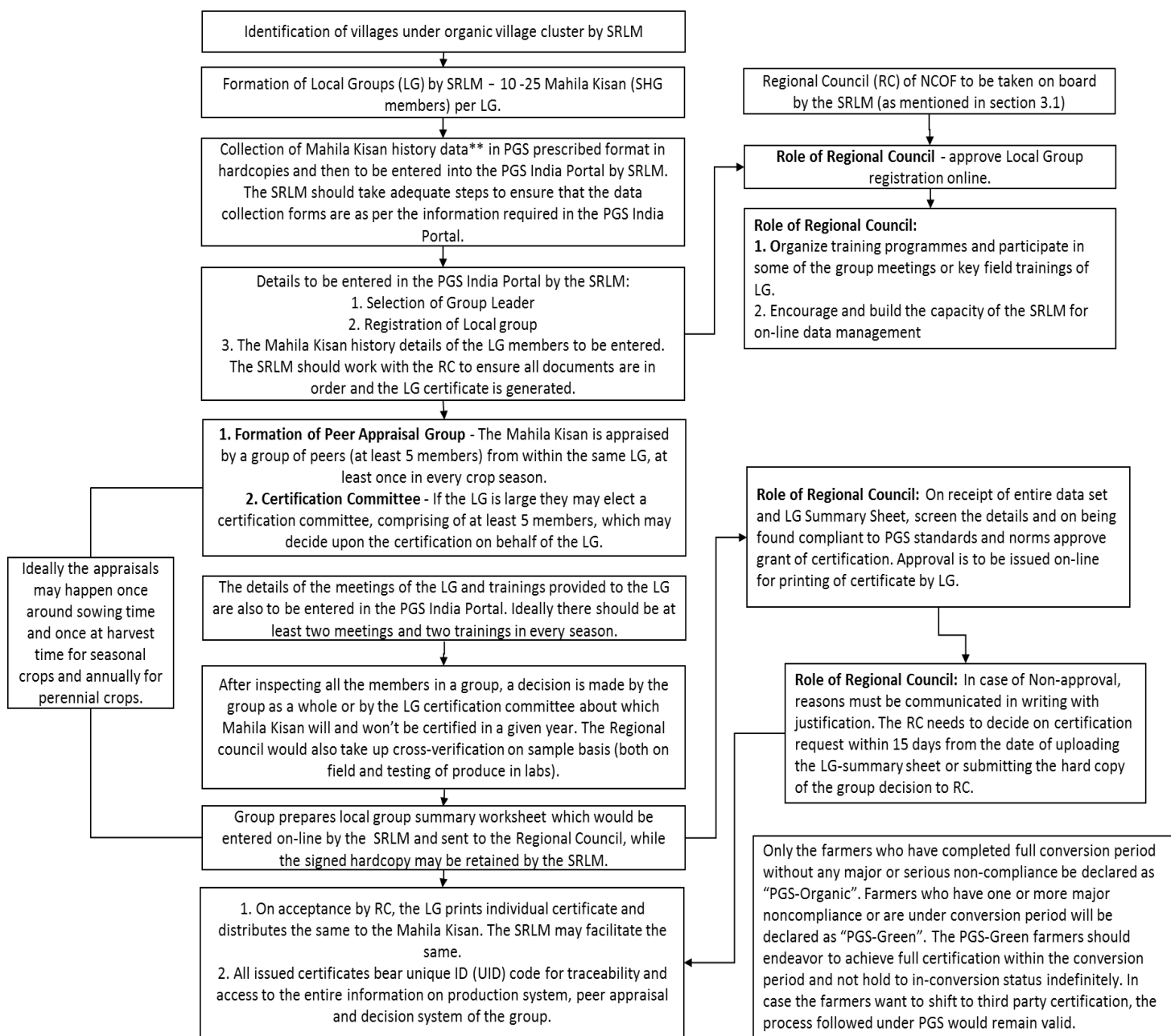
5.2 Identification of Master Trainers

In many states, there are various progressive farmers, who are already practicing Organic farming. These farmers have the potential to be used as Master Trainers, keeping in view that they already know the local agro-climatic conditions and available resources for the preparation of organic inputs. They possess the knowledge required to disseminate the knowledge to new potential organic farmers in a commonly understood language or dialect. Further, their farms can be used as immersion sites for the new organic farmers or the CRPs. These organic farmers must be identified for possible use as trainers. As these Master Trainers might not have exposure to NRLM processes, they must be oriented to the key aspects of DAY-NRLM. The SRLM must prepare a calendar for training and orientation of the Master trainers.

6 Initiating Organic Certification Process

As PGS is cost effective and viable process of organic certification, currently emphasis would be given to the PGS system. In areas where there is potential for export or the buyer insists on third party certification suitable steps may be taken and DAY-NRLM may issue a separate

advisory for the same. The critical steps for PGS certification as defined in the PGS India (https://pgsindia-ncof.gov.in/pdf_file/PGS-India%20Operational%20Manual.pdf) –



****PGS India mandates that the entire family with its farm is to be converted to organic and covered under PGS within the stipulated period. Any farm family willing to embrace organic methods of cultivation, therefore, the Mahila Kisan would represent the household in the organic certification process and the linkage of the family with the land needs to be established (in the PGS registration form, the family details of the Mahila Kisan are also to be provided). For further details please refer the PGS data collection forms. Any other issues related to registration may be taken up on case by case basis with the support of the Regional council.**

The detailed process of PGS certification may be referred to for any further information and guidance (attached as Annexure III).

6.1 Structure for roll-out of Participatory Guarantee Systems (PGS)

PGS relies on the basic principles of Social Capital, where groups of farmers adhere to the standards of organic farming and certify the products. For this process of certification there is a need to form an entity, termed as “Local Group” i.e. LG. As stated in section 3.1, SRLMs would take on board Technical Support Agency for implementation of organic certification to help them in adhering to the PGS method of certification.

The following structure may be followed for the certification process:

- a. Local Group (LG) – 10 – 25 farmers
 - i. The local group is the main functional and decision-making body under Participatory Guarantee System. It is a local group of farmers who live in the same village or close by villages and interact regularly with each other. A minimum size is needed to get a sizeable marketable surplus for efficient operations.
 - ii. Should consist of 10-25 farmers with a minimum total land holding area of 5 acres; the land should preferably be contiguous for ease of monitoring and to obtain a sizeable marketable surplus from each LG.
- b. Sensitization of the VO members – A plan may be made for sensitization of the VO members including the members of the VO livelihoods sub-committee.
- c. Organic village cluster
 - i. For having a viable volume of organic produce in nearby 5-7 villages for aggregation and processing
 - ii. A cluster should consist of at least 10 LGs
- d. Farmer Field School
 - i. Each cluster should have one FFS and would have at least 24 meetings in a year
- e. Appraisal mechanism
 - i. Each LG should have a Group Leader who would be a part of the Peer Appraisal Group (PAG). Group leader may be elected on periodic basis within group.
 - ii. The PAG should have at least 5 Group members for cross visits for verification and monitoring of LGs on organic production. There is no upper limit. It will be an optimal situation if all members of the group can participate in peer reviews, as this contributes to capacity building and information exchange between farmers, and reduces conflicts of interests.
 - iii. Based on principle of transparency Cluster Coordinator will also plan to include other cross LG members in the same cluster, where possible, during Peer Reviews to allow for cross checks across villages and reduce chance of collusion.
 - iv. Appraisal mechanism shall be transparent and available for scrutiny and access to any consumer, official or member of the public.
 - v. All data in the PGS forms must be duly collected to the best ability of the PAG. No field shall be left empty without suitable justification.

6.2 Mapping of resources of the organic cluster

A resource mapping activity of the villages selected for development of organic village clusters to understand the current agricultural practices, crops under cultivation, marketing avenues, and ecosystem related to it. Also, an understanding of the existing local markets and linkages with distant markets, value addition or its potential should be developed.

7 Training and capacity building of Staff and CRPs

- a. The SRLM should plan for training to block and cluster level staff with the support of Technical support agencies or the SRLM may request NMMU to engage National Resource Persons (NRPs) for the same.
- b. The training to CRPs would be provided as per the training and capacity building architecture of Farm Livelihoods, DAY-NRLM.
- c. The SRLM should develop training material on organic farming and certification with the support of TSA, Regional Councils, MKSP partners, Krishi Vigyan Kendra (KVK), line departments and other resource organizations.

8 Consultations at state and district level for collaboration with other institutions and line departments for convergence.

As experienced, other institutions have the mandate of promoting either conventional or organic agriculture through various schemes and programmes. While rolling out the organic clusters on the ground, it is advisable to apprise and draw support from related institutions such as KVKs, Agriculture Department, Horticulture Department, Soil and Water Conservation, Civil Society Organisations (CSOs), Agriculture University/ies, Forest Department, MGNREGS, Regional Centre for Organic Farming (RCOF), ICAR institutions etc.

The project may collaborate with Paramparagat Krishi Vikas Yojana (PKVY), wherever possible. District and State level workshops may be held to ensure effective roll out plan of organic cluster and to seek support if necessary.

9 Regulatory Frameworks

The various regulatory frameworks of the country on organic farming, certification and value addition would be applicable and States should take suitable steps to comply with the regulations. The Monitoring Compliance of the Food Safety and Standards (Organic Foods) Regulations, 2017 of Food Safety and Standards Authority of India (FSSAI) is given as Annexure IV. Please refer <https://jaivikbharat.fssai.gov.in/> for further details.

Annexure-I

Number of organic village clusters to be promoted by different SRLMs

S No	State	No of Clusters to be promoted
1	Arunachal Pradesh	58
2	Assam	6
3	Bihar	85
4	Chhattisgarh	45
5	Gujarat	33
6	Haryana	2
7	Himachal Pradesh	4
8	Jharkhand	209
9	Jammu & Kashmir	12
10	Karnataka	20
11	Kerala	201
12	Madhya Pradesh	326
13	Maharashtra	209
14	Manipur	4
15	Meghalaya	7
16	Mizoram	12
17	Nagaland	18
18	Odisha	100
19	Puducherry	83
20	Rajasthan	43
21	Sikkim	7
22	Tamil Nadu	20
23	Telangana	50
24	Uttarakhand	4
25	Uttar Pradesh	40
26	West Bengal	6
27	Dadra and Nagar Haveli	40
28	Andaman and Nicobar Islands	2
	Total	1,646

Annexure II

9-15/2018-Org.Fmg.
Government of India
Ministry of Agriculture and Farmers Welfare
Department of Agriculture, Cooperation and Farmers Welfare

Krishi Bhawan, New Delhi
Dated: 21 May, 2018

OFFICE MEMORANDUM

**Sub: Revised Guideline for Paramparagat Krishi Vikas Yojana (PKVY) scheme-
reg.**

The undersigned is directed to enclose herewith the revised guidelines of Paramparagat Krishi Vikas Yojana (PKVY) scheme for implementation and further necessary action.

This issue with the approval of competent authority.



(Vandana Dwivedi)
Additional Commissioner (INM)

Distribution:

1. PPS to Hon'ble Agriculture Minister, Krishi Bhawan, New Delhi
2. PPS to Secretary (AC & FW), Krishi Bhawan, New Delhi.
3. PPS to Secretary, Ministry of Food Processing Industries (MOFPI), Panchsheel Bhawan, August Kranti Marg, Khelgaon, New Delhi.
4. PPS to Secretary, Ministry of Micro Small and Medium Enterprises (MSME), Udhayog Bhawan, New Delhi
5. PPS to Additional Secretary & Financial Advisor, Krishi Bhawan, New Delhi.
6. PPS to Additional Secretary (INM), Krishi Bhawan, New Delhi.
7. PPS to Additional Secretary (Panchayati Raaj), Krishi Bhawan, New Delhi
8. PPS to Additional Secretary (Rural Development), Krishi Bhawan, New Delhi
9. PPS to Agriculture Commissioner,
10. PPS to Horticulture Commissioner,
11. PPS to Joint Secretary (NHM), New Delhi.
12. PPS to Joint Secretary (Crops), Krishi Bhawan, New Delhi.
13. PPS to Joint Secretary (NRM & RFS), Krishi Bhawan, New Delhi.
14. PPS to Joint Secretary, Department of Fertilizer (DoF), Shastri Bhawan, New Delhi.
15. PPS to Joint Secretary (INM), Krishi Bhawan, New Delhi.
16. PPS to Joint Secretary (MOFPI), New Delhi.
17. PPS to Joint Secretary (MSME), New Delhi.
18. PPS to Joint Secretary (Panchayati Raaj), New Delhi.

19. PPS to Joint Secretary (Rural Development), New Delhi.
20. DDG (NRM), ICAR, Krishi Anusandhan Bhawan -II, Pusa, New Delhi-12
21. DDG (Extension), ICAR, Krishi Anusandhan Bhawan -II, Pusa, New Delhi-12 (With the request to circulate guidelines to all KVKs for the implementation).
22. Director NCOF, Ghaziabad. (With the request to upload the Guideline on NCOF portal)
23. Director, CFQCTI, Faridabad
24. Director of Agriculture (All States)/UTs (including Hilly States)
25. All State Agriculture Universities
26. All Central Agriculture Universities.



सत्यमेव जयते

Paramparagat Krishi Vikas Yojana (PKVY)

**National Mission for Sustainable
Agriculture (NMSA)**

**Integrated Nutrient Management Division
Department of Agriculture, Cooperation & Farmers Welfare
Ministry of Agriculture & Farmers Welfare
Krishi Bhavan, New Delhi**

INTRODUCTION

Paramparagat Krishi Vikas Yojana (PKVY)

“Paramparagat Krishi Vikas Yojana (PKVY)” a sub-component of Soil Health Management (SHM) scheme under National Mission of Sustainable Agriculture (NMSA) aims at development of sustainable models of organic farming through a mix of traditional wisdom and modern science to ensure long term soil fertility buildup, resource conservation and helps in climate change adaptation and mitigation. It primarily aims to increase soil fertility and thereby helps in production of healthy food through organic practices without the use of agro-chemicals. PKVY also aims at empowering farmers through institutional development through clusters approach not only in farm practices management, input production, quality assurance but also in value addition and direct marketing through innovative means. Participatory Guarantee System under PGS-India programme will be the key approach for quality assurance under the PKVY. The farmers will have option to adopt any form of organic farming in compliance of PGS-India standards. While adopting a system it must be ensured that the system adopted is compatible to the area and crop and assures optimum yield and provides adequate measures to manage nutrients, pests and diseases. Farmers will have the flexibility to use appropriate package of practice(s) best suited to their situations.

2

OBJECTIVES

- To promote natural resource based integrated and climate resilient sustainable farming systems that ensure maintenance and increase of soil

fertility, natural resource conservation, on-farm nutrient recycling and minimize dependence of farmers on external inputs;

- To reduce cost of agriculture to farmers through sustainable integrated organic farming systems thereby enhancing farmer's net income per unit of land
- To sustainably produce chemical free and nutritious food for human consumption.
- To protect environment from hazardous inorganic chemicals by adoption of ecofriendly low cost traditional techniques and farmer friendly technologies
- To empower farmers through their own institutional development in the form of clusters and groups with capacity to manage production, processing, value addition and certification management;
- To make farmers entrepreneurs through direct market linkages with local and national markets

3 INSITUTIONAL FRAMEWORK AT NATIONAL, STATE AND DISTRICT LEVEL

A) National Level

A.1 National Advisory Committee (NAC)

The National Advisory Committee (NAC) under Chairmanship of Secretary (A&C) constituted under NMSA will be the policy-formulating body giving overall direction and guidance to the Mission and monitor and review its progress and performance. It is empowered to lay down and amend operational guidelines other than those affecting financial pattern and Cost Norms. The composition of the NAC is given below:

Secretary, Agriculture, Cooperation & Farmers Welfare (AC&FW)	Chairman
Secretary, MOFPI	Member

Secretary, MSME	Member
Additional Secretary & Financial Advisor, DAC&FW	Member
Additional Secretary (INM), DAC&FW	Member
Additional Secretary (Panchayati Raj)	Member
Additional Secretary (Rural Development)	Member
Representative from Department of Agriculture Research & Education	Member
Joint Secretary (NHM)	Member
Joint Secretary (Crops)	Member
Joint Secretary (NRM & RFS)	Member
Joint Secretary (DOF)	Member
Joint Secretary (INM)	Member Secretary
Representative of State Governments	Associate members on rotation basis

- NAC will invite 3-4 states as associated members in each meeting on rotation basis. NAC will meet at least once in six months.

A.2 Executive Committee (EC):

Executive committee will be headed by Additional Secretary (INM). Executive Committee (EC) will comprise of the following Members:

Additional Secretary (INM), DAC&FW	Chairman
Joint Secretary (Department of Fertilizers)	Member
Joint Secretary (INM)	Member Secretary
Joint Secretary (MOFPI)	Member
Joint Secretary (MSME)	Member

Joint Secretary (Panchayati Raj)	Member
Joint Secretary (Rural Development)	Member
DDG (NRM), ICAR, Agriculture Commissioner, Horticulture Commissioner, ADC (INM), Director, NCOF and Director, CFQC&TI	Expert Members

During the Annual Action plan approval meetings , the State Secretary of Agriculture/ nodal department shall be co-opted as member of the E.C, when the State's Action plan is taken up for approval.

- EC will oversee activities of the Scheme and approve Action Plans of various states in accordance with the prescribed norms.
- EC is empowered to reallocate resources across States and components and approve projects on the basis of approved financial assistance norms.
- EC will meet at least once every quarter.

A.3 INM Division in DAC&FW:

- Indicate tentative provisions for each component at the beginning of Financial Year (March- April) to facilitate the States in preparing Annual Action Plan (AAP) as per the prescribed format.
- Oversee dissemination, implementation, monitoring and evaluation of various interventions in the mission and provide feedback reports to the NAC and EC.
- Ensure timely release of funds as per the annual action plans and monitor utilization status of funds.
- Provide overall policy guidelines for the scheme.
- Prepare the Agenda for the EC and NAC meetings.
- In order to cater to the diversified requirements of the scheme in an

efficient and time bound manner, INM Division will engage a Project Management Team.

A.4 National Centre of Organic Farming (NCOF)

- > NCOF being the secretariat for PGS-India programme shall be the monitoring body for PGS certification programme including authorization of RCs, selection of NABL accredited labs and random surveillance through the RCOFs
- > Technical trainings to state Government officers on organic crop and livestock management as per PGS standards
- > Monitoring of functioning of Support agencies.
- > Monitor implementation of the scheme in states
- > Management and maintenance of data, MIS development, report generation and digital surveillance on group activities on PGS certification
- > Any other monitoring and surveillance activity assigned by the DAC&FW

A.5 National Project Management Team: Project Management Team (PMT) constituted at the National level will function under the leadership of the JS (INM). Consultants in organic farming management, PGS certification and agri-marketing as programme Manager, Senior Programmers, Technical Assistants, and supporting staff will form part of the PMT. The functions of the PMT are as at Annexure I.

B) State Level

- > State Department of Agriculture or agency nominated/authorised by the state government shall be the nodal Department for implementation of this scheme.

B.1 Functions of the State department:

- Prepare annual State Level Action Plan by compiling District-wise Action Plan and submit to the State Level Executive Committee (SLEC) for approval and there after forward the same to EC
- Receive funds from DAC&FW for implementation and oversee its implementation, regular monitoring & review of programmes. Facilitate monitoring by INM Division/ NCOF/RCOFs
- Where the programme is implemented by the State Departments, it must be ensured that the aim of market linkages to clusters is properly implemented and farmers are linked to the market before the closure of the programme.
- Selection of support agencies (if not implementing on its own) through the state determined process in an open and transparent manner.
- Release of fund to support agencies as per work progress and release of funds to farmers/ accounts of farmers groups as DBT.
- Organize workshops, seminars and training programmes for all interest groups/stakeholders at State/District level.
- Operationalize Information Communication Technology (ICT) enabled management system up to grass-root level.
- Supervise all activities related to implementation of plan, monitoring etc.
- Conduct independent evaluation to assess the performance of scheme in their States.
- Two percent (2%) of total allocation to the State may be earmarked for administrative and other contingent expenses. Expenditure in excess of 2% limit will be met by the States from their own resources.

- The State Government and other designated implementing agencies, to the extent possible, will ensure active participation of the Panchayati Raj Institutions (PRIs) in the implementation of this scheme
- State Government may involve PRIs in publicising the demonstrations and training of farmers and in ensuring participation of farmers from nearby areas for widespread dissemination of technology.
- States may prefer Women farmers / Women Self Help Groups formed under Ministry of Rural Development while choosing the organic farming areas.
- States may also take the services of FPOs, SME(s) and convergence with other government schemes to create end-to-end value- chain based cluster models (of 500 to 1000 ha area each) with effective and functional marketing channels.

B.2 The State Level Executive Committee (SLEC) :

Agriculture Production Commissioner/Principal Secretary Government	Chairman
Commissioner (Agriculture)/ Director (Agriculture)	Member Secretary
Commissioner (Horticulture)/ Director (Horticulture)	Member
Commissioner (Panchayati Raj)	Member
Commissioner(Rural Development)	Member
Representatives of SAUs/ICAR/NCOF/other line departments	Expert Members
Lead Farmers	Expert Members

The above SLEC is only indicative. States can choose to set up their own SLEC/already existing structures as per the need and availability under

information to GoI.

- The SLEC will oversee the implementation of scheme's components of the respective States through regular meetings with the nodal and other line Departments. It will also provide inputs to the Executive Committee for appropriate policy formulation and post facto approval, if required.
- State level Executive Committee shall approve the Annual Action Plan prepared by the State nodal Department/authorized agency. The SLEC will oversee the implementation of scheme components of the respective States through regular meetings with the nodal and other line Departments. The project prepared by state government must be duly approved by SLEC before submission to EC.

B.3 State Project Management Team (PMT): States can engage consultants, technical assistants at state and district level having technical and administrative expertise for providing technical guidance and effective monitoring of the scheme implementation. States can decide the number based on their requirements at State and District level. Financial support for the same will be obtained from 2% administrative costs provided to the states.

B.4 Support Agencies: States can implement the programme through their own staff or can engage /outsource programme implementation through professional support agencies

- Support agencies shall be required for the following twofold functions:

(A) Implementation of Cluster formation, capacity building including exposure visits, trainings, deployment of manpower in the form of Lead Resource Persons (LRPs), management of entire programme implementation including data management, handholding to groups and clusters, facilitating value addition and marketing of PGS certified produce.

(B) PGS Certification endorsement, physical verification and issue of certificates including sample collection and analysis for residue analysis.

- While any support agency fulfilling the prescribed criteria/qualifications can take up the functions as listed at (A), States shall engage already registered Regional Councils (RCs) for functions as listed at (B).
- In order to implement organic integrity, in such clusters, where a RC is selected as the support agency for functions of Part (A), they will make sure that another RC shall have to undertake their certification or functions of Part (B).
- Essential qualifications for support agency are at ANNEXURE II
- Roles and responsibilities of Support agency in detail is at ANNEXURE III
- Eligible criteria of Regional Councils is at ANNEXURE IV
- Roles and responsibilities of Regional Councils
 - as supporting agency will be as specified at ANNEXURE III
 - as agency endorsing PGS certification process is provided at ANNEXURE V
- Roles and responsibilities of LRPs is at ANNEXURE VI

C) District Level

C.1 The indicative structure for District Level Executive Committee (DLEC) is as follows; states can choose their own setup under intimation to GoI

DISTRICT LEVEL EXECUTIVE COMMITTEE

Collector	Chairman
Joint Director/Deputy Director (Agriculture)	Member Secretary

District Conservation officer	Agriculture/Horticulture/Soil	Member
Representative of (PR, RD, Health, Education of others)		Member
Representatives of SAUs/IKVKs/ other line departments		Expert Members

C.2 DISTRICT LEVEL PROJECT MANAGEMENT TEAM: DMPT will be set up for implementation and monitoring of programme at District level.

3)

CRITERIA

A) For selection of areas/ Farmers' groups:

- Organic farming under PKVY will be promoted preferably in hilly, tribal and rain-fed areas.
- Cluster approach will be adopted in large patches of up to 1000 ha area in plan areas and 500 ha area in hilly areas.
- Cluster chosen shall be in contiguous patch, as far as possible, may be extending over few adjacent villages (but not over large areas in sparsely distributed villages).
- Formation of Gram Panchayat based Farmer Producer Organizations will be encouraged or already existing FPOs will be promoted under the scheme
- In a cluster, there should be maximum number of small and marginal farmers. Women farmers/ SHGs should be given preference.
- Success in marketing shall be one of the key component taken up for outcome evaluation along with other indicators such as soil health improvement, reduction in cost of cultivation etc.

B) For allocation of funds to States:

- Timely submission of quarterly reports on financial (fund

utilization/submission of Utilization Certificates) and physical progress (area, crop details) reports.

- Effective use of existing FPOs convergence with other schemes, adoption of innovative value addition and marketing strategies will be considered while allocating the funds.

4 PROCEDURE AND TIMELINES FOR SUBMISSION AND APPROVAL OF ANNUAL ACTION PLANS

- The tentative allocation for the states for the next financial year will be intimated by INM division by end of February every year.
- State Government will prepare cluster wise annual action plan on a project basis with details of area to be taken up in each cluster; organic farming system/ cropping systems to be adopted; sources of organic inputs (on-farm/off-farm); possible surplus produce for marketing; value addition requirement marketing strategy along with details of agencies involved, by first week of April every year.
- This Annual Action Plan (AAP) duly approved by SLEC along with the minutes of SLEC, shall reach DAC&FW for examination, deliberation and final approval by first week of April every year. Post facto approvals from SLSC can also be considered to facilitate the approvals of SLEC in time.
- INM Division in DAC&FW will examine AAP before it is placed before the EC for consideration and sanction of AAP. Action plans will be approved by EC by April and shall be intimated to states.
- Funds will be released to states by 1st week of May every year.

5 FUND FLOW MECHANISM

- > Funds will be released to states after approval of annual action plan by national Executive Committee in May of each year.
- > Incentives to farmers for organic conversion, organic inputs, on-farm

input production infrastructure etc shall be provided as Direct Benefit Transfer (DBT) to their respective bank accounts of farmers/ group of farmers. States may define the policy guidelines for utilization of such funds, but it will be the choice of the farmers to select the input/ input production infrastructure.

- > The grants-in-aid/ funds would be released to the States/Implementing agencies in 2 instalments. States will become eligible for 1st instalment by 50% fund utilization of previous year. By the time the state comes for second instalment, 100% fund utilization for last year should be there.
- > Unspent balance and physical & financial progress report of the previous grant will be taken into account while sanctioning the subsequent grant. The unspent balance of previous year will be deducted from the instalment amount and remaining funds will be released
- > States/ implementing agencies will furnish utilization certificate (UC) in the prescribed format (Form GFR 19-A) and physical & financial progress report containing physical and financial targets of the previous grants-in-aid, along with State share, before requesting for release of subsequent instalment.
- > All implementing agencies are required to maintain subsidiary accounts of the grants-in-aid and get the same audited from a Chartered Accountant.
- > Release of grants-in-aid in excess of 75% of the total amount sanctioned for the subsequent financial year shall be done only after the Annual Audited Statement of Accounts (Audited UC, Income & Expenditure Account, Receipt & Payment Account and Balance Sheet) relating to grants-in-aid released during preceding year are submitted.
- > The project is to be executed over a period of 3 years, every year audited report (GFR 19-A) duly signed by Chartered Accountant along with physical report is to be submitted to DAC&FW, Ministry of Agriculture and Farmers Welfare, Govt. of India. State that requires additional time to implement the project, beyond 3 years may seek prior permission before the end of the project period during first 2 years subject to the condition that they should not exceed the overall per hectare and per farmer cost ceilings.
- > As far as possible, all the activities should be funded through PKVY as

per guidelines. Convergence with other schemes like RKVY, MIDH, NFSM etc. of the DAC&FW and schemes of other ministries like MSME, MOFPI for value addition, marketing can be done.

6

MODEL CLUSTER DEMONSTRATION

- For model cluster demonstration, proposals will be considered on case to case basis. Cooperatives/public sector organizations such as KVKs, ICAR institutions, SAUs, Central Agriculture Universities, Small Farmers Agri Consortium (SFAC), NSC, NCDC, and other public sector organizations of Central and State Governments will be eligible for conducting the model cluster demonstrations. Monitoring of the same will be done by INM division and /or NCOF through RCOFs. The funding pattern will be 100% grant from central government for central agencies. Upto 5% of PKVY fund will be allocated at DAC level for funding these demonstrations.
- In case of private agencies/organizations, only those having experience in organic farming and registered with NCOF or Darpan of Niti Aayog will be considered on a case to case basis. However, at least 10% of the total project cost shall be contributed by them for the implementation of Model Organic Cluster Demonstration.

7

MONITORING AND EVALUATION

- At the national level regular monitoring of the scheme will be done by NCOF, RCOFs and National Project Management Team. Monitoring formats will be developed for the same
- At state and district levels also the Project Management Teams engaged will do regular monitoring of the implementation of the scheme.
- Information and communication technology will be deployed extensively for ensuring transparency in the implementation process

and effective monitoring of the programme.

- A dedicated MIS will be developed to capture the information from planning of project, approval, execution to progress report.
- States will send quarterly progress reports to MIS and in hard copy also.
- Geo-tagging: The clusters taken up under PKVY will be geo tagged for monitoring purpose as well as for facilitating marketing mechanism based as the crops grown.
- DAC&FW will evaluate efficacy of this Scheme through a "third party". The agency will assess the efficacy, performance, outcome and shortcomings of the Scheme and recommend suitable corrective measures. Concurrent, midterm and final evaluations will be conducted by DAC to incorporate midterm corrections and final evaluation of the scheme implementation
- States shall also take up third party based concurrent, midterm and final evaluations from time to time.

8

JAIVIK KHETI PORTAL

A dedicated portal for organic farming acting as both a knowledge platform as well as marketing platform will be developed. Details of farmers involved in Organic farming, input supplier, certification agency (PGS), and marketing agencies will be available for smooth implementation from production to marketing. PKVY/PGS groups can take the advantage of this portal for capacity building, technical know-how, communicating with marketing channels/ other groups and direct marketing of their produce to prospective buyers and consumers.

9

CONVERGENCE

Convergence with other Central Sector Schemes like MIDH, NFSM and with schemes of other ministries like MOFPI, SMES, MoRD etc. for relevant components is highly encouraged.

FORMATION OF GROUP AND CLUSTERS

- **Formation of Groups:** A group of farmers having a total area of 20 ha, in as far as possible, in contiguous patch within a village or closely located villages shall be considered a PKVY/PGS Group. A group shall comprise minimum 20 farmers (may be more if individual holdings are less). All PGS group requirements for PGS certification shall be taken up by this group (called local group in PGS manual). 25-50 such groups covering 500-1000 ha area shall constitute one "Cluster"
- **Formation of Clusters:** State Government shall identify the target PKVY/PG Groups between 500 or 1000 ha area for formation of clusters. The group of clusters should be identified preferably in the existing FPO areas. Creation of new FPOs can also be taken up provided such FPO formation is funded through convergence of resources of State Government, NABARD, SFAC, DAY-NRLM. Most importantly while selecting Group of clusters, contiguous area upto 1000 ha should be selected in nearby villages so as to generate marketable surplus for processing and marketing.
- PKVY farmer organizations in respective clusters shall initiate necessary activities for formation of FPO for all postharvest activities such as collection and aggregation of produce, primary processing including washing, cleaning, grading, packing and branding & marketing of the organic produce within six months of cluster formation
- Farmers in a group can avail benefit to a maximum of two ha as per provision of PKVY, however the entire land of farmer could be allowed in the cluster without extending any additional support to the rest of the area and the same can be facilitated by the service provider for certification by the group and endorsed by the Regional Council without any extra cost involvement for data management and certification.
- For mobilization of farmers in groups and clusters, their capacity building,

day-to-day handholding in standards implementation, assisting farmers in peer appraisal and documentation and data management and data uploading supporting agencies shall deploy Local Resource Persons

11

CAPACITY BUILDING

- > After formation of a cluster, state Government in consultation with Support agency shall draw up a strategy for capacity building of farmers on organic farm management, organic input production and use, organic approaches for pest management, adoption of PGS standards in field practices, PGS certification procedures at group level documentation requirements for PGS and peer appraisal procedures through trainings, exposure visits and on-hand data management systems for data uploading.
- > Every year a minimum of 3 trainings shall be done at a cluster level, covering all the groups. In cases, where cluster is spread over large area (as in hills), trainings may be done at group level comprising members from 3 groups. In first year farmers shall also be exposed to PGS certification systems through exposure visits to existing PGS groups.
- > For mobilization of farmers in groups and clusters, their capacity building, day-to-day handholding in standards implementation, assisting farmers in peer appraisal and documentation and data management and data uploading Local Resource Persons (LRPs) shall be deployed.
- > Training of Officers /Executives of PKVY Team: Officers/Executives of PKVY Team, members of PMUs at different levels, and Regional Councils, to be trained on Sustainable Agriculture System and Governance Management of FPOs/PCs.

12

INCENTIVES TO FARMERS

- A) For organic conversion and on-farm and off-farm inputs
 - > Financial assistance to farmers shall be provided as incentive for ecosystem service and for procurement/ management of organic inputs.

- Necessary funds under the head shall be released directly to the farmer beneficiaries as Direct Benefit Transfer (DBT) in their bank accounts.
- On-farm inputs can be like composting, green manuring etc. and Off-farm inputs like organic seeds, manures, vermicomposts, biofertilizers, biopesticides, neem formulations, PROM, waste decomposer, botanical and physical and biological plant protection agents etc. can be considered.
 - States can issue necessary guidelines and suggest inputs as recommendatory measures. Farmers can choose inputs out of the recommendations as per their choice. In any case farmers should not be forced to buy the recommended inputs by the implementation Department and professional support agencies. Farmers will also be free to utilize the assistance fully for creation of on-farm input production infrastructure.
- B) For marketing, common packaging, branding, space rent, transport –
- > Financial assistance will be given for direct marketing by the groups and clusters including procuring common packing material, printing of packing material, brochures, leaflets, preparation of labels, holograms, transportation expenses to local markets, hiring spaces on rent for specific organic markets and branding of organic products.
 - > PGS India Green logo may be used for area under conversion and PGS India Organic logo may be used for completely converted organic area. Regional Council/ service providers in consultation with the State Governments will design the label and branding for the clusters. The labeling must include name of cluster, district and unique product packing used for branding organic produce.
 - > If required for marketing, States can adopt any mode of certification as required by the buyer within the allocated budget.
- C) For Value addition infrastructure creation through FPC/FPO:
- > Clusters can develop their own post-harvest, value addition and processing facilities, preferably under their institutions such as FPOs/ FPCs for creation of facilities for following:

- Creation of collection and aggregation/postharvest process center (one between every 5-10 groups)
- Creation of storage facility
- Transportation infrastructure/ costs
- Cold store/ pack house
- Processing unit for drying, grinding, milling, packaging etc
- Any other facility deemed necessary for completing value chain
- Financial assistance to meet the expenses for procuring processing units, storage, grading, packaging, branding, labeling, transportation, market linkage with FPO/ SME including the cost of organic fare to be provided on submission of appropriate proposal to the EC on case by case basis.

D) Brand building, trade fairs, exhibitions, local publicity, organic fairs/ melas, local marketing initiatives, participation in national trade fairs:

- > States in consultation with service providers shall draw a comprehensive marketing strategy and plan at state level for brand building of state specific organic products. Cluster leaders can also be exposed to national and international trade fairs within the country, running publicity campaign etc.
- > State Governments can also hire spaces in high end markets during weekends for promotion of PGS certified organic produce and can organize state level exhibitions, trade fairs and seminars/ conferences for facilitating direct market linkages with retail chains.
- > Setting up of Integrated Processing Unit is linked with the area already brought under organic farming or is proposed for conversion to organic. It must be ensured that adequate raw material is available from grower groups in close vicinity.
- > It also to be ensured that facilities are created in such a way that different commodity can be processed under single roof facility and the unit can run for at least 8- 10 months a year.

- > These projects should be preferably Farmer institutions driven or under Private and farmer Institution partnership mode and are established mainly to cater the value addition requirement of the PKVY cluster produce.
- > Funds under this component will be provided on specific proposal on case by case basis by DAC&FW

13 CONSULTATION WITH LEAD FARMERS

Consultations/Seminars with the lead farmers of different sustainable agriculture Systems will be organized at Regional Level and National level from time to time. 2% administrative cost available at national level will be utilised for this purpose.

14 These guidelines shall be reviewed after one year, on the basis of review, impact study and consultations with States and implementing agencies.

15 FINANCIAL BREAK UP AND COMPONENT WISE ALLOCATION

S.N o.	Component	Pattern of assistance/ ha			Total per ha area for 3 years	Total per group of 20 ha for 3 year	Total per cluster of 1000 ha each Rs in lakh
		1 st Year	2 nd Year	3 rd Year			
A. Programme implementation through Support Agencies							
1.	Cluster formation and Capacity building including exposure visits, and trainings of field functionaries	1000	1000	1000	3000	60000	30.00
2.	Deployment of manpower and management cost for implementation of programme including data management and uploading	1500	1500	1500	4500	90000	45.00
B. PGS Certification through Regional Councils							
3.	Service charges to RCs for physical verification, certification endorsement and certificate issue	700	700	700	2100	42000	21.00
4.	Residue analysis through Zonal councils/ state Departments in NABL accredited laboratories @ 3 samples/per 100 hec. (LRP area) from 2 nd year	0	300	300	600	12000	6.00
C. Incentive to farmers through DBT							
5.	Incentive to farmers for organic conversion, inputs, on-farm input infrastructure to be provided as DBT for direct farmers account	12000	10000	9000	31000	620000	310.00

S.N o.	Component	Pattern of assistance/ ha			Total per ha area for 3 years	Total per group of 20 ha for 3 year	Total per cluster of 1000 ha each Rs in lakh
		1 st Year	2 nd Year	3 rd Year			
D.	Value addition, marketing and publicity					0	0
6.	Support for marketing, common packaging, branding, space rent, transportetc	0	500	1000	1500	30000	15.00
7.	Value addition infrastructure creation through FPC/ FPO case to case basis*	0	1000	1000	2000	40000	20.00
8.	Brand building, trade fairs, exhibitions, local publicity, organic fairs/ melas, local marketing initiatives, participation in national trade fairs	1300	2000	2000	5300	106000	53.00
	Total	16500	17000	16500	50000	1000000	500.00

Rs 500.00 lakh per cluster of 1000 ha each

* Proposals regarding Value addition infrastructure creation through FPC/FPO would be considered separately on case to case basis

Inter component changes under prior intimation to Government of India on a case to case with full justification is allowed.

**FUNCTIONS OF NATIONAL/STATE/DISTRICT PROJECT
MANAGEMENT TEAM (PMT)**

- PMT, at all levels, will provide technical backstopping and also help in monitoring of the scheme implementation. The responsibilities of PMTs/ experts at national/state/ district levels are as follows:
- Design understanding of Sustainable Agriculture Systems including eco system services at Farm level and cluster level.
 - Design understanding of Farmer Producer Organization (FPOs) and Producer Companies (PCs) for value addition and marketing of surplus produce at different cluster levels (GP, Block and District).
 - Design of training Modules of SAS and Farmer producer Organisations (FPOs) & PCs.
 - Coordination for Convergence of resources at national, state, district and GP level.
 - Take up concurrent evaluation based on case studies in identified areas.
 - Performance Matrix development for monitoring.
 - Administration and Coordination of PKVY at respective levels.
 - Undertake publicity/information campaign to create awareness about the scheme activity including organizing workshops/conferences/symposium etc.

Essential qualifications for Support Agency

- Legally registered body under relevant act for last 3 years supported with their annual reports
- Financially sound supported through last 3 years balance sheets
- At least 3 years of experience in management of organic adoption and certification programmes (Third party or PGS) or organic farming conversion projects through experienced manpower in organic farming.
- Proven track record in facilitating market linkages to their developed organic groups/ clusters.
- Have strong in-house technical team competent in organic farm management, value addition, certification and marketing
- Have experience in FPO/FPC formation and providing handholding to such organizations in their business management.
- Competence in market facilitation and past record in handholding farmer groups in successful marketing shall be the key requirement for selection of service providers.

Roles and responsibilities of Support Agency

- Deployment of manpower as Lead Resource Persons (LRPs) for effective implementation of programme.
- One LRP shall be deployed for minimum of 100 farmers (means one LRP for 5 groups having 100 ha area).
- Group/ cluster formation through mobilization of interested farmers
- Collection of basic data such as Aadhar card/ PANcard/ Voter ID card, land details and bank account No (for DBT), last 3 years farm history.
- Helps in registration of local groups and ensure generation of user ID and password for data uploading on PGS-India website
- Facilitate local group in data uploading and management on PGS website/ state ICT network (farmers details, 3 years farm history sheets, group summary sheets etc.), if local group do not have access to computer
- Ensure access of portal data to public to build trust and credibility in the system
- Capacity building of LRPs on implementation requirements and ensure implementation of all activities through LRPs
- Trainings to farmers on organic farming activities, assist in annual plan of action preparation, packing, marketing, logo preparation, transportation etc.
- Helping farmers in developing suitable organic packages and guiding them on regular basis for optimum productivity
- Helping farmers in adopting suitable on farm strategies for nutrient and pest management
- Capacity building of farmers through trainings, group meetings and exposure visits on
- Capacity building of farmers on PGS group operations, documentation, peer appraisals and certification decision
- Capacity building of farmers on PGS standards implementation.

- Capacity building of groups and clusters in institutional development/ FPO/FPC making and their professional management
- Translate and print PGS paper work in local languages
- Submission of monthly, quarterly, half yearly and annual reports
- Facilitating market linkages-Introducing local marketing initiatives to ensure that PGS certified produce finds market as premium produce in local and city markets
- Helping states in brand building activities and projecting states potential in national and international trade fairs with in the country.

Eligible Criteria for Regional Councils

- The organisation/agency should have experts in technical, marketing, training fields
- Should have support of atleast 10 local groups (total 50 farmers). List of farmers to be uploaded as per prescribed format.
- Organization should be financially sound supported by legal status (3 years audit report required).
- Must not have been black listed from any organization (self declaration required).
- Proof/certificate of adequate experiences (05 years) of PGS-India/any other certification (TPS) in organic farming.
- Situated in the area of functioning (proposed to operate PGS-India programme) with permanent office and working personnels.
- If proposed for operation in any other places other than its HQ, then address of branch offices will be required.
- Must have adequate infrastructure for online activity (like computer, printer, internet facility etc.).

Roles and Responsibilities of Regional Councils as Agencies endorsing PGS Certification Process

- State Government can select any Regional Council from the list of duly authorized RCs available on PGS website. Preference may be given to RCs located in the nearby areas for cost effectiveness
- One RC shall be given not less than 1000 ha and not more than 3000 ha area in one state (1-3cluster) for certification activities.
- Physical verification of groups at least once a year, including participation in some peer appraisals by group for peer appraiser's competence assessment
- Periodic checking of data being uploaded-Checking of local group summary work sheets for organic certification; whether complete in all respects and are maintained by groups
- Appraisal of summary sheets and communication of compliances/ non-compliances
- Endorsement, returning for review or denial of certification decision
- Activate and issue Certification UID to each Local group in case of endorsement
- Print and distribute annual organic certificates to individual farmer members
- Coordinating RCOF, NCOF, state Government authorities for sample collection for residue analysis and sending to authorized testing laboratories
- Communication of test results
- Time to time reporting to NCOF and State Government authorities

ANNEXURE VI

Roles and Responsibilities of Lead Resource Persons (LRPs)

- LRPs can be chosen from the local group of farmers
- LRPs shall be the main field functionary and shall be responsible for farmer registration, documentation of the group members, uploading data in coordination with RC and handholding group members for PGS standards implementation in field, PGS documentation, group meetings and helping group members in Peer-appraisals.
- Supervising PGS standards implementation, nutrient and pest management protocols, inputs production, purchase and use
- Participate in peer appraisals as external member, help farmers in peer appraisal report preparation, summary sheet development and yields assessment
- Coordinate with RCs for physical verification and timely data submission.
- Submission of time to time reports to cluster coordinator
- Providing hard data to cluster coordinator for uploading

Annexure III

Participatory Guarantee System for India

[PGS-India]

Operational Manual for Domestic Organic Certification

[National Mission for Sustainable Agriculture]

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Abbreviations

CT	-Chemically Treated
DAC	-Department of Agriculture and Cooperation
EM	-Effective Microorganism
GMO	-Genetically Modified Organisms
ICS	-Internal Control System
IFOAM	-International Federation of Organic Agriculture Movements
INM	-Integrated Nutrient Management
LG	-Local Group
NAC	-National Advisory Committee
NCOF	-National Centre of Organic Farming
NGO	-Non-Government Organization
NPOP	-National Programme for Organic Production
NT	-Non-Treated
RC	-Regional Council
RCOF	-Regional Centre of Organic Farming
UID	-Unique Id
ZC	-Zonal Council

Definitions

Accredited certification agency - An agency accredited by National Accreditation Body under National Programme on Organic Production (NPOP) for certification of organic production system.

Ayurvedic - Ayurveda is a traditional naturopathic system of medicines and health care of India.

Buffer zone - A clearly defined and identifiable boundary area bordering an organic production site that is established to limit application of, or contact with, prohibited substances from an adjacent area.

Co-mingling – Accidental or intentional mixing of organic and conventional produce

Contamination - Pollution of organic product or land; or contact with any material that would render the product unsuitable for organic certification.

Conversion period – The time period required for converting a conventional farm to organic farm.

Diversity – Creation of biological diversity by planting different types of trees, bushes and plants and by taking various types of crops simultaneously at given time

Habitat management - Practices and protocols for management of an area in which ideal environment is created for existence of various plant or animal species naturally.

Homeopathy - Homeopathy is a system of medicine based on the principle of “*Similia, Similibus, Curentur* (let likes be treated by likes)”.

Facilitating agency – A agency hired by the Local Group to assist in management and implementation of PGS norms, including data management on PGS website on behalf of Local Group/(s).

Local Group – A group of farmers working together for participatory organic guarantee programme under PGS-India norms and guidelines

Livestock - Means any domestic or domesticated animal including bovine (including buffalo and bison), porcine, caprine, equine, poultry and bees raised for food or in the production of food. The products obtained by hunting or fishing of wild animals shall not be considered as part of this definition.

Parallel production - Means any production system where the same unit is growing, breeding, handling or processing the similar products both in organic and in non- organic system.

Part Conversion - Means when part of a conventional farm or unit has already been converted to organic production or processing and a part is either conventional or in the process of conversion.

PGS-NAC – PGS-National Advisory Committee is the apex policy and decision making body for PGS-India programme at Department of Agriculture and Cooperation.

Zonal Council – An agency authorized by PGS-NAC to coordinate and monitor the functioning of Regional Councils under PGS-India organic Guarantee programme.

Participatory Guarantee System (PGS) - PGS is a quality assurance initiative that is locally relevant, emphasize the participation of stakeholders, including producers and consumers and operate outside the frame of third party certification.

As per the definition of IFOAM (2008) "Participatory Guarantee Systems are locally focused quality assurance systems. They certify producers based on active participation of stakeholders and are built on a foundation of trust, social networks and knowledge exchange.

Peer Review - A process whereby people in similar situations (in this case small holder producers) in some way assess the production practices of their peers. The process can be formal or informal.

Pledge – Pledge is a written document by the operator or local group member committing to abide by the organic production system as per the PGS-India norms.

Regional Council - An agency authorized by PGS-NAC to coordinate, monitor and approve certification decisions of Local Group under PGS-India organic Guarantee programme.

Third Party Certification – An organic guarantee programme operated under National Programme on Organic Production involving an independent agency for verification and certification of organic production processes.

Unani – Ancient system of medicines and health care emerged from Europe

Veterinary – A modern health care system for animals

Contents

No.	Chapter	Page No.
	<i>Abbreviations</i>	
	<i>Definitions</i>	
1.	Participatory Guarantee System for India	1
1.1	Preamble	1
1.2	About PGS	1
1.3	Guiding Principles for participatory Guarantee System	2
1.3.1	Participation	2
1.3.2	Shared vision	2
1.3.3	Transparency	3
1.3.4	Trust	3
1.3.5	Horizontality	3
1.3.6	National networking	3
1.4	Advantages of PGS	3
1.5	Limitations of PGS	3
1.6	Operational structure	5
2.	Structure, Role and Responsibilities of different key Stakeholders	5
2.1	National Advisory Committee for PGS (PGS-NAC)	5
2.2	NCOF as PGS Secretariat	6
2.3	Zonal Council	7
2.4	Regional Councils	8
2.5	Local Groups	9
2.6	Farmer/ Farm family	9
3.	Certification Process	
3.1	Certification process with Farmer and Farm	13
3.2	Certification Process by Local Group (LG)	14
3.3	Certification Process by Regional Council	16
3.4	Verification of certification by consumers	18
3.5	Grant of Logo and unique certificate ID code	18
3.6	Separate logo for PGS organic and PGS under conversion status	18

3.7	Conditions for use of logo	18
4.	PGS National Standards for Organic Production	
4.1	General Requirements	19
4.1.1	Habitat Management	19
4.1.2	Diversity	19
4.1.3	Integration of animals/ livestock	20
4.1.4	Conversion period	20
4.1.5	Contamination control	20
4.1.6	Soil and water conservation	20
4.2	Standard requirements for crop production	
4.2.1	Selection of seed and planting material	20
4.2.2	Fertilization	20
4.2.3	Pest, Disease and Weed Management including Growth Regulators	20 21
4.2.4	Equipments/ implements and storage containers	21
4.2.5	Storage and Transport	21
4.3	Standard requirement for animal production	
4.3.1	Conversion requirements	21
4.3.2	Rearing environment	22
4.3.3	Animal Nutrition	22
4.3.4	Veterinary Medicine	23
4.3.5	Requirements for Bee keeping	23
5.	Standard Requirement for food processing, handling and storage	
5.1	General requirement	24
5.2	Storage	24
5.3	Ingredients, additives and processing aids	24
5.4	Processing	24
5.5	Packing and labelling	25
	<i>Formats</i>	
1.	Application form for Registration of Regional Council	26
2.	Format of Agreement to be executed between PGS-India Regional Council and Local Group under PGS-India Programme	27

3. PGS-India Programme- Term of Reference for Operation of Local Groups	31
4. Details of Local groups and farmers registered in Regional Councils	36
5. Application form for entry into PGS Local Group	37
6. Farmer History Sheet	38
7. Organic Farmer's Pledge	44
8. Application format for Registration of the Local Group (LG) with Regional Council	45
9. Tentative Certification Team	47
10. Endorsement of Local Group	48
11. Format for proceedings and attendance Register for Meetings	51
12. Format for proceedings and attendance Register for Field Day / Trainings	52
13. A. Peer Inspection / Field Inspection Appraisal Worksheet – Part 1	53
B. Peer Inspection / Field Inspection Appraisal Worksheet – Part 2	54
C. Peer Inspection / Field Inspection Appraisal Worksheet – Part 3	55
D. Peer Inspection / Field Inspection Appraisal Worksheet – Part 4	57
E. Peer Inspection / Field Inspection Appraisal Worksheet – Part 5	58
14. Peer Inspection/Appraisal Worksheet for Processing and Handling	59
15. Non-Compliance Guidelines	61
16. Local Group Summary Worksheet	63
17. Scope certificate	65
18. Annual Progress for the year (Report to be submitted by Regional council)	67

Chapter-1

Participatory Guarantee System For India (PGS-India)

1.1 Preamble

Organic producers around the world have been developing methods to guarantee the organic integrity of their products for fifty years. Today, what are generally referred to as *Third-Party Certification* systems have become the dominant means of Organic Guarantee for world trade and Indian producers have accredited Third-Party Organic Certification agencies to choose from. While Third Party Certification is an essential component to world trade, there are downsides to the system. The inherent expense and paperwork required in a multi-level system discourages most small organic producers from being certified at all. This limits local and domestic trade as well as access to organic products. Worse yet, it limits the growth of the Organic Movement as a whole.

In an attempt to reduce the inequality, a number of alternative methods to guarantee the Organic integrity of products have been developed for small domestic producers, and they are growing rapidly. These alternative programs are now collectively referred to as *Participatory Guarantee Systems* (PGS). The term PGS embodies the active participation of producers and other stakeholders in their organic guarantee process.

1.2 About PGS

Participatory Guarantee System (PGS) is a quality assurance initiative that is locally relevant, emphasize the participation of stakeholders, including producers and consumers and operate outside the frame work of third party certification. As per IFOAM (2008) definition "Participatory Guarantee Systems are locally focused quality assurance systems. They certify producers based on active participation of stakeholders and are built on a foundation of trust, social networks and knowledge exchange". PGS is a process in which people in similar situations (in this case small holder producers) assess, inspect and verify the production practices of each other and take decision on organic certification (PGS-Green and PGS-Organic).

PGS system has number of basic elements which embrace a participatory approach, a shared vision, transparency and trust. Participation is an essential and dynamic part of PGS. Key stakeholders (producers, consumers, retailers, traders and others such as NGOs, Societies/ Gram panchayaths/ State/Central Govt. organization/agencies /farmer etc.) are engaged in the initial design, and then in the operation of the PGS. In the operation of a PGS, stakeholders (including producers) are involved in decision making and essential decisions about the operation of the PGS itself. In addition to being involved in the mechanics of the PGS, stakeholders, particularly the producers are engaged in a structured ongoing learning process, which helps them improve what they do. This process is facilitated by the PGS group itself or in some situations a supportive NGO/ Societies, Gram panchayaths, State/Central Govt. organization/agencies etc. The learning process is usually 'hands-on' and involves field days or workshops. The idea of participation embodies the principle of collective responsibility for ensuring the organic integrity of the PGS.

1.3 Guiding Principles for Participatory Guarantee System

In tune with the international trends and IFOAM's PGS Guidelines, PGS India system is also based on participatory approach, a shared vision, transparency and trust. In addition it gives PGS movement a National recognition and institutional structure without affecting the spirit of PGS.

1.3.1 Participation

Participation is an essential and dynamic part of PGS. Key stakeholders (producers, consumers, retailers, traders and others such as NGOs, Societies, Gram panchayaths, State/Central Govt. organization/agencies etc.,) are engaged in the initial design, and then in the operation of the PGS and decision making.

The idea of participation embodies the principle of a collective responsibility for ensuring the organic integrity of the PGS. This collective responsibility is reflected through:

- Shared ownership of the PGS
- Stakeholder engagement in the development process
- Understanding of how the system works and
- Direct communication between producers and consumers and other stakeholders, producers, consumers, retailers, traders and others such as NGOs, Societies, Gram panchayaths, State/Central Govt. organization/agencies etc.

Together these help to shape the integrity based approach and a formula for trust. An important tool for promoting this trust is having operational processes that are transparent. This includes transparency in decision making, easy access to the data base and where possible farms are open to participation and visits of consumers. Participation of traders/ retailers or consumers in decision making may not be possible under all situations, but their participation in any form will increase the credibility and trustworthiness of the group.

1.3.2 Shared Vision

Collective responsibility for implementation and decision making is driven by common shared vision. All the key stakeholders (producers, consumers, retailers, traders and others such as NGOs, Societies, Gram panchayaths, State/Central Govt. organization/agencies etc.) support the guiding principles and goals, PGS is striving to achieve. This can be achieved initially through their participation and support in the design and then by joining it. This may include commitment in writing through signing an application/ document that includes the vision.

Each stakeholder organization (or PGS group) can adopt its own vision conforming to the overall vision and standards of PGS- India programme.

1.3.3 Transparency

Transparency is created by having all stakeholders, including producers and consumers, aware of exactly how the guarantee system works to include the standards, the organic guarantee process (norms) with clearly defined and documented systems and how decisions are made. Public access will be ensured to documentation and information about the PGS groups, such as lists of certified producers and details about their farms and non-compliance actions. These will be available through a dedicated National database websites (PGS-INDIA webportal). But still it does not mean that entire information on National PGS database will be available to everyone.

At the grass roots level transparency is maintained through the active participation of the producers in the organic guarantee process which can include

- Information sharing at meetings and workshops
- Participation in internal inspections (peer reviews)
- Involvement in decision making.

1.3.4 Trust

The integrity base upon which PGS are built is rooted in the idea that producers can be trusted and that the organic guarantee system can be an expression and verification of this trust. The foundation of this trust is built from the idea that the key stakeholders collectively develop their shared vision and then collectively continue to shape and reinforce their vision through the PGS. The ways this trust is reflected may depend entirely on factors that are culturally/ socially specific to the PGS group.

The idea of ‘trust’ assumes that the individual producer has a commitment to protecting nature, maintaining biodiversity, maintenance of soil health, and consumers’ health through organic production which are free from chemical residues.

Mechanism for expressing trustworthiness includes:

- Declaration (a producer pledge) via a witnessed signing of a pledge document
- Written collective undertaking by the group to abide by the norms, principles and standards of PGS

1.3.5 Horizontality

PGS India is intended to be non-hierarchical at group level. This will reflect in the overall democratic structure and through the collective responsibility of the PGS group with sharing and rotating responsibility, by engaging producers directly in the peer review of each other’s farms; and by transparency in decision making process.

1.3.6 National networking

PGS India while keeping the spirit of PGS intact also aims to give the entire movement an institutional structure. This is proposed to be achieved by networking the groups under common umbrella through various facilitating agencies, Regional Councils and Zonal Councils. To make the system completely transparent and accessible to traders and consumers entire data will be hosted on a common platform in the form of a website (PGS-INDIA). National Centre of Organic Farming shall be the custodian of data, define policies and guidelines and undertake surveillance through field monitoring and product testing for residues. Regional councils and facilitating agencies will facilitate the local groups in capacity building, training, knowledge/ technology dissemination and data uploading on the PGS website. But at every stage it will be ensured that these agencies including apex body do not interfere in the working and decision making of the group. Even if surveillance is done and reports are made, the same will also be put on website in public domain. What action is to be taken on adverse reports will be left to the group and Regional Council.

1.4 Advantages of PGS over third party certification system

In PGS organic farmers have full control over the certification process and are able to produce far more credible and effective system of quality assurance compared to third party

certification. Important benefits of this system over third party certification system are as follows:

- a. The procedures are simple; documents are basic and use the local language understandable to farmers.
- b. All the members are local and known to each other. Being themselves practicing organic farmers have high degree of understanding on day-to-day knowledge or acquaintance of the farm.
- c. Peer appraisers are among the group and live in the same village, therefore have better access to surveillance
- d. Peer appraisal instead of third party inspections reduces cost
- e. Mutual recognition and support between Regional PGS groups ensures better networking for processing and marketing.
- f. Empowers farmers with increased capacity building
- g. Bring consumers to the farm without the need of middleman
- h. Unlike grower group certification system, PGS offer every farmer with individual certificate and each farmer is free to market its own produce independent of group.
- i. Consumers and buyers are often involved in production and verification process
- j. Random residue testing at regular intervals ensures the integrity and increases the trust.

1.5 Limitations of PGS

PGS certification is only for farmers or communities that can organize and perform as a group within the village or in close-by villages with continuous territory and is applicable on, on-farm activities comprising of crop production, processing and livestock rearing (including bee keeping) and off-farm processing "by PGS farmers of their direct products".

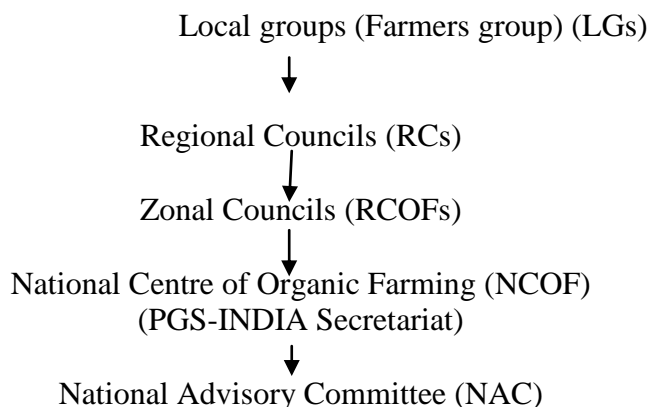
Individual farmers or group of farmers having less than 5 members are not covered under PGS. They either have to opt for third party certification or join the existing PGS local group.

PGS is applicable on on-farm activities comprising of crop production, processing and livestock rearing and off-farm processing "by PGS farmers of their direct products". Off-farm processing activities such as, storage, transport and value addition activities by persons/agencies other than PGS farmers away from the group are not covered under PGS. Off-farm input approval granted by the group is applicable on the members of the same group and cannot be taken as a basis for universal approval for other groups. Off-farm inputs need to be approved by each group for their member's use on case to case basis.

PGS ensures traceability only up to end till it is in the custody of PGS group. Once the product leaves the custody of PGS group there is no control of PGS on its integrity, Therefore PGS is ideal for local direct sales/ direct trade between producer and consumer and direct trade of packed finished product with PGS logo between PGS group and traders/ retailers. But Local Groups and buyers in consultation with RC can devise some mechanism with full traceability records to allow use of PGS logo on products packed by traders/ retailers.

1.6 Operational Structure

Schematic operational structure of the PGS India is given below:



Chapter-2

Structure, Role and Responsibilities of different key Stakeholders

2.1 National Advisory Committee for PGS (PGS-NAC)

2.1.1 Structure

National advisory committee shall be the apex policy making body for PGS India Programme with following composition:

1. Joint Secretary (INM), DAC	Chairman
2. Director, NCOF	Executive Secretary
3. Regional Director, RCOF I	Member
4. Regional Director, RCOF II	Member
5. Additional Commissioner	Member
6. Dy Commissioner (INM), DAC	Member
7. Head Zonal Councils/(s)	Member
8. Representatives of RC (North)	Members
9. Representatives of RC (South)	Members
10. Representatives of RC (East)	Members
11. Representatives of RC (West)	Members
12. Farmers' representatives (4, one from each region)	Members
13. Consumers representatives	Member

First Six members of the committee will be permanent members, as they are represented by their position. Representatives of Regional Councils will be nominated to the committee by election for a fixed tenure of two years. Representatives of farmers and consumers will be selected and co-opted by the other members of the committee on the recommendations of RC and ZCs. The farmer representative is required to be the member of a Local Group from that region with certain standing.

2.1.2 Role and Responsibility

PGS-NAC being apex policy making body shall be responsible for:

- a. Defining operational and policy guidelines and PGS India Standards. In case of changes the committee shall ensure that the amendments/ modifications are considered "through intensive consultation with the base".
- b. Make changes, improvements and amendments to the programme and national coordination structure as a whole without interference in the autonomic functioning of Regional councils and local groups. Co-ordinate and monitor national level capacity building, education, outreach and surveillance activities.
- c. Selection and Authorization of Zonal and Regional Councils
- d. Surveillance and monitoring on the functioning of Zonal and Regional councils
- e. Sanction/ withdrawal of authorization to Zonal/ Regional councils on being found not functioning or not functioning according to the guidelines.

2.1.3 Meetings of PGS-NAC

PGS-NAC will meet at least once a year to review the implementation process and for authorization of new councils. PGS-NAC meetings can also be convened at the discretion of the Chairman and/ or on the request of at least 25% members to take up important matter.

Any policy change, modification in standards and sanctions/ punishments needs to be endorsed by the majority of members present in the meeting. Minimum quorum for a meeting will be 30% of total strength. If it is not possible to convene a meeting, urgent issues can be decided by circulation. In all such cases at least 50% of responding members within the given time frame must endorse the decision.

To give the programme a head start there may a need to meet PGS-NAC at regular intervals in the initial years. Later once the programme is settled the PGS-NAC may meet only once or twice a year.

Travel expanses of non-officials (members of NGO based ZC, RC and Farmers and consumers representatives) shall be borne by PGS Secretariat.

2.2 NCOF as PGS Secretariat

National Centre of Organic Farming will be the Secretariat of the PGS programme with Director NCOF as the Executive authority. Key role and responsibilities of the Secretariat will be as follows:

- a. All executive and secretarial responsibilities related to execution of the programme, NAC meetings, implementation of the decisions of NAC, matters to be put up to NAC and coordination with NAC members
- b. Advise NAC on all technical and implementation issues
- c. Capacity building, education, training and outreach activities for Zonal and Regional councils.
- d. Training of local group leaders through RCOFs in collaboration with Zonal Council and Regional Councils.
- e. Surveillance and monitoring of Zonal and Regional Councils
- f. PGS India Website design, hosting and maintenance
- g. Custodian of entire PGS India database
- h. Receipt and processing of applications for authorization of NAC as Zonal/Regional Councils
- i. Facilitate election of members from RCs for nomination to PGS-NAC.

- j. Facilitate and maintain positive relationship with controllers of Third party certification system to ensure the compatibility of PGS programme with NPOP.
- k. Coordinate and liaise with different State Governments for promotion and popularization of PGS programme.
- l. Surveillance of PGS products through residue testing including collection of PGS samples, getting those samples tested for residue analysis and hosting of residue analysis results on PGS website.
- m. Appellate authority for local groups against the actions and decisions of Regional Councils/Zonal councils and for Regional Councils against the action of Zonal council.
- n. Literature development, publicity, technology dissemination and awareness creation through print and electronic media.

Except surveillance and monitoring on Zonal/ Regional Councils, the PGS secretariat in no way will interfere in the autonomic functioning of Zonal/Regional Councils and local groups. Even in some cases where secretariat undertakes monitoring of some local groups and find some non-compliance, the same will be reported to the concerned Regional Council for further course of action at their discretion. Even in the cases where the PGS samples have been found to be having pesticide residues, the report will be hosted on the website with information to the concerned Regional Council for further action at their discretion.

2.3 Zonal Council

As India is a large country with most of the producers as small and marginal, it is expected there will large numbers of small-small groups in different states and geographical regions. To coordinate such small groups effectively it is desirable that Regional Councils are locally placed and do not need to travel long distances for effective coordination with local groups. Under such scenario it is likely that there are numerous Regional Councils. To have effective coordination with Regional Councils it is proposed to have up to Six Zonal Councils. Initially there may be only two Zonal Councils (North and South Zone) but in due course of time with the increase in number of RCs the number of NCs may be increased up to Six (North, South, East, West, North-East and Central). To start the programme, pending selection and appointment of Zonal Council, NCOF and its Regional Centres will act as Zonal Council. Once the Zonal Councils are appointed the responsibility will be transferred to these Zonal Councils and NCOF and RCOF will only be undertaking the functions assigned to it as PGS Secretariat. For State-Agency Regional Councils NCOF/RCOF shall be the Zonal councils.

2.3.1 Appointment of Zonal Councils

Zonal Councils will be appointed by the PGS-NAC on the recommendations of PGS secretariat. Only well established organizations with proven dedication to the cause of organic agriculture movement and well versed with the organic guarantee/ certification systems will be considered. Zonal Councils should be self dependent bodies with strong financial health. RCOFs shall be the Zonal councils.

2.3.2 Role and Responsibilities

- a. Receipt, processing and authenticity verification of application for authorization as Regional Council. On being found suitable forwarding of applications to PGS secretariat for approval of PGS-NAC.
- b. Provide up-dated documents, policies, literature and other technical input to RCs for further information of local groups.
- c. Coordinate Regional Council Training workshops

- d. Coordinate national level education and outreach activities in collaboration with PGS Secretariat.
- e. Surveillance and monitoring on the functioning of Regional councils.
- f. Complaint redressal of farmers and local groups against the functioning and actions of Regional councils
- g. Appellate authority on complaints of certificate denial by RC or sanctions imposed by RC on local groups
- h. Appellate authority on complaints of traders/ retailers/ consumers on the quality/ organic integrity of PGS products of particular group and action taken by RC or inaction of RC.
- i. Collaborate PGS Secretariat in collection of PGS certified samples for residue analysis

2.4 Regional Councils

Regional Council (RC) can ideally be floated by State agencies, existing NGOs, Organic Certification service providers of Central and State Governments or any other agency((producers, consumers, retailers, traders and Societies / Gram panchayaths/ farmer etc.,). Local groups with three years standing in PGS programme are allowed to form their own RC, provided they have support for at least 10 local groups. Local groups dissatisfied with the functioning and control of their existing RC can, any time, come-together to form a new RC, provided they have support of at least 10 local groups, and apply to PGS secretariat through Zonal Council/RCOF for necessary authorization.

Initially to start the programme the RCs will be selected by the ZC and PGS secretariat, existing PGS regional facilitators (regional councils, members of the existing PGS Organic India council) will also be considered for appointment as RCs if they apply and meet the criteria, but in due course of time the local groups will be encouraged to come forward with their own RCs. Nomination of RCs to PGS-NAC will be done by election on Regional basis. Each RC will have one vote.

2.4.1 Eligibility criteria for appointment of any agency as RC

- a. May have proven record on promotion of agriculture and organic management practices
- b. Situated in the area of functioning with permanent office and working personals.
- c. Have access to computer, printer and internet facility
- d. At least one member is well versed with data handling and data uploading in computer on internet
- e. Adequate knowledge on organic guarantee/ certification systems and/ or previous experience in supporting Third party certification/Participatory Guarantee Systems or promotion of agricultural activities in rural areas..
- f. Should have support and endorsement from at least 10 local groups Members should undergo necessary PGS training meant for RCs organized by ZC and PGS secretariat
- g. Have adequate financial resources to operate as Regional Council.
- h. Each RC will be initially authorized for a period of three years. Authorization needs renewal after every three years. Renewal will be considered by NAC on application by the RC and on the recommendation and surveillance report of ZC and PGS secretariat.

2.4.2 Role and responsibility of Regional Council

- a. Training and support to existing and new local groups in procedures and paper work necessary for each farmer's organic guarantee.

- b. Translate and print PGS paper work in local language
- c. Register local groups and issue user ID and password for data uploading on PGS-India website.
- d. Facilitate local groups in data uploading on PGS website, if local group do not have access to computer and internet.
- e. Confirms that the Local Group Summary Worksheet listing all the farms that are to be Certified Organic is complete and was conscientiously maintained by the group
- f. Can NOT pick and choose individual farmers to certify, only approve/confirms the collective decision of the Local Group as a whole and organic integrity of the system adopted by the local group.

Ideally once a Local Group summary sheet with collective decision of the group signed by at least three lead members is endorsed by the RC, the RC activates the UID. On UID activation the group can directly print the certificates for all its members, but in case if the group does not have access to computer and internet then the same will be facilitated by RC.

- g. Activate and/or issue certification UID number to each approved Local Group (received from the instant UID Pool maintained on PGS Website).
- h. Print and distribute annual Organic Certificates for individual farmer.
- i. Participate in sampling of Local Group farm appraisals
- j. Provide Local Groups with guidelines for “Non-compliance Sanctions”
- k. Participate in online system to provide Summary Worksheet information to interested parties and helps to connect interested parties with the Local Groups for access to individual farmers’ Organic Guarantee
- l. To ensure complete transparency of the certification process
- m. To facilitate Mutual Recognition and Support for the various groups (and individual farmers) on a national level by allowing Regional Councils to audit the Organic Guarantee of certified farms in other Regional Councils.
- n. To quickly build trust and credibility in the system as a whole ensure access to members of the public and media.
- o. Submission of annual reports on PGS activity in a prescribed format to NCOF/RCOFs.
- p. Organize sufficient training to farmers on organic farming activity , assist in annual action plan preparation, packing, marketing, logo preparation, transportation etc.,
- q. Residual analysis and Soil testing of samples through NABL labs
- r. Assist farmers/LGs to upload data relating to PGS activity in PGS webportal

2.5 Local Group (LG)

Local group is the main functional and decision making body under Participatory Guarantee System. It is a local group of farmers that live in the same village or close by villages and interact regularly with each other. Participation of consumers or representatives of traders or retailers in the group and its functioning should be encouraged as it strengthens the integrity and trust. The local group can be an existing organic group previously working under third party certification system or under the NGO-based PGS Organic India Council or a new grassroots group started and run by interested local farmers/consumers, or it can be started by a regional NGO or Government agency that has agreed to facilitate the formation of a PGS Local

Group by coaching an initial group of farmers through the process. The PGS Local Group function is even easier to add on to an existing group of farmers (for example Farmer Self Help Groups or Farmer Cooperatives or Societies.)

2.5.1 Requirement and eligibility criteria for a local group

- a. A Local group should comprise of minimum 5 members belonging to same village or close by villages with continuous territory. Regional Councils can decide on maximum number of farmers per group keeping local situations in mind.
- b. Adequate participation of women farmers shall be ensured.
- c. Training on PGS guarantee system organized by Regional Councils, Zonal Council or PGS Secretariat or have been part of the core team of other functional PGS group for at least two years.
- d. All the members in the group have signed the PGS pledge and group agreement to adhere to the group specific vision, participatory approach and collective responsibility.
- e. Although, there is no restriction on the size of holding of any individual farmer but in any case the holding of one single member should not exceed one third of the total land under the group.
- f. Under PGS organic guarantee system normally parallel production and part conversion is not allowed, therefore it is necessary that all group members need to bring their entire farm with livestock under organic management as per the PGS standards. However, Regional Councils in some cases may allow conversion in phases, but in any case the entire farm holding of the group members must be brought under PGS organic management within 24 months of joining the group.
- g. Have access to PGS documents and preferably have access to computer and internet

If a farmer under PGS group fails to convert his entire land holding and livestock within the stipulated 24 months time, then he will not be eligible for PGS organic certification and shall continue to remain under conversion.

- h. Registered with Concerned Regional Council and have obtained necessary user ID and password to upload data on PGS website.
- i. In case if farmer group is unable to operate on-line system of data up loading then the services can be availed from Regional Council or of any other facilitating agency or local NGO etc.
- j. In case if it is essentially required to use off farm products for organic cultivation, in such cases it should get approval from PGS-India Secretariat to use any such products

2.5.2 Role and Responsibility of Local Group

- a. Organize farmers in the group and each member individually sign PGS organic pledge and group agreement.
- b. Provide copies of PGS standards, operational manual and appraisal forms to all the members in local language. If farmers are illiterate then they need to be explained details and standards orally and through pictorial representations.
- c. Prepare necessary field documents with individual farm history.
- d. Elect Group leader and core team of peer reviewers (minimum 3 in 5 member group). There is no upper limit. It will be an optimal situation if all members of

- the group can participate in peer reviews, as this contributes to capacity building and information exchange between farmers, and reduces conflicts of interests.
- e. Participate in the activities of any other registered PGS group to understand the functioning of the PGS Group. Implement standard requirements on the farms of all the group members and obtain endorsement from the other registered group. This endorsement is needed only once at the time of registration.
 - f. Register the group on PGS website (facility available on-line) and obtain registration approval from the nearest Regional Council.

The Local Groups need to be approved only once and no further renewal is needed. If there are repeated problems (missing paperwork, a random pesticide inspection turns up a problem, a random oversight inspection turns up a problem, etc) THEN they could get disbanded/ sanctioned and have to re-apply and could get re-entry only after taking necessary correction and thorough verification by RC.

- e. no PGS registered group is there in the vicinity then State Agencies (State Agriculture Department District Officer) may be requested to verify the requirement and submit necessary verification report to RC. Else request RC to do verification and grant registration approval. RCOFs can also be requested for verification and endorsements of Local Groups for their recognition by Regional Council.
- h. Obtain User ID and password from RC for time to time data up loading.
- i. Organize time to time meetings and maintain attendance register. Participation of members in these meetings is a mandatory activity and is an indication of dedication of the member to the cause of group's guarantee scheme. There should be at least 6 times a year, compulsory meetings or more frequently as specified by the Regional council and at key times of the year depending on the season, the crops, etc.
- j. Every member need to attend at least 50% of the meetings in a year and sign in attendance register.
- k. Advise each other and share information to improve the capacity of the group as a whole.
- l. Organize regular training courses by inviting practicing organic farmers from other groups, RC members or experts of other State Govt and Non-Govt agencies.
- m. Chalk out peer appraisal strategy and ensure timely appraisal of each farm at least twice a year. Peer reviewers will ensure to complete Peer review appraisal form, sign and submit to the group leader. Each farm is to be appraised by at least a three member team. Inclusion of consumer's representative increases the credibility and trust.
- n. Inspection of peer reviewer's farms by another peer reviewer group. To increase credibility and trust the group may have any number of peer reviewers.
- o. At appropriate time the group decides which farmers are to be certified. Separate out farmers which are yet to comply with the certification requirements. List out defaulters and impose sanctions.
- p. Organize final decision meeting explain the reviewer's results to all the members. Collectively declare the group as conforming to PGS standards (in case of small groups, up to 10 members). If the group is large then elect a sub-group or certification committee, comprising of 5 or more members, which may review the

results and decide upon the certification. Approval of majority group members is required only in the cases of negative decision (denial of certification or decertification). Full member body can also serve as an appeal body against the decision of certification committee.

- q. At appropriate time prepare summary sheet with list of farmers declared certified with details of crops and expected quantity of produce.
- r. Submit summary sheet to the RC with all other documents as required by RC. In case if data has already been up loaded by the Group on-line, then provide only the signed hard copy of the summary sheet.
- s. On getting the approval from RC on-line the certificates can be printed directly from the website and distributed to the individual farmers.
- t. If there is any off farm materials is need to be used for organic production should be get approval from NCOF/RCOFs before to using them in crop production

2.5 Farmer/ Farm family

As in PGS, part conversion and parallel production is not allowed, the entire family with its farm and livestock is to be converted to organic and covered under PGS within the stipulated period. Any farm family willing to embrace organic methods of cultivation and become part of Participatory organic guarantee system, the first step in the process is to become part of PGS group in the same village or in nearby village.

2.5.1 Role and responsibilities of farm family

- a. Develop an understanding of organic standards and participatory guarantee system. This can be done by obtaining the copy of PGS standards and understanding it through reading, participation in PGS group meetings and discussion with existing farmers.
- b. Make sure that farm practices are compliant to the standards and PGS norms
- c. Fill farm history sheet, registration form and make a pledge that they understand organic system of cultivation and commit to adhere to the organic standards
- d. Participate in appraisals/ inspections of other farms in the local group
- e. Participate in key field day trainings
- f. Participate in local group meetings and advise neighbors, share information and improve the capacity of the group as a whole
- g. Allow consumers/ buyers visits of the farms

Chapter-3**Certification Process****3.1 Certification process with Farmer and Farm****Step 1**

- i. Farmer decides to embrace organic farming and willing to be a part of PGS certification process
- ii. Reads or hear a summary of organic standards. For better understanding, participation in group meetings will be beneficial
- iii. Stops using all synthetic and chemical inputs on farm and on livestock.
- iv. Undertake adequate measures for contamination control, habitat management, diversity and livestock integration.
- v. In case farmer is unable to bring his entire land holding and livestock under organic management at the time of entry to group, then provide a time schedule in which farmer proposes to convert his entire holding to organic and obtain gradual conversion approval from group. In turn Group need to obtain approval of Regional Council.
- vi. Signs a PGS pledge committing to adherence to standards

Step 2

- vii. Regularly participates in group meetings and key field day trainings
- viii. If possible maintain a farm and livestock diary to list out farm operations. Illiterate farmers can take help of their literate sons or daughters or even the other literate members of the group.
- ix. Participate in peer appraisals of other farmers, first as shadow reviewer and then later as part of peer appraisal team.

Step 3

- x. The farmer is appraised by a group of peers from the local group, at least once in every crop season. A minimum of three (or more as per the decision of the group) peer reviewers must be present to sign and validate the appraisal form.
- xi. If possible an external advisor or representative of trader/ consumers or a local State Agriculture Department Officer may be included. But their presence is not mandatory.
- xii. To ensure consistent (i.e. complete but not overzealous) appraisals, all appraisals are scripted and include both physical checks of various parts of the farm and more importantly questions to make sure that the farmer understands the organic standards and they are complying to all the requirements
- xiii. Literate member of the appraisal group makes sure that every point in the appraisal script is completed and checked off. At the end, all reviewers present must sign off as supporting references and endorse the farmer's organic guarantee. Peer appraisals are done in the presence of the farmer or his family member and at the end of the inspection Peer appraisal sheet is also to be signed by the farmer.

Step 4

- xiv. After inspecting all the members in a group, a decision is made by the group as a whole or by the certification committee about which farmers will and won't be certified in a given year.
- xv. Group prepares local group summary worksheet on-line and sends signed hard copy to the Regional Council.

- xvi. On acceptance by RC, Group prints individual certificate and distribute to the farmers.

Note:

If a farmer has satisfactorily completed the 3 main requirements of being certified (**Attendance** at group meeting and field-trainings, Farmer's **Pledge** and Peer **Appraisal**) they will most likely be certified. PGS is an inclusive system based on trust. This is different from a Third Party system where the farmer has to convince the certifier of his/her "innocence" with huge amounts of paper "proof" as to his/her organic integrity.

In a small village, neighboring farmers know what happens on each other's farms, and these are the same neighbors empowered to make a final decision as to who is and isn't certified. A non-compliance by one farmer could influence the certification status of the group as a whole, so for that reason (among others) neighboring farmers are more likely to:

- a. Deny certification to farmers known to be cheating
- b. Proactively share knowledge, materials and moral support with a struggling farmer so they don't feel to resort to use of prohibited substances
- c. Immediately apply reasonable sanctions to farmers for a non-compliance (for example temporary suspension of Certified Organic status but the farmer is still included in the Local Group)

There are ample evidences that the power of local social control is far greater than that wielded by trained Third-Partv inspectors who are outsiders and further visit only a few hours in a given year.

3.2 Certification Process by Local Group (LG)

Step 1

- i. Form a group comprising of minimum 5 farmers (belonging to close by villages with continuous territory).
- ii. Collect registration and farm history sheet from all the members.
- iii. Obtain copies of PGS Standards and PGS operational documents from nearest RC and distribute to all the members. These documents can also be downloaded from PGS website.
- iv. Convene the meeting of all the members and ask all the members to sign the pledge.
- v. Prepare Local Group operational manual detailing requirement of documents to be maintained by farmers, peer appraisal methodology and checkpoints to be assessed, based on the broad guidelines of PGS-India norms
- vi. Ensure that members have committed to convert their entire land holding and livestock to organic. In case if some members propose to convert their land in phases then draw appropriate strategies to distinctly separate such units with organic ones.
- vii. Invite already registered another Local Group to verify the group formation and obtain necessary recommendations. In case if there is no other PGS-LG close by, then contact local State Agriculture office, demonstrate the group's strength on organic and obtain endorsement. Alternatively apply to the RC and request RC to undertake verification. RCOFs can also be requested for endorsement of Local Groups.
- viii. Register the group on-line on PGS Website. In case if the group do not have access to computer and internet, then services of an local computer operator/ internet cafe can be taken. Alternatively fill all the forms and submit to RC for uploading the information on PGS website.
- ix. Enter into agreement with the RC for services to be availed on payment basis (as per mutual agreement).
- x. Request RC to grant registration, user ID and password.

Step 2

- xi. Follow the PGS guidelines on group meetings, key field trainings and knowledge sharing.
- xii. Keep vigil on neighboring farmer's farms and if some non-compliances are noticed then inform other group members during group meetings
- xiii. Ensure timely organization of training programmes in collaboration with RC.
- xiv. Invite practicing organic farmers and other local experts for problem solving in management issues such as in nutrient management, pest management etc during key trainings and group meetings.
- xv. Maintain attendance register for group meeting and key field trainings
- xvi. If member farmers are using or propose to use off-farm inputs then verify their organic status, discuss in group meetings and endorse or prohibit their use. Use of such inputs without group's approval shall be treated as non-compliance.

Step 3

- xvii. Chalk out peer appraisal schedule and constitute peer appraisal groups. Each group should have minimum 3 peer appraisers. Depending upon the number of farmers there can be any number of appraisal teams comprising of three or more members. At least one member in the appraisal team must be literate and well versed in filling the appraisal forms.
- xviii. Reciprocal review between two member group farms is not allowed (i.e. A reviews the B and B reviews A).
- xix. Invite other group peer reviewers or representatives of consumers/ traders or local State Agriculture Department officer as invited member of the peer group (but their participation is not mandatory). This may increase the trust and credibility of the group Guarantee.
- xx. Complete peer review of all the farms at least once in each season. Ensure that all farms have been reviewed objectively.
- xxi. Discuss review reports in the meetings and decide upon the organic status of each farm one by one.
- xxii. Segregate farmers who have fulfilled all the requirements and consider them for grant of certificate
- xxiii. Discuss about the non-complying farmers and depending upon the nature and gravity of non-compliances issue sanctions.

Step 4

- xxiv. Appraisal paper work is checked for completeness and a local Group Summary Worksheet is prepared.
- xxv. Group or certification committee decides on certification and declares certification status of each group member.
- xxvi. Enter all details on-line in PGS website and send signed copy of the summary worksheet to the RC. Alternatively send all details in hard copy along with signed copy of summary sheet to RC for uploading the data into PGS website.
- xxvii. Regional Council check details provided in hard copy or on-line. While deciding on approval RC takes into consideration surveillance report (if any done), complaints received, residue analysis report etc. RC cannot decide on inclusion or non-inclusion of specific farmers based on information provided, it can decide only on approval or non-approval of certification of the Local Group as a whole. On being satisfied, grants necessary approval on-line.

- xxviii. LG prints certificate from PGS website and distribute to individual farmers. Alternatively LG requests RC to print the certificates and send to Group leader for distribution.

Only the farmers which have completed full conversion period without any major or serious non-compliance be declared as “PGS-Organic”. Farmers which have one or more major non-compliance or are under conversion period will be declared as “PGS-Green”. Only the crops sown after joining the group, taking the PGS pledge in conformity of PGS standards and fully conforming to the PGS standard requirements as per the recommendations of peer reviewers shall qualify for “PGS-Green”. 3 continuous advisory on same issue can shift the status of member.

3.3 Certification Process by Regional Council

Step 1

- i. Receive registration applications (on-line or off-line or in hard copy) of Local Groups (LG). Check details of individual farmer history. Check for other group recommendation or endorsement by Central/State Govt authorities.
- ii. Finalize working modalities and if required enter into some sort of agreement including payment of fee for services provided. If data uploading work is to be done by RC then finalize necessary modalities for the same.
- iii. Ensure that LG has brought their entire holdings under organic. In cases of gradual conversion verify the facts and on being satisfied, grant necessary approval with time frame.
- iv. On being found adequate and finalization of working modalities/ agreement etc grant registration.
- v. If data and application have been provided on-line then approve registration on-line and provide user ID and password on PGS website.
- vi. If application is in hard copy or off-line then upload the information on website and grant registration with user ID and password.
- vii. Provide copy of PGS standards and LG operational manual guidelines.

Step 2

- viii. Time to time organize training programmes and if possible participate in some of the group meetings or key field trainings of group.
- ix. Encourage and build the capacity of the group for on-line data management (may be through internet café)
- x. If required undertake random surveillance on some groups for assessment of standards implementation and capacity of the Local Group
- xi. Receipt and redressal of complaints against the LGs and their functioning

Step 3

- xii. On receipt of entire data set and Local Group Summary Sheet, screen the details and on being found compliant to PGS standards and norms approve grant of certification. Approval is to be issued on-line for printing of certificate at Local Group’s end.
- xiii. RC needs to endorse the certification decision of the LG, if requirements have been met and there are no complaints, adverse residue testing report or adverse surveillance report etc.
- xiv. In case of Non-approval, reasons must be communicated in writing with justification.

- xv. The RC needs to decide on certification request within 15 days from the date of uploading the LG-summary sheet or submitting the hard copy of the group decision to RC. If RC fails to endorse the decision of the LG or otherwise within 15 days then ZC need to intervene and decide the issue within next 7 days. In case if ZC also fails to intervene and decide in time then the group can approach PGS Secretariat for decision.

Note that the Regional Council does *not* make a decision to include or not include specific farmers based on the information provided. They can only approve or not approve the certification of the Local Group as a whole.

One example where this might apply would be if the Regional Council has a concern about Farmer X (for example because of a random pesticide residue test result) but the Local Group continues to list that farmer as Certified Organic with no sanctions and no explanation, the Regional Council may rightly be concerned and withhold certification approval of all farmers in the Local Group.

Another example could be that the Regional Council feels that some individual farmers' Peer Appraisals were faked or handled in a sloppy fashion. While the Regional Council can not hold-up the certification status of those specific farms, they can and SHOULD withhold certification approval from the Local Group as a whole.

Although the individual farmer is part of a Group Guarantee process, the Organic Certificate and identification number is given to them individually. Unlike with Third Party Group Certification, there is no requirement of common point of sale, and the farmer may sell to whomsoever they wish separately from the group.

For sales that are not local and direct to consumers, a system to maintain integrity through the chain of custody as well as to give consumers more confidence and immediate feedback about batches requires that the *code number for each Local Group* appears on every bag/batch shipped through non-direct sales channels.

- xvi. In case if the group has no access to internet and computer The Regional Council enters summary information for every local group into a PGS website database and sends a paper certificate certifying the *individual farm*. Each farmer's certificate has an individual unique identification code (UID) that includes codes for both the Local Group and the Regional Council.
- xvii. All issued certificates bear unique ID (UID) code for traceability and access to the entire information on production system, peer appraisal and decision system of the group.

Step 4

- xviii. Zonal Council and PGS secretariat also under take independent surveillance and communicate results to RC through website.
- xix. A small percentage of farms/ products are randomly selected for random pesticide residue testing each year and the results are placed on the website. Adverse results on both counts may impact the Certification status of the Local Group as a whole.
- xx. Pesticide Residue testing is coordinated by the NCOF-the PGS secretariat but it is the Regional Council and the Local Group that has to decide what to do about a positive result. The Regional Council provides Local Groups with non-compliance guidelines, but can not apply those guidelines to an individual farmer. ONLY the Local Group can sanction the individual farmers. The Regional Council can only suspend the certification of the entire Local Group.
- xxi. In PGS although there is no system of transaction certificate and traceability is ensured only up to the farm gate (or till it is in the custody of the group), but LG and RC can device some mechanism to ensure traceability till retail point.

3.4 Verification of certification by consumers

National PGS website will be the database for the entire programme. To make the system transparent entire data base will be kept in public domain. Even the surveillance reports and residue analysis reports will also be made available on the website. Consumers or public will be able to access the summary reports of LG, details of groups, products being offered by each group and their certification status. The information in respect of farmers/ groups which have lost their certification will be available on the website for a period of at least 5 years after the loss of certification status occurred.

With access to unique ID code of particular product, consumers will be able to access the entire information on the group in respect of past history, cultivation practices and peer appraisal reports etc.

Efforts will also be made in the programme to launch SMS based internet traceability system in which, through SMS consumers will be able to know the certification status of the product in question with origin of the produce.

3.5 Grant of Logo and unique certificate ID code

On getting the certification approval from the Regional Council Local Group can print individual certificates from PGS website and can use the PGS logo on packets or containers of PGS certified products. Individual farmer certificate will have a unique ID code, identifying the RC, Local Group and the farmer. Each certificate will also list out the area, crops and products certified during the year as Annexure. Details in respect of quantity of each produce shall be available on PGS-India Website.

The validity of the certificate shall be 12 months from the date of decision of the group. On submission of subsequent summary sheet a new certificate will be granted with fresh 12 month validity from the date of last certification decision by the group as approved by the RC and so on.

Logo on the product is required to be printed with the unique ID code. Consumers can access the entire information about the group, its certification status, production practices, peer appraisals, surveillance reports etc by entering this unique ID code in PGS website.

3.6 Separate logo for PGS organic and PGS under conversion status

Two separate logos shall be granted for PGS organic and PGS under conversion as follows:



(For detailed color specifications see inside of back cover)

3.7 Conditions for use of logo

PGS certified products can be labeled with PGS logo along with unique ID code provided on the certificate only when they are packed under the supervision of either Local Group or by the certificate holder farmer himself. In case if packing is done away from the farm at some pack house then also the group need to ensure that it is done in their supervision and all precautions are taken to prevent the product from co-mingling.

Logo is to be used only on quantity certified as per the details provided to the RC and placed on the PGS-India website.

Use of logo without unique ID code is not allowed

Separate logos need to be used for organic and in-conversion products

Chapter-4

PGS National Standards for Organic Production

4.1 General Requirements

4.1.1 Habitat Management

Habitat management is an important part of organic management system and forms the first step towards organic conversion. To ensure proper living conditions for all living beings, steady supply of green material for manuring and to create diversified plant stand it is essential that diversified plants/ trees etc are planted on bunds and other non-cultivated area of the farm. Adequate space may be provided for plantation of nitrogen fixing trees. Nitrogen fixing tree hedge not only act as biological fence but also ensure steady supply of biologically fixed nitrogen and other nutrients drawn from deeper layers of soil. These plants also provide home and shelter to friendly insects and birds.

If required rain water harvesting pits and farm ponds can also be created.

4.1.2 Diversity

Diversity in crop production is second most important step of organic management which not only helps in management and control of pests and diseases but also ensure balance nutrition of the soil. Diversity can be achieved by a combination of mixed cropping, intercropping, relay cropping and rotation with legumes. Use of trap crops and barrier crops also add to the diversity.

4.1.3 Integration of Animals/ livestock

As successful organic farming depend upon continuous supply of dung and urine, efforts should be made to integrate crop production with livestock rearing.

4.1.4 Conversion period

The time taken for a farm to comply with the PGS organic standards is defined as the conversion period. In other words, it is the time required by the conventional farm to attain full PGS organic status. The whole farm including the crop production and animal husbandry shall be converted to organic management. Parallel or part conversion is not allowed under PGS organic management. For newly acquired fields or fields managed conventionally, the

conversion period shall be not less than 24 months in case of seasonal and annual crops while it shall be not less than 36 months in case of perennial and permanent crops from the last date of use of prohibited inputs or from the date of taking the pledge, whichever is later. However, Regional Councils in some cases may allow conversion in phases, but in any case the entire farm holding of the group members must be brought under PGS organic management within 24 months of joining the group.

Duration of conversion period can be reduced to 12 months if no prohibited substances have been used since last three years and all the members in the group are fully satisfied with past history of no synthetic input use and collectively declare so.

Conversion period for animal products shall be not less than 12 months provided they are fed with fully organic feed and fodder and all the members of group are satisfied that the standard requirements have been met since last 12 months.

In case of existing ICS groups (under NPOP) or members of such groups joining PGS, their certification status, as granted by accredited certification body and valid at the time of joining PGS shall continue, provided the group/ members meets all other requirements of PGS and have necessary documents to prove their claim to the full satisfaction of other group members (if they join an existing group) or RC (if they join as independent group).

4.1.5 Contamination control

All organic production units shall have effective measures to check accidental contamination with prohibited substance through drift or water flow. All organic farms shall be either protected with biological fence (hedge/hedge rows etc) or maintain a buffer zone.

Organic farms also need to be protected from contaminated water flow from adjoining non-organic fields. This can be achieved by putting appropriate bunds and escape channels.

4.1.6 Soil and Water conservation

Relevant measures should be taken to prevent erosion, salination of soil, excessive and improper use of water and the pollution of ground and surface water.

Clearing of land through the means of burning organic matter, e.g. slash-and burn, straw burning shall be restricted to the minimum. The clearing of primary forest is prohibited.

4.2 Standard requirements for crop production

4.2.1 Selection of seed and planting material

Seeds and planting material varieties should be well adapted to the soil, climatic conditions, suitable for organic management, resistant to pests and diseases and preferably of organic origin. In case organically grown seeds are not available then, chemically untreated conventional materials shall be used.

The use of genetically engineered seeds, pollen, transgenic plants or planting material is not allowed.

4.2.2 Fertilization

On-farm biodegradable material of microbial, plant or animal origin shall form the basis of fertilization policy. Green manuring, intercropping or crop rotation with legumes shall be the

integral part of cropping system planning. Off-farm/ purchased biodegradable material of microbial, plant or animal origin can also be used provided it is ensured that no prohibited substances have been used in their preparation.

Microbial preparations such as biofertilizers, biodynamic preparations, EM solutions etc can be used.

Off-farm/industry produced inputs approved by NPOP accredited certification body as approved input for use in organic farming can be used without further approval of the group.

Mineral fertilizers shall be used in their natural powdered form as supplementary source of nutrients.

Use of synthetic fertilizers is strictly prohibited in any form, directly or indirectly.

4.2.3 Pest, Disease and Weed Management including Growth Regulators

Selection of pest resistant varieties, suitable rotations, green manures, balanced fertilization, early planting, mulching, cultural, mechanical and biological control measures (including use of insect pest parasites and predators), disturbance in pest life cycles and ensuring survival of pest enemies should form the basis of pest management programme.

Thermic weed control or thermic sterilization of soils can be resorted to only when it becomes absolutely necessary. Microbial pest control formulations such as biopesticides can be used. On-farm fermentation products and botanical extracts can also be used. Off-farm purchased microbial or botanical preparations can also be used provided it is ensured that such products are approved as organic inputs under NPOP by accredited certification agencies.

Use of synthetic herbicides, fungicides, insecticides and other chemical preparations including synthetic plant growth regulators and synthetic dyes are strictly prohibited. Use of genetically engineered organisms or products are also prohibited.

4.2.4 Equipments/ implements and storage containers

All farming equipments, implements and tools etc must be washed and cleaned before use on the organic farm.

Bags and containers used to harvest, store and transport organic produce must be clean and free from any chemical contamination and should not have been used for storage of conventional produce. All such containers and bags shall be clearly labeled "Organic Only".

4.2.5 Storage and Transport

Organic Products must be protected at all times from co-mingling with non-organic products. Use of synthetic or chemical storage pesticides/ fumigants are prohibited. Natural and traditional ways and means for storing organic produce are allowed. Use of carbon-di-oxide, nitrogen or any other such inert gas is permissible.

4.3 Standard requirement for animal production

4.3.1 Conversion requirements

The whole farm, including livestock, should be converted to organic within the specified conversion period. Part conversion or parallel production is not allowed under PGS after 24

months. The minimum conversion period for all animals except poultry shall be not less than 12 months. The poultry birds for egg production or for meat purpose shall be fed only on organic diet from 2 day onwards after hatching.

4.3.2 Rearing environment

The management of animal environment shall ensure free movement, sufficient access to fresh air, day light, water, lying and resting place and protection against excessive sunlight, rain and wind etc.

Mutilations in any form should not be resorted except for castrations, tail docking, dehorning, ringing and mule sing.

Breeds and breeding

Breeds should be chosen which are adapted to local conditions. Breeding goals should not be at variance with the animal's natural behaviour and should be directed towards good health. Reproduction techniques should be natural. Artificial insemination is allowed. Hormonal heat treatment and induced births are not allowed, unless applied for medical reasons under veterinary advice.

Genetically engineered species or breeds are not allowed.

4.3.3 Animal Nutrition

The livestock should be fed 100% organically grown feed of good quality. All feed shall come from the farm itself or be produced on the farms of other group members or have been harvested from wild where no prohibited substances have been used. Products from the organic feed processing industry shall be used. Colouring agents shall not be used in organic livestock production.

The following products shall not be included nor added to the feed given to farm animals:

- Synthetic growth promoters or stimulants
- Synthetic appetisers
- Preservatives, except when used as a processing aid
- Artificial colouring agents
- Urea
- Farm animal by-products (e.g. abattoir waste) to ruminants
- Droppings, dung or other manure (all types of excreta) even if technologically processed
- Feed subjected to solvent (e.g. hexane), extraction (soya and rape seed meal)
- Feed prepared with the addition of other chemical agents
- Pure amino acids
- Genetically engineered organisms or products thereof

Vitamins, trace elements and supplements shall be used from natural origin when available in appropriate quantity and quality.

4.3.4 Veterinary Medicine

The well-being of the animals is the primary consideration in the choice of illness treatment. Natural medicines and methods, including homeopathy, ayurvedic, unani medicine and acupuncture, shall be emphasised. The use of conventional veterinary medicines is allowed when no other justifiable alternative is available.

Where conventional veterinary medicines are used, the withholding period shall be at least double the legal period.

Use of the following substances is prohibited:

- Synthetic growth promoters
- Substances of synthetic origin for production, stimulation or suppression of natural growth
- Hormones for heat induction and heat synchronisation unless used for an individual animal against reproductive disorders, justified by veterinary indications

Vaccinations shall be used only when diseases are known or expected to be a problem in the region. Legally required vaccinations are allowed. Genetically engineered vaccines are prohibited.

4.3.5 Requirement for Bee Keeping

As bee keeping is considered a part of animal husbandry, general principals of animal husbandry shall also apply on bee keeping. In addition following requirements shall also be met:

- Bee hives shall be made of natural materials free from toxicity.
- Bee hives shall be placed in organically managed farms and/ or wild natural areas, away from the fields or areas where prohibited substances have been used.
- Veterinary medicines/ antibiotics shall not be used in bee keeping and no repellents consisting of prohibited substances be used when working with the bees.
- For pest and disease control and for hive disinfection use of caustic soda, lactic, oxalic, acetic, formic acids, sulphur, etheric oils and *Bacillus thuringensis* are allowed.

Standard Requirements for Food processing, Handling and Storage

5.1 General requirement

Any food processing, handling and storage of organic products, on-farm and/or off-farm or under hired facilities away from the farm can be certified under PGS, provided the entire operation is carried out under the supervision of PGS Group and the items/ materials to be processed are the direct produce of the PGS group. If required many PGS groups can make their federation and get their federation registered with RC for collective processing, handling and storage. Necessary guidelines for making federation and handling of products from different groups will be laid down by the concerned RC.

5.2 Storage

Organic products shall not be stored and transported together with inorganic products unless they are properly packed and labelled and physically separated from each other with no chances of contamination or co-mingling.

Control measures should ensure that organic products do not come in contact with the inorganic products and prohibited substances during storage, transportation and processing.

No synthetic preservatives, chemicals, fumigants etc or storage aid shall be used. Use of controlled temperature, cooling, freezing, drying, humidity control through mechanical means and fumigation with nitrogen or carbon-di-oxide gas is permitted. Ethylene gas is permitted for ripening.

5.3 Ingredients, additives and processing aids

- All ingredients and additives of agriculture origin shall be PGS-organic.
- Water and salt may be used without any restriction.
- For the production of fermentation / microbiological products the medium shall be composed of organic ingredients.
- Commercial microbial formulations for use as inoculants in such processes can be used.
- In cases where ingredients of organic agriculture origin are not available or some ingredients of non-agriculture origin are to be used then the guidelines provided under NPOP be followed and the quantity of such non-agriculture additives should not exceed 5% of total dry weight (excluding water and salt) of the raw material.
- Use of genetically modified organisms or their products are prohibited
- Minerals, vitamins and similar other ingredients of chemical origin shall not be used.

5.4 Processing

- All processing equipments and machinery should be properly washed and made contamination free before using for organic processing.
- All processing equipments and filtration aids shall be free from contamination and shall not release any substance that may negatively affect the organic integrity
- Measures should be in place to prevent co-mingling and contamination of organic produce with non-organic.
- Services of NPOP certified processing units can be availed.

- Processes approved under PGS organic are: mechanical and physical, biological, smoking, extraction, precipitation and filtration. Extraction shall be done with water, ethanol, plant and animal oils, vinegar, carbon-di-oxide, nitrogen or carboxylic acids. All such solvents/ extraction liquid shall be of food grade.
- Irradiation is not allowed

5.5 Packing and Labelling

- Packing material should not affect the organoleptic character of the product
- The description of the PGS group with PGS logo and unique ID code shall be clearly printed.
- Single ingredient products may be labelled as “PGS-Organic” when all standard requirements have been met and the produce has been declared PGS-organic.
- PGS In-conversion products may be labelled as “PGS-Green” when all standard requirements for declaring the Local PGS group under PGS In-conversion have been met and the produce has been declared as PGS-Green.
- In case of mixed/ processed products if minimum of 95% ingredients is PGS-organic the product may be labelled as PGS-Organic. If proportions of organic ingredients are between 95 and 70% the products can be labelled as “Made with PGS-organic ingredients”, but in such cases PGS logo cannot be used.
- Only PGS Local groups and their duly authorized federations are allowed to use PGS Logo on the products, produced, processed and packed under their supervision.

Format-1

Photo of
Proposed RC
In charge

**Application form for Registration of
Regional Council**

Photo of Head
of
Organization

<u>Sl No.</u>	<u>components</u>	<u>Details</u>
1.	Name of the applicant organization	
2.	Logo of the Operation	
3.	State	
4.	District	
5.	Address City Town Pin code	
6.	Telephone with STD code	
7.	Mobile Number	
8.	Fax Number	
9.	Email ID	
10.	Status of Organization Central Govt . State Govt. Central/State Govt. Agency Cooperative NGO Company Other	
11.	Registration Number and act In case of Cooperative/ NGO/ Pvt. Company etc Registration No with act under which Registered (Attach copies of Registration, bye laws)	
12.	Registration Expiry date	
13.	Financial category (In case of Cooperative/ NGO/ Pvt. Company etc attach last 3 years audited balance sheets) Government Govt Funded Self financed Other (Pl specify)	
14.	Attach atleast 3 year audited report sheet	
15.	Facilities available (Computer, Phone, Internet, Vehicles)	
16.	Office building (own/rent)	
17.	Experience / Competence in Organic Farming (Attach a Copy)	
18.	Whether worked as service provider of Central/State Government/Other agency for organic adoption and certification (attach a proof)	

19.	Experience in any Participatory Guarantee System (Attach proof)	
20.	Experience in Organic certification system or ICS (Attach proof)	
21.	Knowledge in Organic Standard PGS-India NPOP NOP EU standards Others (Pl specify)	
22.	Proposed area of operation State : District : Villages :	
23.	Proposed farmers and group details Total Number of Groups: Total Number of farmers : Total Area proposed (Ha) :	
24.	Whether already have registered farmers as per their requirement of PGS guidelines (If yes then provide details, Group wise with list of farmers in each group and their organic status)	
25.	Regional Council operational manual prepared or not (if yes provide a copy)	
26.	Local Group operational manual prepared or not (If yes then provide a copy)	
27.	Detailed strategy of operation as Regional Council. (If required attach on separate sheets)	
28.	<u>Head</u> (Attach Photo) 1. Name of the Head of organization 2. Designation 3. Telephone No. with STD code 4. Mobile Number 5. Email ID 6. ID Proof (Enclose a copy)	
29.	<u>Operating Person</u> (Attach Photo) 1. Name of the person responsible for operation of regional Council 2. Designation 3. Telephone No. with STD code 4. Mobile Number 5. Email ID 6. ID Proof (Enclose a copy)	
30.	Total staff strength (Attach list of staff members with photos, designation and qualifications and assigned work)	

31.	<u>Technical Staff details</u> 1. Name of the Technical Staff 2. Designation 3. Telephone No. with STD code 4. Mobile Number 5. Email ID	
32.	Any other information	
33.	List of enclosures attached	

I/We the members of the organization hereby declare that the information provided above is true to the best of my/ our knowledge.

I/ We have read the PGS-India operational Guidelines and are convinced that the proposed organization (Give name of Organization) fully meets the eligibility criteria prescribed in PGS-India guidelines.

I/We understand that PGS-India Programme do not provide any financial assistance and the entire operation shall be taken up from the organization's sources

I/We declare that the organization is in sound financial health and capable of meeting the expanses needed for operation of Regional Council.

I/ we declare that on being selected as Regional Council under PGS-India programme we undertake to abide by the PGS-India guidelines and instructions issued by the NAC/ PGS secretariat from time to time and shall implement the programme in true spirit of PGS Principal

Signature of Head of organization with seal
(Name Head of organization)
Designation
Date

Format-2**Format of Agreement to be executed between PGS-India Regional Council and Local Group under PGS-India****(To be signed on Rs. 20/- Non-Judicial Stamp paper)**

An agreement made on _____ day of _____ (month) of year Two thousand between the _____ (Name of Regional Council) (hereinafter called the RC, which expression shall include their successors and assignees) on one part and _____ Name and address of Local Group) {hereinafter called the said LG which expression shall include their heirs, administrators, executors and legal representatives} on the other part.

Whereas the said LG has under the provisions of the PGS-India programme as stipulated and detailed in PGS-India operational Guidelines and PGS Terms of Reference (ToR) for Local Groups (hereinafter referred to as the said rules, which expression shall include the provisions in force and amendments/ modifications made from time to time) has applied to the _____ Regional Council for grant of Registration as LG and whereas the _____ Name of Regional Council has agreed to authorize _____ Name of local Group) as PGS-India Local Group on the terms and conditions as stipulated in ToR, NOW IT IS HEREBY AGREED that:

1. M/S _____ (Name of LG) as PGS-India Local Group shall abide by the operational guidelines and ToR for Local Groups, as prescribed by and on behalf of the Executive Secretary PGS India programme and _____ (Name of RC) and undertake to perform in true spirit of the PGS-India programme with full commitment and responsibility without any personal interest towards persons or organizations according to the said rule and hereby authorize the Executive Secretary PGS-India and _____ (Name of RC) to take any appropriate action as per the said rules in the event of violations.
2. _____ (Name of RC) hereby declare that as the _____ (Name of LG) has completed all necessary requirement as stipulated under PGS-India programme and in accordance with ToR for LGs the group is granted with registration under PGS-India programme as per the details given in the Registration certificate.
3. _____ (Name of RC) undertake to provide all the assistance to the said LG in terms of literature, copies of operational manual, standards and capacity building activities, including development of competence of local group members in standards implementation, peer review, analysis of review results and decision making.
4. _____ (Name of LG) undertakes to provide all assistance and access to all documents, fields, store houses, processing units, cattle houses, fodder storages etc to the authorized persons of RC for surveillance and verification. _____ (Name of LG) shall be providing copies of all peer appraisal sheets with necessary LG Summary sheet at the end of every season or at least twice in a year to RC and provide necessary help and assistance in surveillance as authorized by RC.
5. _____ (Name of LG) declare that they will keep all their information and documents in easy access for inspection by any officials of RC, Zonal Council or of PGS-Secretariat.

6. _____(Name of RC) and _____(Name of LG) have finalized the mutual working arrangement including the financial payments for the services, to be provided by the RC and agree to abide by our agreement.
7. It is understood that the Local Group or the RC shall have no claim for any financial assistance from Government of India or PGS-India Secretariat.
8. The Executive Secretary, PGS-India, Secretariat shall have full authority for surveillance, verification and monitoring of the functioning of Local groups.
9. _____(Name of LG) on being registered as Local Group under PGS-India programme hereby declare that they shall not be the part of any other certification process, other than PGS-India, including the similar PGS programme being run by other non-Government agencies, without the prior approval of the RC/PGS-India secretariat.

IT IS HEREBY FURTHER AGREED AND DECLARED THAT _____(Name of LG) and _____(Name of RC) shall work together effectively towards image building of the PGS-India programme and shall not be doing anything or activity which lowers or tarnish the prestige of the programme and/ or jeopardize or threaten the integrity of the organic guarantee. Further it is also declared that none of the partners of LG and RC have any conflict of interest in functioning of the PGS-India organic guarantee process.

Signed on behalf of the
Regional Council

Name _____
Address _____
Date _____

Signature of Group leader of LG

Name _____
Address _____
Date _____

In witness of

Witness 1 (signature)
Name and Address _____

Witness 1 (signature)
Name and Address _____

Witness 2 (signature)
Name and Address _____

Witness 2 (signature)
Name and Address _____

Format-3

PGS-India Programme
Term of Reference for Operation of Local Groups

PGS-India is a voluntary organic Guarantee programme, being operated by the National Centre of Organic Farming (NCOF) under National Project of Organic Farming, Department of Agriculture and Cooperation, Government of India.

PGS-NAC (PGS-National Advisory Committee) is the apex policy and decision making body. National Centre of Organic Farming shall be the secretariat of the programme with Director, NCOF as the Executive authority.

The programme intends to create a network of local organic farmer's groups having competence of organic certification system which are capable of providing organic guarantee based on PGS-India Standards through participatory approach. To make the system transparent and trust worthy there is a provision for appointment of local agencies as Regional Councils. These Regional Councils shall be the agencies situated within the close geographical proximity of the groups and through their participation in group processes, surveillance, and supervision and by verification of documented peer appraisals confirm the organic integrity of the group.

It must be clearly understood that registration of any Local Group by the Regional Council authorized by PGS-India NAC or PGS-India Secretariat is purely voluntary and do not give any guarantee/ assurance for any financial assistance from the Secretariat or Ministry of Agriculture, Govt. of India or its any other Institution/ organization associated to the secretariat.

PGS-India NAC being the apex governing body and NCOF being the secretariat of the PGS-India programme, although, shall not be interfering in the autonomic functioning and decision making of the RCs and Local Groups (LGs), but have full right to review the decisions of the LGs and RCs in accordance with the spirit of the PGS and PGS-India operational guidelines.

PGS-India NAC and PGS-India Secretariat shall have the right to surveillance, monitor, review and random sampling of products for residue testing. In all such cases the report shall be sent to the concerned RC for action and simultaneously shall also be hosted on the website of the PGS-India programme.

Registration of LG by RC shall be subject to the fulfilment of eligibility conditions, prescribed in the PGS-India operational manual. Registered LG on being registered is required to function as per the requirement of the PGS-India programme, as specified in PGS-India operational manual and should ensure that that at all times they contribute to the confidence building of the consumers in the PGS-India guarantee system.

Although PGS-India programme do not stipulates any fee, but RCs and LGs may agree upon some fee structure to be paid by LGs to RC, depending upon the services being offered by the RC.

Terms of reference for Registered Local Groups under PGS-India Programme

1. The Local Group on being registered as PGS-India Local Group (hereinafter referred as LG) shall ensure that it has provided a copy of the following documents to the Regional Council:
 - a. Application form of LG for registration
 - b. List of farmer members with a copy of individual application form and duly signed PGS-India pledge
 - c. Individual member's farm history sheet in prescribed proforma.

- d. In case, if all the members are not converting their entire land holding and cattle herd to organic in one go, then detailed conversion plan of fulfilling the requirement within 24 months
 - e. Agreement to be entered into with RC.
2. There is a mandatory requirement of group's endorsement by any other registered PGS-India Group or by State Govt Agriculture/ Horticulture Department's District Officer or by RC itself or by Zonal council or Regional Centres of Organic Farming.
 3. At the time of Registration each LG needs to obtain following documents from the RC
 - a. Copy of PGS-India operational manual
 - b. Copy of PGS-India standards in local language
 - c. Copy of all the forms, peer appraisal sheets and LG summary sheet in local language
 - d. LG operating manual, developed by RC along with the checklists (if any developed by RC)
 - e. List of the services and activities to be provided to LG by the RC.
 - f. RCs shall also facilitate availability of technical literature on crop management, nutrient management, plant protection or any other such issues as needed by farmers.
 4. The LG shall make all out efforts to promote organic farming and work towards image building and confidence building among its members and other stakeholders of organic farming and consumers
 5. If a LG is having only five members then each member shall be the part of certification team. But if the group is large then each LG need to elect its certification team comprising of five members as Follows:
 - Group leader
 - Training and meeting coordinator
 - Peer review facilitator
 - Documentation In-charge
 - Public relation and RC Coordinator
 Certification team is elected every year with the post of Group Leader being rotated.
 6. All efforts should be made to ensure that each and every member of the group is active participant in peer review process.
 7. Capacity building of farmers is an important component of PGS-India Programme each LG shall ensure adequate capacity building measures in consultation with group leaders and RCs for total compliance of standards. At least 2 members of each group need to be properly trained by RC.
 8. In cases where LGs do not have access to computer or internet or LGs are unable to upload the data, RCs need to help them in developing their capacities or obtain the entire data in hard copy and upload in the website. In such cases LGs need to provide all information to RC in hard copy on paper.
 9. LG shall ensure that the members of RCs shall participate in LG group meetings, LG key training programmes and some peer appraisal visits to assess the strength of the group and to help them improve their implementation processes.

10. Although entire PGS data shall be on-line in the PGS-India website, but each LG shall also ensure that original hard copies of the records such as LG summary sheets, peer appraisal sheets, LGs application with each member history sheet are also maintained in hard copy in separate member files at LG office.
11. LG shall prepare half yearly calendar of activities (such as trainings, capacity building programmes, peer appraisals etc) and intimate all group members and RC for effective coordination.
12. LGs shall also prepare annual or half yearly crop calendar before every sowing season with details of activities to be taken and intimate to RC in time.
13. As per the requirement each LG shall meet at least six times a year and maintain attendance register and details of meeting proceedings. Each and every member is required to participate in at least half of such meetings. Participation of members in such meetings reflects the commitment of the member to the programme and an important step for endorsement of certification decision by RC.
14. To keep on building the competence of the members, LGs need to organize some key field day trainings. Proceedings, details of such trainings along with attendance is also an important component for endorsement of certification decision by RC.
15. LGs shall provide full access to all the documents, records and information, including their fields and members for surveillance, monitoring and groups' competence assessment to representatives of RCs, Zonal Councils or PGS-India Secretariat at any point of time during their visits.
16. LGs shall ensure mutual recognition and support among different LGs at regional and national level by studying each other's processes and functioning and by having surveillance in each other's areas.
17. In case if any LG wanted to leave and desire to join other RC, then the group need to apply to the concerned RC or in case if RC is not cooperating then to Zonal Council for No Objection Certificate with full reason and justification. On being satisfied RC/ ZC can allow LGs to join other RC. In such cases after obtaining NOC from RC/ ZC, they can apply for registration to other RC with a copy of NOC. Entire record pertaining to that group shall be transferred to the new RC on their request without any prejudice or condition, what-so-ever.
18. AS PGS-India programme do not provide for part conversion and parallel production, RC shall ensure that all LGs stick to these requirements and in case where phased conversion is allowed, proper time schedule of full conversion is chalked out and approved. LGs need to ensure that approved time frame is adhered. In cases where a group or a member of the group fails to meet the requirement of full conversion, he will not be entitled for organic certification, in spite of being attaining full requirements of organic on part fields.

19. Entire Certification process to be followed by LGs is as follows:

Certification Process by Local Group (LG)

Step 1

- xxix. Form a group comprising of minimum 5 farmers (belonging to close by villages with continuous territory).
- xxx. Collect registration and farm history sheet from all the members.
- xxxi. Obtain copies of PGS Standards and PGS operational documents from nearest RC and distribute to all the members. These documents can also be downloaded from PGS website.
- xxxii. Convene the meeting of all the members and ask all the members to sign the pledge.
- xxxiii. Prepare Local Group operational manual detailing requirement of documents to be maintained by farmers, peer appraisal methodology and checkpoints to be assessed, based on the broad guidelines of PGS-India norms
- xxxiv. Ensure that members have committed to convert their entire land holding and livestock to organic. In case if some members propose to convert their land in phases then draw appropriate strategies to distinctly separate such units with organic ones. Also chalk out a plan for phased conversion and get it approved by Regional Council. As per PGS-India norms each member has to bring his entire land holding with livestock within 24 months from the date of registration in the group.

If a farmer under PGS-India group fails to convert his entire land holding and livestock within the stipulated 24 months time, then he will not be eligible for PGS organic certification and shall continue to remain under conversion.

- xxxv. Invite already registered another Local Group to verify the group formation and obtain necessary recommendations. In case if there is no other PGS-LG close by, then contact local State Agriculture office, demonstrate the group's strength on organic and obtain endorsement. Alternatively apply to the RC and request RC to undertake verification. RCOFs can also be requested for endorsement of Local Groups.

The Local Groups need to be approved only once and no further renewal is needed. If there are repeated problems (missing paperwork, a random pesticide inspection turns up a problem, a random oversight inspection turns up a problem, etc) THEN they could get disbanded/ sanctioned and have to re-apply and could get re-entry only after taking necessary correction and thorough verification by RC.

- xxxvi. Register the group on-line on PGS Website. In case if the group do not have access to computer and internet, then services of an local computer operator/ internet cafe can be taken. Alternatively fill all the forms and submit to RC for uploading the information on PGS website.
- xxxvii. Enter into agreement with the RC for services to be availed on payment basis (as per mutual agreement).
- xxxviii. Request RC to grant registration, user ID and password.
- xxxix.

Step 2

- xl. Follow the PGS guidelines on group meetings, key field trainings and knowledge sharing.
- xli. Keep vigil on neighboring farmer's farms and if some non-compliances are noticed then inform other group members during group meetings
- xlii. Ensure timely organization of training programmes in collaboration with RC.
- xlili. Invite practicing organic farmers and other local experts for problem solving in management issues such as in nutrient management, pest management etc during key trainings and group meetings.
- xliv. Maintain attendance register for group meeting and key field trainings
- xlv. If member farmers are using or propose to use off-farm inputs then verify their organic status, discuss in group meetings and endorse or prohibit their use. Use of such inputs without group's approval shall be treated as non-compliance.

Step 3

- xlvi. Chalk out peer appraisal schedule and constitute peer appraisal groups. Each group should have minimum 3 peer appraisers. Depending upon the number of farmers there can be any number of appraisal teams comprising of three or more members. At least one member in the appraisal team must be literate and well versed in filling the appraisal forms.
- xlvii. Reciprocal review between two member group farms is not allowed (i.e. A reviews the B and B reviews A).
- xlviii. Invite other group peer reviewers or representatives of consumers/ traders or local State Agriculture Department officer as invited member of the peer group (but their participation is not mandatory). This may increase the trust and credibility of the group Guarantee.
- xliv. Complete peer review of all the farms at least once in each season. Ensure that all farms have been reviewed objectively.
 - l. Discuss review reports in the meetings and decide upon the organic status of each farm one by one.
 - li. Segregate farmers who have fulfilled all the requirements and consider them for grant of certificate
 - lii. Discuss about the non-complying farmers and depending upon the nature and gravity of non-compliances issue sanctions.

Step 4

- liiii. Appraisal paper work is checked for completeness and a local Group Summary Worksheet is prepared.
- liv. Group or certification committee decides on certification and declares certification status of each group member.
- lv. Enter all details on-line in PGS website and send signed copy of the summary worksheet to the RC. Alternatively send all details in hard copy along with signed copy of summary sheet to RC for uploading the data into PGS website.
- lvi. Regional Council check details provided in hard copy or on-line. While deciding on approval RC takes into consideration surveillance report (if any done), complaints received, residue analysis report etc. RC cannot decide on inclusion or non-inclusion of specific farmers based on information provided, it can decide only on approval or non-approval of certification of the Local Group as a whole. On being satisfied, grants necessary approval on-line.
- lvii. LG prints certificate from PGS website and distribute to individual farmers. Alternatively LG requests RC to print the certificates and send to Group leader for distribution.

Only the farmers which have completed full conversion period without any major or serious non-compliance be declared as “PGS-Organic”. Farmers which have one or more major non-compliance or are under conversion period will be declared as “PGS-Green”. Only the crops sown after joining the group, taking the PGS pledge in conformity of PGS standards and fully conforming to the PGS standard requirements as per the recommendations of peer reviewers shall qualify for “PGS-Green”. 3 continuous advisory on same issue can shift the status of member.

20. Time limit for grant of certification decision

The RC needs to decide on certification request within 15 days from the date of uploading the LG-summary sheet or submitting the hard copy of the group decision to RC. If RC fails to endorse the decision of the LG or otherwise, within 15 days, then ZC need to intervene and decide the issue within next 7 days. In case if ZC also fails to intervene and decide in time then the group can approach PGS Secretariat for decision.

Signed on behalf of the

Regional Council

Name _____

Address _____

Date _____

1. Signature of Group leader of LG

Name _____

Address _____

Date _____

Format-4

Details of Local groups and farmers registered under Regional Councils

Sl No.	Name of Local Group Address details (Complete postal address with phone numbers, email ID) and date of Registration and Unique ID no. of Group	Group Leader Name and Address details (Complete postal address with phone numbers, email Id)	Total Number of farmers in Local Group	Farmer Name and Name of Village to which farmer belong	Unique ID No. of farmer	Total Area covered under organic farming (ha)
Grand Total						

Application form for entry into PGS Local Group

To

The Group Convener/Leader

PGS Local Group

Village

District

State.....

Sir,

I am willing to undertake organic crop cultivation and livestock production as per PGS standards and want to become a member of your PGS local group for PGS organic guarantee programme.

Necessary details of my family and farm, past history of production and inputs use and livestock are enclosed herewith in the prescribed format.

I have obtained a copy of PGS Standards and Local Group operational manual and I undertake to adopt these standards on long term basis.

I also undertake to participate in all the activities of PGS Local Group including regular participation in group meetings, key field day training programmes and peer appraisals of farms of other members of the group.

I undertake to abide by the rules and regulations of the Local Group and follow all directives. I undertake to abide by the collective decisions of the Group.

On being formally inducted I undertake to sign the PGS organic pledge and follow it in letter and spirit.

Signature of Farmer
Name.....

Date

Place

Address.....

<u>For Use by Local Group Office</u>
Application No in sequence.....
Details checked and found adequate or not.....
Placed before the LG executive on Dated for approval.....

Accepted as LG member(Yes / No)

Assigned Membership Code.....

Signature of Local Group Leader.....

Paste a
photo of
farmer

Format -6

FARMER HISTORY SHEET

NAME OF GROUP:- _____

Sl. No.	Components	Details
1	Name of the Farmer	
2	Father's name	
3	Age	
4	Gender (M/F)	
5	Category (SC, ST, OBC, GEN)	
6	Mobile Number	
7	E-mail id (if any)	
8	Name of the family members and Relation	1 2 3 4 5 6
9	Village	
	Tehsil/Block	
	District	
	State	
10	Total area of land holding (ha.)	

11	Area offered for Organic (ha.)	
12	No. of plots offered for organic (plots having in different locations)	
13	Date of use of Prohibited substances (Synthetic chemical fertilizer and pesticides)	
14	Irrigation facilities (source and no.)	1 2 3 4 5
15	Machine and tools (name and no.)	1 2 3 4 5
16	Live stock (name and no.)	1 2 3 4 5
17	Live stock feed and fodder used (on-farm or off-farm) (name and quantity) (kg/day)	
	Live stock waste (dung) (kg/day)	

	(urine) (Lit./day)	
18	Live stock medicines used (Name and Quantity)	
19	Contamination control measures proposed	
20	Storage facilities	
21	On-farm input production facilities	
22	Post harvest facilities available	
23	Post harvest processing facilities	
24	Farm field map	
25	Soil testing (Attach Report)	
26	Water testing (Attach Report)	

(RABI)

Sl. No.	Components	Details			
1	Crop Category (Cereals, Pulses, Vegetables etc.)				
2	Name of Crop taken				
3	Fertilizer used	Chemical Fertilizer (name and qty/ha)	Biofertilizers (Name and qty/ha)	Organic Manures (Name and qty/ha)	
4	Plant protection measures	Chemical	Botanical extracts	Bio-pesticides	Others

Note: (Data for previous three years of RABI seasons required at the time of registration)
Use the same format to give details of each season details

(KHARIF)

Sl. No.	Components	Details			
1	Crop Category (Cereals, Pulses, Vegetables etc.)				
2	Name of Crop taken				
3	Fertilizer used	Chemical Fertilizer (name and qty/ha)	Biofertilizers (Name and qty/ha)	Organic Manures (Name and qty/ha)	
4	Plant protection measures	Chemical	Botanical extracts	Bio-pesticides	Others

Note: (Data for previous three years of KHARIF seasons is required at the time of registration)

Use the same format to give details of each season details

(SUMMER)

Sl. No.	Components	Details			
1	Crop Category (Cereals, Pulses, Vegetables etc.)				
2	Name of Crop taken				
3	Fertilizer used	Chemical Fertilizer (name and qty/ha)	Biofertilizers (Name and qty/ha)	Organic Manures (Name and qty/ha)	
4	Plant protection measures	Chemical	Botanical extracts	Bio-pesticides	Others

Note: (Data for previous three years of SUMMER season is required at the time of registration)

Use the same format to give details of each season details

Format -7

Organic Farmer's Pledge

I _____ son/daughter _____ of _____
 of _____
 Village _____ District _____ hereby declare on _____
 day of month _____ year _____ that:

1. I will follow the PGS organic standards in crop production and livestock rearing/ processing to ensure synthetic input free production system for the long term sustainability, health and well being of soil, environment, crops, livestock, my family and community. I have received a copy of PGS standards and Local Group operational manual.
2. I will not use any synthetic input (such as chemical pesticides, insecticides, herbicides, fungicides, chemical fertilizers, growth regulators and synthetic hormones etc) in any form directly or indirectly in my farming operations brought under PGS programme.
3. I commit to bring my entire farm operations including livestock under organic (or within a period of 24 months)
4. I will check with the Local Group before using any off-farm product that I am unsure of its organic status.
5. I will work with my fellow farmers in the Local Group and attend meetings and trainings to expand and share my knowledge of the standards and organic production techniques.
6. I will work to build the soil through ecologically sustainable farming practices such as crop rotations, composting, cover crops and green manures.
7. I will care for my livestock in ways that ensures their well-being in full compliance of PGS organic standards.
8. I will only use bags and containers that are clean and clearly labeled 'organic only' to harvest, transport and sell our organic products.
9. I will work to prevent contamination by suitable buffers and other means.
10. I will encourage biodiversity through my farming system.
11. I will sell products as Organic only when they are grown on certified land, and have been grown in accordance with PGS organic standards.
12. I will ensure that on the farm during storage, processing, transport and sale there is no contamination or mixing of organically grown with non-organically grown produce.
13. I agree to accept the decision of the Local Group in regards to my certification status.
14. I will participate in appraisals on other farms as per group norms.
15. I will report even minor or unintentional non-compliances to the organic standards on my farm to my Local Group

I hereby further declare that the information I have provided in the application and farm history sheet is true to the best of my knowledge. I also hereby declare that during peer appraisal I will fully cooperate with the peer reviewers and provide true information to the best of my and my family's knowledge and I will keep my information up to date with any changes occurred during the process.

Date
Place

Signature of farmers

Format -8

**Application format for Registration of the
Local Group (LG) with Regional Council**

To
The _____
_____ (Name of Regional Council)
Address _____

Sub:- Request for registration of Local Group under PGS-India programme.

Sir,

We the members of the (name and Address of local group) are willing to join the PGS-India programme as Local Group to develop an organic participatory guarantee system for our produce. Details of the group are as follows:

Name of the
Group _____

Total number of farmers (Enclose list of farmers, duly signed by each member) _____

Total area to be
covered _____

Copy of application and PGS pledge in respect of individual farmer members are enclosed at S.No _____ to _____.

Farm History sheet complete in all respects individually for each farmer is enclosed at S.No. _____ to _____.

We the members of the _____ (name of the local group) collectively and individually declare that:

- a. We have read and understand the PGS-India programme thoroughly and declare that the group is in a position to carry out all the activities of Local Group, as specified under PGS-India operational manual.
- b. We have obtained the copy of PGS-India operational manual and PGS-India Standards and have explained to all the members. A copy of standards in the local language has also been provided to each member.
- c. Each member has signed the PGS pledge in front of the group members and we collectively undertake to ensure that all the members will follow the PGS-India guidelines in letter and spirit.
- d. _____ members of the group (enclose the list with name and addresses) have undergone the training on PGS-India programme and are in a position to act as peer reviewers.

Contd....

- e. We undertake to convene the meetings of the Group at least once in two months (at least 6 times a year) to discuss the progress of the programme and to share the experience of each other earned from contacts, trainings or otherwise.

- f. All the farmers have committed to bring their entire land holding along with cattle under PGS-India programme in _____ months time.
- g. We undertake to abide by the guidelines and instructions of the PGS-India programme and the instructions/ guidelines of Regional Council issued from time to time.
- h. We undertake to abide by the decision of the Regional Council and shall work towards image building of the programme.
- i. For administrative purpose we have elected/ constituted our Certification team comprising of following members and we authorise the certification team members to undertake all documentary requirement as and when needed as per the requirement of PGS-India programme. Besides certification decisions, the role and responsibility of each team members is mentioned against each:

- | | |
|-----------------|---------------------------------------|
| i. Shri _____ | Group Leader |
| ii. Shri _____ | Training and meeting coordinator |
| iii. Shri _____ | Peer review facilitator |
| iv. Shri _____ | Documentation In-charge |
| v. Shri _____ | Public relation and RC
Coordinator |

- j. For data uploading on PGS-India Website we have necessary facilities and competence available at our end and shall be doing by our own
Or

We have hired the services of agency (Give name of the agency) for data uploading and the concerned agency has obtained all necessary details from RC.

Or

We request the Regional Council to kindly provide all such facilities and for the same we shall be providing all the details in hard copy to Regional council.

The _____(Name of RC) is hereby requested to kindly accept our group as authorized local group and grant us with necessary registration, User ID and Pass word etc.

Signature & Name

Member 1

Member 2

Member 3

Member 4

Group Leader Signature

Name _____

Format -9

Tentative Certification Team**Local groups Name:** _____**List of Farmers (Members in group)**

Sl No	Farmer Name	Code No.	Village	Certification member (Mention members who will perform certification (Yes or No))

Note: This is tentative indication of farmer among the members of local group who can perform inspection of fields and document peer appraisal details, Young and Educated farmer (both men and women) can perform this activity. It may change later as per requirement of local group

**Group Leader Signature
After Approval of Local Groups**

Endorsement of Local Group

Particulars	Details & Remarks	
Name of Endorsing Agency		
1.State Government Authority		
2. Regional Council		
3. PGS Local Group		
Name of Group being Endorsed		
Date of Endorsement		
Group is competent enough to undertake PGS-India programme as per guidelines	Yes	No
Constitution of the group fulfils the requirement of PGS-India programme and the members are trusted with proven dedication for organic	Yes	No
Few member of the group are fully aware about PGS standards, operational requirements and can undertake peer appraisals	Yes	No
Please provide details that how the group is propose to undertake on-line data uploading work through	Own	Through Regional council

I/We _____ (name and address of endorsee) _____ is/are convinced that the group as mentioned above fulfils the minimum requirements as per PGS-India operational guidelines, at least few members are well versed with the standards and peer appraisal strategy and can carry forward the implementation strategy of PGS-India organic guarantee scheme. The members of the group are known and can be trusted. I/We considered for grant of registration under PGS-India programme.

Date

Signature

Place

Name and address of the endorsee

List of documents to be submitted at the time of registration of Regional Council

Applicant / Regional Council Name :

Address :

Sl No.	Documents to be submitted at the time of registration of Regional Council	Yes / No	Remarks / page no.
1.	Application form with duly signed by competent authority		
2.	Biodata/ Name, address, photo with resumes of the head of organization with identity proof		
3.	Should have support and endorsement from at least 10 local groups supporting to RCs (Local group formats should be enclosed)		
4.	Copy of TOR signed on each page as token acceptance of terms and conditions (duly signed by farmers and Regional Council members)		
5.	Agreement duly executed on Rs. 20 non judicial stamp paper duly signed by and executed in two copies (Format as per PGS guideline : refer Local group formats)		
6.	List of farmers and farmer as per prescribed format		
7.	Documents of legal status of agency with 3 years balance sheets		
8.	Affidavit of financial soundness with undertaking of PGS activities operations with their own resources		
9.	Have adequate financial resources to operate as Regional Council		
10.	Proven record in promotion of agriculture and its management (if any)		
11.	Proof / certificates of adequate experience of PGS , organic farming, and certification (if any)		
12.	Registration of applicant organization under acts govt. of India / State (enclose proof copy)		
13.	Situated in the area of functioning (proposed to operate PGS-INDIA programme) with permanent office and working personals		
14.	Have access to computer, printer, internet facility		
15.	Any knowledge on organic guarantee/ certification systems and/ or previous experience in supporting TPC(if any)		
16.	If members have undergone necessary PGS training meant for RCs organized by ZC and PGS secretariat (enclose documents)		
17.	At least one member is well versed with data handling and data uploading in computer in internet		
18.	Sample copies of peer appraisal sheet and sample copy of certificate issued earlier (if any)		
19.	Any other related documents to substantiate Technical / Financial credential to operate smooth function of RCs / PGS (if any)		

Formats used after Approval of Local groups

Format -11

Format for proceedings and attendance Register for Meetings

1. PGS Local Group Name.....
2. Total number of members.....
3. Date and time meeting.....
4. Important issues discussed and planning done (if any)

5. Number of peer appraisals completed since last meeting.....
6. Peer appraisals planned for next two months.....

7. Proposal for any input approval or query on problem solving (give brief)

8. Any other specific issue raised and discussed.....

9. Decisions made (if any)

Members present

S.No.	Name of member	Signature

Format -12

Format for proceedings and attendance Register for Field Day / Trainings

1. Name of PGS Local group :
2. Number of members :
3. Location of training :
4. Date of training and duration :
5. Subject and theme of training :
6. Expert persons invited :

7. Training was organized in collaboration of whom :

8. Brief description of issues discussed

Members present

S.No.	Name of member	Signature

Format -13A**Peer Inspection / Field Inspection Appraisal Worksheet – Part 1**

Peer Appraisal sheet for Season..... Year.....

Local Group Name :

Local Group Code No. :

Name of peer Appraisers with their member code

1.
2.
3.
4.
5.

1. Farmer's details

S. No.	Component	Details
1.	Farmers Name	
2.	Member Code	
3.	Status of farmer as per last appraisal	
4.	Area of farm	
5.	Is there any change on farm in area or infrastructure	
6.	Is there any change in livestock position	
7.	Name of family member present during inspection*	
8.	Date of Inspection	

*During peer appraisal presence of at least one member of the family who is well versed with the PGS programme is a must requirement. In the absence of any representative appraisal cannot proceed

Format -13B

Peer Inspection / Field Inspection Appraisal Worksheet – Part 2

2. Background Information

S. No.	Component	Observation	Status of NC*
1.	Date of last use of prohibited substances		
2.	Since how many months farmer is doing organic		
3.	Are you satisfied that since taking pledge farmer is not using any synthetic inputs		
4.	Whether farmer has adopted some measures to improve habitat If yes please provide details. If not then advise improvement		
5.	How diversity is being maintained Explain the measures initiated since last inspection or after taking pledge		
6.	If under conversion period, then what is the exact period of conversion on the date of inspection		
7.	Are you satisfied that conversion requirements are being met		
8.	Do you feel any need for reduction in conversion period? If yes then specify reasons and evidences		
9.	Buffer zone is being maintained or not? If yes then specify that are you satisfied with the buffer zone If not then advise (but this advice is applicable in conversion period only). Non-maintenance of buffer zone after conversion period becomes non-compliance		
10.	Are you satisfied that adequate measures have been taken to prevent contamination from water flow		
11.	What is source of irrigation? Does it meet the requirements of organic standards		
12.	Specify if any soil and water conservation methods have been adopted. If not please advise (it is a continuous process)		
13.	Are you satisfied that the farmer is well acquainted with PGS organic standards and protocols?		

*Status of non-compliance – In case the nature of deficiency or non-compliance is not threatening the organic integrity; it should be rated as A (advisory). If it is threatening organic integrity it should be rated as M (Major non-compliance). If it is of serious nature and a gross violation it should be rated as Serious (S). Major NC reverts the organic status of farmer into in-conversion and Serious (S) NC necessitates sanction (such as suspension, expulsion or reversion of status to registered). Three Advisory (A) on particular issue in three consecutive

appraisals turns into Major (M) non compliance and threatens certification status. Full compliance is indicated as “C”.

Format -13C

Peer Inspection / Field Inspection Appraisal Worksheet – Part 3

1. Compliance of PGS organic standards

S. No.	Item	Comments	Status of NC*
1.	Seed and planting material a. Organic (o) or conventional (c) b. If conventional whether chemically treated (CT) or not (NT) c. Genetically modified (GMO) or not (Non-GMO)		
	Are you satisfied that seed and planting material meets PGS standards		
2.	List on-farm manures used and quantity Are you satisfied that they meets PGS standards		
	List any off-farm purchased input used. If yes then give details Whether it was approved by group or not Does input is approved under NPOP by any agency (give detail)		
	Are you satisfied that fertilization process and inputs meets PGS standards		
3.	Weed management practices adopted		
	Are you satisfied that weed management process meets PGS standards		
4.	Provide details on plant protection measures a. On-farm measures b. Off-farm inputs		
	Whether off-farm inputs were approved by group or not		
	Whether off-farm inputs are approved under NPOP by any agency (give details)		
	Are you satisfied that pest management process meets the requirement of PGS standards		
5.	Whether equipments and tools used are properly washed for use in organic farming		
6.	Whether containers used for storage of organic produce meets PGS standards		

7.	Are you satisfied that requirements of storage, containers, bags etc meet PGS standards		
8.	Whether livestock are being treated in proper manner and provided with adequate facilities		
9.	Whether livestock is being fed with organic feed and fodder		
10.	Are you sure that no prohibited substances are being fed to animals		
11.	Give details of veterinary medicines given and vaccinations		
12.	Are you satisfied that veterinary medicines meet the PGS standards and were given only in emergency. Give details of with-holding period after medication		
13.	Are you satisfied that all requirements for animal production have been met as per PGS standards		
14.	<p>Beekeeping</p> <ul style="list-style-type: none"> • Are you satisfied that bee hives and boxes meet the standards requirement • Are you satisfied that the bee boxes have been placed under organic management/ wild natural fields • Are you satisfied that no prohibited substances have been used in bee rearing or handling <p>Are you satisfied that all standard requirements for Bee keeping have been met</p>		

*Status of non-compliance – In case the nature of deficiency or non-compliance is not threatening the organic integrity; it should be rated as A (advisory). If it is threatening organic integrity it should be rated as M (Major non-compliance). If it is of serious nature and a gross violation it should be rated as Serious (S). Major NC reverts the organic status of farmer into in-conversion and Serious (S) NC necessitates sanction (such as suspension, expulsion or reversion of status to registered). Three Advisory (A) on particular issue in three consecutive appraisals turns into Major (M) non compliance and threatens certification status. Full compliance is indicated as “C”.

Format -13D

Peer Inspection / Field Inspection Appraisal Worksheet – Part 4

1.	Chemical fertilizers used :	Yes/No	Fertilizer Name Quantity(Kg/Ha)
2.	Chemical pesticide/weedicide /Insecticide etc	Yes/No	Category Name Quantity(Kg/Ha)
3.	iquid Biofertilizer consortia/ Liquid Biopesticides/ Neem cake/ Neem Oil/ Phosphate Rich Organic Manure / Zyme Granules Applied	Yes/No	Category Quantity(Kg/Ha) Source of Funding
4.	Soil samples collected from your field by any members of Regional Council /other members (State/Central Govt. / Public agencies	Yes/No	Member Name No. of Sample No. of Sample Tested
5.	Organic farming practices recommended to you to follow in your farm field by members of Regional Council /other members (State/Central Govt. / Public agencies) based on soil test results	Yes/No	List of Practices
6.	Field inspection done in your farm field during crop production by members of Regional Council /other members (State/Central Govt. / Public agencies)	Yes/No	Name Of LG Member Date Of Inspection Name Of Other Members
7.	Samples collected from your farm field has been analyzed for residues of chemicals and pesticides by members of Regional Council /other members (State/Central Govt. / Public agencies)	Yes/No	Name Of Member Sample Collected Name Of Other Members Result Reports
8.	Traditional organic Input Production units (Panchagavya, Beejamruth and Jeevamruth etc.) of your own / sponsored under government scheme in your farm field	Yes/No	Name Of Unit No of Unit Capacity Source
9.	Planted any Nitrogen Harvest plants in your farm field during organic crop production	Yes/No	Name Of Seed Quantity NO of Plants
10.	Botanical extracts production units (Neem cake, Neem oil) in your farm field of your own / sponsored under government schemes/other agencies	Yes/No	Name Of Unit NO of Unit Source of Funding
11.	Vermicompost production units in your farm filed of your own / sponsored under government schemes/other	Yes/No	NO of Unit Quantity(kg/Ha) Source of Funding

	agencies		
12.	Transportation facilities you are having or any transportation convenience arranged to you for transportation of organic produce by cluster/RCS/ State/Central Govt. / Public agencies on packs of your products which are going to sale in market	Yes/No	Distance of Market Transportation Facility Arrangement
13.	Spending any amount on utilization of Machineries / Agricultural implements from Custom Hiring Centre (CHC)	Yes/No	Amount(By Own) Amount Supported By RC Cluster Other Name of Agriculture Implements
14.	Training Attend on organic farming	Yes/No	Training Date Subject Place Duration
15.	Exposure visits of organic field organized by attended any meeting on organic farming	Yes/No	Visit Date Place Duration

Format -13E**Peer Inspection / Field Inspection Appraisal Worksheet – Part 5**

4. Production details

S. No.	Crops/ produce	Expected yield	Requirement for home consumption	Surplus available for sale
1.				
2.				
3.				
4.				
5.				

2. Inspection summary and recommendations

Although the peer review team does not make the final decision on certification but now that the inspection is over, what would you recommend?

- Full Certification
- In Conversion Certification
- Farmer should make listed improvements and apply for certification next year.

Date of peer appraisal _____

How long did the peer appraisal take _____

Who was responsible for filling in the peer appraisal worksheet

Printed Name, Signatures and Date of all peer-appraisers present at this inspection

Format -14

Peer Inspection/Appraisal Worksheet for Processing and Handling

Peer Appraisal sheet for Year.....

Type of processing

Details of processing and processing facility

On-Farm/ Off-Farm or Hired facility

Facility owned by

Details of other processing activities on premises

Name of peer Appraisers with their member code

1. Sh
2. Sh
3. Sh
4.
5.

1. Local Group details

S. No.	Component	Details
1.	Group Name	
2.	Group Code	
3.	Details of organic produce to be processed with quantity	
4.	Proportion of various ingredients to be used including water salt and other non-organic additives	
5.	Name/(s) of Group member present responsible for supervision/ processing	
6.	Name of Group member/ representative present during inspection*	
7.	Date of Inspection	

*During peer appraisal presence of at least one member of the group who is well versed with the PGS processing standards is a must requirement. In the absence of any representative appraisal cannot proceed

2. Appraisal report sheet of processing process

S. No.	Component	Observation	Status of NC*
1.	Storage <ul style="list-style-type: none"> Does storage facility meet standard requirement of PGS Are you satisfied that necessary measures have been put into place to prevent co-mingling and contamination Are you satisfied that no prohibited substances have been used in storage 		
	Are you satisfied that full standard requirements have been met in storage		
2.	Processing facility Specify whether processing facility is certified organic or undertakes non-organic processing also.		
	Whether all equipments, containers and processing facility has been cleaned thoroughly to ensure that no prohibited substances are incorporated in the processing		
	Are you satisfied that the processing unit meets all standard requirements for PGS-organic processing		
3.	Processing <ul style="list-style-type: none"> Give details of process and specify whether the process is approved process under PGS-organic programme or not 		
	<ul style="list-style-type: none"> Whether all ingredients are PGS organic or not. If not then provide details for each organic and non-organic ingredients 		
	<ul style="list-style-type: none"> Are you satisfied that all non-organic ingredients/ purchased ingredients meet standard requirements 		
	<ul style="list-style-type: none"> Name, quality and quantity of non-organic additives used 		
	<ul style="list-style-type: none"> Are you satisfied that no prohibited substances have been used in processing 		
	Are you fully satisfied that the entire processing process meets the standard requirements or not. If not then specify non-conforming activity/ingredient		

3. Production details

S. No.	Type of finished product	Expected total yield	Details of packing	Specify number of containers with sizes
1.				
2.				
3.				
4.				
5.				

3. Inspection summary and recommendations

Although the peer review team does not make the final decision on certification but now that the inspection is over, what would you recommend for:

Storage facility

Processing unit

Process and out put

Date of inspection _____

Name, Signatures and Date of all peer-inspectors present during the appraisal

Format -15

Non-Compliance Guidelines

“Catalogue of Sanctions”

Sanctions are given to farmers by the Local Group as a whole OR by the Local Group’s elected Ethics Council (if one was created).

Situations	Type of sanction
<ul style="list-style-type: none"> • Missing Attendance at a required Field Day • Unsatisfactory production system 	Verbal warning
<ul style="list-style-type: none"> • Minor violations of the standards or regulations • Repeated written warning for similar problem • Not responding to approval conditions 	<i>Short Suspension of Certification</i> Period determined by length of time it takes for the Grower to get a new peer inspection/consultation
<ul style="list-style-type: none"> • Repeated minor violations • Clear violation of the standards not threatening the organic integrity of the product 	<i>Suspension</i> for a fixed period after until farmer(s) take corrective actions.
<ul style="list-style-type: none"> • Clear violation of the standards threatening the organic integrity of the product eg: use of prohibited pesticides or synthetic fertilisers. 	<i>Longer term suspension for 1 year</i> <i>Farmer may be moved back into “In Conversion” status</i>
<ul style="list-style-type: none"> • Repeated violations leading to penalties, suspension or withdrawal of approval. • Obvious fraud • Intentional obstruction of the inspection eg: denying inspector access. • Refusal to respond to written requests for additional information 	<i>Termination of participation</i> Farmer(s) banned from PGS membership either permanently or for a set period of time.

The Right of Appeal : The farmer's can make an appeal to the Regional Council within 2 weeks of the date of notification of the sanction by the Local Group OR to the Local Group as a whole if there is an Ethics Council that implemented the sanction.

LOCAL GROUP SUMMARY WORKSHEET

(To be submitted to the Regional Council for certification decision approval)

List of Local Group Farms to be Certified this Calendar Year

Calendar Year: _____

LOCAL GROUP ID# _____
(Assigned at the time of formation of the Local Group)

LOCAL GROUP LEADER/Representative _____

Contact Information: _____

Total number of farmers

1. Number of farmers fully conforming to certified status
(list enclosed as A)
2. Number of farmers granted in-conversion
(List enclosed as B)
3. Number of farmers sanctioned
(List enclosed as C)

Certification decision

We the members of the Local Group ID No. hereby individually and collectively declare that members listed at A have achieved the PGS certified status (PGS Organic) and fully conformed all the requirements.

We individually and collectively declare that farmers at B are granted with In-conversion status (PGS Green – Grown without chemicals).

Details of expected produce under PGS-Organic and PGS-Green are given at Annexure I.

Regional Council is requested to kindly approve our certification decision. All required information including peer appraisal sheets have been up-loaded on PGS website and is available for review.

We all group members undertake to abide by the decision of the Regional Council.

Local Group Representative Signature Date

Decision of the Regional Council

Certification decision approved

Certification unique ID Code

Or

Certification decision not approved due to reasons

1

2

3

Signature

Regional Council Certification Manager Date

The Right of Appeal

In case of certification approval denial by Regional Council the Local Group can make an appeal to the National Council or to NAC through PGS Secretariat within 2 weeks of the date of notification of the certification denial by the Regional Council OR to the Appellate authority designated by the NAC.



PGS - India

A Participatory Organic Guarantee Programme
 Department of Agriculture and Cooperation
 Govt of India

Certificate No.
 Date of Issue (MM/DD/YYYY).....

Scope Certificate

This is to certify that the product(s) and areas(s) of the
 mentioned farmer DHDHD
 belonging to PGS-India Group

Registered with Regional Council Noand name.....
 are in accordance with requirements of

PGS-India National Standards For Organic Production

For the process of :

“Crop Production”

This Scope Certificate
valid from (MM/DD/YYYY) until (MM/DD/YYYY)
for those product(s) and area(s) specified in the annexe

The validity of this certificate solely depends on the continued compliance with the
 required standards and PGS-India guidelines.

Signature of PGS India Group Leader
Local Group No.

Logo
Authorized by :

Signature of Head of Regional Council
Date-
Name of Regional Council
Authorization No.



(Any one of the type of logo used depending on the organic cultivation status of farmer)

Local Group Name :

Local Group Code :

Farmer's Name :

The validity of this certificate solely depends on the continued compliance with the required standards and PGS-India guidelines.

Member Code	Member Name	Total Organic Area(Ha)	Farmer Status	Crops name	Production (kg/ha)

Signature of PGS India Group Leader
Local Group No.....

Logo

Authorized by :

Signature of Head of Regional Council

Date-

Name of Regional Council

Authorization No.

**Annual Progress Report for the year(Report to be submitted by Regional council)
(Soft copy to be mailed at nbdc@nic.in)**

Name of Regional Council.....
Complete Address and contact details:.....
Year of Registration / Authorization
Year of Expiry of Authorization
PGS-INDIA Registration ID.....

Sl. No	No. of Groups			Total No. of Farmers			Area ((Ha)			Total No. of Farmers certified		Name of Products produced		Production In tones		Total Amount of Revenue generated from marketing (Rs. In Lakh)	
	Total number of Groups upto previous year (April YYYY)	Total number of Groups added in the present year (April YYYY)	Grand Total number of Groups	Total number of Farmers upto previous year (April	Total number of Farmers added in the present year (April	Grand Total number of Farmers	Total of Area (Ha)upto previous year (April YYYY)	Total Area (Ha)add ed in the present year (April YYYY)	Grand Total Area (Ha)	PGS Green	PGS-organic	PGS Green	PGS-organic	PGS Green	PGS-organic	PGS Green	PGS-organic

Present Status of PGS-INDIA

To promote organic farming and domestic organic market a free / no cost domestic organic certification system called Participatory Guarantee system-India (PGS-India) in India is being implemented by Ministry of Agriculture, Department of Agriculture & Cooperation, Government of India through National Centre of Organic Farming (NCOF), Ghaziabad and its seven Regional Centres (Ghaziabad -Head Quarter, Bangalore, Nagpur, Jabalpur, Panchkula, Bhubaneswar & Imphal). At present, fifty five **Regional councils** are authorized (on 26-03-2015) to work under PGS India Programme. Out of fifty five regional councils, seven are Regional centers of NCOF and forty eight are from different NGOs/ Society/ State Govt. organization/Departments from different States {Karnataka (6), Kerala (3), Tamil Nadu (3), Maharashtra (1), Andhra Pradesh (1), Rajasthan (11), Utter Pradesh (2), Madhya Pradesh (13), Chhattisgarh (2), Manipur (2), Odisha (1), Sikkim (1), Uttarakhand (1), Car Nicobar (1)}. The PGS organic certification at free of cost to the farmer under Paramparagat Krishi Vikas Yojana Scheme is promoted under components of National Mission for Sustainable Agriculture.

Logos used in Participatory Guarantee System-INDIA organic certification Programme



Logo Used while marketing on the products produced from the field under conversion



Logo Used while marketing on the products produced from fields of completely converted into organic

Annexure IV

Standard Operating Procedures (SOP) for Food Safety Officer (FSO) For Monitoring Compliance to the Food Safety and Standards (Organic Foods) Regulations, 2017

Introduction-

This SOP provides guidance for a Food Safety Officer to inspect an organic product and related documents.

a. Information for FSO:

Any food offered or promoted for sale as organic food is required to comply with all the applicable provisions of any one of the following (Regulation 4 under Chapter II of this regulation):

- i. National Programme for Organic Production (NPOP);
- ii. Participatory Guarantee System for India (PGS-India);

b. Requirements for labelling-

The product shall carry a certification or quality assurance mark in addition to the labelling requirements of one of the systems mentioned in (a) above in addition to the FSSAI logo. All organic foods shall also comply with the packaging and labelling requirements specified under the Food Safety and Standards (Packaging and Labelling) Regulations, 2011”.

This means that all organic food products shall have two logos, one of FSSAI and another of either India Organic logo or PGS-India Organic Logo as the case may be.

1. Requirements of labelling under National Programme for Organic Production (NPOP)

If the product is certified under National Programme for Organic Production (NPOP) then the label must clearly display following logo.



In case of single ingredient product where all requirements have been met:

- Product may be labelled as 'Organic'.
- Name of accredited certification body, accreditation number.
- FSSAI logo

In case of Multi ingredient product where NPOP Logo (India Organic) is allowed is as under:

Where min. 95% of ingredients are of certified origin

- Product can be labeled as 'Certified Organic'.
- Name of accredited certification body, accreditation number.
- FSSAI logo

2. Requirements of labelling under Participator Guarantee System (PGS):

If the product is certified under PGS-India programme then the label must clearly display following logo.



In case of single ingredient product where all requirements have been met:

- Products may be labelled as 'PGS-Organic'
- PGS Logo (India Organic)
- FSSAI logo
- UID Code

In case of Multi Ingredient Product-

Where min. 95% of ingredients are organic:

- Product can be labeled as PGS Organic
- FSSAI logo
- UID Code

c. Requirements for sampling and analysis-

Regulation 9 under Chapter II of FSS (Organic Food) Regulations, 2017 also states that “Without prejudice to the provisions of these regulations, all organic food shall comply with the relevant provisions, as applicable, under the Food Safety and Standards (Food Product Standards and Food Additives) Regulations, 2011, the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011, under the Act and the rules and regulations made there under”.

- To ensure the compliance of these general regulations samples need to be collected and analysed in FSSAI accredited testing laboratories.
- Sampling for laboratory testing to be done as per the sampling procedure described in Section 47 “Sampling and Analysis” of FSS Act, 2006.

➤ **Steps/Parameters to check the Organic Food compliance at the Retailer end:**

For NPOP and PGS certified Food products:-

Retailer is the business entity which is not involved in manufacture or processing including packaging. A retailer buys the product in closed/ sealed packs from manufacturer, processor or packer and keeps them on shelves for sale to consumers.

- Organic products shall be kept/ displayed separately in a manner that it is distinguishable from non-organic products.
- Check for labelling requirement as specified above
- Check for purchase records to ensure that products have been purchased from organic certified manufacturer and processor

iv. The sample may be drawn as per the standard sampling protocol and sent to the authorised testing laboratory.

➤ **Steps/Parameters to check the Organic Food compliance at manufacturer, processor, handler/ packer end.**

For NPOP certified Food products:-

Besides the general requirement mandatory under FSS Act 2006 following additional parameters/ records to be checked to ensure the integrity of organic process.

- i. Unit is registered with NPOP accredited organic certification body
- ii. Unit possess valid scope certificate for organic processing and is maintained on continuity basis.
- iii. All organic product labels are approved by the accredited organic certification body.
- iv. Production records are maintained for incoming raw material, manufacturing/ processing process, output records, sale records and are duly verified by accredited organic certification body. Ensure that all certification related records are verified by organic certification body at least once a year.
- v. Transaction certificates are available for all inward raw material and scope certificates indicate the quantum of production.
- vi. Scope certificates and Transaction certificates are issue with QR code and Bar code. FSO's can verify the genuineness of these certificates by scanning the QR code and instantly he will get the pdf copy of the certificate from APEDA's Tracenet
- vii. Run audit trail for inward of raw material and outward of finished product as per the manufacturing process.
- viii. If required, samples can be drawn for testing as per the standard sampling protocol and sent for testing in authorised laboratory.

➤ **Steps/Parameters to check the Organic Food compliance at manufacturer, processor, handler/ packer end.**

For PGS-India certified Food products:-

- i. Scope certificates issued by the RC shall carry the digital signatures of authorised signatory of RC.
- ii. Actual ink signature of LG group leader on all the certificates handled to individual members.
- iii. Unique Identification (UID) Code to be checked on each certificate.
- iv. Each certificate will list out the area, crop and products certified during the year.

➤ Steps/Parameters for Import of Organic Food products:-

In addition to the requirements laid down under Food Safety and Standards Act 2006, following additional documents should accompany the import consignment for checking by the custom authorities:

- i. Importer is registered with NPOP accredited organic Certification Body, for management of traceability.
- ii. Valid scope certificate issued by the NPOP accredited organic Certification Body of India (in cases where India does not have bilateral or multilateral equivalency for organic products with the exporting country) or valid scope certificate issued by authorised certification body of exporting country, if there is bilateral or multilateral equivalency agreement exists between NPOP and organic regulation of exporting country and APEDA has granted the authorization to such certification bodies.
- iii. Transaction Certificate issued by the authorised certification body (as above).

भारत सरकार/Government of India
ग्रामीण विकास मंत्रालय/Ministry of Rural Development
ग्रामीण विकास विभाग/Department of Rural Development
ग्रामीण आजीविका विभाग/ Rural Livelihoods Division
(<https://rural.nic.in>)

सातवीं मंजिल, एन.डी.सी.सी-॥ भवन/7th Floor, N.D.C.C -II Building
जय सिंह मार्ग, नई दिल्ली-01/Jai Singh Road, New Delhi-01
दिनांक/ Dated: 19th April, 2023

To,


The State Mission Director,
All States/UTs

Subject: Guidelines on Promotion of Livestock Cluster under DAY-NRLM

Madam/Sir,

As you are aware that Livestock Promotion is one of the fastest alleviation for enhancing the income of poor House Hold. Looking at the potential of livestock sector and the growth envisaged, I am directed to attach and share the guidelines on Promotion of Livestock Clusters under DAY-NRLM.

You are requested to disseminate and initiate the livestock cluster interventions Integrated Farming Cluster as well as through direct livelihoods intervention plan of the SRLM-AAP, NRETP or MKSP.

Yours faithfully,

रमन वाधवा/ (Raman Wadhwa)
उप-निदेशक (प्रशासन)/Deputy Director (Admin)

Copy to:

1. PPS to Additional Secretary(RL) for information

Guidelines on implementation of livestock Clusters

DAY-NRLM

Guidelines on implementation of Livestock clusters **Error! Bookmark not defined.**

I. Introduction **Error! Bookmark not defined.**

 1.1 Livestock, Livelihoods, and competitiveness in livestock..... **Error! Bookmark not defined.**

 2. Convergence with Department of Animal Husbandry **Error! Bookmark not defined.**

 3. Need for the promotion of the group enterprise on Livestock sector **Error! Bookmark not defined.**

 3.1 Roadmap..... **Error! Bookmark not defined.**

 4. **Key outputs** **Error! Bookmark not defined.**

Reference **Error! Bookmark not defined.**

Annexure-I (Economics of a Mother Unit – 960 bird capacity) **Error! Bookmark not defined.**

Annexure-II (Economics of a Mini Hatchery – 2080 eggs capacity)..... **Error! Bookmark not defined.**

Annexure-III (Economics of a Mother Unit – 2000 Chicks) **Error! Bookmark not defined.**

Annexure-IV (Economics of HHs for 50 Vanaraja / Kuroiler and 50 Kadaknath under backyard poultry system)**Error! Bookmark not defined.**

Annexure V Estimated Economics of 10 kids for Memna Nursery..... **Error! Bookmark not defined.**

Annexure VI Estimated Economics of 10 improved goats in 24 Months..... **Error! Bookmark not defined.**

Annexure-VII: Breeding Boars **Error! Bookmark not defined.**

Annexure- VIII Income of a pig fattener (3 castrated piglets) **Error! Bookmark not defined.**

Annexure -IX: Economics of keeping boar (05) for breeding purpose:..... **Error! Bookmark not defined.**

Annexure- X: Economics of Mini Slaughter house **Error! Bookmark not defined.**

Annexure XI: Business plan for household post mother unit at Household level .. **Error! Bookmark not defined.**

Annexure XII: **Business plan of Mother unit/ Hardening center of Ducklings** **Error! Bookmark not defined.**

Annexure XIII: **Business plan for Hatchery unit of Ducklings**..... **Error! Bookmark not defined.**

Annexure XIV: Estimated Economics of Parent Unit for Duck (Indian Runner) **Error! Bookmark not defined.**

I. INTRODUCTION

Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM) is a centrally sponsored programme of the Ministry of Rural Development, Government of India. It aims to eliminate rural poverty by promoting multiple livelihoods for each poor rural household. Launched in June 2011, the Mission seeks to reach 8-10 Crore rural poor households by 2023-24.

More than half of India's rural population is dependent directly or indirectly on agriculture and allied activities. In forest and forest fringe areas, the tribal depends mainly on livestock and forest-based livelihoods. Besides, a wide range of rural enterprises of different sizes, including self-employment, augment the diversity in the livelihoods of the rural poor. Animal Husbandry, Dairying, and agriculture have been integral to human life since civilisation started. These activities contribute to the food basket and draught animal power and maintain ecological balance. Owing to favourable climate and topography, Animal husbandry and dairy play a prominent socio-economic role in India. The syncing of Traditional, cultural and religious beliefs has led to its growth. They also play a vital role in gainful employment in the rural sector, particularly among the landless, small and marginal farmers and women, besides providing cheap and nutritious food to households.

India has vast livestock resources, including poultry. Livestock is an essential source of income for landless and marginal farmers and plays a vital role in the national economy. Livestock Sector has continuously been growing at a Compound Annual Growth Rate (CAGR) of 7.93% (at constant price) from 2014-15 to 2020-21, which is comparable to the CAGR of manufacturing at 4.93% (at constant price) and Services at 4.82% (at constant price) and in contrast to Agriculture (Crop Sector) CAGR of 2.05% (at constant price). Agriculture (crop sector) contributed 8.96 % (at constant prices) of total Gross value addition (GVA), whereas the livestock sector contributed 4.90% (at constant prices) of total GVA in 2020-21. Agriculture diversification through animal husbandry is one of the primary drivers of growth in rural incomes. Higher public investment in Livestock Sector is needed to double farmers' income. Livestock production and agriculture are intrinsically linked, dependent on each other, and crucial for overall food security. The livestock sector is an essential sub-sector of agriculture in the Indian economy. It forms an important livelihood activity for most farmers, supporting agriculture in the form of critical inputs, contributing to the health and nutrition of the household, supplementing incomes, offering employment opportunities, and finally, being a dependable "bank on hooves" in times of need. It acts as a supplementary and complementary enterprise.

1.1 LIVESTOCK, LIVELIHOODS, AND COMPETITIVENESS IN LIVESTOCK

Livestock is core to the livelihoods of the poor. They are an integral part of Agro-ecological practices and natural/organic farming and help raise farm productivity by providing revenue and nutritious food for the family. They also provide wealth insurance and create economic opportunities for women.

Small-scale farmers typically face higher transaction costs than large-scale enterprises. It is more difficult and costly for them to access high-quality inputs (mainly feed), credit and technology. On the output side, market information is critical in higher-end markets, where quality is essential. The high transaction costs for smallholder producers can be reduced through collective action, such as setting up Producer groups and producer companies. Such arrangements can potentially incorporate smallholders in high-value supply chains from which they would otherwise be excluded. This arrangement can also encourage gender equality by providing equal access to resources, including capacity building targeted equally at women and men.

1.2 ROLE OF ANIMAL HUSBANDRY IN DOUBLING FARMER'S INCOME

The animal husbandry sector is transforming rural India and promisingly aiding in doubling farmers' income. Although agriculture sector growth has been around 3-4%, it remains the primary livelihood source for over 50% population of India. In 2021-22, the timely intervention by the Centre in the form of an Rs. 20 lakh crore economic package under the 'Aatma Nirbhar Bharat Abhiyaan', coupled with other growth-promoting schemes, helped agriculture to achieve an improved growth of 3.9%. Hence the role of the animal husbandry sector is significant as it promises outstanding prospects for crores of farmers and a significant boost to the overall rural economy. Moreover, traditionally the farmers in India have maintained a mixed farming system, i.e., a combination of crops and livestock, where one complements the other and helps realise resource efficiency. Therefore, if executed properly, an enhanced focus on animal husbandry growth has been a viable strategy for income growth.

The animal husbandry market was estimated to be around Rs. 1,000 billion in 2021, and experts expect it to reach Rs. 1,574.7 billion by 2027. It means the growth rate is anticipated to be 7.66% during 2022-2027, almost double the growth rate of agriculture. The livestock sector grew at a compound annual growth rate of 8.15% during the last five years. It has the potential to raise farmers' income much faster than agriculture. Moreover, this sector may catch further momentum with the growing population and the rising consumption of eggs, meat, fish, dairy products etc. Exports of animal husbandry products have also registered good growth over the years.

Livestock contributes 16% to the income of smallholders, and 14% of all rural households, besides employing about 8.8 % of the population in the country. According to the Economic Survey-2021, the contribution of livestock in total agriculture has increased from 24.32% in 2014-15 to 28.63% in 2018-19. The role of livestock in the socio-economic life of rural India is vast. The animals offer social security to small farmers when faced with emergencies, besides providing regular income to the livestock farmers by selling milk, chicken, and eggs. In addition, thousands of landless and marginal holders depend upon livestock for their livelihood.

1.3 DAY-NRLM AND LIVESTOCK

Livestock is a crucial income source for the poor across India, where women play a more prominent role. Better livestock management practices are being promoted as universal intervention along-with agroecological practices, and Non-Timber Forest Produce interventions. The program promotes improved livestock management practices to reduce mortality and morbidity in small ruminants, pigs and poultry birds through improved feed and fodder, breed, health care, general management and ethnoveterinary practices. DAY-NRLM is also promoting livestock clusters and Integrated Farming Clusters for providing diversified and integrated livelihood activities at the household level.

DAY-NRLM, through its last mile extension worker "Pashu Sakhi", has provided 24*7 services at farmers' doorstep. To date, 58,348 , Pashu Sakhi have been trained and deployed by the State SRLMs.

1.4 Objective

- a) Upscaling of the livestock cluster intervention in a systematic way
- b) Creation of tiers of interventions for promoting livestock in holistic manner
- c) Promotion of Agri-entrepreneurs
- d) Convergence with line departments

1.5 Focused livestock intervention

The livelihoods activities being undertaken and planned under DAY-NRLM are as follows:

- (i) Creation of last mile extension worker "Pashu Sakhi" for providing extension services, thereby increasing saving through the adoption of sustainable livestock practices
- (ii) Enhancing production and productivity through better management practices and technology via the Pashu Sakhi
- (iii) For value chain initiative, Promotion of Producer Groups and Farmers Producer Organizations
- (iv) Promotion of Livestock Clusters (Sub-sector intervention).
- (v) Promotion of Integrated Farming Clusters

In rapidly growing economies where the livestock sector is in the early stages of transition, smallholders need support to participate. Appropriate interventions include support for technological innovations to increase productivity and to meet increasingly stringent health and food-safety standards, access to capital and credit for investment, access to input and output services and markets. The capacity to respond to changing contexts and conditions is essential if smallholders are to thrive. Such capacity relates not only to financial, technical and infrastructure requirements but also involves routines and networks that, in combination with policies, allow technology and other forms of information to be put into productive use (World Bank, 2007).

Looking at the issues mentioned above, the guidelines on poultry, goat rearing, Piggery and duck rearing were circulated for the benefit of Self-help Group members vide letter no.K-11038/02/2019-20/MKSP/Mis/367783 dated 25th September 2020, dated 4th November 2020, dated 1st February 2021 and 10th June 2021 (Summary of each intervention attached). Following interventions under the different thematic of livestock have been earmarked for the entrepreneurs/Collective enterprises:

SI no	Poultry	Goat rearing	Piggery	Duck rearing
1	Parent Farm	Kid Nursery	Pig breeding centre	Parent Farm
2	Hatchery units	Buck breeding		Hatchery units
3	Mother units			Mother units

2. CONVERGENCE WITH DEPARTMENT OF ANIMAL HUSBANDRY

As part of convergence support, the State may take support from Department of Animal Husbandry where there is provision for subsidy to individual entrepreneur as well as to self-help groups under National Livestock Mission. The detailed plan is attached as Annexure XV

These activities through collective action (PG/SHG)/Individuals will help develop entrepreneurs or strengthen producer collective through captive market of SHG households who will be directly procuring from these enterprises. Looking at the immense opportunity, State rural livelihoods missions may take up these livestock interventions in cluster model. Financial requirement for the same may be kept as per the shared guidelines looking at the number of households to be benefitted and the number of livestock to be distributed. These centres will help maintain the constant supply of input (chicken, kids, piglets etc.) to the rural households for rearing.

Households supplied with these inputs will rear these livestock and either sell them in the market or utilise them for nutrition. State Rural Livelihoods Mission may plan to set up Producer Groups for collectivization of the produce, for economies of scale and connect them through institutional buyers, or Producer companies or whole sale dealers or retail markets for enhancing the income of the households.

Last but not least, training and capacity building across the segment is vital, including the technological inputs for enhancing the productivity and production at every level of value chain.

3. NEED FOR THE PROMOTION OF THE GROUP ENTERPRISE ON LIVESTOCK SECTOR

Livestock interventions at HH level must be linked with backward and forward linkages. Thus, there is need of identifying different resources for constant supply of inputs and proper marketing facility for maintaining the complete value chain. The back end support may be sought by promoting entrepreneurs/ collective action through convergence with DAHD and funding through DAY-NRLM, Bank Linkage, Department of Animal Husbandry (DAHD) etc. The technological input and training may come both from DAHD and DAY-NRLM.

3.1 ROADMAP

To achieve the objective of the sub-sector in generating the revenues, livestock sub-component will be horizontally integrated with the other sub-sectors such as agriculture and NTFP. Therefore, a robust approach has to be adopted for better integrations that should help increase efficiencies in producing high-quality output. The process flow for implementing the activities is as follows:

- (i) **Role of State Rural Livelihoods Missions (SRLM):** The role of SRLM is critical in terms of planning the cluster looking at the State perspective, converging them with the line departments, facilitating access to credit (through loans, support through line departments etc.) and in broader contour connecting with markets. The role of SRLM will also be important in planning for State level trainers for implementing and hand-holding the cluster interventions. The block unit identified will handhold these clusters through dedicated professional who will be responsible for the specific interventions.
- (ii) **Role of Cluster Level Federations (CLFs) :** The clusters Identified under the cluster promotions need ownership and mentoring by designated CLFs. The role of CLF will be important in terms of identification of households, training and capacity building of Mahila Kisans, Krishi sakhis, entry in MIS, and access to finance, monitoring, identifying gaps and taking remedial action.

- (iii) **Community Resource Person (Pashu sakhi):** The role of Pashu sakhi who is the back bone of DAY-NRLM livestock cluster providing sustainable livestock services at the doorstep of rural livestock farmers 24*7 cannot be over emphasized. The role of Pashu sakhi will not be only to provide the services but may also be in the list of 1st identified entrepreneurs who may serve as input provider for the community. These Pashu sakhis may be further trained to become entrepreneur in their area along with the service provider.
- (iv) **Identification of Clusters :** The identification of clusters may be based on identified activities through Village Poverty reduction Plan tool or District livelihoods potential mapping or through One district one Product. Besides the area where Pashu sakhis are primarily involved in specific livestock rearing activities like poultry, goat rearing etc. may be identified for promoting livestock clusters.
- (v) **Identification of Households (HHs):** As part of interventions under any given livestock sector, focus should be on achieving the economies of scale. Thus identification of proper households becomes imperative. To identify the households, the States may look into areas where Pashu Sakhis are already placed, sustainable livestock practices are being adopted by the intervention households and producer groups related to livestock are existent. Pashu sakhis of the respective village under the cluster may be chosen for this activity under the monitoring of respective CLFs
- (vi) **Entry in MIS:** MIS is an important component that helps in monitoring and planning, implementation and taking corrective actions as and when required. Thus, post identification of households' entry of identified household in MIS is critical. For proper and real-time MIS implementation, Pashu Sakhis may be trained and can serve as eCRP-MIS for livestock interventions. Block Mission Management Unit (BMMU) along with the CLFs may plan for the same.
- (vii) **Intervention planning:** Based on the intervention/s planned, the business plan has to be prepared looking at the cost norms already circulated for taking up activity. This plan will be based on the number of households to be covered, the number of livestock to be reared by each household, and the number of interventions intended. BMMU with the support of SMMU and respective Cluster level federation may design the proposal based on the current activities being undertaken by the community. The business plan may be made with the support of tentative budget for different heads attached in Annexure
- (viii) **Human resources:** For carrying out livestock cluster promotion, dedicated staff preferably with diploma in veterinary science may be placed to support the CLFs and BMMU in implementation of livestock cluster interventions.
- (ix) **Market side intervention:** Looking at the scope of output envisioned in the plan, setting up of Producer Groups/Producer Company may be envisaged. Looking at the number of producers mobilized, volume of business, scope of value addition, feasibility of market and the human resources available, the market side intervention should be planned. BMMU along with SMMU may support in planning whereas the implementation part may be done by CLFs, Community resource persons, dedicated staff and resource persons.
- (x) **Training and capacity building:** It is a cross-cutting theme across all segments that must be provided regularly based on the need and requirement. Besides hand-holding, mentorship and exposure visits are key for strengthening the stakeholders. The training program must include Standard Operating Procedure (SoP) and Package of Practice (PoP) for the particular species. In addition, the training must include diseases and outbreaks with major rearing problems in the particular areas.

3.2 INSTITUTIONAL MECHANISM OF IMPLEMENTATION

Cluster Level federation will serve as nodal agency for implementation of livestock cluster. The ownership of cluster will be with CLFs. The role of CLF will be important in terms of identification of households, training and capacity building of SHG members, Pashu sakhis, entry in MIS, access to finance, monitoring, identifying gaps and taking remedial actions. CLF will support individual entrepreneurs and Producer Groups by providing them requisite funds through CIF/Bank Linkage. SRLM team consisting of State, District and Block unit may serve as facilitator for supporting the cluster promotion by providing timely training and capacity building, convergence with line departments for funds as well as training etc.

3.3 FINANCIALS FOR THE INTERVENTION

The finance for different activities earmarked under livestock cluster promotion may be obtained either through dedicated livelihoods funds or community investment fund, Bank linkage, muddra loan or in convergence with line department scheme of national livestock mission or animal husbandry infrastructure development fund.

4. KEY OUTPUTS

- The overall outcomes are as follows:
- Farmers adopted new practices for sustaining livelihoods
- Pashu sakhi providing services to the farmers
- The households are getting services through hardening centers
- The households are using concentrate feeds for livestock as per recommendations
- Farmers are using deworming and vaccination at regular intervals
- Farmers are getting primary health services at their door step.
- Farmers are demanding improved breed of different species of livestock
- The beneficiaries adopted different models
- Livestock interventions are leading to cluster approach

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1.4.1 POULTRY INTERVENTION

Backyard poultry is defined as the small-scale rearing of poultry birds (chicken) by womenfolk in poor households for dietary improvement, cash income, investment and security against risk. Here, the poultry birds may range freely in the household compound and, find much of their food, get additional amounts from the household. The birds are fed with locally available feed sources, mostly household and farm by-products. Backyard poultry is rarely the sole means of livelihood for a family but is one of the number of integrated and complementary farming activities contributing to the overall well-being of the household. It generates income from the sale of poultry birds and eggs. Eggs can provide a regular, albeit small, income, while the sale of live birds provides a more flexible source of cash. Occasional consumption of chicken meat and egg offers a valuable source of protein in the household diet. Poultry also plays an essential socio-cultural role in many societies. Backyard poultry is the smallest livestock investment a rural household can make.

Objective: The objectives of backyard poultry may be any or more of the following:

- a. Income generation only.
- b. Income and home consumption;
- c. Home consumption and cultural reasons
- d. Home consumption only

VII A BACKYARD POULTRY INTERVENTION IN LIVELIHOOD CLUSTER

BACKYARD SYSTEM

Backyard poultry is a vital livelihood intervention for poor rural households, including landless or small landholders. It is more suited for poor households as it requires little investment and skill. Under this system, the pure indigenous breed/ hybrid varieties are promoted as a source of livelihood for the poor. The system consists of the following supply chain:

Supply chain system under backyard poultry: The functional smallholder supply chain can be established to supply chicks/pullets to small rural households, even in the remote area, through "mother units." The units raise the birds for 3-4 weeks and sell the grown-up birds to rural households. There are some critical element/Hybrid varieties in such a supply chain:

A typical supply chain under the backyard poultry system: The supply chain can be represented as below:

The above model can be explained in a tabular form also for better understanding:

LH services	Service area	Particulars	Ownership
Parent farm	Block	At the parent farm pullet and cockerels are kept for supplying eggs to hatcheries.	An individual entrepreneur at the block level
Hatcheries	Cluster	At cluster level, hatcheries are units for supplying day-old chicks to the mother unit	Producers Group at cluster level attached with LSC / Individual entrepreneur / Pashu Sakhi can be promoted.
Mother unit	Village	The existence of a small-scale "mother unit" spread at the village level serves as a brooding unit where DOCs are kept for 3-4 weeks under good heat and light conditions and are appropriately fed and vaccinated. This is critical because, after three weeks, the brooded chicks weigh around 250 grams and can live and thrive in the open range, scavenging rearing system	Individual entrepreneur / Pashu Sakhi

- Parent farm:** For a 960 birds' capacity parent farm unit for backyard poultry, an initial investment of about Rs 7.3 lac will be required. In addition, for a 55 weeks cycle, a recurring cost of about Rs 14 lac will be required. This will generate a net income of about Rs 3.3 lac after depreciation and interest payment. The details are in Annexure-I.
- Economics of Mini hatchery (2080 eggs):** The economics of an incubator of 2080 eggs capacity under a backyard poultry system found that an estimated Rs 6 lac initial investment will be required. In addition, an operational cost of Rs 5.6 lac per year will be necessary, generating a net income of Rs 77 thousand per annum. The details of the economics are shown in Annexure II.
- Economics of a Mother unit/ Hardening centre of Chicks (Unit: 2000 birds):** The economics of a mother unit of 2000 birds capacity under a backyard poultry system found that an estimated Rs 2 lac initial investment will be required. In addition, an operational cost of Rs 0.94 lac per cycle (1 month) will be required. In a year, 12 cycles can generate a net income of Rs 1.2 lac after the depreciation deduction. The details of the economics are shown in Annexure-III

- d. **Income at HH level:** 50 birds can be reared per household, and six cycles can be completed yearly. The economics of a backyard poultry household mother unit of 50 birds capacity under a backyard poultry system found that with a nominal initial investment. The cost of production per bird will come to Rs 171 (Vanaraj / Kroiler) and Rs 129 (indigenous breed), and the activity generates a net annual income of Rs 36,000 (Vanaraj / Kuroiler) and Rs 55,000 (indigenous species). The details of the economics are shown in Annexure IV.

1.4.2 GOAT REARING :

Goats are known as 'poor man's cow'. Goats contribute to the livelihoods of millions of rural poor. Small and marginal farmers and landless farmers, particularly women, increasingly rely on goat keeping for their socio-economic upliftment. Goat is well integrated into the farming systems of small and marginal farmers due to low capital requirement, secure handling and ability to adapt to versatile environmental conditions. The goat is ideal for farming for small and marginal farmers, including landless agricultural labourers, particularly in rainfed regions where crop production is uncertain. Rearing large ruminants is difficult because of acute feed and fodder scarcity. Goat rearing has distinct economic and managerial advantages over other livestock species because of its less initial investment requirement, low input requirement, higher prolificacy, early sexual maturity and marketing comfort. Goats can efficiently survive on available shrubs and trees in an unfavourable environment.

STRATEGY UNDER DAY-NRLM FOR GOAT INTERVENTION

The broader strategy consists of the following intervention:

- Promotion of kid nursery entrepreneur
- Promotion of improved rearing practices.
- Promotion of village-level Producer Group (Goat Club / Pashu Pathshala)
- Promotion of Producers Enterprise (Goat Resource Centre) at a larger geography

PROMOTION OF KID NURSERY ENTREPRENEUR

- Selection of entrepreneur: Preferably Pashu Sakhi or any individual related to SHG willing to take up the activity and having received any formal livestock training may be promoted to initiate kid nursery.
- Training and capacity building: The training and capacity building for the kid nursery can be done through:
 - National Resource Persons/State Resource Person
 - In convergence with the Department of Animal Husbandry
 - CRP rounds can do hand-holding by the experienced CRPs/PRPs of some pioneer states like Jharkhand and Maharashtra, where they have been practising it for quite some time.

Incubation supports: Incubation support can be provided by pioneer states like Jharkhand, Maharashtra, Rajasthan and Maharashtra for the entrepreneurs or Pashu Sakhi interested in promoting kid nurseries. The economics of rearing 10 kid in a nursery, popularly referred to as "memna nursery", is given in Annexure V and the Household economics in Annexure VI

1.4.3 PIG REARING

Backyard piggery has been an age-old practice among the communities in north-eastern India and socio-economically weaker sections of the country. It has great potential to contribute to a faster economic return to the rearers due to its high fecundity, better-feed conversion efficiency, early maturity and short generation interval. Moreover, a pig can convert so-called wastes into high-quality edible protein in its body.

Backyard pig rearing with a small herd size contributes in many ways to improving the livelihood of the poor. Pork and other pig products provide high-value animal protein. The meat is easy to dress and has superior curing and storage qualities. The low costs and small investments are recovered relatively quickly as slaughter can take place at about six to eight months from farrowing (birth), depending on breed and feed availability. Pig husbandry can be easily integrated with other farming activities (agriculture, fishery) within the agricultural and aquaculture sectors. All these advantages make the livelihood activity of pig production a valuable diversification option in small-scale production systems.

Strategies under DAY-NRLM for backyard pig intervention

The broader strategy for the promotion of backyard piggery among the SHG members can be presented below:

BACKYARD PIGGERY INTERVENTION UNDER DAY-NRLM CONSISTS OF THE FOLLOWING:

(a) Maintaining proper ratio (fattener, boar keeper, breeder): A village has been taken as a unit of intervention under this intervention. The number of individual fatteners, pig breeders and breeding boar keepers are to be maintained so that the ratio of 9:1:1 is attained. This ratio will help in producing the required piglets for the fatteners.

(b) Boar exchange: At the cluster level, in the regular interval, the breeding boar is to be exchanged among the boar keepers of that cluster to avoid inbreeding.

(c) Promotion of fatteners: Income from backyard pig fattening depends on the reduction in the cost of feed. Thus at the household level, the herd size is determined by the volume of agricultural / household wastes generated. So the bulk of the feed for the pigs is generated at the household level or within the village (herbs, forest products etc.) except for need-based vitamins and mineral mixture.

(d) Promotion of pig-breeders: Promotion of backyard pig breeder farmers and maintaining a proper ratio of different pig farmers and boar exchange will ensure the availability of quality piglets at an affordable price to all pig fatteners. In addition, the Pashu Sakhi may be promoted to pig-breeding entrepreneurs.

(e) Promotion of breeding boar-keeper: High-quality, locally adopted breeding boar rearing at the household level will be promoted for breeding purposes. After one or two years, such boar will be exchanged or castrated to convert into fattening pigs. This will ensure a continued supply of quality piglets without in-breeding. Pashu Sakhi may be promoted to boar-keeper entrepreneur.

(f) Credit linkage: During the piglet purchase, the SHG women needs credit. Timely availability of such credit through MCP will ensure access to such funds to purchase piglets.

(g) Mini Slaughter House: At the cluster level, such facilities may be promoted as an individual enterprise. Selection of such entrepreneurs may be done through the CLF.

(h) Pig Rearers Group (Producers Group): All the pig rearers (fatteners, boar keepers and breeders) of a cluster of adjoining villages may be organised around a Pig Rearers Group. This informal group is for sharing experiences, cross-learning, boar exchange, collective marketing of piglets, pigs, Mini slaughterhouses etc. This may act as Pashu Pathshala also.

(i) Pig Rearers Enterprise (PE): All the pig rearers groups of a block/district may be federated into a Producers Enterprise (PE) primarily for the aggregated supply of inputs (vaccine, vet-medicine, mineral mixture, vitamins etc.), vet services (through qualified vet-doctors), slaughterhouse, processing of pork, packaging, branding and marketing.

(j) Training and capacity building: The training and capacity building for all the different types of pig rearers can be done through:

- National Resource Persons (NRPs) / State Resource Persons (SRPs)
- In convergence with the Department of Animal Husbandry
- CRP rounds can do hand-holding by some pioneer states' experienced CRPs/PRPs / entrepreneurs.
- TSP and SCSP programmes of ICAR institutes and SAUs.

a. income from pig breeding: With a herd size of 3 female piglets, an SHG woman must invest Rs 25,600 to construct a pigsty, female piglets etc. The piglets will be purchased at three months and around 15 kgs of wt. This investment will bring an annual income of about Rs 23,830 in the first year (excluding incidental expenses). Similarly, in the second year, the income will become Rs 68,364 per year. The details of the calculation/economics have been annexed in Annexure-VII.

b. income from pig fattening: With a herd of 3 castrated pig rearing, 2.5 – 3 months old and weighing around 10 kgs. An initial investment in constructing a pigsty and other accessories comes at Rs 10,500. After all investments and expenses are deducted, it will generate an annual income of Rs 32,560 in the first year. Similarly in the second year yearly income will increase to Rs 43,060. The details of calculation is presented as Annexure-VIII.

c. income of a boar keeper: Keeping five locally adopted, high quality, cross-breed boar(male pig) for breeding purpose needs investment including cost on construction of pigsty, purchase of quality boar, transportation etc. The income from 2nd year onwards is expected around Rs. 90,000. The details of calculation is mentioned in Annexure-IX

d. Income from Mini Slaughter House: Initial investment in a Mini Slaughter House is Rs 4,20,000. Details of the income is presented in annexure as Annexure-X.

1.4.4 DUCK REARING

LH services	Service area	Particulars	Ownership
Parent farm	Block	Drakes and Duck are kept at the parent farm for supplying eggs to hatcheries.	An individual entrepreneur at the block level
Hatcheries	Cluster	At the cluster level, hatcheries are units for supplying young ducklings to the mother unit	Producers Group at cluster level attached with LCC
Mother unit	Village	The small-scale "mother unit" spread at the village level serves as a brooding unit where young ducklings are kept for 3-4 weeks under good heat and light conditions and are appropriately fed and vaccinated. This is critical because after three weeks, the ducklings weigh around 250 gms and can live and thrive in the open range, scavenging rearing system	Individual entrepreneur / Pashu Sakhi

Duck raising is a lucrative livestock industry in the globe and at the same time is an income-generating occupation for the small, marginal and even for landless to for its egg and meat. Duck eggs are larger than chicken, weighing about 4.5% of duck's body weight. Duck has higher red muscle fibre in breast than chicken and is considered red meat. It grows faster than chicken, is costly and is easy to rear.

ECONOMICS OF RAISING BACKYARD DUCK (COMPARATIVE STATEMENT OF KHAKI CAMPBELL AND DESI VARIETY)

- Parent farm:** For a 960 birds' capacity parent farm unit for backyard duck rearing, an initial investment of about Rs 7.3 lac will be required. In addition to this for a 55 weeks' cycle a recurring cost of about Rs 14 lac will be required. This will generate a net income of about Rs 3.3 lac after depreciation and interest payment. The details are in Annexure-XIV
- Economics of Mini hatchery (2080 eggs):** The economics of an incubator of 2080 eggs capacity under backyard duck rearing system found that an estimated Rs 6 lac initial investment will be required. In addition to this an operational cost Rs 6 lac per year will be required, generating a net income of about Rs 50 thousand per annum. The details of the economics is shown in annexure-XIII.
- Economics of a Mother unit/ Hardening centre of Chicks (Unit: 2000 birds):** The economics of a mother unit of 2000 birds capacity under backyard duck rearing system found that an estimated Rs 2 lac initial investment will be required. In addition to this an operational cost Rs 0.94 lac per cycle (1 month) will be required. In a year 9 cycles are

possible that will generate a net income of Rs 40,900 after deduction of depreciation. The details of the economics is shown in Annexure-XII

- d. **Income at HH level:** The economics, and six cycles can be completed per year. For example, the economics of a backyard duck rearing household post mother unit intervention of 20 birds capacity under backyard duck rearing system found that with a nominal initial investment, the net income can be obtained upto Rs. 8,500 (Detail in Annexure- XI).

ANNEXURE-I (ECONOMICS OF A MOTHER UNIT – 960 BIRD CAPACITY)

Sl	Particulars	Unit description	Unit cost (Rs)	No of units	Cost (Rs)
A.	Fixed cost				
A1.	Poultry Shed	Sq. Ft	300	2,400	720,000
A2.	Drinker, Feeder, Nest and other accessories	Lump sum	510	19.2	9,792
	Total A				729,792
B.	Recurring cost				
B1.	Cost of 16-week old pullets & Cockerel	No.	300	960	288,000
B2.	Feed cost (for 16 to 19 weeks)	Kg	30	2,419	72,576
	Feed cost (for 20 weeks to 72-week age)	Kg	25	42,739	1,068,480
B3.	Vaccination, Deworming & other Medicine	Lump sum	50	960	48,000
	Packaging & transportation	No.	0.5	148,400	74,200
	Labour cost	Month	13	10,000	130,000
	Total B				1,393,256
C.	Other costs				
C1.	Depreciation on the fixed cost	10% per annum			72,979
	Interest on Capital cost	10% per annum			109,517
	Total C				182,496
	Total recurring cost / annum (B+C)				15,75,752
D	Receipts				
D1.	Sale of eggs	No.	12	148,400	1,780,800
	Sale of culled birds	Kg	130	960	124,800
	Gross Receipts				1,905,600
	Gross profit per cycle (D-B)				512,344
	Net profit after deduction of depreciation and interest				329,848
	Return on Investment				15.54%
	Egg production in 25 days			10,000	
	Initial investment required	Per unit			10,95,168

SOURCE: JHARKHAND SRLM

ANNEXURE-II (ECONOMICS OF A MINI HATCHERY – 2080 EGGS CAPACITY)

Particulars	Unit	Year 1		
		No. of Units	Unit Cost (INR)	Value (INR)
Capital Expenditure				
Hatchery unit with other machinery & accessories (2080 eggs)	Number	1	200,000	200,000
2 KVA inverter with solar support	Number	1	150,000	150,000

Platform & Platform & another establishment	Number	1	50,000	50,000
Construction of Building for Hatchery (20X10 Sq. ft)	Number	200	1,000	200,000
	Total capital expenditure			6,00,000
Output (Revenue)				
	Sale of chicks	Number	23,296	30.0
Total Revenue				6,98,880
Expenditure				
1. HR Costs				
	Hatchery Operator	Person months	12	7,000
	Hatchery assistant	Person months	12	4,000
2. Recurring Costs				
	Rent/ Maintenance	Months	12	2,000
	Electricity	Months	12	1,000
	Purchase of eggs	Number	29,120	12.0
	Transportation	Number	23,296	1.5
	Cartoon for packaging	Number	466	20.0
Total Expenditure Costs				5,61,702
Gross Profit				1,37,178
Depreciation (machinery/equipment/tools)				60,000
Net Profit				77,178

SOURCE: JHARKHAND SRLM

ANNEXURE-III (ECONOMICS OF A MOTHER UNIT – 2000 CHICKS)

Sl.	Particulars	Unit description	Unit Cost	No. of Units	Total Cost
A.	Fixed cost				
A1.	New building construction	Sq. Ft	300	667	2,00,000
A2.	Drinker, Feeder and other accessories	Lump sum	180	40	7,200
	Total A				2,07,200
B.	Recurring cost				
B1.	Cost of day-old chicks	No.	30	2,000	60,000
B2.	Feed Cost	Kg	32	500	16,000
B3.	Vaccination & other medicine etc.	Lump sum	1	2,000	2,000
B4.	Cost of In-charge- Mother Unit	Per cycle/ Month	1	7,000	7,000
B5.	Incentive to APS	per bird	5	1,800	9,000
	Total B				94,000
C.	C. Other costs				
C1.	C1. Depreciation on the fixed cost	25% per annum			51,800
	Total C				51,800
	Total cost including depreciation				1,45,800
D	Receipts				
D1.	Sale of 25 days old birds	Kg	60	1,800	108,000
	Gross Receipts				108,000
	Gross profit per cycle (D-B)				14,000
	Gross profit for 1 year	12 cycle in year			168,000
	Net profit after deduction of depreciation				1,16,200

ANNEXURE-IV (ECONOMICS OF HHS FOR 50 VANARAJA / KUROIILER AND 50 KADAKNATH UNDER BACKYARD POULTRY SYSTEM)

Sl	Particulars	Vanaraja/ Kuroiler	Indigenous breed
I	Variable cost		
A	Cost of a day-old chicks @Rs. 40/- for Vanaraja and @Rs. 25/- for local chicken	2,000	1,250
II	Cost of feed up to 42 days of age		
A	For Vanaraja/Kuroiler chick 1.2 kg of broiler starter/bird i.e. 60 kg @ Rs 40 per kg	2,400	
B	For local chicks, 10 kg of broken rice @ Rs. 25/- per kg for 50 nos. chicks		1125
li	Cost of vaccine @ Rs. 1.60/ chick	80	80
C	For Vanaraja chick cost of medicine, feed supplement @ Rs.3.75 per chick	187.5	
D	For the local chicken cost of medicine, feed supplement @ Rs. 2.40 per chicks		120
E	For both the flock (Kuroiler and local) cost of labour @ 20 hrs. / month = 2.5 Man-days x 18 months = 45 man-days x Rs. 150/- per Man-day = Rs. 6750.00	3,375	3,375
	Total variable cost	8042.5	5,950
III	Fixed cost		
A	Land	with farmer	with farmer
B	Low-cost poultry shed made with locally available material	1,000	1,000
	Depreciation	500	500
K	Drinker/ Feeder	Local made	local made
L	Total fixed cost		
M	Total cost/value of production	8,543	6450
N	Cost of production per bird	170.85	129
IV	Income		
A	105 eggs per bird @ Rs 8 each		42,000
B	120 eggs per bird @ Rs. 5 each	30,000	
C	Sale of birds @ Rs 400 per birds		20,000
D	Sale of birds@ Rs 300 per birds	15,000	
E	Total income	45,000	62,000
	Net income	36,458	55,550

SOURCE: JHARKHAND AND BIHAR SRLM

ANNEXURE V ESTIMATED ECONOMICS OF 10 KIDS FOR MEMNA NURSERY

A. Fixed cost	Kids - Less than 14-15 kg kids weight		
	Unit cost	No of units	Cost
A1. Cost of kids	3500	10	35000
A2. Transport	100	10	1000
A3. Feeding manger, Water turf	250	2	500
A4. Housing (Thatched roof with ventilation)	1000	1	1000
Total A			37500
B. Recurring cost			

B1. Feeding cost of kids @ 0.3 kg per day at 24 Rs/Kg -24 concentrate for 120 days in a year	360	8640
B4. Health care cost	100	1000
B5. Grazing charges@Rs 100 per month per kids or fodder cost	100	1000
B6. Minerals and supplements	50	500
B7. Insurance	200	2000
B9. Consumables /Repair & maintenance	500	500
Total B		13,640
C. Investment required		51140
D. Receipts		
D1. Sale of 4 Month old goats	7,500	75,000
D3. Sale of manure	20	12000
Gross Receipts		87000
Net profit in 4 Months		35860
Monthly income		8965

ANNEXURE VI ESTIMATED ECONOMICS OF 10 IMPROVED GOATS IN 24 MONTHS

Assumption: - 1.5 Kidding per year and 1.5 Kids per kidding for Meat goats

Sl	Particulars	Unit description	Unit cost	No of units	Cost
A	Recurring Cost				
1	Cost of goat	Age 1 to 2 years, 1 to 2 pair of permanent teeth	10,000	9	90,000
2	Cost of buck	Age 1 to 2 years, well-developed testicles	15,000	1	15,000
3	Housing	Low cost material available locally			30,000
4	Transport	Lump sum	2,000	1	2,000
5	Feeding manger, Water turf	As per requirement	250	10	2,500
6	Feeding cost of adult goats	150 gm concentrate feed per day	4.5	972	4,374
7	Feeding cost of kids (For the first six months)	Nine goats will provide 14 kids in each parturition in 2 years, a total of 40 kids, 75 gm concentrate feed per kid	30	540	16,200
8	Feeding cost of new adults (for the next seven months)	Kids of 1st & 2nd parturition will be sold at 13 months of age and kids of 3rd parturition will be sold at six months of age, 150 gm concentrate feed for 27 kids	30	851	25,530
9	Feeding cost of Buck	250 gm per day concentrate feed	30	180	5,400
10	Vaccination, Dewormer, Health care & insurance cost	PPR, ET, quarterly deworming & 3 years insurance cost	500	10	5,000
11	Fodder cost	Napier grass & other	1,000	1	1,000
12	Labour cost		200	24	4,800
13	Charges to Pashu sakhi	Yearly basis	600	2	1,200
	Total A				2,03,004
B	Other costs				
1	Interest on capital	12% per year for two years			48,721
	Total B				48,721
	Total (A+B)				2,51,725

C	Receipts				
1	Sale of 13-Month-old 27 goats	The average weight of 16 Kg	10,000	27	2,70,000
2	Sale of 6-month-old kids	The average weight of 9 Kg	8,000	13	1,04,000
3	Rate of adult goat & buck	Goats & buck purchase initial can be used for one more year	12,000	10	1,20,000
4	Sale of manure	Approx. 2 tons	5,000	2	10,000
	Gross Receipts				5,04,000
	Net profit in 24 Months				2,52,275
	Yearly Income				1,26,138

Source: Maharashtra SRLM and JSLPS

ANNEXURE-VII: BREEDING BOARS

Particulars	Unit cost (Rs)	No of units	Cost (Rs)
A. Fixed cost			
A1. Cost of piglets (15 K.G.)	4500	3	13500
A2. Transport	200	3	600
A3. Feeding manger, Waterer	500	3	1500
A4. Housing (Thatched roof, pucca floor with ventilation)	10000	1	10000
Total A			25600
B. Recurring cost (first year)			
B1. Feeding cost of piglets @ 150 kg per year at 25 Rs/Kg - concentrate (50% concentrate + 50% agri-byproducts)	3	3750	11250
B2. Health care cost	200	3	600
B3. Minerals and supplements	200	3	600
B4. Insurance	270	3	1620
B5. Consumables /Repair & maintenance	500	2	1000
Total B			15,070
C. Investment required (A+B) First year			40,670
D. Receipts (first year) Piglets	7	3	21
D1. Sale of 2.5 Month old piglets	3000	21	63,000
D2. Sale of manure	03	500	1500
Gross Receipts (first year) – total of D			64,500
Income First year (D-C)			23,830
E. Recurring cost (Second year)			
E1. Feeding cost of 3 adult pigs @ 1.25 kg per day at 25 Rs/Kg - concentrate (50% concentrate + 50% agri-by-products)	3	11406	34,218
E2. Health care cost	300	3	900
E3. Minerals and supplements	300	3	900
E4. Insurance	600	3	1800
E5. Consumables /Repair & maintenance	1000	1	1000
Investment required (Total E)			38,818
F. Receipts (Second year onward) Piglets (2 farrowing per year)	16	3	48
F1. Sale of 2.5 Month old piglets	3000	48	1,44,000

F2. Sale of manure	03	1000	3000
Gross Receipts (second year)-Total of F			1,47,000
Net receipt (F-E)			1,08,182
Income 2nd year			69,364
<i>Value of parent stock (available with farmer as insurance against natural disasters and hard times).</i>	03	15000	45,000

Source: ICAR-Mega Seed Project on Pig

Note: Common Breeding Boars (05) will be maintained by Pashu Sakhi/ entrepreneur and will be rotated village-wise annually to prevent inbreeding.

ANNEXURE- VIII INCOME OF A PIG FATTENER (3 CASTRATED PIGLETS)

Particulars			
	Unit cost (Rs)	No of units	Cost (Rs)
A. Investment			
A1. Feeding manger, Waterer	500	1	500
A2. Housing (Thatched roof, pucca floor with ventilation)	10000	1	10000
Total A			10,500
B. Recurring cost			
B1. Cost of piglets (10 KG)	3000	3	9000
B2. Transport	100	3	300
B3. Feeding cost @ 150 kg per piglet per year at 20 Rs/Kg - concentrate (50% concentrate + 50% agri- by-products)	3	3000	9000
B4. Health care cost	100	3	300
B5. Minerals and supplements	100	3	300
B6. Insurance	180	3	540
B7. Consumables /Repair & maintenance	500	1	500
Total B			19,940
C. Receipts			
C1. Sale of 12 Month old pigs (100 kg) @ Rs 200/kg	20,000	3	60,000
C2. Sale of manure	3	1000	3000
Total receipts (total C)			63,000
Income in the first year (C-B-A)			32,560
Income from second year (C-B)			43,060

Source: ICAR-Mega Seed Project on Pig

ANNEXURE -IX: ECONOMICS OF KEEPING BOAR (05) FOR BREEDING PURPOSE:

Particulars	Unit cost (Rs)	No of units	Cost (Rs)
A. Fixed cost			
A1. Cost of Boar (15 KG) 3 months age	4500	5	22500
A2. Transport	200	5	1000
A3. Feeding manger, Waterer	500	5	2500
A4. Housing (Thatched roof, pucca floor with ventilation)	10000	1	10000
Total A			36000
B. Recurring cost (first year)			
B1. Feeding cost of piglets @ 150 kg per year at 25 Rs/Kg - concentrate (50% concentrate + 50% agri-byproducts)	5	3750	18750
B2. Health care cost	200	5	1000
B3. Minerals and supplements	200	5	1000
B4. Insurance	270	5	1350

B5. Consumables /Repair & maintenance	500	2	1000
Total B			23100
C. Investment required (A+B) First year			59,100
D. Receipts (first year)	7	3	21
D1. Three month Breeding (after 12 months of age) @ two mating per boar per week ie. 120 mating @ Rs. 300 per mating	300	120	36,000
D2. Sale of manure	05	1000	5000
Gross Receipts (first year)			41,000
Net receipt first year (D-B)			17900
E. Recurring cost (Second year)			
E1. Feeding cost of 5 adult Boars @ 1.25 kg per day at 25 Rs/Kg - concentrate (50% concentrate + 50% agri- by-products)	5	11406	57,030
E2. Health care cost	300	5	1500
E3. Minerals and supplements	300	5	1500
E4. Insurance	600	5	3000
E5. Consumables /Repair & maintenance	500	2	1000
Investment required (Total E)			64,030
F. Receipts (Second year onward)			
F1. Twelve month Breeding @ two mating per boar per week ie. 100 mating per boar per year @ Rs. 300 per mating	300	500	150,000
F2. Sale of manure	05	2000	10,000
Gross Receipts (second year onward)			1,60,000
Net receipt (E-F) excluding housing and equipment cost			95,970
Net Monthly income 2nd year onward			7998
<i>Value of parent stock (available with farmer as insurance against natural disasters and hard times).</i>	05	15000	75,000

Source: ICAR-Mega Seed Project on Pig

Note: Common Breeding Boars (05) will be maintained by Pashu Sakhi.

ANNEXURE- X: ECONOMICS OF MINI SLAUGHTER HOUSE

Particulars	Unit cost	No of units	Cost (Rs)
	(Rs)		
A. Fixed cost			
A1. Establishment cost, infra for slaughter house	4,00,000	01	4,00,000
A3. Formation of shed for pigs to keep overnight	04	5000	20,000
Total A			4,20,000
B. Recurring cost (one month)			
B1. Fattened pigs will be purchased from the cluster @ 5 pigs per day ie. 150 per month	15,000	150	22,50,000
B2. Feeding cost @ 2 kg per pig per year at 20 Rs/Kg - concentrate (50% concentrate + 50% agri- by-products) for 2 days	300	20	6000
B3. Packaging cost			5000
A4. Electricity and Misc. cost			1000
Total B			22,62,000
C. Investment required			26,82,000
D. Receipts			
D1. Sale of slaughtered pork among consumers of nearby market (100 kg) @ Rs 200/kg, 5 pigs per day and 150 pigs per month	20,000	150	30,00,000
Gross Receipts			30,00,000

Net receipt(C-B) excluding establishment and housing cost			7,38,000
Monthly income			61,500

ANNEXURE XI: BUSINESS PLAN FOR HOUSEHOLD POST MOTHER UNIT AT HOUSEHOLD LEVEL

Economics of Duck rearing Egg Purpose (20 Duck Unit)					
S No.	Particulars	Unit description	Unit cost	No of units	Cost
A.	Fixed cost				
A1.	Poultry Shed (Night Shelter)	Sq Ft	100	20	2000
A2.	Drinker, Feeder, Nest and other accessories	Lumpsum	1000	1	1000
	Total A				3000
B.	Recurring cost				
B1.	Cost of Ducklings	21 day old, 300 gm weight	105	20	2100
B2.	Cost of supplementary Feed	40 gm feed/ day for 5 week	30	28	840
B3.	Cost of supplementary Feed (Female)	40 gm feed/ day for 70 week	30	196	5880
B4.	Deworming & other medicines etc	Rs. 30/ duck/ year	30	10	300
	Total B				9120
C.	Other costs				
C1.	Interest on fixed & recurring cost	12% yearly for 16 month			1939
	Total C				1939
D.	Receipts				
D1.	Income from sale of eggs	Sale of eggs start after 20 week and 1 duck gives 225 eggs in year	7	2250	15750
D2.	Income from sale male duck	Male ducks will be sold after 2 month of age	150	15	2250
D3.	Income from sale culled female duck	Culled ducks will be sold after 72 week of age	120	15	1800
	Gross Receipts				19800
	Net Income				8741
	Return on Investment				79.04%

Source : JSLPS

ANNEXURE XII: BUSINESS PLAN OF MOTHER UNIT/ HARDENING CENTER OF DUCKLINGS

Unit Size		2000		Birds	
S1	Particulars	Unit description	Unit Cost	No. of Units	Total Cost
A.	Fixed cost				
1	New building construction	Sq Ft	300	667	2,00,000
2	Drinker, Feeder and other accessories	Lumpsum	180	40	7,200
	Total A				2,07,200
B.	Recurring cost				
1	Cost of day old ducklings	No.	35	2,000	70,000
2	Feed Cost	Kg	32	600	19,200
3	Medicine etc	Lumpsum	1	2,000	1,500
4	Cost of Incharge- Mother Unit	Per cycle/ Month	1	7,000	7,000
5	Incentive to APS	per bird	5	1,800	9,000
	Total B				1,06,700

C.	Other costs				
1	Depreciation on fixed cost	25% per annum			51,800
	Total C				51,800
D	Receipts				
1	Sale of 15 days old birds	Kg	65	1,800	1,17,000
	Gross Receipts				1,17,000
	Gross profit per cycle (D-B)				10,300
	Gross profit for 1 year	9 cycle in year			92,700
	Net profit after deduction of depreciation				40,900

Initial investment required per unit	Per Unit	3,13,900
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ANNEXURE XIII: BUSINESS PLAN FOR HATCHERY UNIT OF DUCKLINGS				
Particulars	Unit	Year 1		
		No. of Units	Unit Cost (INR)	Value (INR)
Capital Expenditure				
Hatchery unit with other machinery & accessories (2080 eggs)	Number	1	2,00,000	2,00,000
2 KVA inverter with solar support	Number	1	1,50,000	1,50,000
Platform & other establishment	Number	1	50,000	50,000
Construction of Building for Hatchery (20X10 Sqft)	Number	200	1,000	2,00,000
Total capital expenditure				6,00,000
Output (Revenue)				
Sale of ducklings	Number	17,472	35.0	6,11,520
Total Revenue				6,11,520
Expenditure				
1. HR Costs				
Hatchery Operator	Person months	12	7,000	84,000
Hatchery assistant	Person months	12	4,000	48,000
2. Recurring Costs				
Rent/ Maintenance	months	12	2,000	24,000
Electricity	months	12	1,000	12,000
Purchase of eggs	Number	24,960	12.0	2,99,520
Transportation	Number	17,472	1.5	26,208
Cartoon for packaging	Number	349	20.0	6,989
Total Expenditure Costs				5,00,717
Gross Profit				1,10,803
Depreciation (machinery/equipment/tools)				60,000
Net Profit				50,803

Source : JSLPS

ANNEXURE XIV: ESTIMATED ECONOMICS OF PARENT UNIT FOR DUCK (INDIAN RUNNER)				
Particulars	Unit description	Unit cost	No of units	Cost
Fixed cost				
Poultry Shed	Sq Ft	300	2,400	7,20,000
Drinker, Feeder, Nest and other accessories	Lumpsum	510	19	9,792
Total A				7,29,792
Recurring cost				
Cost of 16 week old ducklings	No.	350	960	3,36,000
Feed cost (for 16 to 19 week))	Kg	30	2,419	72,576
Feed cost (for 20 week to 72 week age)	Kg	25	42,739	10,68,480
Vaccination, Deworming & other Medicine	Lumpsum	50	960	48,000
Packaging & transportation	No.	1	1,48,400	74,200
Labour cost	Month	13	10,000	1,30,000
Total B				13,93,256
Other costs				
Depreciation on fixed cost	10% per annum			72,979

Interest on Capital cost	10% per annum			1,14,317
Total C				1,87,296
Receipts				
Sale of eggs	No.	12	1,48,400	17,80,800
Sale of culled birds	Kg	130	960	1,24,800
Gross Receipts				19,05,600
Gross profit per cycle (D-B)				5,12,344
Net profit after deduction of depreciation				3,25,048
Return on Investment				0

Source : JSLPS

Department of Animal Husbandry & Dairying, Government of India is implementing following schemes from FY 2021-22 aiming towards Entrepreneurship Development and Employment Generation, creating livelihood opportunities for unemployed youth and livestock farmers.

SN	Scheme Component	Activities Supported	How to apply	Eligible entities	Assistance
1	Establishment of Entrepreneurs for breed development of Rural Poultry	For establishment of Parent Farm, Rural Hatchery, brooder cum mother unit for Production of Hatching Eggs, and Chicks and rearing of the said chick up to four week in the mother unit (with minimum 1000 parent layers)	I. State Implementing agency shall invite entrepreneurs/ eligible entities through expression of interest. II. The Entrepreneurs/ Eligible Entities shall submit the application through the NLM Portal in response to Expression of Interest.	Individuals / Self Help Group (SHG)/ Framers Producer Organisations (FPO)/ Farmers Cooperatives (FCOs)/ Joint Liability Groups (JLGs) and Section 8 companies	50% capital subsidy up to the subsidy limit directly to the beneficiary account through SIDBI in two equal installments. Subsidy Limit for each unit: Poultry Project: Rs. 25 lakh, Sheep & Goat Project: Rs- 50 lakh, Pig project: Rs. 30 lakh Feed and fodder – Rs 50 Lakh
2	Establishment of Entrepreneur for breed development in small ruminant sector (sheep and goat farming)	For establishment of sheep and goat breeding unit with minimum 500 females and 25 males.	The subsidy amount will be channelised through the Small Industries Development Bank of India (SIDBI). The subsidy will be provided by SIDBI through the lending scheduled bank or Financial Institutions to the beneficiaries.	Eligibility Criteria : Entrepreneurs/ Eligible Entities	
3	Promotion of Piggery Entrepreneur	For establishment of a breeder farm with minimum 100 sow and 25 boars breeding animals from the Central or State Government/ university farms or local farmers with high genetic merit.	The beneficiaries interested in taking benefit under the entrepreneurship project in self-financing mode need to provide Bank	I. Either have obtained training or have trained experts or have sufficient experience in the relevant field in managing and running the project or have technical experts with sufficient experience in the relevant field of managing and running the project. II. Have got the loan sanctioned for project by the bank/financial	
4	Entrepreneurship activities in feed and fodder	For establishment of fodder value addition such as Hay/Silage/Total Mixed Ration(TMR)/ Fodder Block and storage of fodder, infrastructure development related to hay/silage at village level/ Fodder blocks			

		making units for procuring machinery like bailer, block making machines, TMR machines/equipment, Forage harvester /reaper, Heavy duty Power operated Chaff cutters and any other PHT equipment as per the requirement/need	Guarantee from the scheduled bank for the remaining cost of the project beyond the capital subsidy sought for support.	institutions OR furnished bank guarantee from scheduled bank along with appraisal of project for its validity by bank where it is holding the account.	
5	Entrepreneurship model for establishment of Breed Multiplication Farms	For construction of cattle sheds, equipment, procurement of elite bull mothers etc. the entrepreneur will establish breed multiplication farm (BMF) and produce elite heifers using sex sorted semen or IVF technology.	Entrepreneur will formulate bankable proposal as per guidelines and submit directly to NDDDB in response to Expression of Interest issued by the NDDDB. Project will be implemented through NDDDB as implementing agency of the project.	III. Should have own land or lease land where the project will be established. IV. Have all the relevant documents for KYC	Maximum subsidy will not exceed Rs 2.00 crores.

For detail guidelines visit Department's website www.dahd.nic.in.

भारत सरकार/Government of India
ग्रामीण विकास मंत्रालय/Ministry of Rural Development
ग्रामीण विकास विभाग/Department of Rural Development
ग्रामीण आजीविका विभाग/ Rural Livelihoods Division
(<https://rural.nic.in>)

सातवीं मंजिल, एन.डी.सी.सी-II भवन/7th Floor, N.D.C.C -II Building
जय सिंह मार्ग, नई दिल्ली-01/Jai Singh Road, New Delhi-01
दिनांक/ Dated: 31st July, 2023

To

The State Mission Director/Chief Executive Officer,
State Rural Livelihoods Mission(SRLM)
All States / UTs

Subject : Handbook of Animal Husbandry Practices and Cow Comfort Book.

Madam/Sir,

I am directed to share the guidelines on good Animal Husbandry & Cow rearing Practices inform of handbooks developed by NDDB for taking up sustainable and scientific Animal Husbandry & Cow rearing practices.

You are requested to share the same with the concerned including field level functioneries for better extension work at ground level.

Yours faithfully,

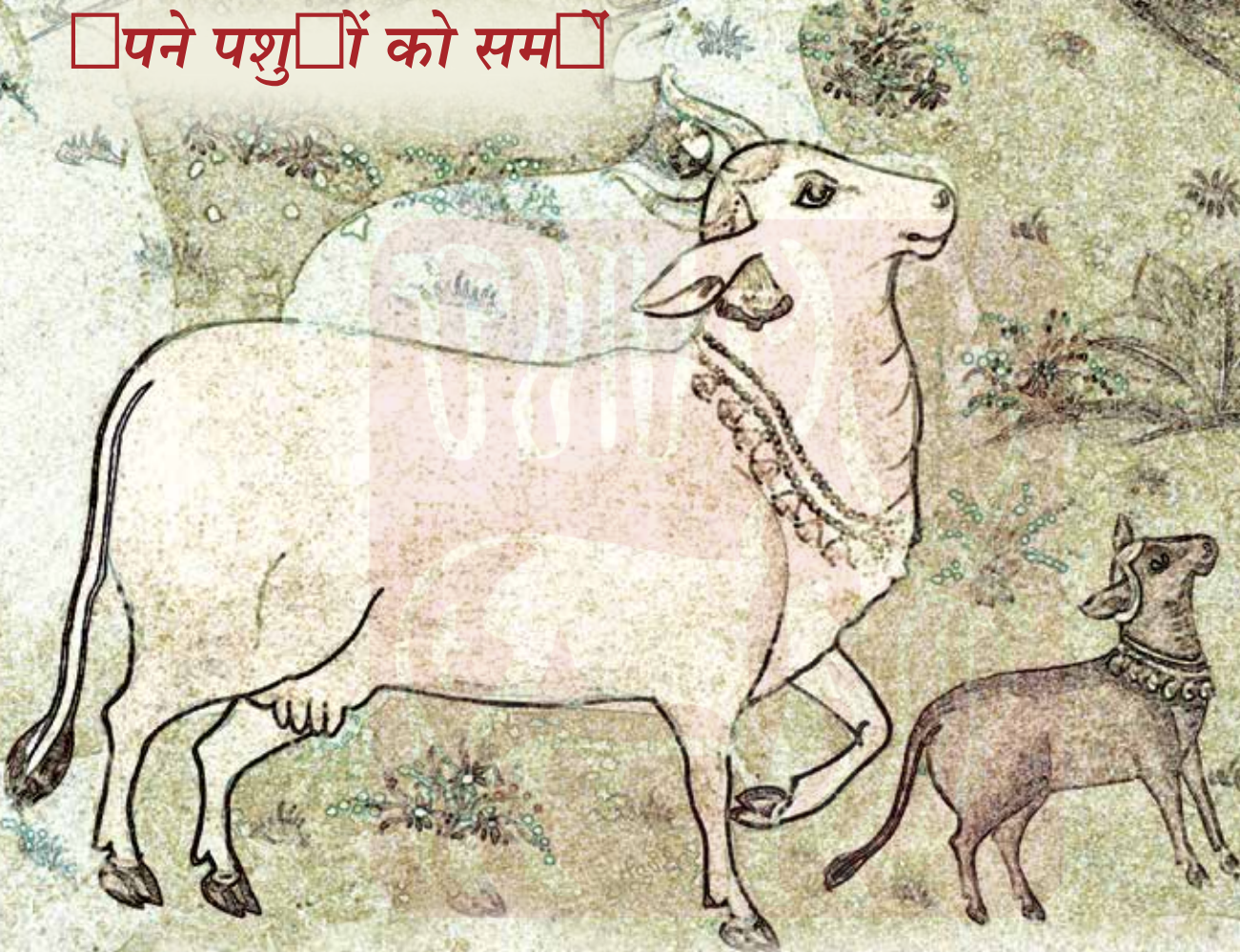

रमन वाधवा/ (Raman Wadhwa)

उप-निदेशक (प्रशासन)/Deputy Director (Admin)

Copy to:

1. PPS to Additional Secretary, RL, MoRD, NDCC-II Building Jai Singh Marg, New Delhi.

□पने पशु□ों को सम□



बेहतर देखभाल, ज्यादा दूध



राष्ट्रीय
डेरी
विकास
बोर्ड



आ गावो अग्न्युत भद्रमक्रन्त्सीदन्तु गोष्ठे रणयन्त्वस्मे ।
प्रजावतीः पुरूरुपा इह स्युरिन्द्राय पूर्वीरुषसो दुहानाः ॥

यूयं गावो मेदयथा कृशं चिदश्रीरं चित् कृणुथा सुप्रतीकम् ।
भद्रं गृहं कृणुथ भद्रवाचो बृहद वोवय उच्यते सभासु ॥

अथर्ववेद

हे गऊ! आप के दुग् एवं घृत से कृशकाय व्यक्ति ऋ-पुष्ट हो जाता है तथा
रुग्ण व्यक्ति, स्वस्थ हो जाता है। आप के रंभाने से घर का वातावरण पवित्र हो
जाता है तथा सभाओं में आपकी महिमा का वर्णन किया जाता है।

अथर्ववेद





परिचय

संयुक्त राष्ट्र संघ (UN) के उद्योगों के विकास
रणनीति को कि जिनके उद्योगों का प्रयुक्त संसाधन विकास की योजना
व्यवस्थापकों द्वारा जिनके उद्योगों के मूल्य निर्धारण और
निष्पादन में संयुक्त की लक्ष्य को प्राप्त करने में मदद
को जिनके उद्योगों के उद्योगों की योजना निर्माण में मदद
को जिनके उद्योगों की योजना निर्माण, प्रयुक्त, उद्योग, और उद्योगों
व्यवस्थापकों की योजना निर्माण में मदद करने में

जिनके उद्योगों को उद्योगों की योजना निर्माण में मदद
को जिनके उद्योगों की योजना निर्माण में मदद करने में
को जिनके उद्योगों की योजना निर्माण में मदद करने में
को जिनके उद्योगों की योजना निर्माण में मदद करने में
को जिनके उद्योगों की योजना निर्माण में मदद करने में
को जिनके उद्योगों की योजना निर्माण में मदद करने में
को जिनके उद्योगों की योजना निर्माण में मदद करने में

को जिनके उद्योगों की योजना निर्माण में मदद करने में
को जिनके उद्योगों की योजना निर्माण में मदद करने में

विवरण

कृषि कृषि	1
1. संरचना	2
2. परिचय	3
3. परिचय	8
4. कृषि के कृषि के कृषि	9
I. कृषि i: कृषि के कृषि (कृषि के 24 कृषि के कृषि)	9
II. कृषि ii: कृषि के कृषि (कृषि के 30 कृषि के कृषि 4 कृषि के कृषि)	10
III. कृषि iii: कृषि/कृषि का कृषि (कृषि के 3-8 कृषि के कृषि)	10
5. कृषि के कृषि	11
6. कृषि के कृषि के कृषि	13
7. कृषि के कृषि	15
8. कृषि के कृषि के कृषि	16
9. कृषि के कृषि के कृषि	17
10. कृषि के कृषि के कृषि	17
11. कृषि के कृषि के कृषि उतार कर	19
A. परिचय के कृषि	20
B. कृषि/कृषि-कृषि के कृषि के कृषि	20
C. कृषि/कृषि का कृषि	21
D. कृषि का कृषि	22
E. कृषि (कृषि) के कृषि का कृषि	23
F. कृषि का कृषि के कृषि	23
G. कृषि के कृषि	23
H. कृषि के कृषि	24

एक नजर में

कृषि क्षेत्रों को जोड़ा जाये और किसानों को अधिक लाभ मिले। किसानों को अधिक लाभ मिले।

कृषि क्षेत्रों को जोड़ा जाये और किसानों को अधिक लाभ मिले। किसानों को अधिक लाभ मिले।

कृषि क्षेत्रों को जोड़ा जाये और किसानों को अधिक लाभ मिले। किसानों को अधिक लाभ मिले।

कृषि क्षेत्रों का जोड़ा जाये और किसानों को अधिक लाभ मिले।

क्र.सं.	विवरण	प्रस्तावित
1.	सिंचनी	कृषि क्षेत्रों के किसानों को लाभ मिले।
2.	कृषि क्षेत्र	कृषि क्षेत्रों के किसानों को अधिक लाभ मिले।
3.	कृषि क्षेत्रों की	कृषि क्षेत्रों के किसानों को अधिक लाभ मिले।
4.	सिंचनी/प्रकल्प	कृषि क्षेत्रों के किसानों को अधिक लाभ मिले।
5.	सिंचनी	कृषि क्षेत्रों के किसानों को अधिक लाभ मिले।
6.	सिंचनी	कृषि क्षेत्रों के किसानों को अधिक लाभ मिले।
7.	प्रकल्प/प्रकल्प का	कृषि क्षेत्रों के किसानों को अधिक लाभ मिले।
8.	कृषि क्षेत्रों	कृषि क्षेत्रों के किसानों को अधिक लाभ मिले।
9.	सिंचनी	कृषि क्षेत्रों के किसानों को अधिक लाभ मिले।
10.	सिंचनी	कृषि क्षेत्रों के किसानों को अधिक लाभ मिले।
11.	सिंचनी	कृषि क्षेत्रों के किसानों को अधिक लाभ मिले।
12.	कृषि क्षेत्र	कृषि क्षेत्रों के किसानों को अधिक लाभ मिले।
13.	कृषि क्षेत्रों के	कृषि क्षेत्रों के किसानों को अधिक लाभ मिले।



2. शारीरिक क्रिया संकेत

शारीरिक संकेतों से जानकर जानवरों की शारीरिक प्रक्रियाओं को प्रभावित करके उनके स्वास्थ्य का संरक्षण है। शारीरिक क्रियाओं को नियंत्रित करके उनका स्वास्थ्य बनाया जा सकता है।

तापमान, श्वसन और जुगाली हमेशा सामान्य दर पर होने चाहिए।

शारीरिक संकेतों का निम्नलिखित प्रकार है।

शारीरिक संकेत	शारीरिक प्रक्रिया	संकेत
<ul style="list-style-type: none"> जानवरों का तापमान 38 °C से 39 °C के बीच रहना चाहिए (101.5±1 °F के बीच)। जानवरों, जानवरों के श्वसन दर 12-20 प्रति मिनट के बीच होनी चाहिए। 	<ul style="list-style-type: none"> उष्णता (ज्वर) ज्वर, कैंसर और कृमि-कृमि संक्रमण कृमि, ज्वर और श्वसन दर में, ज्वर और श्वसन दर में कृमि (ज्वर) 	<ul style="list-style-type: none"> ज्वर, ज्वर, ज्वर-उत्प्रेषण कैल्शियम की कमी (दूध ज्वर) ज्वर संक्रमण/ज्वर में उत्प्रेषण ज्वर के कारण श्वसन दर में
<ul style="list-style-type: none"> जानवरों की श्वसन दर 10-30 प्रति मिनट (ज्वर और ज्वर के) श्वसन दर 30-50 प्रति मिनट होनी चाहिए। ज्वर का श्वसन दर के बीच में उष्णता के कारण श्वसन दर के बीच में ज्वर के बीच में 	<ul style="list-style-type: none"> ज्वर में ज्वर ज्वर में ज्वर ज्वर में ज्वर 	<ul style="list-style-type: none"> ज्वर ज्वर में ज्वर ज्वर को ज्वर उत्प्रेषण है दूध ज्वर, ज्वर के बीच में ज्वर का ज्वर के बीच में ज्वर



उष्णता: ज्वर और ज्वर के कारण श्वसन दर में ज्वर होना चाहिए।

1. ज्वर करके श्वसन दर में कि श्वसन दर में
2. ज्वर के कारण श्वसन दर की श्वसन दर के बीच में ज्वर के कारण श्वसन दर को ज्वर में
3. ज्वर के कारण श्वसन दर में ज्वर में
4. ज्वर के कारण श्वसन दर में श्वसन दर में



उष्णता: ज्वर और ज्वर के कारण श्वसन दर में ज्वर होना चाहिए।

1. ज्वर करके श्वसन दर में
2. ज्वर के कारण श्वसन दर में ज्वर में
3. ज्वर के कारण श्वसन दर में ज्वर में

	प्रकार	समय	उपकरण
	<ul style="list-style-type: none"> प्रकार 7-10 प्रकार 5-25 प्रकार प्रकार 10-60 प्रकार का प्रकार 45-60 प्रकार 40-70 प्रकार प्रकार 1-3 प्रकार 	<ul style="list-style-type: none"> प्रकार प्रकार की 	<ul style="list-style-type: none"> प्रकार प्रकार प्रकार प्रकार प्रकार
प्रकार	<ul style="list-style-type: none"> प्रकार 5 प्रकार प्रकार 10-15 प्रकार प्रकार के प्रकार का प्रकार की प्रकार के प्रकार (प्रकार) 	<ul style="list-style-type: none"> प्रकार प्रकार के प्रकार प्रकार (प्रकार/प्रकार/प्रकार) 	<ul style="list-style-type: none"> प्रकार प्रकार का प्रकार
प्रकार	<ul style="list-style-type: none"> प्रकार के प्रकार का प्रकार के प्रकार को 3-5 प्रकार की प्रकार प्रकार के प्रकार की प्रकार 	<ul style="list-style-type: none"> प्रकार प्रकार प्रकार प्रकार (प्रकार) 	<ul style="list-style-type: none"> प्रकार को प्रकार 24 प्रकार का प्रकार, प्रकार, प्रकार प्रकार की प्रकार को प्रकार का



उपयोग

1. प्रकार के प्रकार
2. प्रकार को प्रकार करी प्रकार के प्रकार
3. प्रकार के प्रकार

क्या आप जानते हैं?

प्रकार 100-150 प्रकार रंग का प्रकार

कृषि	कृषि उत्पादन	उत्पादन	उत्पादन
<ul style="list-style-type: none"> कृषि क्षेत्र में 10 से अधिक क्षेत्रों में कृषि क्षेत्रों के क्षेत्रों में 350-400 किमी का कृषि क्षेत्रों में 8.5-10 से अधिक क्षेत्रों में 	<ul style="list-style-type: none"> कृषि क्षेत्रों में कृषि क्षेत्रों में कृषि क्षेत्रों में 	<ul style="list-style-type: none"> उत्पादन उत्पादन उत्पादन उत्पादन उत्पादन 	
<ul style="list-style-type: none"> उत्पादन के 1-2 क्षेत्रों में उत्पादन का प्रत्येक क्षेत्रों में 75% से अधिक क्षेत्रों में 90% उत्पादन करें 	<ul style="list-style-type: none"> उत्पादन के क्षेत्रों में 	<ul style="list-style-type: none"> उत्पादन के क्षेत्रों में (उत्पादन के प्रति क्षेत्रों में उत्पादन करें) उत्पादन के क्षेत्रों में उत्पादन के क्षेत्रों में उत्पादन के क्षेत्रों में उत्पादन के क्षेत्रों में 	
	<ul style="list-style-type: none"> उत्पादन के क्षेत्रों में 	<ul style="list-style-type: none"> उत्पादन के क्षेत्रों में उत्पादन के क्षेत्रों में उत्पादन के क्षेत्रों में 	
	<ul style="list-style-type: none"> उत्पादन के क्षेत्रों में 	<ul style="list-style-type: none"> उत्पादन के क्षेत्रों में उत्पादन के क्षेत्रों में उत्पादन के क्षेत्रों में उत्पादन के क्षेत्रों में 	
	<ul style="list-style-type: none"> उत्पादन के क्षेत्रों में (SNF)% में 	<ul style="list-style-type: none"> उत्पादन के क्षेत्रों में उत्पादन के क्षेत्रों में उत्पादन के क्षेत्रों में उत्पादन के क्षेत्रों में 	

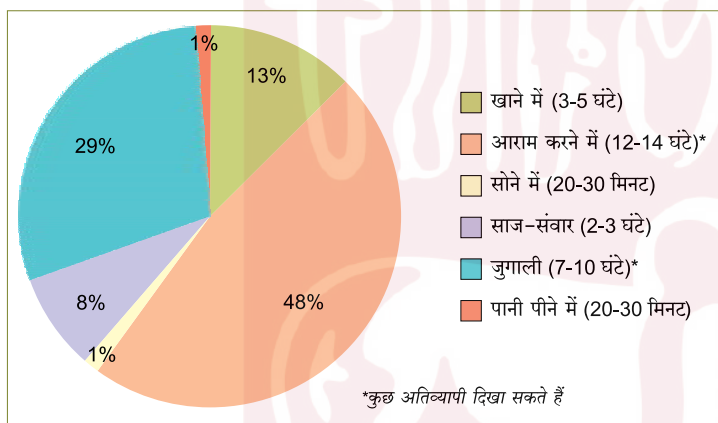
क्या आप जानते हैं?
 कृषि क्षेत्रों में उत्पादन के क्षेत्रों में 500 से अधिक क्षेत्रों का प्रत्येक क्षेत्रों में

3. गतिविधि चक्र

पशुओं के व्यवहार चक्र के बारे में जानकारी पशु के चरण के सत्र के बारे में पता चलता है। चक्र पशु की चरणों में, पशु व्यवहार चक्रों को देख करके पशुओं को व्यवहार में कोशिश करने के लिए प्रोत्साहित करता है। उदाहरण के लिए, पशुओं को उका विना करके पशु

पशुओं को उनकी सामान्य गतिविधियां प्रकट करने देना चाहिए।

पशुओं का एक दिन का व्यवहार चक्र निम्न प्रकार है-



क्या आप जानते हैं?

पशु पशु पशु पशु उके पशु पशु प्रकट 30% के पशु पशु पशु उके पशु पशु की प्रतिक्रिया पशु पशु पशु को उके पशु पशु प्रकट करके पशु

पशु व्यवहार	व्यवहार
<ul style="list-style-type: none"> पशु उके 	<ul style="list-style-type: none"> पशु पशु पशु पशु पशु की क पशु पशु का पशु प्रकट पशु पशु पशु पशु पशु पशु पशु पशु के पशु पशु
<ul style="list-style-type: none"> पशु पशु प्रकार पशु पशु 	<ul style="list-style-type: none"> पशु पशु पशु पशु पशु पशु पशु पशु पशु प्रकट पशु पशु की क पशु पशु प्रकट के पशु (पशु को पशु पशु पशु कर पशु)



4. ब्याने के संकेत

ब्याने के संकेतों को पहचानना पशुचिकित्सक को पशुओं की समस्याओं को पहचानने में मदद करता है। ब्याने के संकेतों को पूरे ब्याने के 3 संकेतों में बांटा जा सकता है (i) ब्याने के संकेत (ब्याने के 24 संकेतों) (ii) ब्याने (iii) ब्याने/ब्याने का संकेत।

(i) प्रारंभिक: ब्याने के संकेत (ब्याने के 24 संकेतों):

योनि द्वारा से स्वच्छ श्लेष्मा का रिसाव और थनों का दूध से भर जाना ही ब्याने की शुरुआत के आसन्न लक्षण हैं।

ब्याने के संकेत प्रकार हैं-

- ब्याने के संकेतों को पहचानना पशुचिकित्सक को पशुओं की समस्याओं को पहचानने में मदद करता है।
- ब्याने के संकेतों को पूरे ब्याने के 3 संकेतों में बांटा जा सकता है।
- ब्याने के संकेतों को पहचानना पशुचिकित्सक को पशुओं की समस्याओं को पहचानने में मदद करता है।
- ब्याने के संकेतों को पहचानना पशुचिकित्सक को पशुओं की समस्याओं को पहचानने में मदद करता है।
- ब्याने के संकेतों को पहचानना पशुचिकित्सक को पशुओं की समस्याओं को पहचानने में मदद करता है।
- ब्याने के संकेतों को पहचानना पशुचिकित्सक को पशुओं की समस्याओं को पहचानने में मदद करता है।
- ब्याने के संकेतों को पहचानना पशुचिकित्सक को पशुओं की समस्याओं को पहचानने में मदद करता है।



उठी हुई पूँ, योनि से श्लेष्मा साव, थनों में दूँ का भराव आदि ब्याने की शुरुआत के संकेत हैं।



ब्याने की शुरुआत पर फूला हुआ एवं बड़ा हुआ योनि।

अधिक जानकारी के लिए पशुचिकित्सक से संपर्क करें।

- ब्याने के संकेतों को पहचानना पशुचिकित्सक को पशुओं की समस्याओं को पहचानने में मदद करता है।
- ब्याने के संकेतों को पहचानना पशुचिकित्सक को पशुओं की समस्याओं को पहचानने में मदद करता है।

क्या आप जानते हैं?

ब्याने का पहचानना पशुचिकित्सक 280-290 संकेतों में ब्याने का 305-318 संकेतों में

(ii) **विशेषकर:** प्रसव (प्रसव 30 मिनटों के बाद 4 घंटों के)

सामान्य रूप से ब्याते समय बछड़े के आगे के पैर और सिर सबसे पहले दिखाई देते हैं।

- प्रसव की प्रारंभिकता का सिर दिखाई देता है।
- प्रसव की स्थिति/प्रकार का सिर के 30 मिनटों के बाद अनुमान को ध्यान में रखें।
- प्रसव के प्रारंभिक चरणों में 4 घंटे के अंदर ही।
- अनुमानों को ध्यान में रखें।



प्रसव की शुरुआत पानी के थैले के दिखाई देने से शुरू होती है।



सामान्य प्रसव में बछड़े के आगे दोनों पैर एवं सिर सबसे पहले दिखाई देते हैं।

ध्यान दें

प्रसव को प्रारंभिक चरणों में ही जल्द से जल्द सिर और पैर का सिर दिखाई देना सुनिश्चित करना चाहिए।

(iii) **विशेषकर:** गर्भनाल/जेर का स्थिति (प्रसव 3-8 घंटों के)

- गर्भनाल/जेर के प्रसव के 3-8 घंटों के अंदर ही।
- प्रसव के 12 घंटों के अंदर ही गर्भनाल का रूकाव (रूकाव) का कारण (ROP) का कारण।



यदि प्रसव के 12 घंटे बाद तक पशु गर्भनाल/जेर नहीं गिराता है, तो इसे गर्भनाल का रूकाव (रूकाव) कहते हैं।

ध्यान दें

किसी भी भी प्रसव को रोकना/प्रकार में ही, प्रसव रूकाव के कारण सिर और पैर की प्रसव को रोकना है।



5. स्वस्थ नवजात के संकेत

किसी नवजात को स्वस्थ नवजात के संकेतों के बारे में जानने के लिए नवजात को धीरे-धीरे खड़ा करके देखें कि नवजात को खड़ा करने में कितना समय लगेगा।

स्वस्थ बछड़ा पैदा होने के बाद कुछ ही मिनटों में अपने पैरों पर खड़ा हो जाता है और 1-2 घंटे में दूध पीना शुरू कर देता है।



- स्वस्थ नवजात को खड़ा करने में 1-2 मिनटों का समय चाहिए।
- नवजात को खड़ा करने के बाद 1-2 घंटे में दूध पीना शुरू करना चाहिए।
- नवजात को खड़ा करने के बाद 1-2 घंटे में दूध पीना शुरू करना चाहिए, नवजात को खड़ा करने के बाद 1-2 घंटे में दूध पीना शुरू करना चाहिए।

स्वस्थ नवजात के संकेत	अस्वस्थ नवजात के संकेत
नवजात को खड़ा करने में 1-2 मिनटों का समय चाहिए।	नवजात को खड़ा करने में 3-4 मिनटों का समय चाहिए।
नवजात को खड़ा करने के बाद 1-2 घंटे में दूध पीना शुरू करना चाहिए।	नवजात को खड़ा करने के बाद 2-3 घंटे में दूध पीना शुरू करना चाहिए।
नवजात को खड़ा करने के बाद 1-2 घंटे में दूध पीना शुरू करना चाहिए।	नवजात को खड़ा करने के बाद 2-3 घंटे में दूध पीना शुरू करना चाहिए।

परिचय	कारण
नवजात बछड़े के स्वास्थ्य	<ul style="list-style-type: none"> जन्म माता का स्वास्थ्य पर्यावरण क्यासी विषाणु/बैक्टीरिया की कमी
माता के स्वास्थ्य का स्तर	विषाणु (विषाणु के कारण)
माता के स्वास्थ्य का स्तर	<ul style="list-style-type: none"> ऑफिशियल माता को माता के माता ऑफिशियल
माता के स्वास्थ्य का स्तर	<ul style="list-style-type: none"> माता के स्वास्थ्य का स्तर माता के स्वास्थ्य का स्तर माता के स्वास्थ्य का स्तर
माता के स्वास्थ्य का स्तर	<ul style="list-style-type: none"> माता के स्वास्थ्य का स्तर माता के स्वास्थ्य का स्तर
माता के स्वास्थ्य का स्तर	<ul style="list-style-type: none"> माता के स्वास्थ्य का स्तर माता के स्वास्थ्य का स्तर

क्या आप जानते हैं? नवजात बछड़े के स्वस्थ जीवन के 3 प्रमुख स्तम्भ

1. माता के स्वास्थ्य को उचित की जाये
2. माता के स्वास्थ्य का स्तर
3. उचित कृषि के माता का स्तर

क्या आप जानते हैं? ग्रासनाल खाँच

नवजात बछड़े को माता के स्वास्थ्य को उचित की जाये। माता के स्वास्थ्य का स्तर उचित होना चाहिए। माता के स्वास्थ्य का स्तर उचित होना चाहिए। माता के स्वास्थ्य का स्तर उचित होना चाहिए।



6. पैर एवं संचलन संकेत

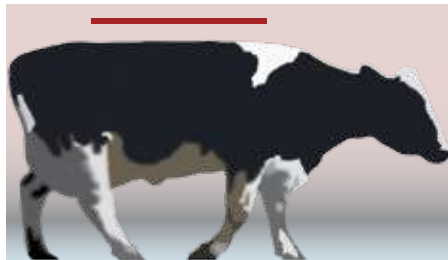
पशुओं की पैरों, पैरों की उपायों पर ध्यान देने के लिए निर्धारित करें।

पशु का संचलन गुणांक एवं पैरों का गुणांक 1 होना चाहिए।

पैरों की स्थिति	पैरों की समस्याएँ	संकेत/लक्षण
<ul style="list-style-type: none"> पशु कि उभरता है (गुणांक 1): पशु पैरों को ठीक से रखता है, पैरों से उभरता है और पैरों को ठीक से रखता है। पशु के पैरों की स्थिति (पैरों का गुणांक 1): पशु पैरों को ठीक से रखता है और पैरों को ठीक से रखता है। 	<ul style="list-style-type: none"> किसी भी प्रकार का विकृति (पैरों को ठीक से रखना) पैरों के बीच की स्थिति पैरों, पैरों से निकलना पैरों को ठीक से रखना 	<ul style="list-style-type: none"> पशु के पैरों को ठीक से रखना पैरों को ठीक से रखना पैरों को ठीक से रखना पैरों को ठीक से रखना पैरों को ठीक से रखना



सामान्य पशु पैरों को ठीक से रखता है या चलते समय अपनी पीठ सीधा रखता है।



स्वस्थ पैर रखने की हड्डियों के समानांतर होता है जबकि प्रभावित पैर को पशु बाहर की ओर मोड़कर रखता है। (तीर का निशान)



घुटने एवं पिंजले पैर के जोड़ों पर चोट फर्श के स्राव होने से लगती है।

सूजे हुए पैर के क्लॉक्ला (बिजन पुरी) समानी पैर से ज्यादा दूर-दूर होती है।



मध्यम प्रकार के संक्रमण में सूजन सममित प्रकार की होती है।



गहरे संक्रमण में सूजन असममित होती है।



7. आहार संकेत

गर्भकाल में आहार प्रदान करने पर, किसी भी पशु को उचित गुणवत्ता वाले आहार प्रदान करने से अधिक 70% तक आहार देना नहीं चाहिए।

शरीर की अवस्था, विषा संगठन एवं विषा पाच्यता गुणांक, ब्यांत की स्थिति के अनुसार उपयुक्त होना चाहिए।

शरीर की अवस्था	विषा संगठन	विषा पाच्यता
<ul style="list-style-type: none"> गर्भकाल में आहार प्रदान करने के समय के आहार में उचित गुणवत्ता वाले आहार प्रदान करने चाहिए। 	<ul style="list-style-type: none"> गर्भकाल में आहार के समय उचित प्रदान करने चाहिए। 	<ul style="list-style-type: none"> गर्भकाल में आहार गर्भकाल में आहार
<ul style="list-style-type: none"> गर्भकाल में आहार प्रदान करने के समय 3 से अधिक आहार प्रदान करने चाहिए (गर्भकाल में आहार प्रदान करने के समय 3 से अधिक आहार प्रदान करने चाहिए) गर्भकाल में आहार प्रदान करने के समय 0.5 से अधिक आहार प्रदान करने चाहिए 	<ul style="list-style-type: none"> गर्भकाल में आहार प्रदान करने चाहिए 3 से अधिक आहार प्रदान करने चाहिए 	<ul style="list-style-type: none"> गर्भकाल में आहार गर्भकाल में आहार गर्भकाल में आहार
<ul style="list-style-type: none"> गर्भकाल में आहार प्रदान करने के समय 3 से अधिक आहार प्रदान करने चाहिए (गर्भकाल में आहार प्रदान करने चाहिए) 	<ul style="list-style-type: none"> 3 से अधिक आहार प्रदान करने चाहिए गर्भकाल में आहार प्रदान करने चाहिए 	<ul style="list-style-type: none"> गर्भकाल में आहार गर्भकाल में आहार गर्भकाल में आहार गर्भकाल में आहार गर्भकाल में आहार
<ul style="list-style-type: none"> गर्भकाल में आहार के समय 2-3 के आहार प्रदान करने चाहिए (गर्भकाल में आहार प्रदान करने चाहिए) 	<ul style="list-style-type: none"> गर्भकाल में आहार प्रदान करने चाहिए 	<ul style="list-style-type: none"> गर्भकाल में आहार



ब्याने के बाद प्रथम प्रमाशय तुष्टि/भराव गुणांक 2 रहता है। यदि इसके बाद भी यह गुणांक 2 रहे तो यह पशु को पर्याप्त आहार नहीं मिलने का संकेत है। (दाएं)



शरीर अवस्था गुणांक किसी भी पशु समूह के आहार प्रबंधन एवं स्वास्थ्य स्तर की जानकारी देता है।

क्या आप जानते हैं? शरीर अवस्था गुणांक 3 से ज़्यादा नहीं होना चाहिए

3 से अधिक आहार प्रदान करने (3 से अधिक) गर्भकाल में आहार प्रदान करने से अधिक 70% तक आहार देना नहीं चाहिए।

8. आरोग्यता एवं स्तन स्वास्थ्य संकेत

आरोग्यता का स्तन स्वास्थ्य को प्रभावित करने वाला प्रमुख निदान-सूचक है और यह दूध गुण के अंकों के बारे में महत्वपूर्ण जानकारी देता है।

आरोग्यता	स्तन स्वास्थ्य	दूध गुण
<ul style="list-style-type: none"> आरोग्यता गुणक 1 का अर्थ है कि आरोग्यता के अंकों 1 से 3 के बीच हैं, जो कि आरोग्यता के अंकों 1 से 3 के बीच हैं, जो कि आरोग्यता के अंकों 1 से 3 के बीच हैं। 	<ul style="list-style-type: none"> स्तन के अंकों 1 से 3 के बीच हैं, जो कि आरोग्यता के अंकों 1 से 3 के बीच हैं, जो कि आरोग्यता के अंकों 1 से 3 के बीच हैं। 	<ul style="list-style-type: none"> दूध गुण की कमी दूध गुण की मात्रा में कमी दूध गुण की मात्रा में कमी
<ul style="list-style-type: none"> स्तन स्वास्थ्य गुणक 1 का अर्थ है स्तन स्वास्थ्य के अंकों 1 से 3 के बीच हैं, जो कि आरोग्यता के अंकों 1 से 3 के बीच हैं, जो कि आरोग्यता के अंकों 1 से 3 के बीच हैं। 	<ul style="list-style-type: none"> स्तन के अंकों के अभाव स्तन की त्वचा में दर्रें 	<ul style="list-style-type: none"> दूध गुण का अंका दूध गुण की मात्रा का अभाव



आरोग्यता गुणक 1



स्तन गुणक 1: मुलायम स्तन



9. गर्मी से तनाव के संकेत

पशु के हाँफने के गुणांक 0 से 4 तक के स्तर का पशु तनाव का संकेत है।

पशु के हाँफने का गुणांक कभी भी 2 से अधिक नहीं होना चाहिए।

गुणांक	संकेत	कारण
0	40 से कम	सामान्य
1	40-70	कम तापमान, पशु को ठंडा करने के उपकरणों का उपयोग करना।
2	70-120	पशु को ठंडा करने, पशु को ठंडा करने के उपकरणों का उपयोग करना।
2.5	70-120	गुणांक 2 के उपकरणों का उपयोग करने के लिए पशु को ठंडा करने के लिए।
3	120-160	गुणांक 3 से अधिक है और पशु को ठंडा करने के उपकरणों का उपयोग करना।
3.5	120-160	गुणांक 3 की उपकरणों का उपयोग करने के लिए पशु को ठंडा करने के लिए।
4	>160	गुणांक 4 से अधिक है और पशु को ठंडा करने के लिए पशु को ठंडा करने के लिए।



एक पशु जिसके हाँफने का गुणांक 3 है, उसका मुँह खुला हुआ है और मुँह से लार गिर रही है।

10. आवास संबंधी संकेत

पशु को ठंडा करने के उपकरणों के उपयोग से पशु तनाव को रोकना चाहिए।

संकेत	कारण	उपाय
पशु तनाव	<ul style="list-style-type: none"> पशु तनाव को ठंडा करने के उपकरणों का उपयोग करना। 	<ul style="list-style-type: none"> पशु तनाव को ठंडा करने के उपकरणों का उपयोग करना। पशु तनाव को ठंडा करने के उपकरणों का उपयोग करना।
पशु तनाव	<ul style="list-style-type: none"> पशु तनाव को ठंडा करने के उपकरणों का उपयोग करना। 	<ul style="list-style-type: none"> पशु तनाव को ठंडा करने के उपकरणों का उपयोग करना। पशु तनाव को ठंडा करने के उपकरणों का उपयोग करना।
पशु तनाव	<ul style="list-style-type: none"> पशु तनाव को ठंडा करने के उपकरणों का उपयोग करना। पशु तनाव को ठंडा करने के उपकरणों का उपयोग करना। पशु तनाव को ठंडा करने के उपकरणों का उपयोग करना। 	<ul style="list-style-type: none"> पशु तनाव को ठंडा करने के उपकरणों का उपयोग करना। पशु तनाव को ठंडा करने के उपकरणों का उपयोग करना।




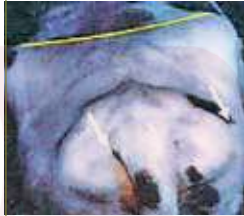



11. तनाव या दर्द के समय पशु द्वारा उत्पन्न स्वर

पशु स्वर के अलावा पशु चिल्लाता, घुंघुंसाता, आँसु बहाता और अक्सर पशु को घुंघुंसाता है। पशु की आँसु बहाव से पशु को दर्द या चोट का संकेत मिलता है और पशु को दर्द के समय उत्पन्न आँसु पशु को दर्द का संकेत देता है। पशु को दर्द का संकेत देना पशु के व्यवहार में परिवर्तन को दर्शाता है। पशु के दर्द का संकेत देना पशु के व्यवहार में परिवर्तन को दर्शाता है।

उत्पन्न स्वर	पशु द्वारा उत्पन्न स्वर	कारण
• गहरे गहरे (घुंघुंसाव)	• घुंघुंसाव, घुंघुंसाव, घुंघुंसाव की आँसु बहाव	• पशु को घुंघुंसाव, घुंघुंसाव के घुंघुंसाव (घुंघुंसाव घुंघुंसाव), घुंघुंसाव के घुंघुंसाव के घुंघुंसाव को घुंघुंसाव
• आँसु बहाव की आँसु	• आँसु बहाव के घुंघुंसाव (घुंघुंसाव घुंघुंसाव घुंघुंसाव के घुंघुंसाव), घुंघुंसाव घुंघुंसाव की आँसु	• घुंघुंसाव की आँसु
• घुंघुंसाव	• पशु स्वर संकेत देता है कि पशु को घुंघुंसाव घुंघुंसाव की आँसु	• पशु के घुंघुंसाव घुंघुंसाव (घुंघुंसाव घुंघुंसाव) के घुंघुंसाव
• घुंघुंसाव	• पशु स्वर संकेत देता है कि पशु को घुंघुंसाव घुंघुंसाव की आँसु	• घुंघुंसाव के घुंघुंसाव
• घुंघुंसाव	• घुंघुंसाव (घुंघुंसाव घुंघुंसाव घुंघुंसाव) के घुंघुंसाव की प्रतिक्रिया	• घुंघुंसाव के घुंघुंसाव
• घुंघुंसाव करण की आँसु, घुंघुंसाव घुंघुंसाव	• घुंघुंसाव घुंघुंसाव के घुंघुंसाव, घुंघुंसाव घुंघुंसाव घुंघुंसाव	• घुंघुंसाव घुंघुंसाव के घुंघुंसाव घुंघुंसाव घुंघुंसाव की घुंघुंसाव का घुंघुंसाव
• घुंघुंसाव घुंघुंसाव/घुंघुंसाव करण की आँसु	• घुंघुंसाव घुंघुंसाव	• घुंघुंसाव घुंघुंसाव के घुंघुंसाव घुंघुंसाव का घुंघुंसाव
• घुंघुंसाव	• घुंघुंसाव घुंघुंसाव घुंघुंसाव की आँसु	• घुंघुंसाव घुंघुंसाव के घुंघुंसाव घुंघुंसाव
	• घुंघुंसाव घुंघुंसाव	• घुंघुंसाव घुंघुंसाव के घुंघुंसाव घुंघुंसाव

□. शरीर □□□□ □□□□ (BCS)

□□□□ - 1	□□□□ - 2	□□□□ - 3	□□□□ - 4	□□□□ - 5
				
पू□ के सिरे पर-गहरा ग□□, त्वचा के नीचे कोई वसा नहीं, साथ ही □□स्थियों के सिरे उभरे हुए।	पू□ के सिरे पर-गहरा हलका ग□□ लेकिन कूल्हे की ह□ उभरी हुई □□र उसके सिरे गोलाकार।	पू□ के सिरे पर- बहुत हलका ग□□ □□र कूल्हे की ह□ के सिरे एकदम गोलाकार।	पू□ के सिरे पर - वसा का □□वरण मौजूद, □□स्थियों के सिरे पर वसा का जमाव।	पू□ के सिरे पर - त्वचा के नीचे वसा का मोटा □□वरण, □□स्थियों के सिरे गोलाकार।

पशु की ब्यांत के शुरू के कुछ सप्ताहों में शरीर अवस्था गुणांक 2 हो सकता है लेकिन दूध देना बंद करते समय शरीर अवस्था गुणांक 3 होना चाहिए। जिन पशुओं का शरीर अवस्था गुणांक 3.5 से ज्यादा होता है उनमें चयापचय या प्रजनन से संबंधित परेशानियाँ होती हैं।

□. प्र□□□□□□□□□□/□□□□□□□□:

□□□□ - 1	□□□□ - 2	□□□□ - 3	□□□□ - 4	□□□□ - 5
				
त्वचा की लम्बवत तह कूल्हे की ह□ से नीचे रहती है	प्रथम □□माशय □□ तिकोने □□कार का दि□ई देता है	पसलियों की कमान के पी□ प्रथम □□माशय □□ दि□ई देता है।	प्रथम □□माशय □□ दि□ई नहीं देता है।	पेटी की त्वचा एकदम □□ची हुई रहती है।


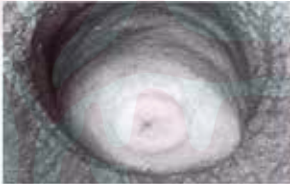






ब्यांत के प्रथम सप्ताह में पशु का गुणांक 2 हो सकता है। ब्यांत के दौरान अच्छे पोषित पशु का गुणांक 3 रहना उचित होता है। ब्यांत के अंत में पशु का गुणांक 4 व शुष्क पशु में गुणांक 5 होना चाहिए।



□. □□□□□ □□□□

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<p>गोबर क्रीम जैसा संगठन लिए होता है, यह समांग और बहुत ही स्थिर होता है। गोबर में कोई पाच्य आहार कण नहीं होते हैं।</p>	<p>गोबर क्रीम जैसा और समांग होता है। गोबर में कुछ पाच्य आहार कण होते हैं।</p>	<p>गोबर समांगी नहीं होता और बिना पचे हुए टुकड़े इसमें दे जा सकते हैं। गोबर को हाथ से दबाने पर बिना पचे हुए रेशों गुलियों पर चिपक जाते हैं।</p>	<p>बिना-बिना आहार कण गोबर में दिखाई देते हैं। हाथ से दबाने पर बिना पचे हुए रेशों की गेंद हाथ में रह जाती है।</p>	<p>बिना-बिना आहार कण गोबर में महसूस होते हैं और आसानी से दिखाई देते हैं।</p>
<p>दूर रू और शुष्क पशुओं के लिए आदर्श।</p>	<p>दूर रू एवं शुष्क पशुओं के लिए स्वीकार्य।</p>	<p>शुष्क पशुओं एवं बिना-बिनाओं के लिए स्वीकार्य।</p>	<p>आहार संतुलन की आवश्यकता होती है।</p>	<p>आहार संतुलन की आवश्यकता होती है।</p>

□. □□□□ □□□□

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<p>स्तन का निचला भाग मुलायम, कोई रॉट (कैलस) और घाव नहीं होता।</p>	<p>उभरा हुआ रॉट (कैलस) जो कि थोड़ा उभरा हुआ होता है।</p>	<p>रॉट (कैलस) उरदरा होता है जिसमें केरेटिन बनना शुरू हो चुका है।</p>	<p>बहुत उरदरा कैलस जिसमें केरेटिन बना हुआ है एवं दरारें पक चुकी है।</p>

□. □रोग□□ □□□□

पार्श्व भाग (पू□ सहित)	पि□ला कमजोर पग	थन
		
		
		

□□□□-1: □□

कोई कीच□ नहीं होता, केवल ताजा या सू□ हुआ गोबर लगा होता है।

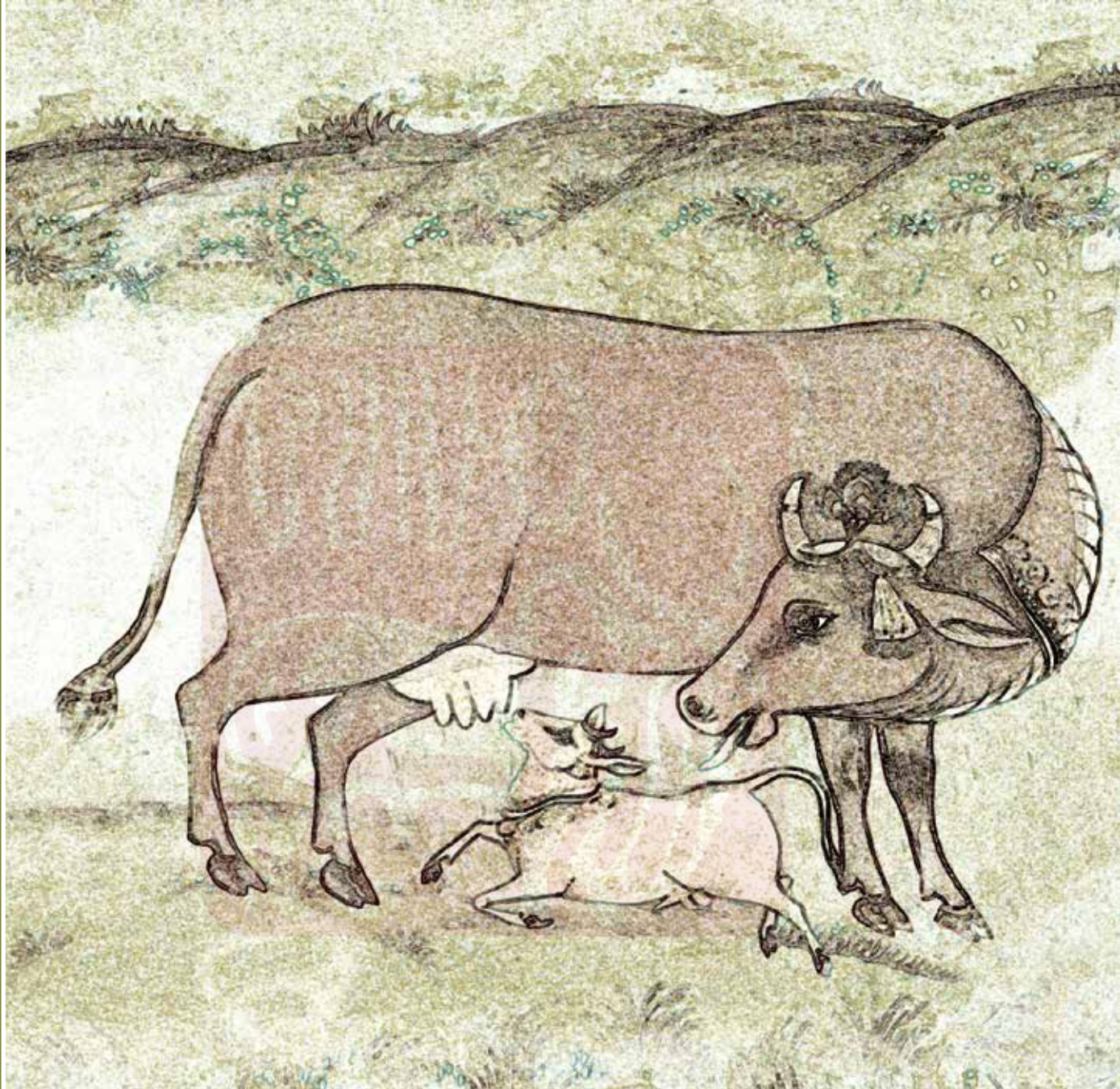
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हथेली के □कार या उससे ब□ □कार के कीच□ के निशान।

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पैरों का निचला हिस्सा बहुत गंदा होता है।





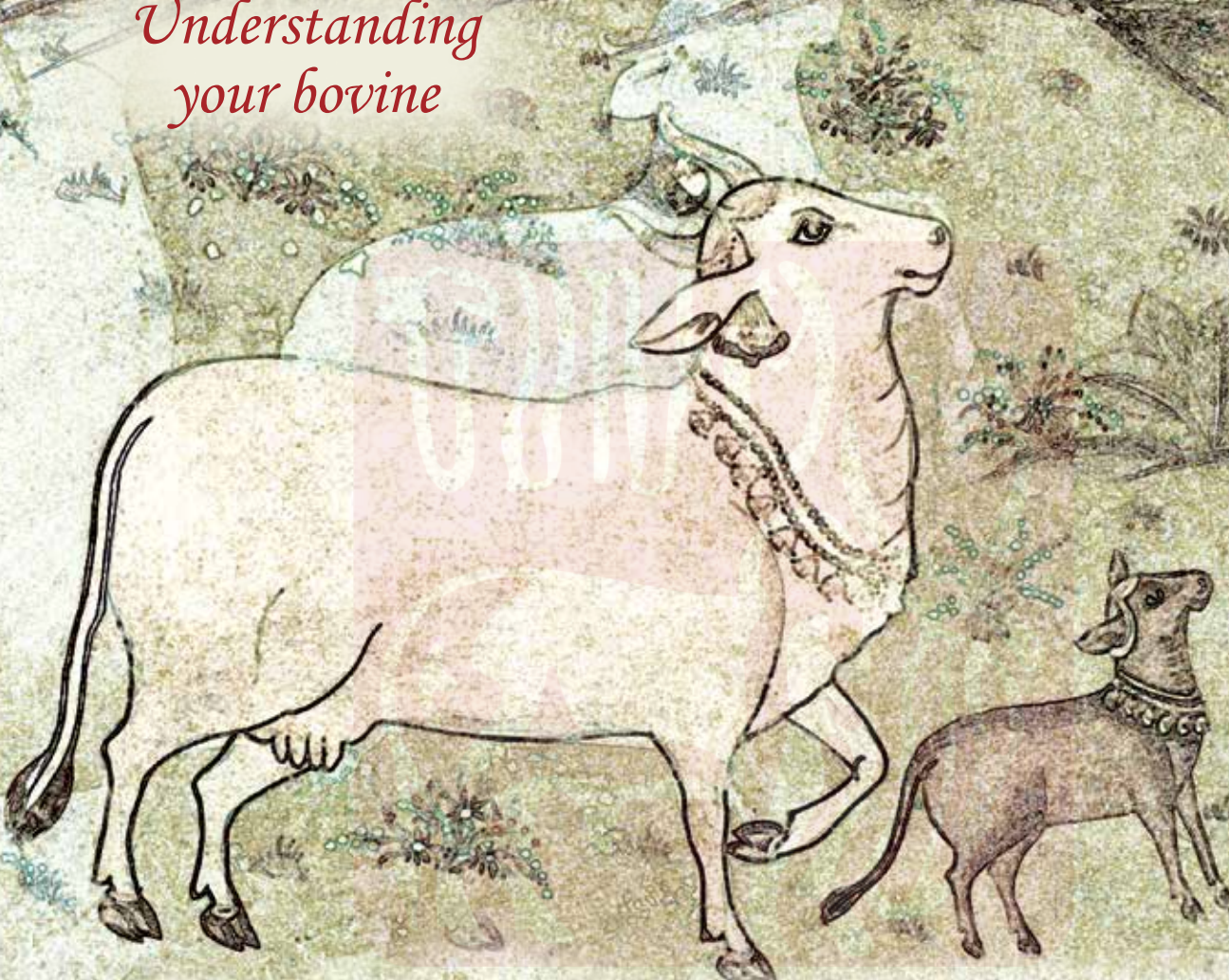
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*Understanding
your bovine*



More care more milk



**NATIONAL
DAIRY
DEVELOPMENT
BOARD**





Oh Cows! With your milk and ghee you make the physically weak strong, and nurture the sick to health. With your sacred utterances, you purify our homes. Your glory is discussed in gatherings.

– Atharvaveda





Introduction

The National Dairy Development Board has always been working for the uplift of poor and marginal farmers who form the bulk of the milk producers in our country. These farmers who mostly own one or two milch animals are dependent on the income from its milk for supporting their livelihood. The importance of a healthy animal cannot be stressed enough for a profitable business in dairying. Keeping this in mind, NDDB had developed a 'Handbook of Good Dairy Husbandry Practices' which contains all the basic information on animal health, breeding, nutrition, fodder production and conservation.

In addition to having the basic knowledge on scientific dairy husbandry, it is very important that the dairy farmers also understand the various pointers exhibited by their animals from time to time, which if correctly interpreted communicates enough on the management, feeding, health, hygiene practices, levels of discomfort etc. The handbook on 'Understanding your bovine' has therefore been developed with the aim of creating an awareness on these easily discernable signs so that necessary corrective measures can be taken well in advance to avoid losses, which at times could be catastrophic.

This handbook would be helpful to dairy farmers who continuously strive to improve their dairy husbandry practices.



Contents

At a glance	1
1. Health pointers	2
2. Physiological pointers	3
3. Activity cycle	8
4. Calving pointers	9
(i) Stage I: Pre-calving signals (from 24 hours prior to calving):	9
(ii) Stage II: Calving signals (30 minutes to 4 hours):	10
(iii) Stage III: Expulsion of placenta (3-8 hours)	10
5. New born calf pointers	11
6. Feet and locomotion pointers	13
7. Feeding pointers	15
8. Hygiene and teat health pointers	16
9. Heat stress pointers	17
10. Housing pointers	17
11. Vocalizations during stress or pain	19
A. Body Condition Score (BCS)	20
B. Rumen fill score	20
C. Locomotion score	21
D. Leg score	22
E. Manure consistency score	23
F. Manure digestibility score	23
G. Teat end score	23
H. Hygiene score	24

At a glance

An animal is able to communicate its well-being through a plethora of signs that the farmer consciously or unconsciously interprets as good or bad.

Interpreting these pointers which have been time tested and are measurable would be an important milestone in developing the 'gut feeling' of the farmer regarding the health and well-being of his/her animal into a more resolute and correct understanding of the state of the animal.

Various pointers reflect different aspects of management like feeding, housing, space availability, changes in routine, health, hygiene and normal physiology, any deviation of which should be viewed seriously and veterinary care solicited. A summary list of such signs and their relevance is given in the table below.

S.no	Pointers	Relevance
1	Health	Indicates feeding and management practices
2	Physiology	Indicates general health, feeding practices, diseases, metabolic conditions, heat /cold stress, changes in routine, deficiencies, housing , insect menace etc.
3	Body condition	Indicates general health corresponding to stage of lactation, feeding practices, probability of occurrence of metabolic diseases or reproductive conditions post calving etc.
4	Calving	Helps identify abnormal signs that require immediate attention
5	New born	Helps identify abnormal signals that require special attention
6	Feet & locomotion	Indicates feeding, hoof management, flooring, housing etc.
7	Rumen fill	Indicates ailments, inadequate feeding etc.
8	Feeding and manure	Indicates imbalance in ration formulation, metabolic diseases etc.
9	Hygiene	Indicates cleanliness in the shed
10	Teat end	Indicates milking practices
11	Heat stress	Indicates level of stress due to heat
12	Housing	Indicates housing management in relation to flooring, ventilation, space requirement, proper placement of mangers and railings, effluent disposal, insect menace etc.
13	Vocalizations in stress and pain	Indicates the psychological status, disease condition and the pain source

1. Health pointers

A healthy animal communicates its wellness through health indicators which can be easily discerned by the farmer.

The muzzle of the animal should always be cool and moist.

A brief description of the health pointers are given below:

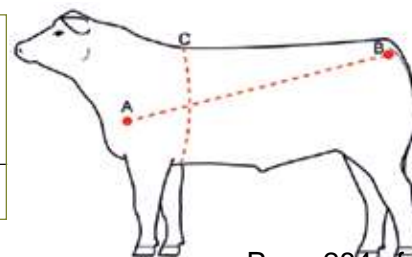
Description	Health pointers
Muzzle	Cool & moist with frequent licking
Eyes	Bright, clear and not runny (no discharge), crusty or bloodshot
Breathing	Should be regular and not laboured
Coat	Glossy, clean and un-matted, free of ticks/lice, other parasites or eruptions. Coat discolouration is an indication of mineral deficiency ; ruffled coat is an indication of worm infestation
Appearance	Average weight of the breed; should not be emaciated or thin
Movement	Walking should be easy and free of limps; should not have slow or uneven gait or hunched positions while sitting; the animal should be able to rise from seated positions with ease. An animal in normal gait will place the hindlimbs where the forelimbs were while walking; a lame cow may either under-reach or over-reach
Udder	Size isn't necessarily an indicator of a good udder. It should sit forward with prominent milk veins, not sag and not be too meaty. The udder should not show too much sideways movement when the animal walks
Behaviour	Curious, alert and contented; animals should not stand apart from the herd, seem disinterested or show signs of a bad temper
Body score	It is an important indicator of the health of the animal. An animal in good health will have a body score between 2-3 (based on stage of lactation and pregnancy status)

Tips: Estimating the weight of the animal

The body weight of an animal can be estimated by the following formula:

Body weight (Kgs) = $\frac{[\text{Hearth Girth}(C) \text{ (inches)}]^2 * \text{Body Length} (AB) \text{ (inches)}}{660}$

660





2. Physiological pointers

Physiological pointers reflect the normal physiological processes occurring in the animals. Normal values indicate a healthy animal. Any deviation from normal physiology should be attended to by a veterinarian.

The temperature, respiration and rumination should always be within the normal range.

Brief descriptions of the physiological pointers are as under:

	What to know	What is abnormal	Probable reasons
Temperature	<ul style="list-style-type: none"> Normal body temperature is between 38 to 39 °C (101.5 ± 1). Temperature is taken ideally during early morning or late evening/night 	<ul style="list-style-type: none"> Higher temperature (Fever). May be accompanied by rapid breathing, shivering and occasional diarrhoea Ears, horns and legs are usually cold to touch while body is too warm 	<ul style="list-style-type: none"> Infection, Heat stress, Hyper excitability
		<ul style="list-style-type: none"> Lower temperature (hypothermia) 	<ul style="list-style-type: none"> Hypocalcaemia (milk fever) Shock following serious infections/poisoning Exposure to extreme cold
Respiration	<ul style="list-style-type: none"> Normal respiration is 10-30 times (breathing in + breathing out) per minute in adults and 30-50 times per minute in calves 	<ul style="list-style-type: none"> Increase in respiration rate 	<ul style="list-style-type: none"> Fever Heat stress Animal is in pain or is excited
	<ul style="list-style-type: none"> Respiration is observed best from the animal's right flank, seen from behind 	<ul style="list-style-type: none"> Decrease in respiration rate Laboured breathing 	<ul style="list-style-type: none"> Milk fever Shock Blockage in nasal passage Shock



Tips: Taking rectal temperature using a digital thermometer

1. Ensure reading is zero before use.
2. Insert the tip of the thermometer into the rectum at an angle so that it touches the rectal wall.
3. Retain for at least 1 minute.
4. Wipe the thermometer clean and note the reading.



Tips: Observing respiration

1. Ensure that the animal is calm.
2. Stand at a safe distance behind the animal.
3. Observe the movement of the animal's right flank region (arrow).

	What to know	What is abnormal	Probable reasons
Rumination	<ul style="list-style-type: none"> Rumination occurs 7-10 hours per day in 5-25 cycles, each lasting 10-60 minutes Chewing while ruminating occurs around 40-70 times within 45-60 seconds Rumen motility occurs at a rate of 1-3 per minute 	<ul style="list-style-type: none"> Decrease in rumination Decrease in rumen motility 	<ul style="list-style-type: none"> Improperly balanced ration More concentrate in ration Rations with low fibre Inadequate rations Other diseases conditions Milk fever Acidosis Infections
Feeding	<ul style="list-style-type: none"> Animals feed around 5 hours every day Feeding is spread out over 10-15 meals Rumen fill score should correspond to the lactation stage.(See rumen fill scores) 	<ul style="list-style-type: none"> Low rumen fill score Decrease in feeding time Depraved feeding (eating mud or anything that the animal comes across) 	<ul style="list-style-type: none"> Inadequate rations or ailing animal Indicative of Pica (phosphorus deficiency)
Drinking	<ul style="list-style-type: none"> Clean drinking water is to be made available 24x7 to the animals Around 3-5 litres of water is required for every litre of milk produced Requirement of water increases greatly during summer 	<ul style="list-style-type: none"> Reduced milk production Constipation Animal not drinking water Water engorgement (Animal binges on water resulting in haemoglobinuria-coffee coloured urine) 	<ul style="list-style-type: none"> Adequate quantity of clean water is not available 24x7 The water provided is dirty and foul smelling due to soiling with mud, dung or algal growth Insects /larvae in water Animals are deprived of water for long periods



Tips: Measuring rumen motility

- Place a clenched fist on the rumen fossa on the left flank of the animal.
- Apply a little pressure on the fist and hold for about a minute.
- The fist will be pushed back when rumen contraction occurs.

Do you know?

The rumen of an adult bovine can hold 100-150 litres of water!



What to know	What is abnormal	Probable reasons
<ul style="list-style-type: none"> Defaecation occurs around 10-25 times per day Quantity of dung is based on the body weight An animal weighing 350-400 Kg excretes around 20-25 Kg of dung a day Manure consistency score should be around 3 (see manure consistency scoring) 	<ul style="list-style-type: none"> Reduction in frequency / quantity of dung/ constipation / inspissated dung Diarrhoea Bloat 	<ul style="list-style-type: none"> Milk fever Ketosis Inadequate water intake Poisoning Gastro-intestinal tract Infections Internal parasites Lactic acidosis (foamy, yellowish brown dung) Johne's disease(gas bubbles in large numbers in dung) Sudden change in feed, especially legumes Internal parasites
<ul style="list-style-type: none"> Water-logged areas with snail populations have high chances of amphistomes & schistosomes requiring specific treatment 	<ul style="list-style-type: none"> Foetid diarrhoea with bottle jaw Diarrhoea, weight loss, anaemia; blood may be seen after defaecation 	<ul style="list-style-type: none"> Amphistomes Schistosomiasis (sub-clinical infections with low growth & productivity also common)
<ul style="list-style-type: none"> Reduced dry matter intake immediately post calving due to ketosis/milk fever etc may lead to abomasal displacement 	<ul style="list-style-type: none"> Exceptionally greasy or pasty faeces, apparently covered with thin oil film 	<ul style="list-style-type: none"> Left-sided abomasal displacement
<ul style="list-style-type: none"> Abrupt changes in feeding & management, inadequate water intake, parasitic infection,dental abnormalities, coarse feeds, highly fermentable feeds etc may predispose to intestinal obstruction 	<ul style="list-style-type: none"> Difficulty in defaecation, mucous with blood 	<ul style="list-style-type: none"> Intestinal obstruction
<ul style="list-style-type: none"> Manure digestibility score of 1 is ideal for milking and dry animals (see manure digestibility scoring) 	<ul style="list-style-type: none"> Undigested particles in dung (1-2 cm) Matchstick size fragments in dung 	<ul style="list-style-type: none"> Indigestion Gastro-intestinal infections Tooth/ stomach diseases

Defaecation

	What to know	What is abnormal	Probable reasons
Urination	<ul style="list-style-type: none"> • Urination occurs around 10 times a day • Quantity of urine is based on body weight(around 1 ml per Kg body weight per hour) • An animal weighing 350-400 Kg excretes around 8.5-10 litres urine a day 	<ul style="list-style-type: none"> • Decrease in quantity of urine 	<ul style="list-style-type: none"> • Milk fever
		<ul style="list-style-type: none"> • Change in urine colour 	<ul style="list-style-type: none"> • Babesiosis • Water engorgement • Urinary infection
		<ul style="list-style-type: none"> • Difficulty in urination 	<ul style="list-style-type: none"> • Urinary calculi • Kidney problems
Milk Production	<ul style="list-style-type: none"> • Peak yield is reached 1-2 months after calving • Heifers peak at 75% in the first and at 90% in 2nd calving in comparison to mature cows 	<ul style="list-style-type: none"> • Sudden reduction in milk production 	<ul style="list-style-type: none"> • Change in milking routine/ personnel(buffaloes take longer time to get used to new routines) • Adverse climatic conditions • Change in feed/feeding pattern • Animal in heat • Milk fever • Ketosis
		<ul style="list-style-type: none"> • Change in colour of milk 	<ul style="list-style-type: none"> • Mastitis • Phosphorus deficiency • Teat injury
		<ul style="list-style-type: none"> • Reduction in fat % 	<ul style="list-style-type: none"> • Sub-clinical mastitis • Thin or fat animals • High energy diet • Reduced quantity or low quality roughage in diet
		<ul style="list-style-type: none"> • Reduction in SNF % 	<ul style="list-style-type: none"> • Sub-clinical mastitis • Low energy diet • Heat stress • Underfeeding • Low quality roughage

Do you know?

Around 500 litres of blood need to circulate through the udder to make one litre of milk!



	What to know	What is abnormal	Probable reasons
Heat Signs	Average age at puberty: <ul style="list-style-type: none"> ▪ Cross bred - 18 months ▪ Indigenous breed - 2.5 years. ▪ Buffalo- 2.5-3 years <ul style="list-style-type: none"> • Heat is less pronounced in buffalo • First heat post calving is seen 40 days after calving 	<ul style="list-style-type: none"> • Animal not coming into heat after the average age at puberty 	<ul style="list-style-type: none"> • Undernourishment • Mineral deficiency • Worm infestation • Silent heat (especially in buffaloes) • Anatomical defects • Congenital defects
	<ul style="list-style-type: none"> • Repeated bellowing, swollen vulva, clear discharge from vagina, frequent urination, mounting and allowing to be mounted are major signs of heat 	<ul style="list-style-type: none"> • Animals not conceiving after repeated inseminations • Animals not coming into heat after calving 	<ul style="list-style-type: none"> • Uterine infections • Hormonal defects • Anatomical • Congenital defects • Energy deficiency • Mineral deficiency
Salivation	<ul style="list-style-type: none"> • Around 40-150 litres of saliva is produced per day based on type of ration given • Roughages causes production of more saliva while concentrates reduce it 	<ul style="list-style-type: none"> • Increased salivation, drooling, frothiness 	<ul style="list-style-type: none"> • Feeding of coarse material • Lesions in the mouth, tongue etc. • Foot & Mouth Disease (FMD) • Poisoning • Rabies

Tips: Time of insemination

- If heat is seen in the evening, insemination is to be carried out on the following morning.
- If heat is seen in the morning, insemination is to be carried out in the evening of the same day.
- Heat may persist in some cases for more than a day (prolonged heat) wherein insemination may have to be repeated.
- Some animals may even have a shorter heat period for which insemination may need to be carried out earlier.

Tips: When to consult a veterinarian for infertility in your animal

In case the animal has not conceived even after three inseminations, have it examined by a veterinarian for further course of action. Repeated inseminations may damage the uterus!

Do you know? Sub-clinical acidosis

Lesser saliva production may lead to sub-clinical acidosis leading to reduced feed intake, weight loss, unexplained diarrhoea and exhaustion. This may also lead to laminitis and lameness.

Do you know? Test to assess heat

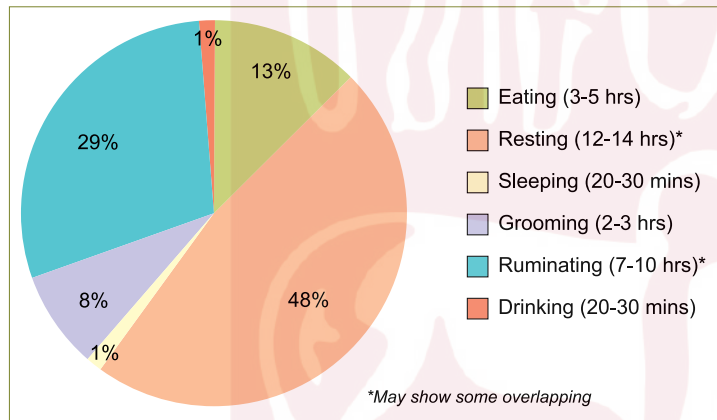
An animal in heat will sink its back and raise its tail to one side when the lumbosacral region is massaged.

3. Activity cycle

An idea on the activity cycle of bovines will help one assess the level of comfort the animal is in. An animal that is comfortable will exhibit its normal activity pattern if allowed to do so. Any drastic alterations in the activity patterns should be viewed seriously and mitigated.

Animals should be allowed to exhibit its normal activity cycle.

The normal activity pattern of bovines in a day can be depicted as under:



Do you know?

Blood circulation to the udder is increased by around 30% when the animal is lying down, thereby helping to increase milk production and udder immunity.

What is abnormal	Probable reasons
<ul style="list-style-type: none"> Hyper excitability 	<ul style="list-style-type: none"> Change in routine /personnel Hypomagnesaemia Nervous form of ketosis Nuisance from biting flies, heat etc. Central Nervous system diseases. (eg. rabies)
<ul style="list-style-type: none"> Drastic alterations in activity patterns 	<ul style="list-style-type: none"> Milk fever Severe infections Shock Improper feeding management Lack of adequate space Improper management practices (animals always remaining tethered)



4. Calving pointers

Understanding calving pointers helps the farmer to identify when the animal requires veterinary attention. The calving pointers can be divided into 3 stages: (i) Pre-calving pointers (24 hours before calving) (ii) Calving and (iii) Expulsion of placenta.

(i) Stage I: Pre-calving pointers (from 24 hours prior to calving):

Clear mucous discharge from vulva and udder filled with milk are imminent signs of onset of calving.

Other signs include:

- Animal may seek isolation
- Loss of appetite
- Restlessness, kicking at belly/scratching flank region
- Pelvic ligaments relax causing tail head to rise.
- Vulva becomes enlarged and flabby.
- Udders fill with milk can occur 3 weeks before or a few days after calving.
- Shape of belly changes as calf moves to position of delivery.



Raised tail head, mucous discharge from vulva, udders filled with milk are signs of onset of calving.



Enlarged and flabby vulva at the onset of calving.

Tip: Anticipating the calving date

- Always write down the date of insemination.
- Do pregnancy diagnosis after 3 months of insemination if the animal is not showing any heat symptoms.

Do you know?

The average gestation period of cattle ranges from 280-290 days and buffalo, 305-318 days.

(ii) Stage II: Calving pointers (30 minutes to 4 hours):

Both the forelimbs and head of the calf are seen in normal delivery.

- The calving process starts with the appearance of water bag.
- Animals with normal calf presentation usually deliver within 30 minutes to one hour after the water bag bursts.
- Heifers may take up to four hours.
- Animal may calve either standing up or lying down.



Delivery process begins with appearance of water bag



Both the forelimbs and head are seen in normal calving

Attention!

Animal labouring for over an hour with no signs of water bag appearing requires immediate veterinary care.

(iii) Stage III: Expulsion of placenta (3-8 hours)

- Normally expelled within 3-8 hours
- If placenta is retained more than 12 hours, it is termed as Retention of Placenta (ROP).



Placenta retained more than 12 hours is termed as ROP.

Attention!

Never try to forcibly remove the retained placenta since it may cause severe bleeding and lead to serious complications which may be fatal.



5. Healthy new born calf pointers

It is critical for a farmer to be aware of the signs of health in a new born calf in order to carry out necessary interventions at the earliest.

Healthy new born calves stand up within minutes of calving and start suckling within a short period (1-2 hours or less).



- Healthy calves stand up within minutes of calving (left).
- Calves with raised and wagging tail (middle) while nursing indicate proper closure of oesophageal groove.
- A calf that had a difficult calving will have swollen head or, meconium staining of perineum/body and reduced vigour and motivation to nurse (right). They require special attention. Other abnormal calf signals and its probable causes are:

Pointers to ill health	Probable cause(s)
Does not stretch its legs when aroused after a lengthy rest	Often the first sign of ill health
Kicking belly with hind legs	Pain in abdominal area
Grinding teeth	Pneumonia/scours/bloat etc. that has taken a serious course

Pointers to ill health	Probable cause(s)
Unable to stand	<ul style="list-style-type: none"> • Injured knee • Displaced joint • Infected navel • Weakness • Vit E/ selenium deficiency etc.
Sunken eyes and loss of skin flexibility	Dehydration usually following diarrhoea
Pot belly and rough coat	<ul style="list-style-type: none"> • High fibre and low energy diet • Internal parasites
Bloating after drinking milk	<ul style="list-style-type: none"> • Improper closure of oesophageal groove due to rough handling • Feeding milk that is too hot/too cold • Force feeding or overfeeding etc.
Dry muzzle, droopy ears	Fever
Standing with legs spread and extended head	Lengthy bout of pneumonia
Diarrhoea	<ul style="list-style-type: none"> • Gastro-intestinal tract infections • Improper closure of oesophageal groove

Do you know? The 3 pillars of healthy life for a new born calf

1. Navel dipping with appropriate disinfectant soon after birth.
2. Timely feeding of colostrum in adequate quantities.
3. Following a proper deworming schedule.

Do you know? The oesophageal groove

Also called reticular groove, is a muscular structure at the lower end of the esophagus that, when closed, forms a tube allowing milk to go directly into the abomasum (true stomach) without entering the rumen. This is very essential in calves to prevent milk from being fermented in the rumen.



6. Feet and locomotion pointers

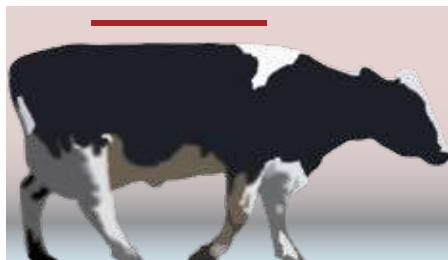
These pointers give a good indication of the floor condition, space availability and feeding practices.

The animal should have a locomotion score of 1 and a leg score of 1.

What to know	What is abnormal	Probable reasons
<ul style="list-style-type: none"> The normal gait of an animal (locomotion score 1): Stands and walks with a level back, bears weight on all legs evenly, joints flex freely, head carriage remains steady as animal moves Normal stance of hind legs (Leg score 1): The hind legs are parallel to the spine with no degree of outward rotation when viewed from behind 	<ul style="list-style-type: none"> Any form of lameness (see locomotion and leg score) 	<ul style="list-style-type: none"> Lack of sufficient space to lie down and to move about Sub-clinical acidosis resulting from increased concentrate feeding in relation to roughage
	<ul style="list-style-type: none"> Lack of confidence while walking on shed floor 	<ul style="list-style-type: none"> Very slippery flooring
	<ul style="list-style-type: none"> Knee, hock or leg lesions 	<ul style="list-style-type: none"> Uneven or rough flooring
	<ul style="list-style-type: none"> Overgrown hooves 	<ul style="list-style-type: none"> Improper hoof management



Animal with no lameness stands and walks with a level back

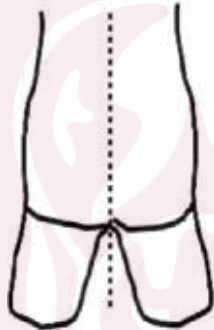


The normal hind leg is placed almost parallel to the spine as against the affected hind leg which is rotated outward (arrow).

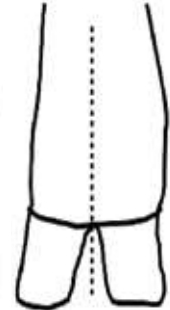


Hock and knee lesions are due to improper flooring

The dewclaws of the swollen feet are wider apart than the ones on the affected foot



In milder infections the swelling is symmetrical



In deep seated infections the swelling is asymmetrical



7. Feeding pointers

The feeding pointers reflect the feeding management, an understanding of which would help optimize returns since about 70% of the expenses incurred in dairying is for feeding.

The body condition, manure consistency and manure digestibility scores should be appropriate for the stage of lactation.

What to know	What is abnormal	Probable reasons
<ul style="list-style-type: none"> The animal should have an appropriate rumen fill score based on the stage of lactation (see rumen fill score) 	<ul style="list-style-type: none"> A rumen fill score not corresponding to the stage of lactation 	<ul style="list-style-type: none"> Metabolic or other ailments. Inadequate feeding
<ul style="list-style-type: none"> Body Condition Score (BCS) of animal at the time of calving should be around 3 (not less and not more) (see BCS score) BCS difference between parturition and 1st service should be limited to 0.5 for best results 	<ul style="list-style-type: none"> Low BCS 	<ul style="list-style-type: none"> Poor health/chronic diseases Inadequate feeding
<ul style="list-style-type: none"> Manure consistency score should be around 3 (see manure consistency score) 	<ul style="list-style-type: none"> High BCS 	<ul style="list-style-type: none"> Overfeeding
	<ul style="list-style-type: none"> High manure consistency score 	<ul style="list-style-type: none"> Excess fibre Hypocalcaemia Ketosis
<ul style="list-style-type: none"> Digestion score of 2-3 based on stage of lactation (see manure digestibility scores) 	<ul style="list-style-type: none"> Low manure consistency score 	<ul style="list-style-type: none"> Acidosis High concentrates in ration Chronic gastro-intestinal diseases like JD etc.
	<ul style="list-style-type: none"> Low manure digestibility score 	<ul style="list-style-type: none"> Imbalance in ration formulation



Rumen fill score of 2 is seen in the first week after calving. If seen later on, it is a sign of insufficient feed intake (right)



BCS is an indicator of feeding management and health status of a herd

Do you know? BCS should not be above 3

High BCS (above 3) gives a fair indication on chances of occurrence of metabolic problems like ketosis, fatty liver syndrome and placental retention and also breeding problems later on.

8. Hygiene and teat health pointers

Quantifying the hygiene and teat health would provide information on the levels of cleanliness in the cattle shed and the milking practices followed.

What to know	What is abnormal	Probable reasons
<ul style="list-style-type: none"> Hygiene score should be 1: There should be no dirt present or only minor fresh or dried splashing present on lower hind leg, tail and udder (see hygiene score) 	<ul style="list-style-type: none"> Dried dirt found on tail, lower hind leg and udder 	<ul style="list-style-type: none"> Lack of adequate space Improper shed cleaning Improper manure consistency
<ul style="list-style-type: none"> Teat score should be 1: Teat end should be smooth with no calluses (see teat score) 	<ul style="list-style-type: none"> High teat scores 	<ul style="list-style-type: none"> Improper milking practices. Improper use of milking machines
	<ul style="list-style-type: none"> Cracks on teat skin 	<ul style="list-style-type: none"> Dryness



A hygiene score of 1



Teat score1: Smooth teat end



9. Heat stress pointers

The levels of stress due to heat can be quantified by using the panting score.

Animals should not have a panting score above 2.

Panting score	Breaths/minute	Status
0	Below 40	Normal
1	40-70	Light panting. No salivation/ chest movement seen
2	70-120	Fast panting with salivation but with mouth closed
2.5	70-120	As for 2 with mouth open but tongue not extended
3	120-160	Open mouth with some drooling. Neck extended and head up
3.5	120-160	As for 3, but tongue out slightly, occasionally extended for short periods and excessive drooling
4	>160	Open mouth with tongue fully extended for prolonged periods and excessive drooling



An animal with panting score of 3 with open mouth and some drooling of saliva

10. Housing signals

There are a few important signals on housing that directly correlates with the comfort of the animal.

Description	What to know	Significance
Location of the shed	<ul style="list-style-type: none"> Should be on elevated land to allow proper drainage 	<ul style="list-style-type: none"> Water – logging and dampness avoided in and around the shed Reduction in vector population due to dryness
Shed orientation	<ul style="list-style-type: none"> East- west orientation most beneficial in regions with average temperature is 30°C or more for up to 5 hours per day 	<ul style="list-style-type: none"> The feed and water troughs will always be under shade which will allow animals to eat and drink in the shade
Shed walls	<ul style="list-style-type: none"> Walls should allow natural air flow. In warmer regions no walls are required for the shed A wall on one side (usually western) to block strong winds is required in certain regions 	<ul style="list-style-type: none"> Walls at improper places block out the natural wind flow increasing heat stress during summers

Description	What to know	Significance
	<ul style="list-style-type: none"> North-south orientation of the shed is suitable in cooler regions 	<ul style="list-style-type: none"> Sun will strike every part of the floor area under and on either side of the roof at some time during the day which will help to keep the floored area dry If the animals are kept at pasture throughout the day this system would be beneficial
Ventilation	<ul style="list-style-type: none"> There should not be any smell of ammonia in the shed A person should not feel suffocated standing in the centre of the shed 	<ul style="list-style-type: none"> Adequate ventilation reduces heat stress Adequate ventilation reduces occurrence of respiratory diseases
Illumination	<ul style="list-style-type: none"> There should be enough light in the shed during the day for a person to comfortably read in the centre of the shed 	<ul style="list-style-type: none"> Adequate levels of light are required for at least 8 hours a day for an animal
Flooring	<ul style="list-style-type: none"> A person should be able to walk comfortably on the cattle shed floor with his /her bare feet 	<ul style="list-style-type: none"> Improves comfort levels of the animal Reduces hoof problems
	<ul style="list-style-type: none"> The floor should not have any slip marks caused by the hoof 	<ul style="list-style-type: none"> Slipping may cause irreparable damage to the hip leading to downers Animals may be reluctant to move due to lack of confidence resulting in hoof problems
Effluent management	<ul style="list-style-type: none"> There should be not stagnation of farm effluents in or near the cattle shed 	<ul style="list-style-type: none"> Stagnation increases vector menace which cause significant alterations in the animal's activity cycle leading to reduced productivity
Space requirement	<ul style="list-style-type: none"> Around 160 square feet should be available per adult in loose housing including 40 square feet of covered area Around 2 feet of manger space should be provided per animal About 3 cubic feet water trough should be provided under shade for each adult 	<ul style="list-style-type: none"> Enabling animals to express its natural behaviour and move freely would bring about an increase in productivity and better foot health
Mangers and railings	<ul style="list-style-type: none"> Callus/lesion on the neck region (top or/and bottom) indicates that the manger and/or railings are not at appropriate height 	<ul style="list-style-type: none"> Feed intake of animals with more severe lesions may reduce due to the pain while feeding thereby reducing productivity




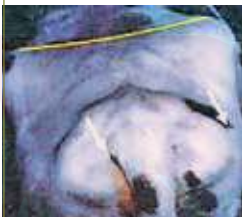



11. Vocalizations during stress or pain

Adult bovines generally vocalize only during feeding, milking, during oestrus and after their calf has been taken away or has died. It is important to differentiate normal vocalizations from those due to pain in order to take adequate mitigation measures. Some vocalizations during pain are given below:






Vocalization	Accompanying circumstance	Significance
<ul style="list-style-type: none"> Loud lowing(mooing) 	<ul style="list-style-type: none"> Mouth opened, head extended forward or raised 	<ul style="list-style-type: none"> Calling for calf, for milking (full udder), due to hunger or thirst. Also while in oestrus or calling other members of the herd
<ul style="list-style-type: none"> Brief, loud bellow 	<ul style="list-style-type: none"> Directly after caused event (slamming door, injury) mouth open, head usually raised 	<ul style="list-style-type: none"> Fright or pain
<ul style="list-style-type: none"> Repeated loud bellowing 	<ul style="list-style-type: none"> In healthy sexually mature females free from nervous symptoms 	<ul style="list-style-type: none"> Indicator of nymphomania
	<ul style="list-style-type: none"> In cattle of any age showing signs of central nervous disorder, break in voice and worsening posterior paresis 	<ul style="list-style-type: none"> Symptom of Rabies
<ul style="list-style-type: none"> Short grunt 	<ul style="list-style-type: none"> Either spontaneous (upon standing up or walking downhill) or as a reaction to pressure 	<ul style="list-style-type: none"> Sign of painful condition in the abdominal cavity If localized to anterior chest region (xiphoid)-evidence of reticulo-pericarditis
<ul style="list-style-type: none"> Prolonged groaning accompanying expiration 	<ul style="list-style-type: none"> Spontaneous or after slight exertion; head and neck extended; expiratory dyspnoea 	<ul style="list-style-type: none"> Painful space-occupying lesion in the chest (thoracic cavity)
<ul style="list-style-type: none"> Snoring, roaring or grunting in time with breathing 	<ul style="list-style-type: none"> Pronounced difficulty in breathing 	<ul style="list-style-type: none"> Evidence of narrowing of the upper respiratory tract Diseases affecting upper nasal tract like nasal schistosomiasis & rhinosporidiosis
<ul style="list-style-type: none"> Coughing 	<ul style="list-style-type: none"> Dry and powerful cough occurring outside feeding times 	<ul style="list-style-type: none"> Indicator of disease of upper respiratory tract
	<ul style="list-style-type: none"> Moist and/or weak cough 	<ul style="list-style-type: none"> Indicator of pneumonia or pleuritis Lung worm infection

A. Body Condition Score (BCS)

Score - 1	Score - 2	Score - 3	Score - 4	Score - 5
				
<i>Tail head - Deep cavity with no fat tissue under skin. Spine prominent</i>	<i>Tail head - cavity shallow but prominent pin bones. Spine ends are rounded</i>	<i>Tail head - cavity shallow but prominent pin bones. Spine ends are rounded</i>	<i>Tail head - fat cover present. Some fat deposits around bone extremities</i>	<i>Tail head - Completely filled and folds evident. Bone extremities are rounded</i>

An animal in the first few weeks of lactation may have a score of 2. At drying off, animals should have a score of 3. An animal with score of above 3.5 will have metabolic and breeding problems.

B. Rumen fill score

Score - 1	Score - 2	Score - 3	Score - 4	Score - 5
				
<i>Vertical fold of skin seen down from the hip bone</i>	<i>The rumen pit gives a triangular appearance</i>	<i>Rumen pit behind the rib bow can be seen</i>	<i>No rumen pit is seen</i>	<i>The belly skin is strongly stretched</i>

Animals in the 1st week of lactation may have a score of 2. Score 3 is the correct score for milking animals with good feed intake. Score 4 should be seen in animals at end of lactation and score 5 for dry cows.

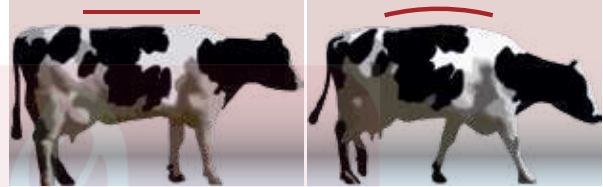


C. Locomotion score



Score 1: Normal

Makes long confident strides. Walks with even weight bearing on all four feet, with a flat back.



Score 2: Mildly lame

Stands with flat back, but arches when it walks. Gait is slightly abnormal. Affected limb or limbs not immediately identifiable.



Score 3: Moderately Lame

Stands and walks with an arched back and short strides with one or more legs.



Score 4: Lame

Arched back while standing and walking but can still bear some weight on them.



Score 5: Severely lame

Pronounced arching of back. Reluctant to move, with almost complete weight transfer away from the affected limb.

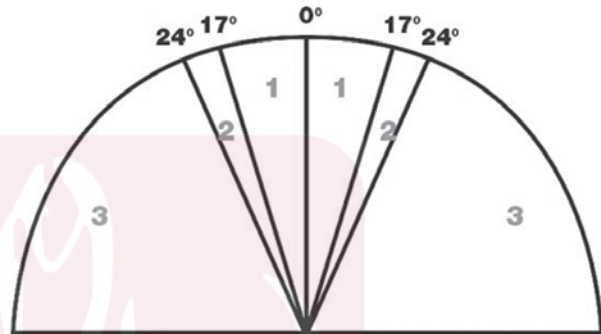
Do you know? How do you identify the affected leg

Fore limbs: The head is thrown up when weight is put on the affected foot and the head comes down when it stands on the healthy foot.

Hind limbs: The head swings down when landing on the affected foot and the head goes up when it stands on the healthy foot.

D. Leg score

- Leg scoring is a quantification of the stance of the hind legs.
- It is related to the height differences between the inner and outer claws and the way the animal places its foot.
- Animals rotate their feet outwards to relieve painful areas in the sole and are more likely to do this on slippery floors when they walk with more weight on their heels.
- The score is based on the degrees rotation from perpendicular (90°) when both legs point parallel along the backbone from the back to the front of the cow.
- Score 1: 0° to 17° from 90° ; this is the ideal situation although hoof problems can still occur.
- Score 2: 17° to 24° from 90° .
- Score 3: more than 24° from 90° .



E. Manure consistency score




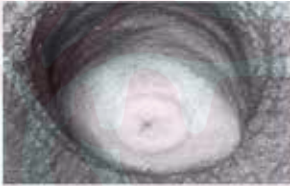

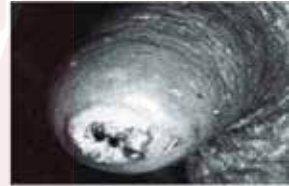




A manure score of 3 is ideal for a lactating animal. A score of 4 or 5 may be acceptable for dry cows or heifers. It also indicates imbalance in ration.



F. Manure digestibility score

Score - 1	Score - 2	Score - 3	Score - 4	Score - 5
<i>The manure feels like a creamy substance and is homogeneous and very weak. The manure contains no undigested feed particles</i>	<i>The manure feels like a creamy emulsion and is homogeneous. The manure contains some undigested feed particles</i>	<i>The manure does not feel homogeneous. Undigested parts can be detected. After squeezing and opening the hand, undigested fiber parts stick to the fingers</i>	<i>Large feed particles can be felt in the manure. Undigested parts are clearly visible. After squeezing and reopening the hand, a ball of undigested fiber remains in the hand</i>	<i>Large feed particles can be felt in the manure. Undigested parts from the ration are clearly recognizable</i>
<i>Ideal score for milking and dry animals</i>	<i>Acceptable score for milking and dry animals</i>	<i>Acceptable score for in-calf heifers and dry animals</i>	<i>Requires ration adjustment</i>	<i>Requires ration adjustment</i>

G. Teat end score

Score - 1	Score - 2	Score - 3	Score - 4
			
			
<i>Smooth bottom, no or smooth callus. No lesions</i>	<i>Raised callus ring with slight roughness</i>	<i>Rough callus with keratin growth</i>	<i>Very rough callus with keratin growth and cracking</i>

H. Hygiene score



Score-1: Clean

No dirt or only very little fresh or dried dung present

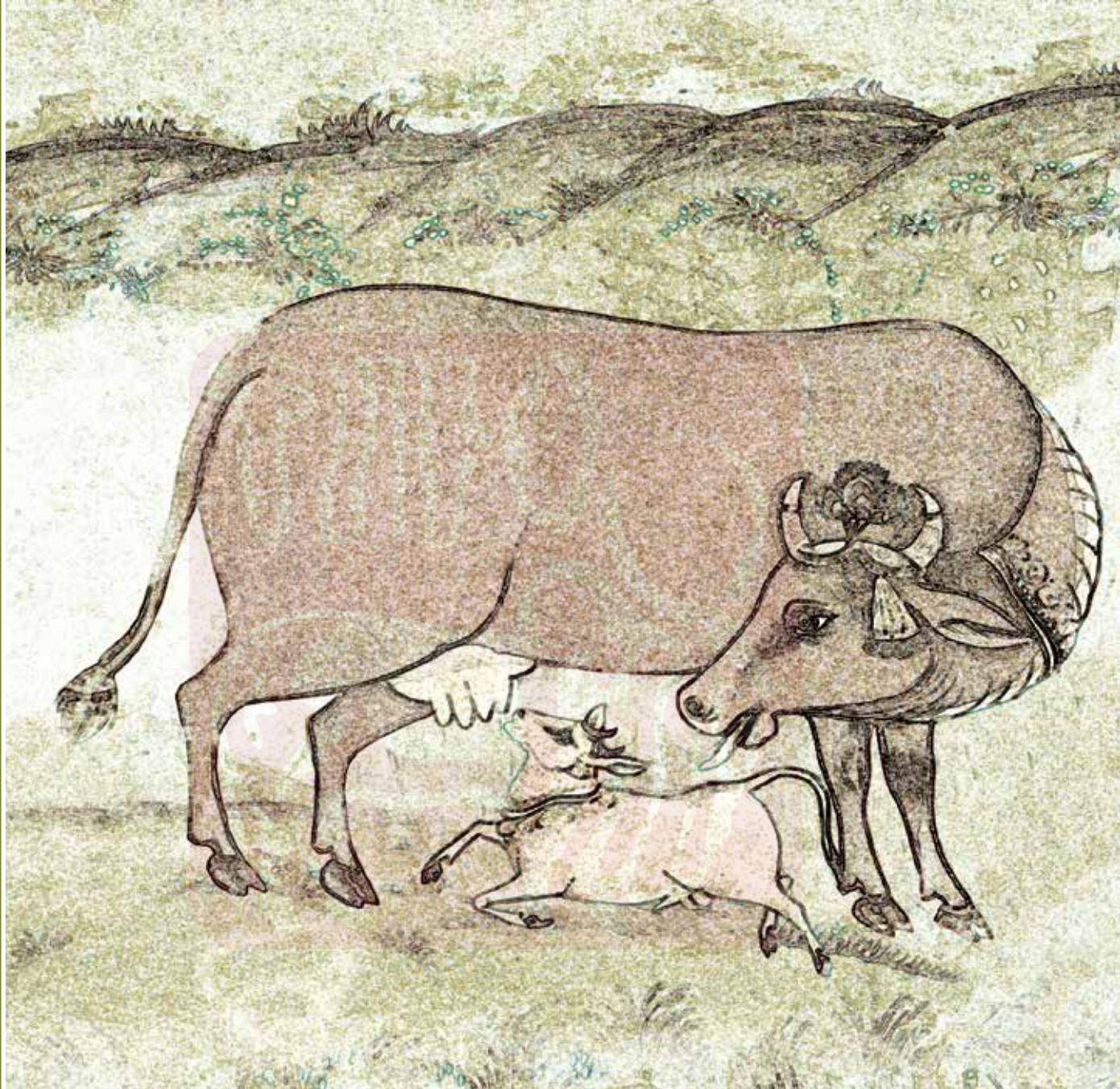
Score-2: Dirty

Dirty areas present (at least palm sized)

Score-3: Very dirty


Dirty areas present to at least forearm length.





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Page 308 of 1852
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National Dairy
Development Board

Handbook of Good Dairy Husbandry Practices



BREEDS OF INDIGENOUS DAIRY CATTLE

MALE



Gir

Native tract: Junagadh, Rajkot, Bhavnagar and Amreli districts in Gujarat



Hariana

Native tract: Rohtak, Hissar, Sonapat, Gurgaon, Jind and Jhajjar districts in Haryana



Sahiwal

Native tract: Ferozpur and Amritsar district of Punjab & Shri Ganganagar district of Rajasthan



Rathi

Native tract: Bikaner & Shri Ganganagar districts of Rajasthan



Red Sindhi

Native tract: In Pakistan, also found in Punjab, Haryana & Rajasthan & Uttarakhand



Tharparkar

Native tract: Jaisalmer, Barmer and Jodhpur districts in Rajasthan



Kankrej

Native tract: Kutch, Mehsana & Banaskantha districts of Gujarat

FEMALE



FOREWORD

With an annual production of 18.77 crore metric tonnes during 2018-19, India continues to be ranked number one in the world in milk production since 1997. Dairying is the main source of livelihood for our milk producers, majority of them either landless or marginal farmers. For making dairying a profitable and, sustainable venture, it is important for the dairy farmer to adopt scientific practices that would lead to increased productivity at optimum costs. For this to happen, the farmer should be aware of the basic tenets of animal health, breeding and feeding.

The National Dairy Plan-I (NDP-I) has been launched by the GoI with the aim to double milk production in the country by 2020. This would require focused efforts in the field of breeding, feeding and animal health, which would increase productivity and optimize costs. In breeding, coverage of artificial insemination (AI) needs to be increased using disease free semen from high genetic merit bulls. There is also an urgent need to optimize the utilization of feed resources in order to reduce the cost of milk production through balancing the ration of animals. More importantly, preventive measures to control occurrence of diseases need to be put in place, which is pivotal in harnessing the full production potential of the animal.

This handbook on scientific dairy practices has been designed keeping these requirements of the dairy farmers in mind. The handbook attempts to provide basic information on breeding, healthcare, management, nutrition, fodder production etc, based on existing and new technologies, along with illustrations. Such information is usually not available from a single source to the dairy farmer.

We sincerely hope that the handbook would be useful to the dairy farmer.

Dilip Rath
Chairman
National Dairy Development Board



INDEX

S. No.	Contents	Description	Page Numbers
PART-I ANIMAL HEALTH & BREEDING			1
1	Section I	General observation of an animal.....	2
2	Section II	Buying & inducting a new animal	5
3	Section III	Care of new born calf.....	9
4	Section IV	Diseases preventable by vaccination.....	12
5	Section V	Other important diseases	21
6	Section VI	Tick & fly borne diseases.....	29
7	Section VII	Tick, fly & worm control	32
8	Section VIII	Diseases that occur after calving.....	35
9	Section IX	Diseases that occur due to faulty feeding	40
10	Section X	Mastitis & diseases of teats.....	44
11	Section XI	Common poisoning conditions.....	51
12	Section XII	Common zoonotic diseases.....	54
13	Section XIII	Breeding & related activities.....	57
14	Section XIV	Traditional remedies for minor ailments	65
PART-II ANIMAL NUTRITION AND MANAGEMENT			73
1	Section I	Feeding of Animals.....	74
2	Section II	Fodder production.....	85
3	Section III	Housing of animals.....	105
PART-III INFORMATION NETWORK FOR BETTER PRODUCTIVITY ...			109
1	Section I	Animal identification.....	110
2	Section II	INAPH & animal health	111
3	Section III	INAPH & animal breeding.....	112
4	Section IV	INAPH & animal nutrition	113
Frequently asked questions			114



PART I

ANIMAL HEALTH AND BREEDING

Animal health plays an important role in harnessing the expected production potential of dairy animals. A diseased animal cannot perform to the expected level. Timely intervention is therefore pivotal in reducing the economic losses due to diseases. Improvement of breeds is also the need of the hour and the farmer needs to be made aware of various aspects of breeding to be an active participant of breed improvement programmes. With this aim, the Part I of this booklet is divided into XIV sections which are as under:

- Section I General observation of an animal
- Section II Buying and inducting a new animal
- Section III Care of new born calf
- Section IV Diseases preventable by vaccination
- Section V Other important diseases
- Section VI Tick and fly borne diseases
- Section VII Tick, Fly and worm control
- Section VIII Diseases that occur after calving
- Section IX Diseases that occur due to faulty feeding
- Section X Mastitis and diseases of teats
- Section XI Common poisoning conditions
- Section XII Common zoonotic diseases
- Section XIII Breeding and related activities
- Section XIV Traditional remedies for minor ailments

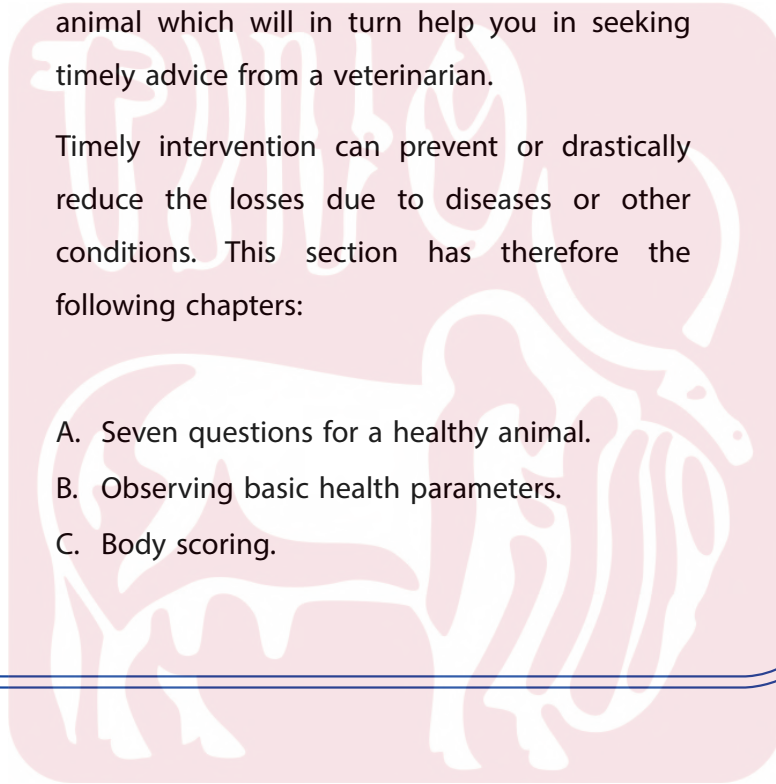
SECTION I

GENERAL OBSERVATION OF AN ANIMAL

General observation of certain parameters will guide you in assessing the health status of your animal which will in turn help you in seeking timely advice from a veterinarian.

Timely intervention can prevent or drastically reduce the losses due to diseases or other conditions. This section has therefore the following chapters:

- A. Seven questions for a healthy animal.
- B. Observing basic health parameters.
- C. Body scoring.



A. SEVEN QUESTIONS FOR A HEALTHY ANIMAL

1. Does the animal react normally to its environment and in the herd or is it acting strangely? (**Behaviour**)
2. Does it carry its head, ears, body and tail as usual? Does it walk normally? (**Attitude**)
3. Is the animal in good condition and is it well muscled, neither too thin or too fat? (**Condition**)
4. Does it eat, drink and ruminate properly?
5. Does it urinate and defaecate normally?
6. If a cow is in milk, is there a sudden drop in milk production?
7. Any other abnormal signs?






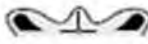





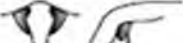








Consult a veterinarian in case any change is noticed

B. OBSERVING BASIC HEALTH PARAMETERS

- **Breathing frequency** - (Breathing in + breathing out) is 10-30 times per minute in normal adults and 30-50 times per minute in calves. Observed best from the animal's right flank, seen from behind.
- **Rumination** - Not less than 40 times per minute and 7-10 hours per day.
- **Rumen movement** - Two to three per minute, can be felt by pressing lightly on the upper part of the left flank.
- **Appearance** - A healthy animal has a shining, smooth and even coat as well as shiny horns and hoofs. Eyes should also be normal without discharge or tears and muzzle moist.
- **Fever** - Usually accompanied by rapid breathing, shivering and occasionally diarrhoea. Ears, horns and legs are usually cold to touch while body is too warm.

If any change is observed in the above parameters or fever seen, consult a veterinarian.

Body condition scoring

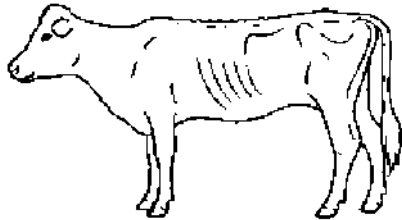
Scoring	Vertebrae at middle of the back	Rear view of the hook bone (cross-section)	Side view of the line between hook and pin bones	Cavity between tail head and pin bone (rear and side view)	Interpretation
Score 1 - Severe under-conditioning					Not in good health. Will not milk well or reproduce.
Score 2 - Frame obvious					Health may be OK. But milk production low and poor reproduction.
Score 3 - Frame and covering well					High producing, but fat may not be enough for peak production.
Score 4 - Frame not very visible					May have more metabolic problems at calving.
Score 5 - Severe over-conditioning					Extremely fat and will have metabolic and breeding problems.

Dry cows and calving cows should have a body condition score of 3.5 (See chapter on body scoring)

Observe your animals closely to help diagnose diseases early

C. BODY SCORING

- Body scoring is very important in assessing the health status of an animal.
- A low score may indicate diseases or improper feeding while a high score may indicate a high probability of breeding and metabolic problems.

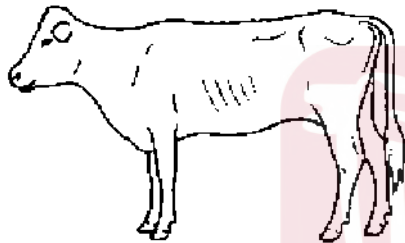


Body score 1

- BODY SCORE-1**
- Extremely thin. No fat in brisket or tail docks.
 - All skeletal structures are visible.
 - Dull hair
 - May be diseased and survival during stress is doubtful



Cattle with body score 1

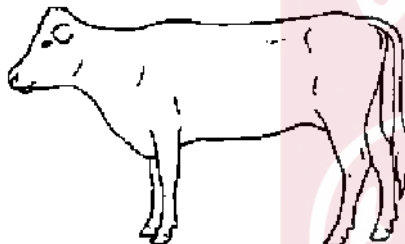


Body score 2

- BODY SCORE-2**
- Thin. Vertebrae, hips and pin bone prominent.
 - Some tissue cover around tail dock, hip bones and the flank.
 - Muscle tissue evident but not abundant, health may be OK.



Cattle with body score 2

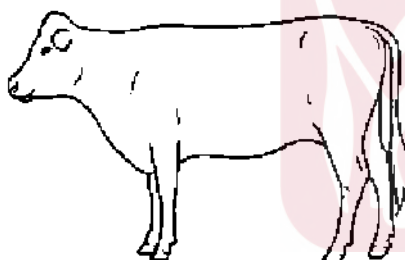


Body score 3

- BODY SCORE-3**
- Ribcage only slightly visible.
 - Fat deposit behind shoulder obvious, ideal condition for calving.
 - Fat deposit in brisket area.
 - Hook and pin bone visible, but not prominent.



Cattle with body score 3

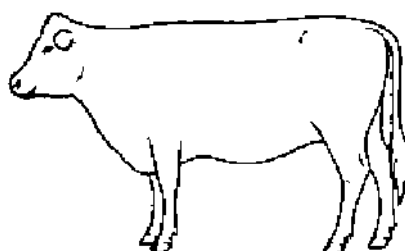


Body score 4

- BODY SCORE-4**
- Skeletal structure difficult to identify.
 - Obvious fat deposits behind shoulder and tail head.
 - Flat appearance to the top line.
 - Folds of fat starting to develop over ribs and thighs.



Cattle with body score 4 may have metabolic problems at calving.



Body score 5

- BODY SCORE-5**
- Animal is obese, flat appearance dominates.
 - Brisket is heavy and bone structure not noticeable.
 - Tail head and hip bones completely buried in folds of fat.
 - Back is flat and completely covered by fat.
 - Mobility impaired by large fat deposits.



Cattle with body score 5 and above have high probability of metabolic and breeding problems.

Body scoring would be a helpful yardstick to monitor health

SECTION II

BUYING & INDUCTING A NEW ANIMAL

Newly purchased animals are one of the major sources of infection and may introduce new diseases into your herd. Once you decide on what type of animals you want to rear based on your resources, purchasing healthy animals and implementing strict protocols for introduction into your herd is one of the most important components to prevent diseases occurring in your herd due to introduction of a newly purchased animal. Determining the age of the newly purchased animal will also be a helpful tool. This section consists of the following sections:

- A. Purchasing a new animal.
- B. Inducting a newly purchased animal into the herd.
- C. Determining the age of an animal.

A. PURCHASING A NEW ANIMAL

Breed

- A decision on what breed one wants to keep depends on the resources available with the farmer and the suitability of the breed to the locale. A decision on the breed should be taken only after detailed discussions with your local veterinarian/Krishi Vigyan Kendras (KVKs)/Kisan Call Centres.

Source

- Known disease free farms (either govt or private) where regular testing for diseases like TB, JD and brucellosis are done and positive animals removed would be ideal sources to procure your animals.
- It is better to buy animals from the owners' premises rather than from cattle markets/shanties since chances of the animal being exposed to diseases is high at these locations.

General signs to observe for in healthy animals during purchase

- Eyes: bright, clear and not runny (no discharge), crusty or bloodshot.
- Nose: cool, moist muzzle, with frequent licking; breathing should be regular and not laboured; beware of discharge, coughing, wheezing or irregular breathing.
- Coat: Glossy, clean and un-matted, free of ticks/lice, other parasites or eruptions.
- Weight: Average weight for the breed; beware of emaciated or thin animals.
- Attitude: Curious, alert and contented; beware of cattle that stand apart from the herd, that seem disinterested or that show signs of a bad temper.
- Mobility: Walking should be easy and free of limps; beware of slow or uneven gaits or hunched positions when sitting; the animal should be able to rise from seated positions with ease.
- Udder: Healthy; size isn't necessarily an indicator of a good udder. It should sit forward with prominent milk veins, not sag and not be too meaty. Observe the cow when she walks, the udder should not show too much sideways movement.
- Body score: This is an important indicator of the health of the animal. An animal in good health will have a body score between 3-4. (See chapter on body scoring)
- History: It is important to have a record of the detailed history of the animal on number of calvings, recorded milk yield during previous lactation, any specific disease occurrence like mastitis, prolapse of uterus, ROP, dystocia, hypocalcaemia etc.
- Age : Though not directly related to health, the farmer should also ensure the age of the animal by referring to its dentition. (See chapter on aging and dentition)

Transportation of animals

- All steps should be taken to avoid stress while transportation. Adequate water, space, feed, water and rest should be provided at regular intervals while transporting, since stress predisposes to various diseases. The flooring should be provided with some bedding material like paddy straw.

Observe proper procedures while purchasing new animals

B. INDUCTING A NEWLY PURCHASED ANIMAL INTO THE HERD

Quarantine (Isolating the animal)

- The newly purchased animal should be kept in isolation without contact with the other animals atleast for 3 weeks. One should attend to the newly purchased animal only after attending the herd.
- Avoid attending to your herd after contact with the newly purchased animal without a proper wash and cloth change.
- Carry out routine deworming, fluke treatment (based on endemicity) and vaccination during the period of quarantine.
- For lactating animals, milk the newly purchased animal separately and, only after milking all the other animals in the herd.
- Always adopt an “all-in all-out” system, clean and disinfect the quarantine area before inducting another animal(s).

Testing during quarantine

The following tests should be performed while in quarantine.

1. For in-milk animals, test for sub-clinical mastitis (SCM)– If found positive, they should be treated and retested till negative results are obtained. In case these animals do not become negative for SCM on subsequent tests, they are most probably chronically infected.
2. Test for brucella
3. Test for bovine TB (bTB)
4. Test for Johne’s Disease (JD)

The following regional laboratories may be contacted for further information:

Note: An animal testing negative does not necessarily mean it is free from disease

For Northern region

1. Joint Director, Centre for Animal Disease Research and Diagnosis (CADRAD), Indian Veterinary Research Institute (IVRI), Izatnagar– 243122
2. Joint Director and In-charge Northern Regional Disease Diagnostic Laboratory, Jalandhar, Punjab

For Southern region

Joint Director
Institute of Animal Health and Veterinary Biologicals
Hebbal, Bangalore - 24

For Eastern region

1. Joint Director
Eastern Regional Disease Diagnostic Laboratory, Kolkata-700 037
2. Deputy Director
North Eastern Regional Disease Diagnostic Laboratory
Khanapura, Guwahati-781 022

For Western region

Joint Director
Western Regional Disease Diagnostic Laboratory
Aundh, Pune-411 007

- The local veterinarian should be contacted for taking samples for the test or testing the animals (bTB/JD) and for any other advise. Many State animal husbandry departments also do the tests in their laboratories.

Proper quarantine will protect your herd from diseases

C. DETERMINING AGE OF AN ANIMAL

Determining age of the animal is important while purchasing a new animal since the information provided by the seller may not always be reliable.

I. DETERMINING AGE BY DENTITION

At birth to one month, two or more temporary incisor teeth are present. By first month all 8 temporary incisors appear.



Dentition at 30 months

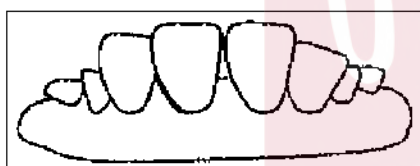
The central pair of temporary incisors are replaced by permanent ones which attains full growth by 2 years (thin arrows).

The third permanent incisor erupts at around 30 months of age (thick arrow)



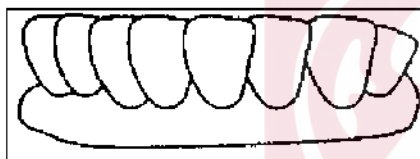
Dentition after 30 months

The fourth permanent incisors erupt after 30 months.



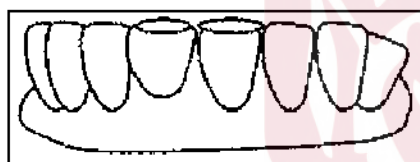
Dentition at 3 years

The second pair of incisors is fully developed at 3 years.



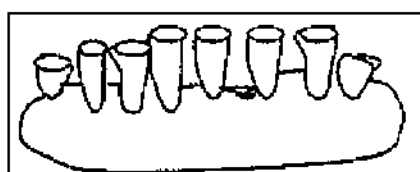
Dentition by 4-5 years years

By the 4-5 years the animal has a full set of permanent incisors. (In buffaloes by 5-6 years)



Dentition by 6th year

By the sixth year, the central incisor shows wear and leveled top.



Dentition by 10th year

The wearing progresses steadily after the sixth year and by the tenth year, all the incisors show significant wear and space in between them.



Dentition of a 3 year old cattle with 2 pairs of fully developed incisors



Dentition of cattle aged around 4-5 years with 4 pairs of permanent incisors.

II. DETERMINING AGE BY HORN RINGS

This is not a good guide and may give only a very rough idea. The first horn ring appears at 10-12 months. One ring is added approximately in a year. But at the fifth year, the first three rings may not be visible and after 8 years, none may be visible.

Determine the age of animal before purchase

SECTION III

CARE OF NEW BORN CALF

A calf is tomorrow's cow. From the health point of view, the life of a bovine is divided into two parts; the first 24 hours, and the rest. The first 24 hours of life of a calf is so important that it has a strong bearing on the rest of its life. A calf not provided adequate care in the first 24 hours may succumb to diseases or will always remain weak and an underperformer, even though it has good genetic potential and is provided a good environment. Another important reason for losing a calf is diarrhoea, the management of which is equally important till such time the cause is treated and cured. Keeping this in view, the following chapters are covered under this section:

- A. Care of new born calf
- B. Calf diarrhoea and its management

A. CARE OF NEW BORN CALF

The golden hour: The first hour after calving is the most critical period in the entire life of a new born calf.

Important points to remember:

- Clean nostrils and mouth which helps the calf breathe better and help prevent future breathing problems.
- Allow the mother to lick the calf clean which promotes circulation within the calf's body and prepares the calf to stand up and walk.
- Cut the navel cord at a distance of around 2 inches from the base with a clean instrument.
- Dip the navel (a simple smearing will not serve the purpose) in 3.5% or higher tincture of iodine solution ensuring a minimum contact time of at least 30 seconds.
- Tie the exposed end of the cord with a clean thread to close the opening.
- Repeat navel dipping after 12 hours. A poorly maintained navel is the gateway to serious infections.
- A new born calf should be given 2 litres of colostrum within the first 2 hours of birth and 1-2 litres (based on size) within 12 hours of birth.
- Many calves do not nurse adequate amounts of colostrum from their dams within the first few hours of life, and thus they may not receive adequate immunity.
- Feeding colostrum after 24 hours of birth may not help the calf to ward off infections.
- A calf must receive adequate colostrum to protect it from diseases for the first three months of its life. Colostrum is the calf's "passport to life".
- Hand-feeding new-born calves is therefore recommended so that the farmer is sure about the amount of colostrum an individual calf receives.
- De-worming should be done within 10-14 days of age subsequently on a monthly basis up to the 6th month.
- When the animal is 3 months old, contact the veterinarian for vaccination.
- Provide calf starter from 2-8 weeks for better growth and early maturity.



Licking stimulates the calf to stand up



Dipping the navel in 7% Tr.iodine is very important in preventing navel infections



A new born calf should receive colostrum as early as possible



Hand-feeding to ensure adequate colostrum intake by calves

Example of a simple calf starter (approx. percentages)

Maize- 52 %; Oats - 20 %; Soya bean meal - 20 %; Molasses - 5 %; Salt - 0.5 %; Minerals (Macro & Micro) - 1.5%; Vitamins - 1%

Timely care of new-born calf will ensure its survival

B. CALF DIARRHOEA

- Diarrhoea in calves can occur due to various reasons.
- Calves with diarrhoea lose considerable amounts of water and electrolytes.
- Diarrhoea and rapid loss of fluid and ions can cause the calf to die very quickly.

MANAGEMENT OF CALF DIARRHOEA

- Replace the lost water and electrolytes at the earliest - Feed 2-4 litres of electrolyte solution every day.
- The electrolyte solution provided should be over and above the normal feeding.
- Consult a veterinarian at the earliest to determine the cause of diarrhoea and to provide appropriate treatment.

Home electrolyte solution formula

(For 1 litre of warm water)

Glucose * - 5 teaspoons

Soda bi carb - 1 teaspoon

Table salt - 1 teaspoon

1 teaspoon=5 g (approx.)

* Calves do not digest table sugar (sucrose) effectively and addition may worsen diarrhoea leading to more fluid and electrolyte loss. Glucose is hence preferred.

ASSESSING LEVELS OF DEHYDRATION

Dehydration level (%)	Symptoms
Up to 5%	No symptoms, animal is normal.
5 – 6%	Diarrhoea, no clinical signs, strong suckling reflex.
6 - 8%	Mild depression, skin tenting* 2-6 seconds, still suckling, sunken eyes, weak.
8-10%	Depressed, laying down, eyes very sunken, dry gums, skin tenting more than 6 seconds.
10-14%	Cannot stand, cool extremities, skin remains tented, comatose.
Over 14%	Leads to death

* The skin above the eye and around the chest and neck should rapidly snap back and return to normal when released. If the skin remains raised it is considered 'tenting'. The time taken to return to normalcy indicates the level of dehydration.

Calves showing symptoms of above 8% dehydration require immediate intravenous fluid therapy, contact a veterinarian immediately.

PREVENTION OF CALF DIARRHOEA

- Ensure that adequate quantities of colostrum has been fed to the calf within 6 hours of birth to avoid failure of transfer of immunity.
- Ensure that the calf is maintained in a hygienic and dry environment.
- Ensure udder cleanliness before allowing the calf to suckle.

Early management of diarrhoea will save your calf

SECTION IV

DISEASES PREVENTABLE BY VACCINATION

Our country is endemic to many diseases that cause severe economic losses due to drastic reduction in the production capacity. Some of the diseases are even highly fatal. Fortunately, vaccines are available for most of these diseases in our country and can be easily controlled if timely vaccination is carried out in a mass scale, covering a large proportion of the susceptible population (at least 80%). This section describes the following diseases that can be easily prevented by resorting to timely and regular vaccination:

- A. Foot and Mouth Disease (FMD)
- B. Haemorrhagic Septicaemia (HS)
- C. Black Quarter (BQ)
- D. Brucellosis
- E. Infectious Bovine Rhinotracheitis (IBR)
- F. Rabies
- G. Anthrax
- H. Theileriosis
- I. Vaccination schedules for cattle and buffalo
- J. Important points to be noted during vaccination
- K. Common reasons for vaccination failure

A. FOOT AND MOUTH DISEASE (FMD)

- A highly contagious viral disease
- Spreads through contact, contaminated water, feed and air.
- Disease is rarely fatal for adults, however the milk production, fertility in females and draft power of males are severely impaired for life after recovery from disease.
- Usually fatal in calves.
- Also affects sheep, goat (usually sub-clinically and are maintenance hosts) and pigs, which are amplification hosts (multiplies the virus around 3000 fold).

SYMPTOMS



Foot lesion



Tongue lesion



Dental pad lesion



Udder lesion

- Drastic drop in milk production and working capacity (draft animals).
- Fever and serous nasal discharge and excessive salivation.
- Vesicles may be seen on tongue, dental pad, lips, gums etc.
- Vesicle in inter-digital cleft may lead to lameness.
- Lesions on teat may lead to mastitis.
- Loss in condition may persist even after recovery.

PREVENTION

- Get your animals aged 4 months and above vaccinated once in 6 months.
- Infected animals should be immediately separated since all excretions and secretions from infected animals contain the virus.
- All feed and fodder in contact with the infected animal should be destroyed.
- All equipment used should be cleaned and disinfected with 4% sodium carbonate solution or as suggested by a veterinarian.
- Healthy animals should not be handled by persons in contact with infected animals.
- The infected premises should be disinfected with 4% sodium carbonate solution or with the disinfectant suggested by a veterinarian.
- Vaccinating sheep, goat and pigs would control the disease to a better extent.
- Informing authorities promptly would enable them initiate control measures at the earliest which will help in limiting the spread of the disease.

MANAGEMENT OF FMD

- Treatment is only symptomatic, the disease will run its course.
- Emollients may be applied on lesions to soothe pain.
- Contact veterinarian for suitable advice.

Vaccinate your animals regularly against FMD to avoid economic losses

B. HAEMORRHAGIC SEPTICAEMIA (HS)

- This is an acute bacterial disease of cattle and buffaloes which usually occurs during monsoon.
- Mortality rate may be as high as 80 %.
- Germs of this disease survive longer in humid and waterlogged conditions.

SYMPTOMS

- High temperature, sudden decrease in milk yield.
- Salivation and serous nasal discharge.
- Severe oedema of the throat region.
- Difficulty in breathing , animal produces a grunting sound.
- Animal usually dies within 1-2 days of showing symptoms.
- Buffaloes are generally more susceptible than cattle.
- Animals with clinical signs, particularly buffalo, rarely recover.
- In endemic areas, most deaths seen in older calves and young adults.



Severe throat and brisket oedema

PREVENTION

- Segregate the sick animal from healthy ones and avoid contamination of feed, fodder and water.
- Avoid crowding especially during wet seasons.
- Vaccinate all animals which are 6 months and above of age annually before the onset of monsoon in endemic areas.

TREATMENT

- Treatment is usually ineffective unless treated very early , that is during the stage when fever sets in.
- Few animals survive once clinical signs develop.
- Case fatality approaches 100% if treatment is not followed at the initial stage of infection.

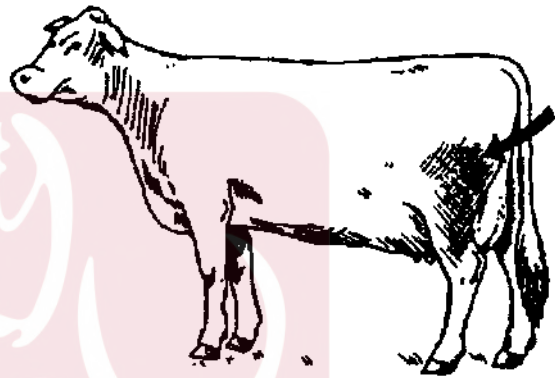
Get your animals vaccinated annually against HS before rains

C. BLACK QUARTER (BQ)

- An acute disease of cattle characterized by emphysematous swelling usually in heavy muscles.
- Buffaloes usually suffer from a milder form.
- Contaminated pasture appears to be major source of infection.
- Healthy animals in the age group 6 months to 2 years are generally affected.

SYMPTOMS

- Sudden high fever (107°F-108°F) and the animal stops eating and ruminating.
- Characteristic hot and painful swelling develops on loin and buttocks causing lameness. Swelling sometimes affects shoulders, chest and neck also. When pressed, a crackling sound is heard because of the gas accumulation in the swellings.
- Animal dies within 24-48 hrs of appearance of symptoms. At this juncture, swellings become cold and painless.



Swelling on legs

PREVENTION

- Vaccinate all animals which are 6 months and above of age annually before the onset of monsoon in endemic areas.
- Burning the upper layer of soil with straw to eliminate spores may be of help in endemic areas.
- Sprinkle lime over carcass at the time of burial.

TREATMENT

- Treatment may be effective in initial stages of infection. However in most cases treatment is not worth the while.

Get your animals vaccinated annually against BQ in endemic areas

D. BRUCELLOSIS (CONTAGIOUS ABORTION)

- An important bacterial disease of cattle and buffalo.
- Leads to loss in milk production, loss of calf, birth of weak or diseased calf ,repeat breeding and even mastitis.
- Humans may also get the disease from consumption of raw milk of infected animal or contact with uterine discharges.
- The disease is very much prevalent in India, both in humans and animals.

SYMPTOMS



Joint swelling



Abortion



Retention of placenta

- Abortion occurs typically after 5th month of pregnancy.
- In an infected animal, chances of abortion reduces with number of calvings.
- No abortions may be observed after 4th calving, but dam and calf remain infected.
- Placental retention may lead to infection and even death of the animal.

PREVENTION

- Vaccinate female calves (not male calves) between 4-8 months of age.
- Only one vaccination is required in its lifetime to protect it from brucellosis.
- Any abortion from 5th month onwards should be suspected for brucellosis.
- Ideally such animals should be culled. If culling is not possible, isolate the animal immediately for a minimum of 20 days after calving/abortion.
- The aborted foetus, placenta, contaminated bedding, feed etc, should be buried (at least 4 feet deep) after a liberal sprinkling of lime. These materials contain very high bacterial loads and if disposed improperly cause the spread of disease by contaminating food sources (pasture, feed, water etc).
- Disinfect the shed after isolating the aborted animal.
- When the animal is in isolation, disinfect the lochial discharges (which also contain high bacterial loads) daily with 1-2% NaOH or 5% sodium hypochlorite (bleach) solution till the discharges cease (usually by 10 –15 days).
- Do not handle infected material with bare hands since the disease is zoonotic.

TREATMENT

- There is no effective treatment once the animal is infected since the bacteria remains in the body of the animal. Consult a veterinarian in case of suspicion.
- Disease in humans is curable provided proper treatment regimen is followed.

Vaccinate 4-8 month old female calves once - protect them for life.

E. INFECTIOUS BOVINE RHINOTRACHEITIS (IBR)

- An important viral disease affecting domestic and wild cattle and buffaloes.
- There are three forms : respiratory, genital and encephalitic, the first two are more common. There is a high prevalence of this disease in India.
- Causes abortions, ROP, moderate reduction in milk production and even death in calves. Infection can be transmitted through semen.

SYMPTOMS



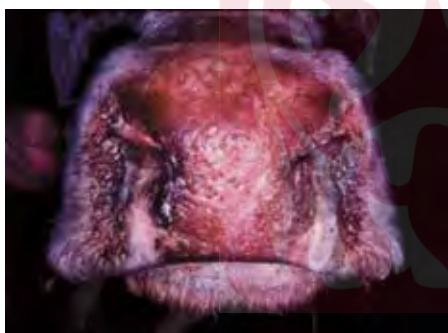
Salivation

- Coughing, profuse bilateral serous discharge from nostrils and pyrexia.
- Rhinitis, conjunctivitis (one or both eyes) with profuse ocular discharge.
- In genital form, swollen vulva with papules which later become ulcers.
- Abortion is common at 6-8 months of pregnancy.



Genital form - Pustules on vulva

- Uncomplicated cases of respiratory and genital forms usually resolves in 5-10 days. Infected animals may carry the virus throughout its lifetime.
- The brain may be effected in calves below 6 months causing high mortality.



Respiratory form - Red nose



Respiratory form - Necrosis of mucous membrane

PREVENTION AND CONTROL

- Purchase new animals only after testing them.
- Induct only negative animals to your farm.
- Vaccination is a method of prevention.
- Consult a veterinarian immediately if the above symptoms are seen to prevent the disease from spreading.



Vaccination

IBR is an emerging disease that needs to be controlled

F. RABIES

- A highly fatal viral disease mainly transmitted by bite of a rabid dog.
- Humans can get the disease through bites of rabid dogs.
- Wild carnivores and bats also present a considerable risk where the disease is prevalent. The disease is endemic in India.

COMMON SYMPTOMS

- Hyperexcitability.
- Drooling of saliva
- Peculiar hoarse sound (bellowing)
- Aggression or paralysis
- The animal dies within 24-48 hours after appearance of first sign, which may be mostly seen within 3 weeks or as late as 5-6 months of the dog bite. Once symptoms are seen, death is inevitable.



Bellowing and salivation

PREVENTION

- Wash the wound immediately in running water for 5-10 minutes.
- Gently clean the wound with bath soap.
- Consult a veterinarian immediately.
- Carry out post-bite vaccination in suspected cases. (see chapter on vaccination)
- Protect your pet dogs and cats against the disease through annual vaccination.



Paralytic form of rabies

Vaccinate in time to save your animal

G. ANTHRAX

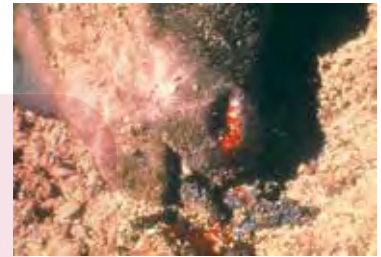
- A highly fatal bacterial disease affecting all farm animals.
- Disease is characterized by high fever, respiratory distress, bleeding from orifices and sudden death.
- Infection is due to ingestion of contaminated feed and fodder with spores of the bacteria, which can survive for up to 30 years in the soil.
- Treatment is usually ineffective unless done at very early stages.
- Humans get infection by eating infected raw meat, contact with infected animals or by inhalation of spores.



Sudden death

PREVENTION

- Regular annual vaccination of animals in endemic areas will prevent the disease from occurring.
- Vaccination may be carried out at least a month prior to expected disease occurrence in endemic areas.



Bleeding

- Never open a carcass of an animal suspected to have died from Anthrax.
- Contact a veterinarian immediately if the above symptoms are seen and seek advice on control measures to be adopted.

H. THEILERIOSIS (a protozoan disease)

- Young exotic and crossbred cattle are highly susceptible. Indian breeds of cattle (Zebu) are comparatively resistant.
- Buffaloes are also infected but symptoms are mild.
- Fever, swollen peripheral lymph nodes, pallour of mucous membranes, anaemia, nasal discharge, jaundice, salivation, rapid and shallow breathing, watery eyes etc are common symptoms.
- Cattle lose condition rapidly.
- Some animals show nervous signs characterized by stepping gait, head pressing, recumbency, unconsciousness and death.



Swollen lymph node in a theileria infected calf.

PREVENTION AND TREATMENT

- Regular tick control is the most effective way to keep these infections in check (see chapter on tick control).
- Seek veterinary treatment if above symptoms of any of the above diseases are seen, since treatment is most effective in the initial stages. Delays may result in death.
- For control of theileriosis, vaccinate all exotic and crossbred animals aged 3 months and above, once in its lifetime.

I. VACCINATION SCHEDULES FOR CATTLE AND BUFFALOES

S.no	Name of Disease	Age at first dose	Booster dose	Subsequent dose(s)
1	Foot and Mouth Disease (FMD)	4 months and above	1 month after first dose	Six monthly
2	Haemorrhagic Septicaemia (HS)	6 months and above	-	Annually in endemic areas.
3	Black Quarter (BQ)	6 months and above	-	Annually in endemic areas.
4	Brucellosis	4-8 months of age (Only female calves)	-	Once in a lifetime
5	Theileriosis	3 months of age and above	-	Once in a lifetime. Only required for crossbred and exotic cattle.
6	Anthrax	4 months and above	-	Annually in endemic areas.
7	IBR	3 months and above	1 month after first dose	Six monthly (vaccine presently not produced in India)
8	Rabies (Post bite therapy only)	Immediately after suspected bite.	4th day	7,14, 28 and 90 (optional) days after first dose.

J. IMPORTANT POINTS TO BE NOTED DURING VACCINATION

- Animals should be in good health at the time of vaccination.
- The cold chain of the vaccines wherever prescribed should be maintained till the time of administration to the animal.
- The manufacturers' instruction on the route and dosage should be strictly followed.
- A minimum vaccination coverage of 80% of population is required for proper control of the disease.
- It is beneficial to deworm the animals 2-3 weeks before vaccination is carried out for better immune response.
- Vaccination should be carried out at least a month prior to the likely occurrence of the disease.
- Vaccination of animals in advanced pregnancy may be avoided even though in most cases nothing untoward may happen.

K. COMMON REASONS FOR VACCINATION FAILURE

- Lack of maintenance of cold chain from the time of manufacture till vaccination.
- Poor immune response in weak and improperly fed animals.
- Lack of herd immunity due to only a few animals being vaccinated.
- Poor quality of vaccine - Quality will deteriorate if repeatedly thawed and cooled.
- Low efficiency or ineffective vaccine – May occur in case of strain variation (eg. FMD).

Vaccination is the easiest and cheapest way to prevent diseases

SECTION V

OTHER IMPORTANT DISEASES

There are certain other diseases which cause severe economic losses but cannot be prevented by vaccination since there are no vaccines available. A few of these diseases are self limiting and proper care and treatment during infection may aid in recovery.

Besides these, there are some diseases which are incurable and the only option is to isolate and remove infected animals from the herd to prevent infection spreading to other animals. The clinical symptoms are seen only late in the disease and animals can spread the infection before exhibiting any symptoms. This section therefore deals with the following important conditions:

- A. Johne's Disease (JD)
- B. Bovine Tuberculosis (bTB)
- C. Mycotoxicosis
- D. Ephemeral Fever (3 day sickness)
- E. Foot rot
- F. Dermatophytosis
- G. Dermatophilosis
- H. Lumpy Skin Disease

A. JOHNE'S DISEASE

- An important bacterial disease of ruminants causing long-lasting diarrhoea with heavy economic losses.
- Loss of weight despite good appetite.
- Bottle jaw may also appear.
- Once clinical signs appear the animal will not recover and will continue to deteriorate.

PREVENTION AND CONTROL



Loss of weight

- Johne's disease is not curable.
- Positive animals should be culled from farm as it may infect other healthy animals.
- Purchase new animals only after testing them.
- Induct only negative animals to your farm.
- Carry out regular testing of your animals.
- Consult a veterinarian to test your animals for Johne's disease.

B. BOVINE TUBERCULOSIS (bTB)

- It is also an important bacterial disease of cattle and buffalo.
- The disease develops over a number of years and results in weakness, coughing and weight loss.
- Also leads to anorexia, emaciation, difficulty in breathing, enlargement of lymph nodes and diarrhoea.
- The disease is also transmissible to humans.

PREVENTION AND CONTROL

- Bovine Tuberculosis is also not curable.
- Positive animals should be culled from farm as it may infect other healthy animals.
- Purchase new animals only after testing them.
- Induct only negative animals to your farm.
- Carry out regular testing of your animals.
- Consult a veterinarian to test your animals for bTB.

Purchase only negative animals to avoid TB and JD.

C. MYCOTOXICOSIS

- Disease is caused by toxins produced by mold (fungus) that grows on feed (eg. ground nut cake, maize etc) and stored fodder (paddy straw etc) that is damp. Mainly result in Aflatoxicosis and Degnala disease in bovines.
- The toxins can occur in concentrations high enough to cause major losses in health and performance of the animal.
- The economic impact of reduced productivity is many times the impact caused by fatalities, milk production may drop by more than 15%.



Mold growth on cattle feed stuffs



Mold growth on paddy straw

COMMON SYMPTOMS

- Gradual loss of appetite and body condition, intermittent diarrhoea may be seen.
- Alopecia, sloughing of extremities like tail and ear.
- Gangrenous lesions on foot.
- High producers may show symptoms first.
- Reduction in feed consumption, reduced fertility, abortions, weight loss, increased occurrence of ketosis, Retention of Placenta (ROP), metritis, mastitis and other diseases due to lowered immunity.



Gangrenous foot lesions and tail necrosis due to aflatoxins.

PREVENTION

- Avoid feeding dry fodder that is or has been damp and is obviously moldy and also avoid feeding feed ingredients with fungus.
- Provide adequate mineral mixture supplements and green fodder.
- Consult a veterinarian immediately on observing any of the above symptoms.

Avoid feeding moldy straw and feed–prevent mycotoxicosis.

D. EPHEMERAL FEVER (Three day sickness)

- Ephemeral fever is viral disease of cattle and buffalo.
- It is an insect-transmitted disease.
- Persists usually for 3 days.
- Morbidity may be very high but mortality is very low (1-2%).

SYMPTOMS

- Biphasic to polyphasic fever with shivering, tears from eyes and decreased appetite.
- Nasal discharge, drooling, labored breathing, depression, stiffness, lameness and sudden decrease in milk yield.

PREVENTION AND TREATMENT

- Spontaneous recovery usually occurs within a few days.
- Proper fly control would help to reduce the disease (See chapter on fly management).
- Complete rest is the most effective treatment. Recovered animals should not be stressed or worked for some days since relapse may occur.
- Consult a veterinarian for symptomatic treatment.



Nasal discharge, drooling



Unable to rise

E. FOOT ROT

- Foot rot is a bacterial infection which is of great economic importance for dairying.
- The incidence varies according to weather, season of year, grazing periods, housing system, type of flooring etc.
- Stony ground, sharp gravel and pasturing on coarse stubble also predispose to the condition.

SYMPTOMS



Foot rot with lesion

- Fever and anorexia.
- Reduced milk yield.
- Swelling of inter-digital space.
- Foul smell from lesion.
- Severe lameness -Animal holds leg in air to relieve pressure.
- Hind feet are affected most



Severe foot rot

often and cattle tend to stand and walk on their toes.

PREVENTION AND TREATMENT

- Remove sources of injury and keep feet dry and clean.
- Animals that are actively shedding infectious organisms should be isolated until signs of lameness have disappeared.
- Steps should be taken to ensure that areas around drinking troughs, gateways, and tracks are adequately drained.
- Preventive use of a footbath with an astringent and antiseptic solution eg. copper sulphate 5% & zinc sulphate 10%, gives good results.
- Systemic therapy is more important than topical treatment.
- Prompt diagnosis and initiation of parenteral antimicrobial therapy are essential to achieve a satisfactory response.
- If improvement is not evident within three to four days, it may mean the infection has invaded the deeper tissues.
- Contact a veterinarian immediately on observing the above symptoms.



Regular foot bath is useful in preventing foot rot

Proper foot care is very important

F. Dermatophytosis

- Fungal disease of keratin tissue (skin and hair).
- Caused by a group of fungi called dermatophytes.
- Direct contact is the most common method of transmission.
- May be transmitted to humans.
- Though lesions are unsightly, economic losses are minimal.
- Lesions may cause some degree of discomfort or may lead to secondary bacterial infection.

SYMPTOMS

- Circular and slightly raised grey-white areas on skin called crusts.
- Size of lesions are very variable and can become very extensive.



Crust formation in dermatophytosis

PREVENTION AND TREATMENT

- Usually recovers without treatment; however this can take many months.
- Clean and disinfect premises regularly.
- Reduce the density and direct contact between animals.
- Increase exposure to sunlight.
- Medicine to be applied topically after removing the crusts by scraping or brushing since medicine cannot penetrate the crust.
- Crust should be collected and burned to avoid contamination of premises.
- Consult a veterinarian for proper treatment.



G.Dermatophilosis

- The disease affecting the skin is caused by *Dermatophilus congolensis*, a type of bacteria.
- Direct contact or biting insects may transmit the disease.
- Prolonged wetting by rain, high humidity and temperature and, presence of ectoparasites are predisposing factors.
- The organism can remain in a dormant form in the skin until the conditions are appropriate.
- Can be transmitted to humans.

SYMPTOMS

- Lesions are characterized by dermatitis and scab formation.
- Lesions can be observed in 3 stages (i) hairs matted together as paint-brush (ii) crust or scab formation as the initial lesions coalesce (iii) wart- like lesions due to accumulation of cutaneous keratinized material.
- Most affected animals recover spontaneously within 3 weeks of initial infection.
- Onset of dry weather hastens healing.
- There is severe productivity loss in animals with extensive lesions.
- Deaths may occur, especially in calves.



Scab formation in dermatophilosis

PREVENTION AND TREATMENT

- Avoid damp conditions.
- Proper ectoparasite control.
- Hand-washing with an antibacterial soap after handling infected animals to avoid infection in humans.
- Consult a veterinarian for proper treatment.

H. Lumpy Skin Disease

- It is a viral disease caused by a pox virus.
- It is an emerging disease in India.
- Biting insects and ticks may transmit the disease.
- Direct contact does not play a major role in the transmission of the virus.

SYMPTOMS

- Fever and marked reduction in milk production.
- Enlarged superficial lymph nodes.
- Rhinitis, conjunctivitis and excessive salivation.
- Cutaneous nodules of 2–5 cm diameter seen all over the body within 48 hours of onset of fever.
- Nodules are circumscribed, firm, round and raised, and involve the skin, subcutaneous tissue and sometimes even the underlying muscles.
- Large nodules may become necrotic and eventually fibrotic and persist for several months.
- Small nodules may resolve spontaneously without consequences.
- Myiasis of the nodules may occur.
- Vesicles, erosions and ulcers may develop in the mucous membranes of the mouth and alimentary tract and in the trachea and lungs.
- Pregnant cows may abort and may not come into heat for several months.
- Bulls may become permanently or temporarily infertile.



Enlargement of superficial lymph node



Nodules on body and muzzle

PREVENTION AND TREATMENT

- Ensure proper and tick and biting arthropod control.
- Consult a veterinarian immediately if symptoms are observed.



SECTION VI

TICK AND FLY BORNE DISEASES

Tick infestation is a major problem for dairy farmers. Many farmers find it difficult to control the problem. Ticks and biting flies cause a great amount of discomfort to the animal and also drain the animal of considerable amounts of blood, which in itself leads to a significant decrease in productivity. More importantly, they are also responsible for transmitting some diseases that destroy the blood cells. Infected animals, if not treated in time will succumb to the infection or remain chronically ill. It is therefore important to understand the symptoms of such diseases so that timely advice and treatment is sought from a veterinarian. The following chapters are covered under this section:

- A. Anaplasmosis
- B. Babesiosis
- C. Trypanosomiasis
- D. Theileriosis (Refer chapter H of section IV)

TICK- BORNE INFECTIONS

- Anaplasmosis, Babesiosis and Theileriosis (already covered under chapter H of Section IV) are the three main tick-borne infections affecting blood.

A. ANAPLASMOSIS

- Anaplasmosis is caused by a small type of bacteria called rickettsia.
- Anaplasmosis can also be spread by blood contaminated needles or AI gloves.
- Calves are more resistant to anaplasmosis than older cattle.
- Carriers exist in endemic areas which act as reservoirs of infection.
- Chronically infected cattle may relapse in adulthood.
- Fever, fall in milk production, progressive anaemia, jaundice, abortion are the common symptoms.
- In later stages, inappetence, incoordinated movements, breathlessness when exerted, and a rapid pounding pulse are usually seen and animals may succumb.
- The disease is curable if treated promptly in early stages.

B. BABESIOSIS

- Babesiosis is caused by a type of microbe called protozoa.
- Fever, inappetence, increased respiratory rate, sharp decrease in milk production, muscle tremors, anaemia, jaundice, abortion, constipation or diarrhoea are the common symptoms.
- Curable if treated promptly.
- In later stages, loss of weight with haemoglobinuria is seen. Nervous symptoms may also be seen.
- It is better to repeat treatment if colour of urine does return to normal by 24 hours after treatment.
- Babesiosis is not to be confused with "Red Water Disease" which is an acute highly fatal bacterial disease seen especially in areas with liver fluke infestation.



Urine before treatment (i) and progressive improvement (ii to iv) to normal (v) after prompt treatment.



Treat tick-borne infections promptly – save your animal

C. TRYPANOSOMIASIS (SURRA)

- An important disease of cattle and buffalo caused by protozoa.
- Transmitted mechanically by biting flies.
- Cattle and buffalo also are reservoir hosts to horses and camels.
- Blood from infected animal, occasionally meat and milk are the sources of infection.
- There is severe loss of productivity due to anaemia. Animals under stress are more susceptible to the disease.

BITING FLIES THAT CAN TRANSMIT SURRA



Tabanus



Stomoxys



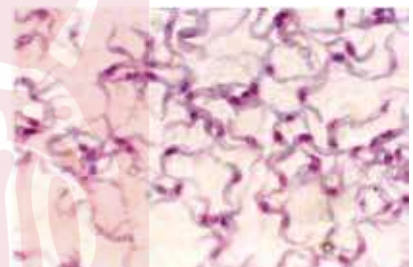
Haematobia

SYMPTOMS



Weak and anaemic animal

- Progressive anaemia, weight loss and weakness.
- Abortions, infertility and stillbirth may occur in buffaloes.
- Cattle may have a chronic course with high mortality and may last up to 2 years.



Tryps in blood

- Death may occur in 2 weeks to 2 months.
- Oedematous swellings of the lower parts of the body (legs, briskets and abdomen) may be seen.
- Lymph nodes also may be swollen.
- Nervous signs like head tilt, circling, blindness, hyper-excitability, paddling movements may also be seen.

PREVENTION

- Control fly population (see chapter on fly control).
- Sufficient ventilation and sunlight should be available in the shed.
- Insecticide applications may be done in the shed and surrounding areas under advice of a veterinarian.

TREATMENT

- Call the veterinarian immediately on seeing the symptoms for treatment.
- Timely and early treatment ensures a high cure rate.

Control biting flies – control Surra

SECTION VII

TICK, FLY AND WORM CONTROL

Both external (tick and flies) and internal parasites (worms) cause a marked reduction in the production potential of the animal. As already discussed in the previous section, ticks and flies also are responsible for transmitting certain diseases. Worms inside the body drain the animal of valuable nutrients. Infestations with worms lead to poor growth rate, diarrhoea, delayed maturity, weakness, increased susceptibility to infection, low response to vaccination and in severe cases, may lead to death. A little attention in controlling the external and internal parasites would go a long way in harnessing the production potential of the animal. This section therefore deals with the following chapters:

1. Tick and fly control.
2. Management of worm infestation.



A. TICK AND FLY CONTROL

- Ticks transmit diseases like anaplasmosis, theileriosis and babesiosis (see chapter on tick-borne diseases).
- Biting flies transmit diseases like Surra and E fever (see respective chapters).
- Heavy infestations may lead to anaemia and significant loss in productivity.
- Tick and biting flies cause severe discomfort to the animal.
- May cause allergic reactions at the biting sites.
- They lay a large number of eggs resulting in further increase in population.



Various types of ticks



A tick with eggs



Skin allergy due to tick bite



Skin allergy due to fly bite

I. TICK CONTROL

- Any newly purchased animal should be completely de-ticked before allowing to mix with other animals.
- Carry out periodic application of acaricide on the animal.
- Each adult tick lays around 3000 eggs and the larvae can survive from 2-7 months, based on the climate, without feeding.
- All cracks and crevices in the cattle shed therefore should be sprayed with a higher concentration of the acaricide along with application on the body to avoid re-infestation. Flaming also can be done using a flame gun if available, with a little bit of caution.
- The acaricide group should be changed often to avoid resistance from developing.
- The acaricide should be applied in proper concentration.
- Seek advice from a veterinarian on the appropriate acaricide and its dosage.

II. FLY CONTROL

- Proper manure and urine disposal on a regular basis. Disposal should be done at a reasonable distance from the cattle shed.
- Any stagnation of drainage should be avoided.
- Smoking the shed with raw leaves (neem leaf preferred) especially during evenings would help reduce the nuisance.
- Fly repellants may be used in proper concentration.

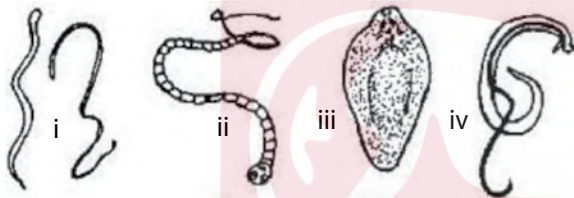
Natural repellants like neem oil etc, may be applied regularly to repel both biting flies and ticks. This does not have any harmful effects of chemicals and chances of resistance developing are also remote. Application should be always done against the direction of the hair and should cover the entire body, especially underbelly and legs.

MANAGEMENT OF WORM INFESTATION

- Worms are parasites that usually live inside the digestive tract of the host, feeding on tissue fluids or blood of the animal. Worms may also be found in lungs, nasal passage, eye etc.
- Eggs are passed through the faeces which contaminate pasture, feed or water sources. Some cause disease in humans also.
- There are basically four types of worms : (i) Round worms and (ii) Tapeworms-found in the digestive tract; (iii) Flukes- found in the rumen and liver and (iv) Schistosomes – found inside blood vessels. (See figure below)
- Different treatment regimens are required based on the type of the worm.

SYMPTOMS OF WORM INFESTATION

- Diarrhoea, delayed age at maturity, reduction in growth rate and milk production, lower reproductive, draft and feed conversion efficiencies, lower disease resistance, anaemia etc.
- In amphistome (rumen and liver fluke) infestation, severe foetid diarrhoea and sub-mandibular oedema (bottle-jaw) may be seen.
- Jaundice may be seen in liver fluke infestation.
- In tapeworm infestation, pot-belly and moving small white segments in faeces maybe seen. It may also cause intestinal obstruction due to its length.
- Hookworm (type of round worm that sucks blood) and schistosome infestation may cause severe anaemia and bloody diarrhoea.
- Thick nasal discharge, snoring and shortness of breath may be seen in nasal schistosome infestation. Cough is seen in lungworm (type of round worm in lung) infestation.



Different types of worms



Weak animal



Bottle-jaw

PREVENTION AND TREATMENT

- First dewormer dose to calves to be given between 7-10 days of age and repeated monthly till 6 months of age.
- Administer dewormer to all animals above 6 months of age twice a year, once at the beginning and another at the end of the rainy season. Ensure administration on the back of the tongue rather than into the mouth to avoid rumen bypass.
- Adopt deworming on a mass scale to reduce the egg load of worms in the soil.
- Pregnant animals should also be dewormed twice, 1st dose near its calving time and the 2nd dose around 6-7 weeks after calving.
- If the animal is not responding to treatment, get the dung of the animal examined by a veterinarian to determine the type of worm and provide appropriate drug as advised.
- In areas with snail population (water-logged etc), flukes and schistosomes may be suspected, since snails are involved in completion of its lifecycle.
- To avoid drug resistance, do not administer the same drug repeatedly .
- For any worm treatment to be effective, the drug must be provided in adequate dosage, consult a qualified person for proper advise.



Deworm your animals regularly – Increase the productivity

SECTION VIII

DISEASES THAT OCCUR AFTER CALVING

There is a huge increase in the requirement of nutrients and minerals in the body immediately after calving. Unless the body of the animal is conditioned properly through proper management and feeding during pregnancy, there is a high probability of such animals developing disease conditions due to such nutritional deficiencies which are collectively called "Metabolic Diseases" which leads to drastic decrease in milk production or even leads to death if timely treatment is not given. It would be important to identify the symptoms of such diseases so that prompt veterinary aid can be sought. The chapter describes the following disease conditions:

- A. Hypocalcaemia (Milk Fever)
- B. Hypomagnesaemia
- C. Ketosis
- D. Post-parturient haemoglobinuria
- E. Prolapse of Uterus
- F. Retention of Placenta
- G. Udder Oedema
- H. Fatty Liver Syndrome (Lipidosis)

A. HYPOCALCAEMIA (MILK FEVER)

- Occurs due to low calcium level in blood, there is actually no fever. May also cause dystocia, ROP and uterine prolapse.
- Occurs usually within 72 hours of calving. Initial stage is excitability with fine tremors over flank and loins, ear twitching and head bobbing.
- Complete milking during the first 48 hours of calving may precipitate milk fever in some cases.
- The animal is unable to stand up and in later stages become recumbent, first with its neck turned to one side and then laterally. Eye reflex is also lost.
- In last stage the animal becomes unconscious with sub-normal temperature.
- Hypocalcaemia also exists in sub-clinical form with greater risk of the animals developing fever, metritis & ketosis. More losses are thought to occur from this form.

VARIOUS STAGES IN MILK FEVER



Unable to get up



Head turned to one side



Lateral recumbency

PREVENTION AND TREATMENT OF MILK FEVER

- Do not feed calcium supplements in excess during late pregnancy.
- Chances of milk fever in prone animals is reduced greatly if given 3-4 doses of oral calcium 12-24 hours before calving to 48 hours post calving, with each dose providing 40-50 g of calcium.
- Anionic salts like ammonium chloride and magnesium sulphate or ammonium sulphate (50-100 g each/day) may be fed during last 3 weeks before calving.
- Contact veterinarian immediately if symptoms are seen, animals respond to therapy instantly. If left untreated, the animal will succumb.
- Some animals may relapse within 24-48 hours and require further treatment.
- An animal should ideally have a urine pH between 6.5-7 near the time of calving. Higher pH indicates increased risk of milk fever.

B. HYPOMAGNESAEMIA

- Occurs due to low magnesium levels in blood, adult lactating animals are most susceptible. May occur in calves also.
- Normal animal suddenly throws up its head, bellow, gallop and fall exhibiting severe paddling convulsions which are repeated in short intervals.
- In milder cases animal walks stiffly, is hypersensitive to touch and sound, urinates frequently and may progress to convulsive stage after 2-3 days.
- Often occurs along with hypocalcaemia. Untreated animals will die.
- Soils fertilized with potash and nitrogen are high risk areas.

PREVENTION AND TREATMENT OF HYPOMAGNESAEMIA

- Provide Magnesium oxide @ around 50 g per day to animals at risk.
- Contact veterinarian immediately if symptoms are seen, animals respond to therapy instantly. May relapse after 1-2 days which require further treatment.



Timely treatment will save your animal

C. KETOSIS

- Occurs in lactating animals usually during the first 2 months of lactation.
- Initially there is slight decrease in feed intake, drop in milk production, lethargy and firm mucous covered dung.
- As disease progresses, there is marked weight loss, pica (animal seeks coarse materials), humped-back posture. Some even show frenzy and aggression.
- Compulsive licking of mangers, bodies, head and nose pressing, chewing bellowing may occur.
- Walking may be abnormal with staggering, circling and falling.
- If untreated, milk production decreases to an insignificant amount.
- Once a cow develops the condition, it is likely to recur in succeeding lactations.

PREVENTION AND TREATMENT OF KETOSIS

- Proper feeding during late lactation and dry period.
- Body score at calving should be 3.5 on a 5 point scale.(see chapter on body scoring)
- Sudden change of feed /overfeeding should be avoided.
- Conditions like ROP, metritis, mastitis, environmental stress etc should be managed properly.
- Contact a veterinarian when above symptoms are seen.



Weight loss in ketosis

D. POST PARTURIENT HAEMOGLOBINURIA

- Recent parturition, heavy milk production, phosphorous & copper deficiency, excess consumption of turnips, rape (Brassica species), sugar beet pulp etc, are considered as predisposing factors.
- Symptoms are haemoglobinuria, marked drop in milk production, fever, diarrhoea, severe anaemia, weakness and pallour and sloughing of the extremities.
- Diseases like babesiosis and theileriosis have to be ruled out.
- Contact a veterinarian when above symptoms are seen.



Haemoglobinuria

Timely treatment will save your animal

E. PROLAPSE OF UTERUS

- More common in buffaloes than in cattle.
- May have genetic predisposition and may occur pre or post partum.
- Place the prolapsed mass gently over a clean surface and protect it from soiling /flies/birds etc.
- Do not attempt to remove anything or push the uterus back, this may cause severe bleeding.
- Gently wash with saline solution if excessively soiled.
- Call a veterinarian for further treatment at the earliest.
- Prone animals may be kept with the hind quarter at a slight elevation.
- Check the vulval area for any stitch marks before purchasing an animal.



Prolapse of uterus after calving

F. RETENTION OF PLACENTA (ROP)

- Normally foetal membranes are expelled within 3 to 8 hours after delivery.
- It is termed as ROP if foetal membranes are not expelled even after 12 hours of parturition.
- Chances of ROP are increased in cases of abortion, dystocia, milk fever, twin birth, induction of calving, infection and nutritional disturbances.
- Never pull the placenta on your own.
- Consult a veterinarian to avoid complications like metritis, septicaemia etc which may lead to even death of the animal.
- Dispose the removed placenta by deep burial. Avoid handling it with bare hands.



Retained placenta

G. UDDER OEDEMA

- Accumulation of excess fluid in udder and sometimes in the belly around calving time.
- Mainly due to increased blood flow to udder against decrease flow from udder and increased permeability of blood vessels in the udder.
- More prevalent in high producing animals, especially heifers.
- Udder is not painful or hot and should not to be confused with clinical mastitis.
- Predisposing factors may be genetic, nutritional, obesity, lack of exercise.
- May become chronic and persist throughout lactation.
- Veterinarian may be consulted if the oedema interferes with milking the animal.



Cow with udder oedema

Proper management will lead to resolution



H. FATTY LIVER SYNDROME (LIPIDOSIS)

- Fatty liver can develop within 24 hours of an animal going off feed.
- This is typically happens around calving time. Fat mobilisation occurs as a result of negative energy balance which is exacerbated when off feed.
- The broken down fat is then converted back to fat in the liver thus the liver is filled with fat even when the cow is losing condition.
- Once fat is deposited in the liver, its concentration in the liver does not fall until the cow gets into positive energy balance, which can be over ten weeks after calving, particularly if the fatty liver is severe.
- Fat cows (Body Condition Score greater than 3.5) are much more prone to fatty liver. (Please see chapter on Body Condition Scoring)
- It is an important economic disease especially in high yielders because cows that develop fatty liver are affected by multiple metabolic and infectious diseases.

SYMPTOMS

- Lower milk yields
- Depressed appetite
- Incidences of milk fever, ketosis, mastitis, retained fetal membranes etc
- Reduced fertility
- This condition can be detected by blood tests.
- Mortality can be high.

PREVENTION

- There is no proven treatment for fatty liver.
- Ensuring that cows are calving at the correct body condition would prevent the breakdown of fat and fatty liver.
- An ideal body condition score to calve would be between 3 to 3.5 Cows should be dried of at this score and weight maintained through the dry period.
- Changing diets during this period should be avoided.
- Consult a veterinarian immediately if the above symptoms are seen.
- Glucose supplements can be given to overfat animals as preventive measure.
- Minimising stress is important for prevention of fatty liver. Sudden changes in environment should be avoided.



Fat cows are more prone to lipidosi

SECTION IX

DISEASES THAT OCCUR DUE TO FAULTY FEEDING

The digestive system of cattle is highly complex with the stomach having four chambers. The digestive process is based on the action of various types of microbes which break down the feed and provide nutrients to the animal. Any sudden change in feeding pattern or an improper feeding regimen is bound to disturb the balance of the various types of microbes, leading to an over population of certain unfavourable microbes that may cause various problems like laminitis or even death in severe cases (acute acidosis). Such conditions may also arise from interference in the process of natural gas expulsion produced as a by-product of microbial digestion. It is important to understand the common conditions so that timely advice or treatment can be sought from a veterinarian. The following conditions are described under this section:

- A. Bloat
- B. Rumen acidosis
- C. Sub-Acute Ruminal Acidosis (SARA)
- D. Laminitis

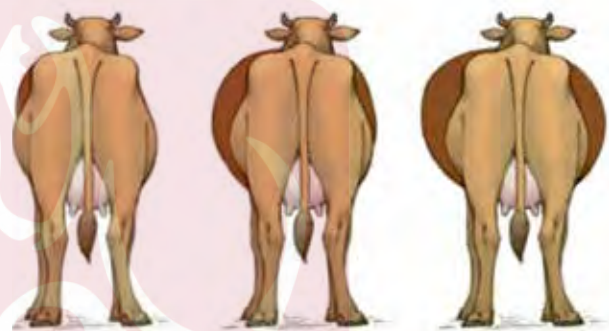


A. BLOAT

- Bloat is a form of indigestion marked by excessive accumulation of gas in the rumen.
- Bloat can occur when the animal grazes on lush young pasture, particularly if the pasture is wet. Some plants, e.g. clover, lucerne and alfalfa are especially dangerous in causing bloat but any fast growing plants can cause it.
- Choking due to foreign objects (esophageal obstruction) will also cause bloat by preventing gas release and causing accumulation of gas in the rumen.
- Sometimes feeding of leftover food such as dry bread can cause bloat.

SYMPTOMS OF BLOAT

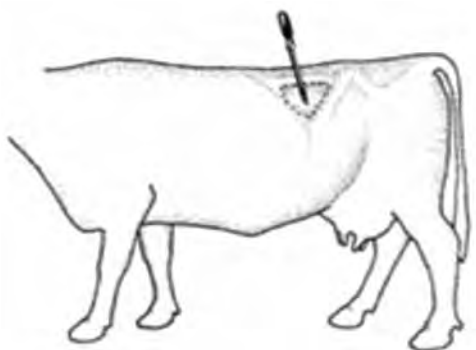
- The left flank balloons out.
- The animal kicks its belly or stands with its back legs wide apart.
- It has difficulty in breathing.
- In severe cases, death occurs due to asphyxiation.



Bloating can be mild to fatal

PREVENTION AND TREATMENT

- Avoid moving animals to wet pasture in the morning.
- Do not allow very hungry animals to graze a pasture. Offer dry, cut grass first before turning out to graze.
- Home remedies may be used in mild cases.
- In severe cases, puncturing the left flank with a sharp knife to release the gas is necessary, it will be necessary for you to act quickly as any hesitation could lead to the death of the animal.



Point for puncturing in the left flank

Home remedies for adult animals

- Drench coconut/vegetable /peanut oil: 300-500ml once a day for 2-3 days till recovery. Or;
- Above plus 30-40 ml turpentine oil. Or;
- Drench 1 tablespoon of detergent in half litre of water once. Or;
- Feed 4-6 banana leaves (mild bloat)

Timely treatment of bloat will save your animal

B. RUMEN ACIDOSIS

- Acidosis may be clinical or sub-clinical.
- Feeding large quantities of rapidly digestible carbohydrate in a short period of time causes clinical acidosis.
- In severe clinical cases, animals may be recumbent within 24-48 hours, which may resemble cases of milk fever. Animal may not urinate or pass dung.
- Sub-clinical acidosis is seen as a result of feeding increased concentrates compared to forage.



Diarrhoea in acidosis

- In sub-clinical acidosis there is reduced feed intake, weight loss, unexplained diarrhoea and exhaustion. This may also lead to laminitis and lameness.
- In severe clinical cases, prognosis may not be good. Some animals though appear to improve, may become seriously ill 3-4 days later.

PREVENTION AND TREATMENT OF ACIDOSIS

- Proper feeding practices should be adopted after consulting a veterinarian.
- Animal should be provided a roughage diet in the mornings before feeding concentrates so that adequate quantities of saliva is produced.
- Never provide the animal with large quantities of rapidly digestible carbohydrates.
- A veterinarian must be consulted immediately in case of clinical acidosis.

C. SUB-ACUTE RUMINAL ACIDOSIS (SARA)

- Occurs due to excessive acid production(usually not lactate unlike acidosis) due to abrupt switch from high fibre diets to higher concentrate diets.
- Major cause of reduced production efficiency.
- Mainly due to improperly balanced or mixed rations, low fibre content or particle size.

SYMPTOMS

- (i) Reduced feed intake (ii) reduced rumination (iii) mild diarrhoea (iv) foamy faeces (v) appearance of undigested >6mm particles in faeces (vi) depressed milk fat.
- Secondary effects : (i) Laminitis (ii) weight loss (iii) poor body condition despite adequate energy intake.
- Prevention : Correcting feeding practices



D. LAMINITIS

- Commonly seen in mature dairy cows during peak lactation, often a herd issue.
- Higher concentrate/protein, low forage, mastitis, metritis , acidosis etc predispose.
- Occurs in sub-clinical, acute and chronic form.
- Rough irregular flooring , lack of enough lying space also predispose to the disease.



Sole ulcer in sub-clinical laminitis



Cross leg in acute laminitis



Hoof deformity in chronic laminitis



Dropped sole in chronic laminitis.

PREVENTION OF LAMINITIS

- Provide soft flooring.
- Provide balanced feed which includes sufficient forage.
- Practice foot bath using 5% copper sulphate for 2-4 days continuously every fortnight.
- Arrange for regular hoof trimming at least once in 6 months.
- Adequate lying space should be provided to avoid excessive standing.
- Check hoofs regularly for any injury and signs of laminitis.



Arched back in severe lameness



Untrimmed hoof



Untrimmed and trimmed hoof



Trimmed hoof

Hoof care is essential especially in high yielders

SECTION X

MASTITIS AND DISEASES OF TEATS

Mastitis is a scourge that result in heavy losses to the dairy farmer by causing a reduction in milk production, drastic decrease or cessation of production, causing permanent damage to the udder or, even death of the animal in severe cases.

Pure exotic breeds like HF, Jersey etc have the highest susceptibility to mastitis followed by crossbreds. The lower susceptibility of local breeds is basically due to its lower milk production and a better immunity levels. Buffaloes are the least susceptible to mastitis.

With more farmers taking to crossbreeding for higher production, the prevalence of mastitis is also on the rise. Preventing the occurrence of mastitis would therefore play a pivotal role in making milk business profitable. A proper understanding of the mastitis will go a long way in reducing the incidence at the farmers' homestead.

Diseases of the teat may not lead to production losses directly, but indirectly there could be a decrease in yield due to difficulty in milking and pain caused by the lesions. This may also predispose the animal to mastitis. The following chapters are described here:

- A. Clinical mastitis
- B. Chronic mastitis
- C. Sub-clinical mastitis
- D. Mastitis in heifers
- E. Teat warts
- F. Ulcerative mammillitis
- G. Pseudocowpox



A. ACUTE MASTITIS

It is the severe inflammation of udder where physical changes are clearly visible in udder and milk. High yielding animals are more prone. Mainly caused by bacteria (more than 100 types). Also caused by fungi, virus & rarely by algae.

MAJOR PRE-DISPOSING FACTORS



Unclean animal/shed



Faulty milking practices



Teat/ udder Injury

MAJOR SYMPTOMS



Inflamed udder in clinical mastitis



Physical changes of milk in clinical mastitis

PREVENTION

- Manage the pre-disposing factors of mastitis properly.
- Before milking, clean the udder well with clean water and wipe dry with clean towel. Should use separate cloth towel for each animal. Disposable paper towel is also an option. Repeated use of unclean towel may itself predispose to mastitis.
- Milking should be quick, complete and hygienic.
- Milk animals with chronic mastitis in the end. (see chapter on this)
- Carry out teat dipping or spray immediately after milking.
- Prevent the animal from sitting for at least 30-45 minutes after milking.
- Periodically check and treat for sub-clinical mastitis (see chapter on this).
- Keep the floor of the cattle shed without holes and as dry as possible.
- Continue teat dipping/spray 2 weeks after drying off and start the practice two weeks before calving.
- Carry out proper fly control.

TREATMENT

- Contact a veterinarian immediately. Early treatment (within 2-3 hours) improves the chances of cure, delayed treatment may cause loss of udder or even death of animal.
- Milk of animal suffering from mastitis should be discarded at least for 4 days after the treatment is over or as directed by the veterinarian.

Detect and treat cases early. Avoid loss of udder or animal.

B. CHRONIC MASTITIS

- A persistent infection of udder.
- Exists most of the time in the subclinical form.
- Occasionally can develop into the clinical form before returning to the subclinical.
- This results in hard lumps in the udder.

MAJOR PRE-DISPOSING FACTORS

- Neglected sub-clinical mastitis
- Improper treatment protocol of acute mastitis
- Unhygienic shed



Unhygienic shed



Improper treatment of mastitis

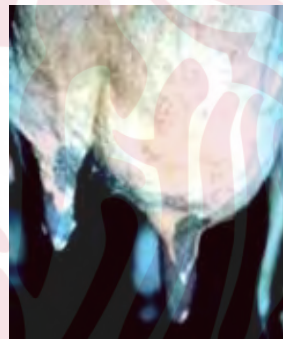
MAJOR SYMPTOMS

The affected udder may atrophy or may lead to fibrosis leading to decreased or total loss of production in the affected quarter.

Chances of recovery of chronically affected quarters are very low once atrophy/fibrosis has occurred.



Atrophy of quarters due to chronic mastitis



Fibrosis and hardening of quarter due to chronic mastitis

PREVENTION

- Separate the affected cow from rest of the herd since they remain a source of infection for healthy animals. Milk chronically affected cows in the end.
- Screen regularly for sub clinical mastitis and treat positive animals.
- Shed hygiene is of prime importance.

TREATMENT

- Antimicrobial treatment is usually not effective.
- It is better to dispose off such chronically affected animals.



Avoid occurrence of chronic mastitis through timely action

C. SUB-CLINICAL MASTITIS (SCM)

- Most prevalent form of mastitis - causes about 70% of the losses due to mastitis.
- Causes heavy losses due to its prolonged effect throughout lactation.
- The other forms of mastitis (clinical or chronic) develop from this stage.

SYMPTOMS

- No specific symptom seen except a slight decrease in milk production.
- Cannot be normally detected since there is no physical changes in udder or milk.

DETECTION OF SCM



California Mastitis Test



Strip cup test



YELLOW NORMAL	YELLOWISH GREEN SUSPECTED	GREEN SUB CLINICAL	BLUE CLINICAL
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- CMT - Equal quantities of milk and CMT reagent are mixed by rotating, SCM milk will form a gel. CMT reaction may disappear within 20 seconds, readings must therefore be taken fast. Also check each quarter separately.
- CMT may give false positive reaction in very early (less than 10 days) lactation or when animal is almost dry.
- Strip cup test - Small flakes are present in SCM milk when viewed against a black surface, size of flakes increase with the degree of SCM.
- Paper test - Green colour is indicative of SCM.
- Field mastitis test - Can be carried out like CMT using concentrated detergent solution instead of CMT reagent.

PREVENTION OF SCM

- All the points mentioned for prevention of 'clinical mastitis' are relevant here too.
- Test for the occurrence of SCM in your animals at least once a week.
- Each quarter should be separately tested.
- Newly purchased animals should be tested first for SCM and treated if found positive before mixing them with the herd.
- SCM positive animal (s) should always be milked at the end.
- If animals are tethered in open, change places frequently.
- Ideally, no lubricant should be used during milking. If used, it should be heated daily before use.

TREATMENT

- Consult a veterinarian for proper treatment.
- The chances of curing SCM is much higher than a clinical or chronic case.
- Timely treatment of SCM will also reduce the chances of clinical and chronic cases of mastitis.

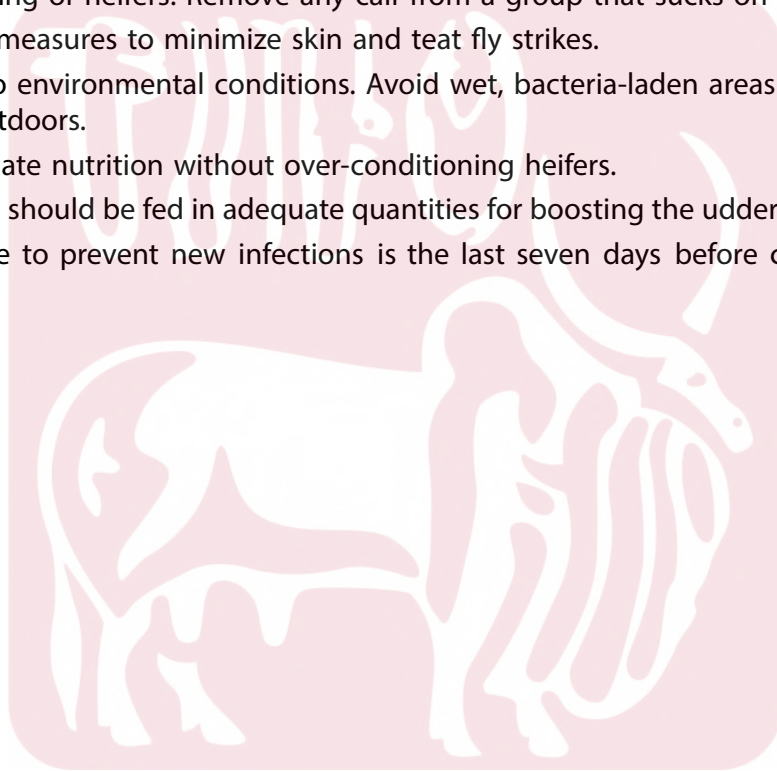
Treatment of SCM will greatly reduce losses

D. MASTITIS IN HEIFERS

- Traditionally heifers have been thought of as a group free of mastitis which is not true.
- Routine visual and manual examination of the developing udder, mammary fluid and teat skin to identify swollen quarters and abnormal secretions (clots and flakes) help to detect heifer mastitis.
- Heifers with teat scabs and abrasions also are likely to be infected and should be treated with advice from a veterinarian.

PREVENTION AND CONTROL

- Calves should receive early, adequate colostrum intake and be removed from the dam as soon as possible.
- If calves are grouped, they should be kept separate for at least one hour after feeding.
- Watch for suckling of heifers: Remove any calf from a group that sucks on other calves.
- Use fly control measures to minimize skin and teat fly strikes.
- Pay attention to environmental conditions. Avoid wet, bacteria-laden areas for resting areas indoors and outdoors.
- Maintain adequate nutrition without over-conditioning heifers.
- Mineral mixture should be fed in adequate quantities for boosting the udder immune system.
- The critical time to prevent new infections is the last seven days before calving.



Control heifer mastitis - reduce incidence in milking animals

DISEASES OF TEAT

- Various conditions affect the teat causing difficulty in milking and some may even be transmitted to the milker's hands.

E. TEAT WARTS

- Teat warts are caused by virus and heifers are more prone to infection.
- Teat warts may appear as fleshy lumps or they may be of the feathery type.



Feathery teat warts

- Teat warts are generally more of an unsightly appearance issue rather than a serious physical problem. But may hamper milking.



Fleshy teat warts

TREATMENT

- Treatment is not usually required, as most warts eventually regress spontaneously.
- Surgical removal is possible but may lead to recurrence.
- Removal should only be done on mature growths, since removing warts too soon can stimulate the growth and spread the virus.
- Large pedunculated warts can be removed slowly by tying a ligature around the base. The wart will dry up and fall off within a month.
- Consult a veterinarian for further advice on treatment.

PREVENTION

- Disinfection of stalls etc, can reduce transmission.
- The virus is thought to be transmitted by flies, so fly control is also important.

F. ULCERATIVE MAMMILLITIS

- Ulcerative mammillitis is a relatively uncommon condition but it can spread rapidly in herds which are affected for the first time and cause significant pain and discomfort.
- It tends to occur most commonly in first lactation cows.
- It is also caused by a virus.
- Lesions of mamillitis can spread over the entire udder and perineum.
- Mouths of nursing calves might be affected. The clinical signs vary from small irregular fluid-filled blisters to larger areas of ulcers and scabs.



Ulcerative mammillitis

TREATMENT

- No specific treatment is available.
- Infected cows should be separated from others.
- Iodine dips may help disinfect teats to prevent the spread of the disease.
- An emollient udder cream can speed healing of skin.

PREVENTION

- Difficult to eliminate once disease occurs in the farm.
- Proper quarantine of newly purchased animals, good hygiene on farm and controlling biting flies can significantly reduce the disease.

G. PSEUDO COWPOX (MILKERS' NODULE)

- The most common infectious cause of teat disease in cattle.
- Caused by a virus and not to be confused with cowpox, which is rare.
- Since immunity is short-lived, cows can get infected fairly soon (often less than six months) after recovering from the disease.

SYMPTOMS

- Initial infection causes a small area of swelling and reddening on the teat.
- Over the next two days, the affected area elevates into an orange papule, which then scabs over.
- Seven to ten days after first signs the scabs start dropping off. This often leaves a horse-shoe or ring shaped area, which is very characteristic of pseudocowpox.
- Affected areas may grow together leading to scabs covering the entire length of the teat.
- Damaged teats are usually healed around a month after first signs.
- Lesions of pseudocowpox is usually found on the teat. However up to 10% of affected cows may have lesions on the udder skin.
- It can spread from cattle to man by contact. Skin infection in man is known as milker's nodules, and is a painful localised infection.



Pseudocowpox



Scabs covering the teat in pseudocowpox

TREATMENT

- Removal of scabs followed by application of a suitable disinfectant .
- Emollient teat dips and sprays have a beneficial effect of reducing bacteria and viruses on teat skin.
- Consult a veterinary doctor if above symptoms are seen.

PREVENTION

- Proper quarantine of newly purchased cows before introducing into the herd.
- Proper teat dipping using iodophor is one of the most effective means of control.
- Maintain proper hygiene in the shed.

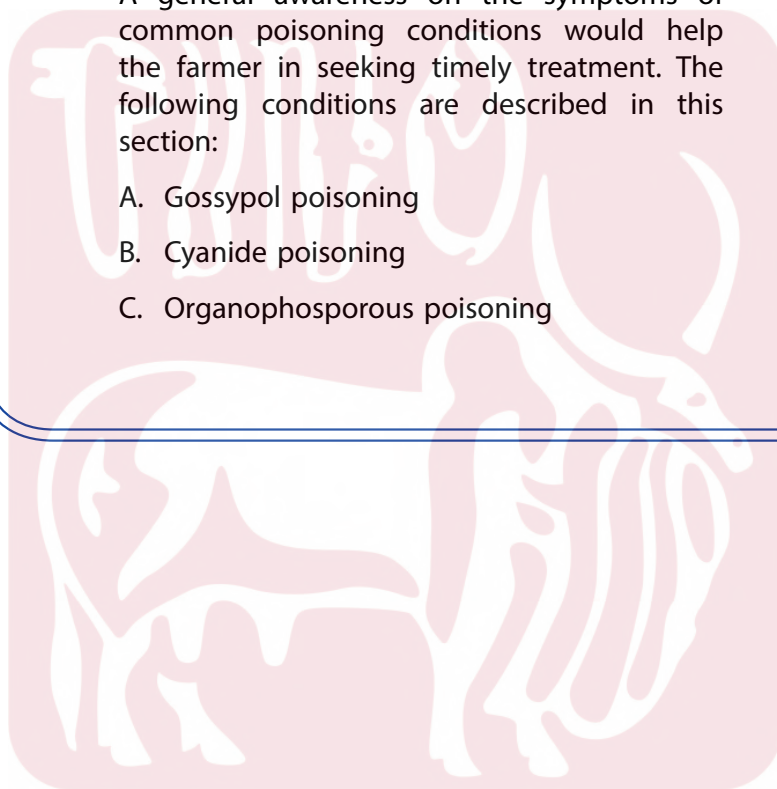


SECTION XI

COMMON POISONING CONDITIONS

There are a large number of plant and chemical agents that cause poisoning in animals. Some of them are fatal in nature if left untreated. A general awareness on the symptoms of common poisoning conditions would help the farmer in seeking timely treatment. The following conditions are described in this section:

- A. Gossypol poisoning
- B. Cyanide poisoning
- C. Organophosphorous poisoning



A. GOSSYPOL POISONING

- Occurs due to consumption of cottonseed or cottonseed products that contain excess free gossypol and can affect high-producing dairy cows with high feed intake.
- Also affect other mature ruminants fed excess gossypol for long periods of time.

SYMPTOMS

- Irregular cycling in cows and buffaloes, reduced libido in males.
- Weight loss, weakness, anorexia, and susceptibility to stress.
- Adult dairy cattle may show weakness, depression, anorexia, edema of the brisket, and dyspnoea, and also have gastroenteritis, hemoglobinuria, and reproductive problems.

CONTROL

- Remove cottonseed products from the diet immediately. Severely affected animals may still die even 2 weeks after stopping feeding of cottonseed products.
- Poor weight gains in affected livestock and increased susceptibility to stress may persist for several weeks after cottonseed products are removed from the diet.
- A high-quality diet supplemented with lysine, methionine and fat-soluble vitamins should be included in supportive therapy.
- Consult a veterinarian for further advise.

B. CYANIDE POISONING

- The most frequent cause of cyanide poisoning is ingestion of certain plants. These include arrow grass, velvet grass, young plants of Sorghum species, tapioca leaves etc.

SYMPTOMS

- Signs occur within 15-20 minutes to a few hours after animals consume toxic forage.
- Excitement may be displayed initially, followed by rapid & difficult respiration, excess salivation. Mucous membranes are bright red but may become cyanotic later.
- Animals stumble/struggle and collapse within an hour.

PREVENTION & CONTROL

- Avoid feeding grasses that cause poisoning until they are 15-18 inches tall.
- Forage sorghums should be several feet tall before being used as fodder.
- Animals should be turned out to new pasture later in the day only.
- Grazing should be monitored closely during periods of environmental stress.
- Immediate veterinary help must be sought if cyanide poisoning is suspected.
- Treatment is very effective if given on time.



Recognize symptoms and provide immediate treatment to save the animal

C. ORGANOPHOSPHOROUS (OP) POISONING

- Pesticides are used on both plants and animals to control crop pests that and to control ticks on cattle.
- A majority of pesticides are organophosphorous (OP) compounds which are active poisons.

COMMON SYMPTOMS OF OP POISONING IN CATTLE & BUFFALO

- Severe depression
- Hypersalivation
- Frequent urination
- Diarrhoea, colic, and dyspnoea
- Involuntary muscle contraction and relaxation which may be visible under the skin
- Nervousness, ataxia, apprehension, and seizures
- Pupillary constriction

PREVENTION AND CONTROL

- Animal should be fed adequate water before applying liquid/spray on the animal body to kill ticks.
- The fodder sprayed with insecticides should be properly washed with water before feeding it to the animal.
- Apply the pesticide as directed on the label at the recommended dose and time.
- Do not treat sick, emaciated or convalescent animals, or animals under severe stress with pesticides for removing external parasites.
- Generally, animals less than 3 months of age should not be treated for external parasites with pesticides.
- Keep animals away from pesticide containers (new or used) or pesticide-contaminated feed.
- Check the label for restrictions regarding application in conjunction with other pesticides or animal health products.
- Contact a veterinarian immediately on observing the symptoms for timely treatment which could save the animal.

Treat OP poisoning at the earliest to increase the chances of survival

SECTION XII

COMMON ZONOTIC DISEASES

Zoonoses are diseases and infections that are naturally transmitted between vertebrate animals and humans.

Zoonoses constitute 61% of all known infectious diseases. It may also be noted that out of the 175 diseases considered to be emerging, 75% are zoonotic.

Poor hygiene, poverty, malnutrition, lack of education, close contact with animals are predisposing factors causing zoonotic diseases.

There are some 45 zoonotic diseases purported to be transmitted from cattle. Dairy farmers who are in close contact with their animals are always at risk of acquiring infections from animals, especially since most of these diseases are prevalent in animals in our country. It is important that the farmer is aware of these diseases which could help him seek appropriate advice or treatment from a doctor. This section briefly describes the following zoonotic diseases that can be transmitted by cattle:

- A. Human Brucellosis
- B. Human Tuberculosis
- C. Leptospirosis
- D. Gastro-intestinal zoonotic diseases
- E. Tick borne zoonotic diseases



A. HUMAN BRUCELLOSIS

- Brucellosis is considered to be a significant public health problem in India.
- Fewer than 10% of the human cases of brucellosis in India may be clinically recognized and treated or reported.
- Most common symptoms are intermittent fever, joint pain and swelling , sweating, dizziness, headaches, chest and abdominal pain etc, though there are a wide range of symptoms that can be seen.
- Humans get infection by drinking raw milk of infected animal or by contact with infected secretions through skin or mucous membranes, especially conjunctiva. (See chapter D in Section IV on Bovine Brucellosis)
- Accidental injection with S 19 vaccine could also lead to infection.

B. HUMAN TUBERCULOSIS

- The disease in humans caused by bovine TB (bTB) (see Chapter B of Section V for bTB) and human TB bacteria are identical with respect to clinical symptoms and lesions and would require complex tests to distinguish them.
- The importance of human TB bacterium as a reverse zoonosis (causing infection in animals) is also gaining prominence with reports humans and bovines respectively having mixed infections with both bTB and human TB organisms.
- There may be no symptoms till the disease is quite advanced. The common symptoms are cough, loss of weight, poor appetite etc.
- Humans get the infection by drinking contaminated milk from infected animals or by close contact with infected animals.

C. LEPTOSPIROSIS

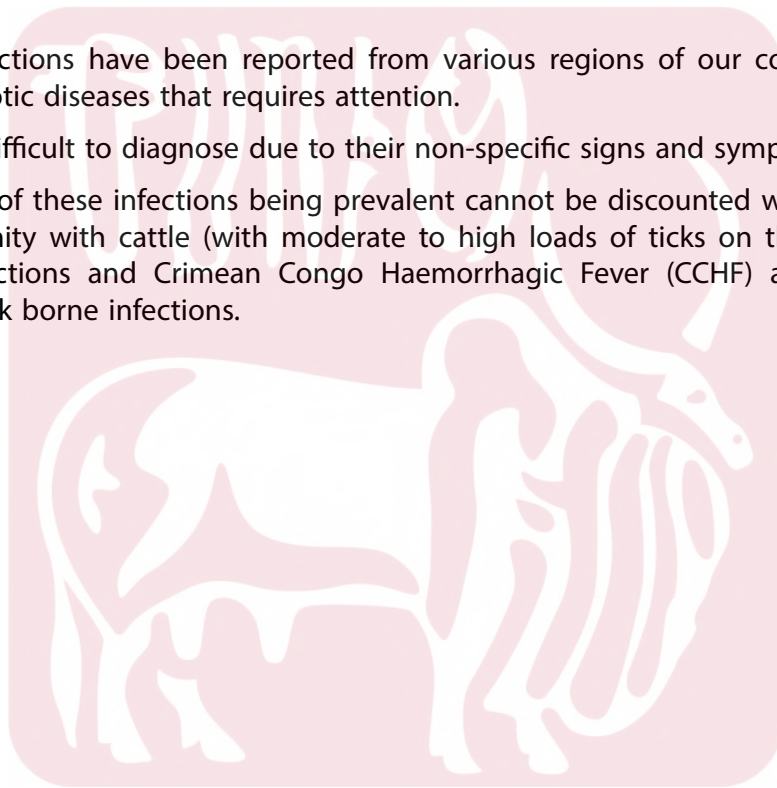
- Cattle are one of the principal hosts for Leptospirosis.
- Infection in humans is most likely to occur by contact with contaminated urine or uterine contents and by milking infected cattle. Infection rate is also higher in monsoon months.
- The most common symptoms are fever, headache, nausea , vomiting, diarrhoea , jaundice , body rashes etc.

D. GASTRO-INTESTINAL ZONOTIC DISEASES

- There are various zoonotic diseases affecting the intestinal tract. Some examples are infections with Salmonella, E.Coli, Campylobacter, Rota virus, Cryptosporidia and Giardia.
- The infection occurs through the faecal-oral route which is always a possible route of contamination in the rural environs where close contact with cattle is common.
- The young, malnourished, immuno-compromised and pregnant women are usually more susceptible.
- The common symptoms in gastro-intestinal zoonotic diseases are fever, diarrhoea, loss of appetite , weight loss, dehydration etc.

E. TICK BORNE ZONOTIC DISEASES

- Tick-borne infections have been reported from various regions of our country and are a group of zoonotic diseases that requires attention.
- They may be difficult to diagnose due to their non-specific signs and symptoms.
- The possibility of these infections being prevalent cannot be discounted with people living in close proximity with cattle (with moderate to high loads of ticks on them). Babesiosis, Rickettsial infections and Crimean Congo Haemorrhagic Fever (CCHF) are some of the examples of tick borne infections.



Zoonotic diseases can be cured if diagnosed and treated promptly

SECTION XIII

BREEDING AND RELATED ACTIVITIES

Selective breeding of cattle and buffalo to increase milk production has been going on for a long time in our country and has made commendable progress in certain areas. Majority of the cattle and buffalo are still not included in the breed improvement programmes and that is why they are low milk producers. In order to increase the milk production in our country, there is a need to increase the production potential of non-descript local animals through scientific methods like crossbreeding. Along with this, improving the milk production potential of indigenous breeds in their native breeding tracts is also equally important. Progeny testing (PT) and Pedigree Selection (PS) coupled with Artificial Insemination (AI) and milk recording have been identified as activities leading to steady genetic progress. For a profitable milk business, it is also necessary for the cow/buffalo to calve every 1 to 1.5 years. The following chapters would provide a good idea on the various aspects of breeding:

- A. Signs of heat, proper time of insemination.
- B. Advantages of artificial insemination (AI).
- C. Drying off a milking animal.
- D. Normal Calving and dystocia.
- E. Infertility and management of infertility
- F. A brief on Progeny Testing (PT)
- G. A Brief on Pedigree Selection (PS)

A. HEAT

- Heat is a period in which female animal shows interest in other animals.
- Generally adult heifer/cow/buffalo comes in heat after every 21 days but may come in heat any time between 18/24 days.
- This period may last from 6 to 30 hours.
- To maximize productive life of a cow, it must be inseminated within 60- 90 days after calving. This will enable the cow to produce one calf per year.
- Longer calving intervals have detrimental effects on lifetime milk production.
- Heat detection is therefore a critical component of good reproductive management.
- Recording the dates of cows in heat and dates of services is necessary to predict future heat or calving dates and to manage the cows accordingly.

SIGNS OF HEAT

- Repeated bellowing.
- Lifting of tail.
- Swollen vulvar lips and redness of vaginal passage due to congestion.
- Thick, sticky and transparent vaginal discharge.
- Frequent urination (Micturition).
- Reduced feed intake and decreased milk yield.
- Restlessness, smells other animals and mounts on them.
- After 10-12 hours in heat, the animal allows a bull or a cow to mount on her. This is the right time for carrying out AI.



When a cow stands still while being mounted is the right time for insemination.

PROPER TIME OF INSEMINATION

- Insemination (either natural service or by Artificial Insemination (AI) should be given ideally after 10-12 hours, or maximum of 18 hours of first sign of heat, that is, if heat is seen in the evening, inseminate in the following morning. If heat persists in the following morning, another AI may be required on the same evening.
- If the animal does not become pregnant, it will come into heat after 18-21 days.
- After 21 days of insemination the animal should be observed for symptoms of heat, especially during early morning and late evening hours.
- Special care should be taken in case of buffaloes, as symptoms of heat are not very prominent.



Timely heat detection is very important in getting the animal conceived

B. ADVANTAGES OF ARTIFICIAL INSEMINATION (AI)

- Artificial Insemination (AI) is carried out by using Frozen Semen Doses (FSD) of High Genetic Merit (HGM), disease free bulls.
- It prevents spread of sexually transmitted diseases.
- During AI, diseases of reproductive organs are also diagnosed.
- Through AI, semen from one bull can be used to inseminate many cows at a time.
- When cow/buffalo comes in heat, the animal should be artificially inseminated with semen of HGM bull through trained AI Technician(AIT) instead carrying out natural service.
- FSDs of HGM bulls may be used even after its death.
- AI can be done at the farmers' doorstep saving the farmer time.
- There is speedy improvement in the breed of the animal.
- AI is easy and cheap.



AI being done by a trained technician at the farmer's doorstep.

POST AI MONITORING

- 21 days After AI, the animal should be observed for symptoms of heat.
- 60 days after AI, the animal should be examined for pregnancy.
- If the animal does not conceive even after three inseminations, consult the veterinary doctor. (refer chapter on infertility)

AI is a simple and cost effective method to improve milk production

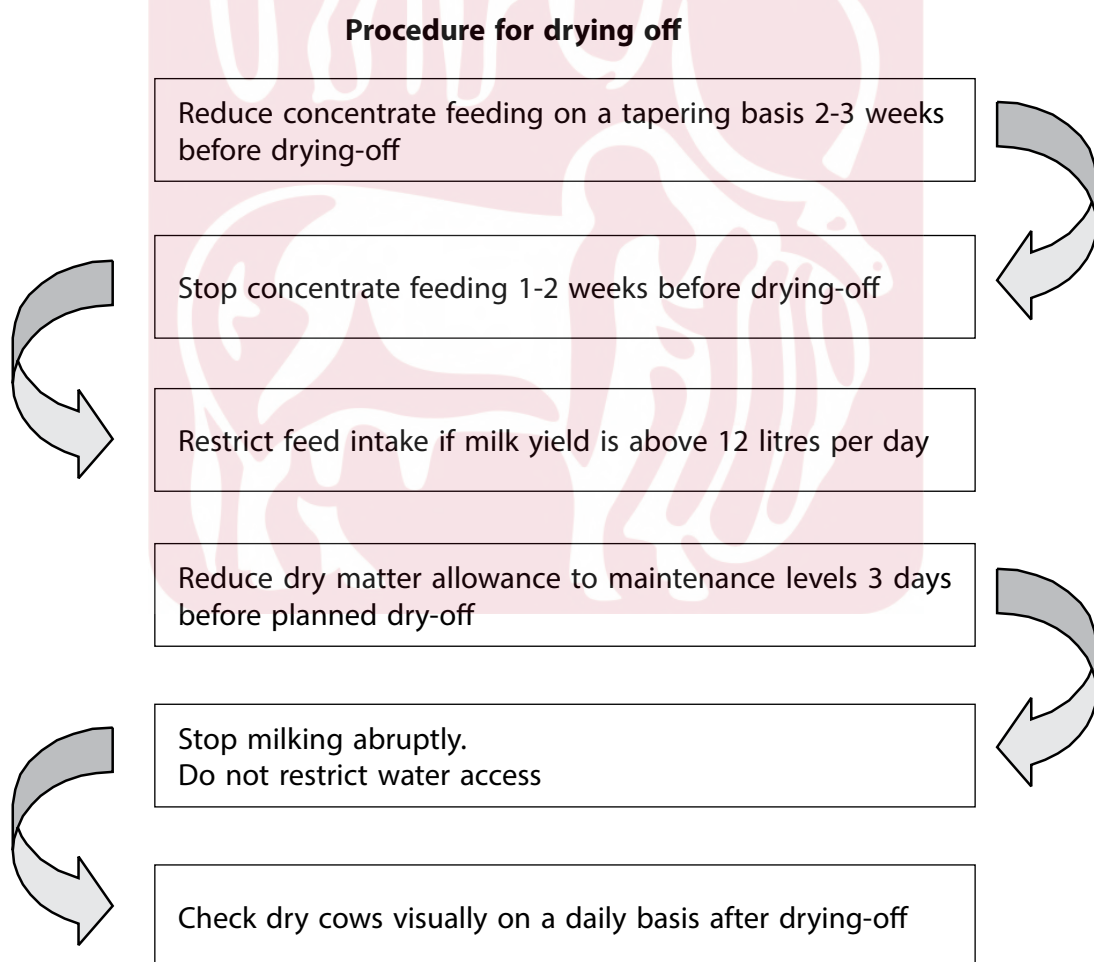
C. DRYING-OFF AN ANIMAL

The dry period is the most important phase of a dairy cow's lactation cycle. For optimal animal health and best performance in the next lactation, lactating animals should have an opportunity to rest and regenerate mammary tissue between lactations. During this phase, the cow and her udder prepares for the next lactation; hence any abnormalities during the dry period will have a negative effect on the cow's health and milk production after calving.

Due to the good amount of milk they produce, the drying-off process is often more complicated for dairy animals. Preparation for dry off should begin at least two weeks prior to the dry-off date with a significant change in the animal's diet. Reducing the energy content of the diet and feeding primarily a high-fiber diet will reduce the nutrients available for the animal to make milk; this is often all that is needed to reduce milk production to a level that makes dry off safe and simple.

Length of Dry Period

Animals should be dry for around 60 days. If animals have prolonged dry periods, they run the risk of becoming obese, experiencing obesity-related diseases and having difficulty in calving.



Ideally, cows should be kept at pasture on a maintenance diet for a week after drying-off.

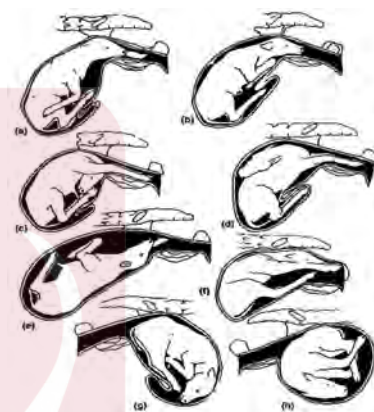


D. NORMAL CALVING & DYSTOCIA

- Calving usually takes place normally without help.
- A sticky vaginal discharge is usually seen a day before calving.
- In older cows the calf is usually delivered 30-50 minutes after the water bag bursts, but may extend up to 2 hours.
- In heifers calving may take up to 4 hours after the water bag bursts.
- If calving does not occur within the prescribed time after the water bag bursts, it is known as dystocia. In this case, it may be required to call a veterinarian.
- If the head and two front legs appear after the water bag breaks, there is no need to call a vet and calving usually occurs normally.
- A gentle traction of the calf in a downward arc by holding the front legs may be done in the above situation.



In normal calving, the head and both the front legs of the calf will appear.



Improper positioning of the calf during delivery causes dystocia.

- Never attempt to pull the calf in any other position other than the one in which both front legs and head are visible (Not even if one front leg and head is visible).
- In case an abnormal presentation is seen or nothing appears after the water bag bursts, call a veterinarian immediately.
- Delay in attending will further complicate the situation.

POST CALVING MONITORING

- Under normal circumstances, an animal should come into heat within 45 days of delivery.
- It is recommended to breed the animal in the subsequent oestrus after the first heat or within 60-90 days.
- If the animal does not come into heat within a period of 60 days post calving, consult a veterinarian.

Early detection of dystocia may save the calf

E. INFERTILITY

- Infertility is a temporary disturbance in reproductive function wherein the animal cannot become pregnant. Normally an animal with a healthy reproductive function should calve every 12-14 months.
- Infertility causes economic losses to the farmers due to delay in maturity, calving and milk production. The farmer also incurs losses by maintaining an unproductive animal.
- Infertility may be due to various reasons like: (i) Diseases of genital organs (ii) Infectious diseases (iii) Absence of heat, repeat breeding, silent heat, cystic ovary (iv) Anatomical causes (v) Faulty AI technique.

MANAGEMENT OF INFERTILITY

- Inseminate at appropriate time of the heat. (See chapter on heat detection)
- Repeat AI may be required in cases of prolonged heat for conception to occur.
- Close observation is required to detect silent heat, especially in buffaloes.
- Provide proper nutrition right from birth of the animal.
- Provide adequate quantities of mineral mixture right from birth of the animal.
- During summer season, reduce heat stress on the animal by providing clean drinking water at all times and adequate shade or cooling systems.
- Ascertain whether the personnel providing AI services is adequately qualified.
- Consult a veterinarian if a regularly cycling animal has not conceived even after 3 inseminations to identify the problem. Repeated inseminations may cause permanent damage to the reproductive organs.
- Animals with anatomical conditions may not conceive.
- Infection/diseases of reproductive tract also may lead to infertility. Consult a veterinarian for proper advice and treatment.

FACTORS RESPONSIBLE FOR CONCEPTION DURING A NORMAL HEAT CYCLE



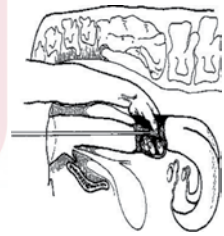
Proper heat detection



Proper handling of frozen semen straws

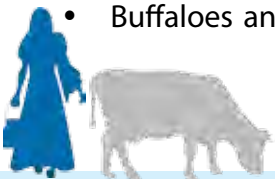


Proper time and technique of insemination



Proper site of semen deposition

- Only timely heat detection is in the hands of the farmer.
- Proper handling of semen, proper time of insemination, proper AI technique and site of deposition of semen are in the hands of trained personnel (vets or AI technicians).
- It is therefore very important to ensure that AI is being done only by trained personnel to avoid complications or problems later on.
- A healthy cross bred heifer should come into heat by 18 months or earlier.
- Buffaloes and local breeds may take more time to mature (around 24 months).

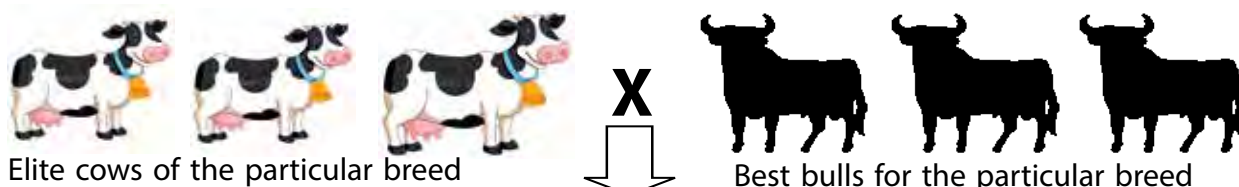


Manage infertility-ensure conception

F. A BRIEF ON PROGENY TESTING (PT)

PT is a scientific technique used to improve the milk production of any particular breed through selective breeding.

STEP 1: Best yielding cows (elite cows) in identified areas for the breed are identified and inseminated with semen from the best bulls available.



STEP 2: Male calves born to the elite cows are purchased from the farmer after testing the dam and calf for certain diseases with negative results.



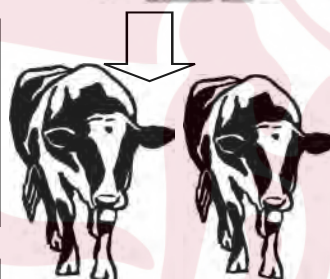
Selected male calves

STEP 3: The selected male calves then undergo a series of rigorous tests at various stages (pre-quarantine, quarantine & rearing stations) before moving to the semen stations. Selected male calves should test negative for all the tests done at all stages.



Test Bull

STEP 4: The semen from these selected bulls (test bulls) are then used on a larger population of cows of the same breed in the PT area.



Daughters of test bulls

STEP 5: The milk yield of the daughters born to test bulls are recorded. A minimum complete first lactation records of 100 daughters are required per test bull.

STEP 6: Based on daughters' performance, "breeding value" of each of the test bulls are estimated. The top 10% of daughters are also selected based on lactation records.

STEP 7: The top 10% of daughters (based on lactation records) and the top 10% of bulls selected (based on breeding value) are used to produce the next generation of young bulls. Each cycle takes 6-7 years to complete. It is always ensured that there is no inbreeding in the process.



Milk recording



An Holstein Friesian test bull

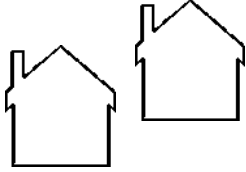


A Murrah test bull

PT is a scientific method to improve milk production of a breed

G. A BRIEF ON PEDIGREE SELECTION (PS)

In Pedigree Selection, bulls are evaluated solely on the basis of their dam & sire's dam's milk yield. This process is followed when a large number of animals of a breed are available in the native tract but, either there is no infrastructure to provide AI or, the availability is scarce.



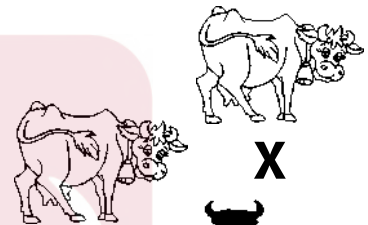
STEP 1: Identification of villages having best animals of the selected indigenous breed in its native tract.



STEP 2: Artificial Insemination (AI) network is started in the selected villages. Extension activities like farmer education, fertility camps and calf rallies are carried out in selected villages with emphasis on promoting AI.



STEP 3: Selected cows or buffaloes of the indigenous breed are milk recorded and elite animals on the basis of milk production are identified.



X



STEP 4: The elite animals giving maximum amount of milk is artificially inseminated with the best bull of the same breed available in the country. This is called nominated mating.



X

Best bulls



STEP 5: Male calves born to the elite cows are purchased from the farmer after testing the dam and calf for certain infectious diseases with negative results.



Male calves



STEP 6: The selected male calves then undergo a series of rigorous tests at various stages (pre-quarantine, quarantine & rearing stations) before moving to the semen stations. Selected male calves should test negative for all the tests done at all stages.



STEP 7: Semen from these bulls are then used on a larger population of the same breed for faster genetic improvement



Bulls at Semen Station



PS is a method to improve milk production in indigenous breeds

SECTION XIV

TRADITIONAL REMEDIES FOR MINOR AILMENTS

Traditional remedies have been used for ages by the farmers to manage minor ailments in their livestock. The knowledge of some alternative form of medicine that could manage minor ailments till such time veterinary aid is sought is important to the farmer especially in areas where services may not be readily available.

Many of these remedies documented by various agencies like BAIF, some milk unions in south Karnataka, International Institute of Rural Reconstruction (IIRR), Vivekananda Kendra etc, have been mentioned here. However it is important to note that the remedies mentioned here are only suggestive in nature and may not ensure a cure. The underlying cause of these ailments may be a disease which needs to be investigated to cure the same. Veterinary advice therefore need to be sought at the earliest. Illustrations of the plants are also provided for easier recognition. Some remedies and preparations for the following ailments are suggested:

- 
1. Failure to produce milk
 2. Anaemia
 3. Fungal infection
 4. Bloat
 5. Dehydration
 6. Diarrhoea
 7. External parasites
 8. Maggot wound
 9. Haemagalactia
 10. Infertility
 11. Udder oedema
 12. Poisoning
 13. Improper letdown of milk
 14. Prolapse
 15. Repeat breeding
 16. Retention of placenta
 17. Skin diseases
 18. Stomach disorder
 19. Tongue ulcer
 20. Wart
 21. Fly repellent
 22. Mange infestation

COMMON HERBAL PREPARATIONS USED IN AILMENTS

S.no	Condition	Remedies / Plant name (Hindi name in brackets)	Portion used and preparation mode	Dose and amount
1	Failure to produce milk	(1) Asparagus racemosus (Satavari, Shahakul)	Grind 250 gm. of Asparagus root.	Give orally for 3 to 5 days.
		(2) Leptadenia reticulata (Jivanti)	Leaf and stem of Leptadenia to be given along with feed.	50 gm. Twice a day for 30 days.
2	Anaemia	Phyllanthus embelica (Amla)	Grind around 50 gm of fruit /bark.	Give daily.
3	Fungal infection	(1) Garlic (Lussan)	Make a paste	Apply on the affected part till it recovers.
		(2) Neem	Bark, flower, seed oil or tender twig- make a paste	Apply on the affected part till it recovers.
4	Bloat (mild)	Ginger (Adrak), garlic, Cardamom (elachi), clove(laung) and jaggery (gud)	50 gm ginger, 1 full garlic, 3 Cardamoms, 5 to 6 cloves, all to be boiled in half liter of water, put a little jaggery and prepare a decoction.	Give once a day for 2 days. Prepare fresh daily. Give half the quantity to calves.



Asparagus plant



Asparagus root



Leptadenia plant and flower



COMMON HERBAL PREPARATIONS USED IN AILMENTS

S.no	Condition	Remedies / Plant name (Hindi name in brackets)	Portion used and preparation mode	Dose and amount
5	Dehydration	Salt, baking soda & sugar	Dissolve 2 teaspoons of Salt, half teaspoon of baking soda & 4 teaspoons of sugar in 1 Liter of water.	Adult animals - 2 - 3 ltrs 2 - 3 times/day. Calves-1/2 to 1 liter till recovery.
6	Diarrhoea	(1) Tea leaves, Ginger	Boil handful of Tea leaves in one lit. of water. Strain & add half handful of ground ginger.	Drench twice a day for 3 to 4 days. Prepare freshly every day.
		(2) Guava (Amrut)	Boil half kg of fresh Amrut leaves in three glass of water.	Drench twice a day.
		(3) Potassium permanganate	Mix 5 to 10 crystals of Potassium in 1 liter of water.	Drench twice a day.



Amla



Tea leaf



Guava

COMMON HERBAL PREPARATIONS USED IN AILMENTS

S.no	Condition	Remedies / Plant name (Hindi name in brackets)	Portion used and preparation mode	Dose and amount
7	External parasites	(1) Custard Apple (Sitaphal)	Seed and leaf extract diluted up to 50% in oil base in any cheap vegetable oil.	Apply over the body for 5 days, twice a day.
		(2) Neem	Leaf pulp	Apply over the body
		(3) Custard apple, Neem & Tobacco leaves	Custard apple seeds-1 part; Neem seeds-1 part tobacco leaves-1/5th part. Make paste and allow to soak in 2 litres of water.	Apply over the body.
8	Maggot wound	(1) Marigold, Garlic and Tulsi	Handful of leaves of both leaves and 1 garlic is crushed with lime to get the paste.	Apply paste twice daily on the wound.
		(2) Custard apple, Neem	Crush leaves (either one or both) to a paste.	Once a day for 5 to 6 days.
9	Blood in milk	Mimosa pudica (Touch me not plant)	Half to one kg of plant made into paste.	Feed as such for 3-5 days, twice daily.



Custard apple



Marigold



Neem leaf with seeds



COMMON HERBAL PREPARATIONS USED IN AILMENTS

S.no	Condition	Remedies / Plant name (Hindi name in brackets)	Portion used and preparation mode	Dose and amount
10	Infertility	(1) Brinjal (Bengan), Horse gram	Ripened fruit- 1 Kg (either alone or with horse gram) Horse gram- 250 gm soak and grind.	Give brinjal first followed by horse gram daily for one week.
		(2) Coconut tree	Extract the juice from the newly opened inflorescence and mix with tender coconut water.	Drench once a day for 3 to 4 days.
11	Udder oedema	Aloe vera, Lime or mimosa leaves	Take 2 to 3 leaves of Aloe alone or; mix with 50 gm of Lime or; 2-3 handfuls of mimosa leaves and prepare a paste.	Apply twice a day for 4 to 5 days (Mix the Lime with Aloe before 2 to 3 days). Apply after milking.
12	Poisoning	(1) Paraffin Oil/ Raw linseed Oil/Natural Vegetable Oil.	One litre of any oil	Drench once a day
		(2) Milk/ Coconut water/ Charcoal	One litre of milk or coconut water; 200 gm charcoal in 800 ml water	Drench once a day



Mimosa plant



Aloe vera



Horse gram

COMMON HERBAL PREPARATIONS USED IN AILMENTS

S.no	Condition	Remedies / Plant name (Hindi name in brackets)	Portion used and preparation mode	Dose and amount
13	Improper milk let down	(1) <i>Jatropha curcas</i> (Jangali arandi)	Leaves	2-3 handful of leaves
		(2) <i>Datura metel</i> (Sadah datura)	Take one datura fruit, warm it in hot ash and crush along with rice polish.	Feed only once. Do not allow animal to stray after giving medicine.
		(3) <i>Asparagus racemous</i> (Shatavari)	Asparagus tuber or its extract	Twice a day for 4 days.
14	Prolapse	<i>Mimosa pudica</i> (Chuimui)	Crush two handful of leaves and give. Also extract juice of the Leaves.	Give thrice a day and apply the juice to the prolapsed portion of Uterus.
15	Repeat Breeding	(1) Curry leaves (Kari patti)	Take 2 handful of Curry leaves.	After insemination for 10 days.
		(2) <i>Mimosa pudica</i> (Chuimui)	200 gm of the plant and prepare decoction.	Give for 2-3 days.



Jatropha



Datura metel plant



Curry leaves



COMMON HERBAL PREPARATIONS USED IN AILMENTS

S.no	Condition	Remedies / Plant name (Hindi name in brackets)	Portion used and preparation mode	Dose and amount
16	Retention of Placenta	(1) Mimosa pudica (Chuimui)	1 Kg to leaves	Once a day for 2 days.
		(2) Aegle marmelos (Bael), Pepper, Garlic & Onion	Bael leaves—handful; garlic – 6 cloves; pepper –10 corns ; onions-2. Make a paste and mix in butter milk.	Give once daily.
		(3) Gossypium herbaceum (Kapas)	Prepare a decoction from 2 to 3 handfuls of root & shell.	Give once daily.
17	Skin diseases	(1) Neem	Make paste of bark, flower, tender twig or use seed oil.	Apply on affected part.
		(2) Brinjal	Crush brinjal and mix with Jowar powder.	Apply on affected part



Bael tree with fruit



Black pepper



Cotton plant with pod

COMMON HERBAL PREPARATIONS USED IN AILMENTS

S.no	Condition	Remedies / Plant name (Hindi name in brackets)	Portion used and preparation mode	Dose and amount
18	Stomach disorder	(1) Ginger (Adrak), Drum Stick (Soanjana), Honey	Take 500 ml each of juice of Ginger, Drum stick leaves, and 200 ml of Honey. Mix thoroughly to make a single dose.	Give twice a day for 2 days.
19	Tongue ulcer	Tamarind (Imli), Gingely oil (Til oil)	Tamarind- 100 gms; Gingely oil- 200 ml. Mix thoroughly to make a paste.	Apply on mouth and tongue 3 - 4 times a day.
20	Warts	(1) Euphorbia neriifolia (Barki-thohar)	Apply drops of Latex of Euphorbia on the wart.	Apply twice a day until the wart falls off.
		(2) Papaya (Papita)	Apply one or several drops of Latex of Papita trunk, fruit or leaves on the wart.	Apply twice a day until the wart falls off.
21	Fly Repellent	Aloe vera (Ghilkanvar)	Grind and extract juice of aloe leaves	Apply on the cow's body and also sprinkle in the surroundings.
22	Mange Infestation	Cassia alata (Dadmurdan)	Grind a handful of fresh/air dried leaves to make a paste with water or lemon juice	Apply on the infected skin daily using a brush or coconut husk till the infection has been cured.



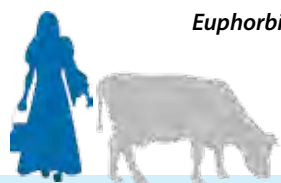
Euphorbia



Tamarind Tree



Cassia alata plant and flower



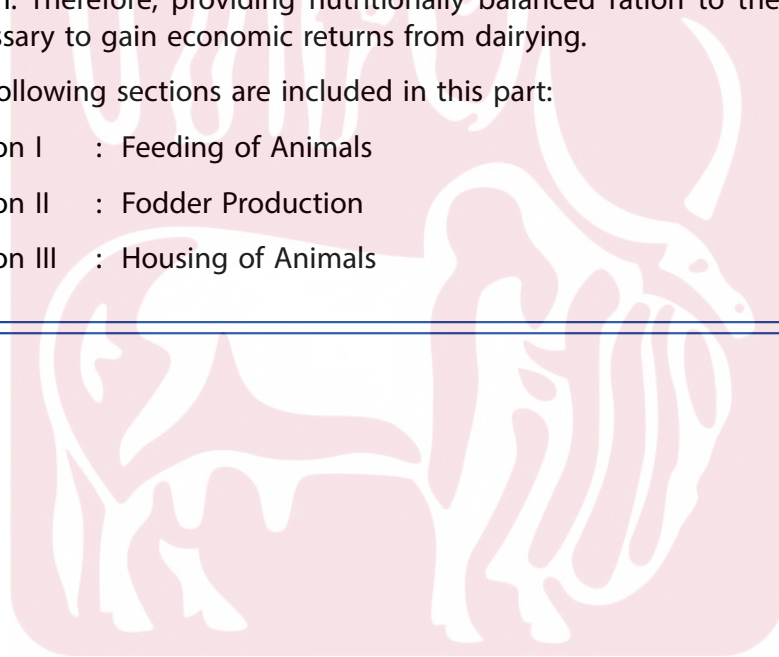
PART II

ANIMAL NUTRITION & MANAGEMENT

Providing balanced nutrition is the foundation for productive and profitable animal husbandry. Without adequate nutrition, animals cannot express their full genetic potential nor will they be productively efficient. Low milk production, low reproductive rates, poor growth and increased illness may be the result of imbalance or deficiency of nutrients. Proper balance of protein, energy, vitamins and minerals are needed in the ration of animals to ensure best performance with respect to production, reproduction and health. Therefore, providing nutritionally balanced ration to the animal is necessary to gain economic returns from dairying.

The following sections are included in this part:

- Section I : Feeding of Animals
- Section II : Fodder Production
- Section III : Housing of Animals



SECTION I

FEEDING OF ANIMALS

Feeding is an important aspect of dairying as it accounts for around 70% of total cost of milk production. Different types of dietary feed ingredients for dairy cows and buffaloes include concentrates such as compound cattle feed, oil cakes, grains and grain byproducts like brans and chunnies; cultivated green fodders and grasses; crop residues like straws and stovers. Following chapters are included in this section:

- A. Feeding of dairy animals.
- B. Importance of Ration Balancing Programme.
- C. Importance of compound cattle feed in milk production.
- D. Importance of bypass protein feed.
- E. Importance of feeding mineral mixture.
- F. Urea Molasses Mineral Block (UMMB)– A feed Supplement
- G. Importance of drinking water for dairy animals.
- H. Care of pregnant animals.
- I. Nutritional care after calving.
- J. Examples of preparing Total Mixed Ration (TMR) for cow.
- K. Examples of preparing Total Mixed Ration (TMR) for buffalo.



A. FEEDING OF DAIRY ANIMALS

- A normal adult animal should be fed 4 to 6 Kg dry and 15-20 Kg green fodder per day.
- Legume and non-legume green fodder should be fed in 1:3 proportion.
- Green fodder should be harvested at 50% flowering stage.
- Surplus green fodder should be conserved in the form of 'hay' or 'silage' .
- Conserved fodder becomes useful during summers or when green fodder is scarce.



Leguminous fodder



Non-leguminous fodder



Cattle feed

GENERAL RECOMMENDATIONS

- To optimize milk production and to meet the nutrient requirement of animals, balanced feeding using user-friendly software developed by NDDDB may be adopted.
- Animals fed only on dry fodder may be provided Urea Molasses Mineral Block as a supplement to the diet, depending upon its availability .
- For body maintenance and higher efficiency of milk production, 'compound cattle feed' / 'bypass protein feed' should also be given .
- Minerals are essential for all metabolic functions of the body, animals' ration should be supplemented with area specific mineral mixture .
- Changing from one feed to another should not be sudden but in a gradual manner.
- Fodder should be chaffed before feeding, to avoid wastage and increase digestibility.
- Various feed ingredients including the additives, should be mixed to make Sani or total mixed ration (TMR). It would be more appropriate to feed this ration in 3-4 equally divided parts in a day. This would reduce spoilage and increase the digestibility.



Chaffing of fodder

B. IMPORTANCE OF RATION BALANCING PROGRAMME

- The feed given to animals usually comprises one or two locally available concentrate feed ingredients, grasses and crop residues.
- This leads to imbalanced feeding which means that proteins, energy, minerals and vitamins in the ration are either more, or less.
- While imbalanced feeding adversely affects the health and productivity of animals in various ways, it also reduces the net daily income to milk producers from dairying because the potential of milk production of animals is not fully exploited.
- To balance the ration of animals, NDDDB has developed a user-friendly software, which can be used by trained and dedicated local resource persons (LRPs) identified for the area.
- Farmers can download and use “Pashuposhan” app from google play store.

BENEFITS OF RATION BALANCING PROGRAMME (RBP)

- Using the locally available feed resources, ration of animals is balanced at a least cost
- Increase in milk production with more fat and solids-not-fat
- Increase in the net daily income
- Improved reproduction efficiency
- Reduction in inter-calving period, thereby increase in productive life of animals
- Improvement in general health of animals
- Improved growth rate in calves, leading to early maturity
- Reduction in methane emission, a potent green house gas (GHG)



An LRP implementing RBP in the field



RBP is an effective tool to improve milk production at least cost and reduce methane emissions

C. IMPORTANCE OF COMPOUND CATTLE FEED IN MILK PRODUCTION

- Cattle feed produced by the Milk Unions/Federations is a balanced source of essential nutrients required for body maintenance, growth and milk production.
- It is manufactured using good quality grains, oil cakes/ meals, brans, molasses, common salt, minerals and vitamins.
- It is comparatively cheaper and highly palatable to the animals.

RECOMMENDATIONS FOR FEEDING CATTLE FEED

- Cattle feed contains protein, energy, minerals and vitamins required for the growth, maintenance and milk production of animals. It is advantageous to feed extra cattle feed to pregnant animals for proper development of foetus.
- It increases reproductive efficiency, milk production as well as fat percentage of milk.
- Growing animals should be fed 1 to 2 kg of compound cattle feed daily.
- Milking animals should be fed 2 kg of compound cattle feed for body maintenance and additional 400 g to cows and 500 g to buffaloes for every litre of milk produced.
- In addition to this quantity, 1 kg compound cattle feed and 1 kg good quality oil cake should also be given to pregnant animals during the last two months of pregnancy.



Cattle feed is prepared from different grains, cakes, brans, molasses, salt, mineral mixture and vitamins.

Compound cattle feed of appropriate quality keeps animals healthy and increases milk production

D. IMPORTANCE OF BYPASS PROTEIN FEED

- Proteins are essential for growth and milk production.
- Generally, the major portion of the feed proteins is broken down in the first compartment (rumen) of the stomach.
- In case of bypass protein feed, significant portion of the protein escapes break down in the first compartment and goes to the later part of gastro-intestinal tract resulting into better utilisation of proteins in the body.
- Bypass protein feed can be prepared using chemically treated protein meals.

BENEFITS OF BYPASS PROTEIN FEED

- More nutritive feed at a cheaper price.
- The utilisation of the dietary protein increases.
- It improves growth and milk production.
- If usual 'bypass protein feed' is not available, then 1 Kg 'treated bypass protein supplement' can be fed (half Kg in the morning and half Kg in the evening) to animals producing 8-10 litres of milk.



Bypass protein plant



Bypass protein feed



Bypass protein feed is an economical source of nutrients

E. IMPORTANCE OF FEEDING MINERAL MIXTURE

- Minerals are essential for proper metabolic functions. Mineral mixture contains all the essential minerals in required quantities. Feeding area specific mineral mixture should be preferred.

BENEFITS OF FEEDING MINERAL MIXTURE

- Helps improving growth rate in calves.
- Better utilization of absorbed nutrients.
- Increases milk production in animals.
- Improves reproductive efficiency and reduces inter-calving period.
- Increases productive life of animals.
- Improves immunity status.
- Prevents metabolic diseases like milk fever, ketosis, haematuria etc., which occur around calving period.



Change in hair colour due to copper deficiency



Iodine deficiency causing enlargement of thyroid gland (arrow) and zinc deficiency causing lachrymation.



Left to right: Area Specific Mineral Mixture (ASMM) manufactured by dairy cooperatives of Rajasthan, Karnataka and Bihar.

FEEDING RECOMMENDATION

Calves	20-25 g daily
Heifers and dry animals	50 g per animal daily
Milking animals	100-200 g per animal daily (as per milk production) or in view of level of mineral mixture in compound cattle feed/concentrate mixture.

Supplementation of deficient minerals improves milk production and reproduction efficiency

F. UREA MOLASSES MINERAL BLOCK (UMMB)– A FEED SUPPLEMENT

- Ruminants have a special compartment in their stomach, which is called rumen. It contains large number of beneficial microorganisms, which help in digestion of fibrous components of feed.
- During scarcity of green fodder, UMMB helps the rumen microbes to multiply and thus improves the digestibility of dry fodder.

BENEFITS OF UMMB

- Increases dry fodder intake and minimizes wastage.
- Improves the digestive efficiency of the animals.
- Improves milk production and fat percentage.
- It is a good source of essential minerals.



UMMB Blocks



Animal licking UMMB

G. IMPORTANCE OF DRINKING WATER FOR DAIRY ANIMALS

Water is required for :

- Digestion of feed and fodder.
- Distribution of absorbed nutrients to various organs.
- Excretion of undesirable and toxic elements through urine.
- Maintenance of body temperature.
- Normally, an adult healthy animal requires 70 to 80 litres of water daily. Since milk contains about 87% water, for every litre of milk produced, additional 2.5 to 3 litres water is required.

RECOMMENDATION

- Animal should have a free access to clean drinking water round the clock.
- During summer, crossbred cows and buffaloes should be given bath twice daily and at least 100 litres of water per day to manage heat.



Dry fodder supplemented with UMMB can form maintenance ration for cows and buffaloes.

H. CARE OF PREGNANT ANIMALS

- Adequate health care and nutrition can ensure rapid growth of female calf as well as attaining puberty at an early age. Timely insemination of such animals can help them to calve at 2 to 2 ½ years of age.
- About 70% growth of foetus takes place during last 3 months of pregnancy, adequate care needs to be taken during this time.

RECOMMENDATIONS

- Animals in the last trimester of pregnancy should not be taken far away for grazing, uneven paths should also be avoided.
- A lactating animal should be dried within a period of 15 days after the 7th month of gestation.
- Pregnant animals should have enough space for standing and sitting comfortably.
- Pregnant animals need suitable ration to reduce the possibility of diseases like milk fever and ketosis at the time of calving and also to ensure adequate milk production.
- Water should be provided round the clock to pregnant animals with a minimum of 75-80 litres of fresh and clean drinking water daily.
- A heifer after 6-7 months of gestation should be tied with milking animals; and its body, back and udder should be massaged.
- 4-5 days before calving, the animal should be tied in a separate clean and airy area having sunlight. Bedding materials like paddy straw should be spread on the ground for the animal.
- The animal should be kept under observation during the last 1-2 days before calving.

DAILY FEED REQUIREMENT OF A PREGNANT ANIMAL

Green fodder	15-20 Kg	Oil cake	1 Kg
Dry fodder	4-5 Kg	Mineral Mixture	50gm
Compound cattle feed	2-3 Kg	Salt	30 gm

Proper care and management of pregnant animals ensures a healthier calf and higher lactation yield

I. NUTRITIONAL CARE AFTER CALVING

- Immediately after calving, the cow/buffalo has a low appetite and will not eat as much feed as the body may require.
- Cow/buffalo undergoes a lot of stress while calving, therefore, the animal should be given light, palatable, mild laxative ration containing warm rice gruel, boiled rice/wheat bran, boiled millet or wheat mixed with edible oil, bypass fat, Jaggery, Soya, Asafoetida, Methi, Black Cumin, ginger etc. for 2 to 3 days after calving. This kind of diet is also helpful in early expulsion of placenta.
- In addition, the animal should be given tender green fodder and fresh water as much as it wants to drink, but do not give hot water.
- Ensure the milking cow has constant access to clean drinking water and receives required quantity of Area Specific Mineral Mixture daily.



Feeding and management during the transition period has a significant bearing on the lactation length and total milk yield.

J. EXAMPLES OF PREPARING TOTAL MIXED RATION FOR COW

1. DRY COW

Ingredients *	Quantity (Kgs)		
	Example 1	Example 2	Example 3
Dry fodder	7	7	7
Green fodder	4	10	4
Cattle feed	2	1	-
Oil Cake	-	-	1

* Mineral Mixture @ 50g per animal per day should be given

2. COW YIELDING 5 LITRES OF MILK PER DAY

Ingredients *	Quantity (Kgs)		
	Example 1	Example 2	Example 3
Dry fodder	7	7	7
Green fodder	4	10	4
Cattle feed	4	3	-
Oil Cake	-	-	2
Wheat bran	-	-	1

* Mineral Mixture @ 100g per animal per day should be given

3. COW YIELDING 10 LITRES OF MILK PER DAY

Ingredients*	Quantity (Kgs)		
	Example 1	Example 2	Example 3
Dry fodder	7	7	7
Green fodder	4	10	4
Cattle feed	6	5	-
Oil Cake	-	-	3
Wheat bran	-	-	2

* Mineral Mixture @ 150g per animal per day should be given

K. EXAMPLES OF PREPARING TOTAL MIXED RATION FOR BUFFALO

1. DRY BUFFALO

Ingredients*	Quantity (Kgs)		
	Example 1	Example 2	Example 3
Dry fodder	6	6	6
Green fodder	2	4	10
Cattle feed	-	-	1
Oil Cake	2	-	-
Wheat bran	-	3	-

* Mineral Mixture @ 75g per animal per day should be given

2. BUFFALO YIELDING 5 LITRES OF MILK PER DAY

Ingredients*	Quantity (Kgs)		
	Example 1	Example 2	Example 3
Dry fodder	7	6	7
Green fodder	5	10	2
Cattle feed	5	5	-
Oil Cake	-	-	3
Wheat bran	-	-	1

* Mineral Mixture @ 125g per animal per day should be given

3. BUFFALO YIELDING 10 LITRES OF MILK PER DAY

Ingredients*	Quantity (Kgs)		
	Example 1	Example 2	Example 3
Dry fodder	7	7	7
Green fodder	10	15	5
Cattle feed	6	7	-
Oil Cake	2	-	5
Wheat bran	-	-	3

* Mineral Mixture @ 175g per animal per day should be given



SECTION II

FODDER PRODUCTION

Fodder production is one of the most important activities in dairying contributing to the profitability of the business. It is also one of the areas that is neglected most often. Fodder provides an economic nutrient source which is highly relished by the animals. A year round supply of fodder can be assured if farmers cultivate seasonal and perennial fodder crops by adopting suitable crop sequences and surplus green fodder is preserved properly in times of abundance for use during lean periods. There are various processes by which this can be done.

Most of the farmers in our country depend on crop residues to sustain dairying. However, these crop residues are very low in nutritive value which needs to be enriched before feeding to the animals to increase its digestibility and palatability. The following chapters are included under this section:

- A. Importance of green fodder in milk production.
- B. Fodder conservation.
- C. Urea ammonia treatment of crop residues.
- D. Fodder mowers and pick-up devices.
- E. Package of practices of important fodder crops in India.

A. IMPORTANCE OF GREEN FODDER IN MILK PRODUCTION

Green fodder is an economic source of nutrients for the dairy animals. It is highly palatable and digestible. Micro-organisms present in green fodder help in improving digestibility of crop residues under mixed feeding system. It also helps in maintaining good health and improving breeding efficiency of animals. Increased use of green fodder in the ration of animals may reduce cost of milk production.

To reduce the gap between demand and availability of green fodder, there is a need to improve green fodder yield through enhanced use of improved fodder seeds. For ensuring year round green fodder production, farmers need to adopt following agricultural practices:

- Always use certified / truthfully labeled seed / planting material of improved high yielding varieties of fodder crops.
- Follow recommended package of practices for fodder cultivation such as land preparation, timely sowing, fertilizer application, irrigation, weed and pest control and harvesting schedule.
- Growing short duration varieties of fodder crops such as maize, sunflower, chinese cabbage, turnip, cowpea etc. between two main seasonal crops.
- Cultivate cereal fodder crops like maize, bajra and sorghum along with fodder legumes like cowpea, cluster bean and velvet bean.
- Cultivation of high yielding multi-cut perennial fodder crop like Hybrid Napier grass in fields and also on boundaries of other crop fields.
- Cultivate guinea grass, a shade tolerant fodder crop along with forage legumes like siratro / stylos under mixed cropping between trees rows in orchards.
- Harvest the multi-cut fodder crops at regular intervals (30 to 45 days) 10 cm height from ground level to get optimum production and quality fodder.
- Cultivate drought tolerant perennial grasses like anjan grass, sewan grass, rhodes grass and fodder trees like desi babool, neem, shisam, kanchan, aaradu, khejri, subabul and Gliricidia on fallow lands/wastelands/community for grazing.
- Some photos of important fodder crops and trees are provided in the following pages.



IMPORTANT FODDER CROPS



Fodder maize– African Tall



Lucerne



Oats



Multi cut Sorghum Sudan Grass (SSG) Hybrid



Fodder pearl millet—GFB 1



Job Tears—Coix



Berseem—Wardan



Sunflower

Feeding green fodder is the key to economic milk production

IMPORTANT FODDER CROPS



Velvet bean



Chicory



Cow pea



Fodder beet



Hybrid Napier- CO 4



Multi cut sweet Sudan grass



Teosinte



Sorghum mixed with cowpea



Feeding green fodder is the key to economic milk production

IMPORTANT FODDER CROPS



Anjan Grass



Clitoria ternatea (Aparagita)



Barley green fodder variety – RD 2035



Congo signal Grass



Dhaman Grass



Guinea Grass



Fodder Mustard – Chinese cabbage



Nandi Grass

Feeding green fodder is the key to economic milk production

IMPORTANT FODDER CROPS



Green Panic Grass



Para Grass



Rhodes Grass



Rice bean variety - Bidhan 1



Shevri (Sesbania sesban)



Siratro



Stylo hamata



Dasrath grass (Hedge Lucerne)



Feeding green fodder is the key to economic milk production

IMPORTANT FODDER CROPS



Stylo scabra



Sugar beet for fodder

IMPORTANT FODDER TREES



Kanchan (Bauhinia purpuria)



Maharukh/Aaradu (Ailanthus excelsa)



Subabul (Leucaena leucocephala)



Gliricidia (Gliricidia sepium)



Khejari (Prosopis cineraria)



Agasthi (Sesbania grandiflora)

Feeding green fodder is the key to economic milk production

B. FODDER CONSERVATION

Feeding quality roughages to the dairy animals throughout the year is essential to exploit their milk production potential. Generally, green fodder is available in plenty in few months like September / October (monsoon season) and February / March (Rabi season) under irrigated conditions while its availability is limited during summer months. The surplus green fodder can be conserved in the form of hay and silage to ensure supply of roughages during deficit period and to minimize wastage of green fodder.

I. HAY MAKING

Hay is a sun dried green fodder, containing moisture below 15 per cent. It is a good source of digestible dry matter and crude protein for dairy animals during deficit periods. The best quality hay is prepared from thin stem cultivated fodder crops like Lucerne, Oats and Sweet Sudan Grass during hot and dry summer months from March to May. Some perennial pasture grasses like Guinea grass, Rhodes grass, Anjan/Dhaman grass, Blue panic grass are also suitable for hay making.

To get best quality hay, these crops are cut at 50 per cent flowering stage. After cutting, green foliage is evenly spread on dry surface in thin layers of 5 cm thick for sun drying. Every morning after 10 A.M. fodder is inverted manually /mechanically for quick and evenly drying. After 4 to 5 days, when moisture reaches to less than 15 per cent in the forages, hay is collected and bundles are made for storage. While drying, care should be taken that hay retain the leaves and green colour, as it is an indicator of good quality hay.

These bundles of hay should be stored in moisture and dust free places like bunkers/godowns to maintain quality for longer period. Hay can be fed @ 5 kg per animal per day with or without chaffing.



Sun drying of green foliage



Bundles of hay



Hay - an alternative to green fodder during deficit period

II. SILAGE MAKING

It is known as pickle of green fodder. It is easily digestible and highly palatable. Best quality silage can be prepared from cereal fodder crops like Maize, Sorghum, Pearl millet, Oats and Barley which are rich in carbohydrates/sugars. Green fodder should be harvested at milking to dough stage of the crop, containing moisture content around 65 to 70 per cent, ideal for silage making. After harvesting, fodder is chaffed to 1 to 2 inch size for filling in silo pit.

Silage storage structure (Silo pit) is to be constructed prior to initiating silage making. Surface silo is an ideal storage structure and to be constructed on raised ground to minimize inflow of water. Size of the silo pit depends on the quantity of fodder to be ensiled. Silo pit with area of one cubic meter (1 metre length x 1 meter width x 1 meter height) is sufficient for ensiling 500 to 600 Kilograms of chaffed fodder.

The chaffed fodder is filled in tightly pressed layer of 10 cm each. Pressing of fodder can be done manually in small silo and through tractors on big size silo. After complete filling of silo pit, silage heap should be well sealed at the top with polythene sheet and 5 inches thick moist soil layer. Later, if some cracks are visible in the covered layer, more soil should be spread to seal it. Use of additives should be avoided in silage making. However, if fodder is not harvested at proper stage, suitable additives (molasses/common salt/ urea/formic acid) can be used during fodder filling.

After 45 days silage is ready for animal feeding. When green fodder is in deficit, silo pit can be opened from one side to take out the silage as per daily need of animals. It may be covered properly with polythene sheet after taking out of silage daily. Silage is a substitute of green fodder. However, initially for 3 – 4 days, its feeding is limited @ 5 to 10 kg/animal/per day to adjust the animals on silage feeding.



Chaffed fodder



Filling and pressing in silo pit



Fully sealed silo pit

Silage making is an effective way to conserve green fodder

C. UREA AMMONIA TREATMENT OF CROP RESIDUES

It is well known that green fodder, cattle feed and dry fodder in combination form the ideal nutritional source for maintaining health and milk production of animals. But sometimes due to non-availability of green fodder in sufficient quantity and high price of cattle feed pose problems for the farmer to meet nutritional demand of milking animals. Generally, paddy, wheat, bajra and sorghum straws are available in plenty with the farmers but these straws are deficient in nutrients and low in digestibility. Straws have less than 4 per cent protein. Urea treatment of straw increases its nutritive value by raising the protein content to about 8 per cent. Feeding urea treated straw may reduce the cattle feed requirement up to 30 per cent.

Straw Treatment Method:

1. At a time at least 1 ton straw should be treated. We need 40 kg urea and 400 litres of water for the treatment of 1 ton straw.
2. Dissolve 4 kg urea in 40 litres of water.
3. Spread 100 kg straw on the floor to form 3-4 inch thick layer.
4. Sprinkle 40 litres of prepared urea solution on the straw using gardener's sprinkler. Then press the straw with feet by walking on it.
5. Spread another 100 kg of dry straw on top of this compressed straw, and prepare another 40 litres of urea solution again by dissolving 4 kg urea in 40 litres of water. Sprinkle the prepared urea solution over the second layer of straw and repeat the compaction by walking on the layer of treated straw. Likewise, repeat the procedure 10 times by spreading 10 layers of straw, sprinkling it with 4 % urea solution and then pressing with feet.
6. Cover the treated straw heap with a new plastic sheet and spread some quantity of mud at the point where it touches the ground to prevent the formed ammonia gas to escape.
7. In case plastic sheet is not available, cover the treated heap with dry straw. Then after putting some soil, cover the same with wet clay / or cow dung layer to make it airtight.



UREA AMMONIA TREATMENT OF CROP RESIDUES (contd)

Precautions:

- Never feed urea or urea solution directly to the animal. Urea as such is fatal to animals.
- While treating the straw, keep the urea solution away from the reach of animals.
- Cemented floor is more appropriate for treatment of straw. If the floor is kaccha, use a plastic sheet on the floor before spreading the first layer of straw.
- It is convenient to undertake straw treatment in a closed room or in the corner location.
- Treated straw should be opened after 21 days in summer and 28 days in winter. Before feeding, the straw should be spread in open air for the ammonia gas to escape.
- Start with feeding small quantities of treated straw. Slowly the animal gets habituated and starts relishing it.

UREA AMMONIA TREATMENT OF CROP RESIDUES



Ensure correct quantities of urea & water



Ensure correct quantity of straw

UREA AMMONIA TREATMENT OF CROP RESIDUES



Ensure proper pressing and sealing



Ensure proper mixing



Urea treated straw after opening the seal

Urea treatment improves the nutritive value of straws

D. FODDER MOWERS & PICK UP DEVICES



Photo A

Auto Pick up Balers



Photo B

Flail Mower, Chopper Loader



Photo C

Reaper binder mower



Photo D

Raker

Due to labour shortage many farmers are adopting grain harvesters/pickers intensively for managing food crops like wheat rice, maize, oil seeds, pulses leading to huge loss of fodder biomass which was otherwise available to dairy cattle in manual harvesting system. For reducing fodder wastage, the farmers need to introduce fodder mowers and auto pick up devices for effective management of fodder and recovery of straw after combining. Mowers are high speed green fodder and straw harvesting machines having inbuilt options for threshing / chopping / trailer loading / stem cracking/ conditioning. They are the most economical devices for straw recovery, silage making, hay making, mulching, composting/fertigation. Mowers are also known as roughage management machines used for intensive fodder production for higher protein and higher energy recovery at right stage of harvesting, storage, banking and ware housing.

Depending on season, crop hardness, tenderness, thickness, height and moisture of different crops, various types of mowers are to be propagated. Following three kinds of straw securing and fodder management devices will be extremely useful in near future:

- a) Auto Pick up Balers (**Photo A**)
- b) Flail Mower, Chopper Loader (**Photo B**)
- c) Combine prevention / reversal mowers (**Photo C**)



FODDER MOWERS & PICK UP DEVICES (contd)

a) Auto Pick up Baler is driven by 50 - 75 hp tractors. It picks up a swath width of about 1500 -1800 mm. Straw or hay pick up rate with this machine is about 1 to 2 MT per hour depending on crop and swath. Size of the bales can be adjusted from 10 to 20 kg. Small bales are easy to handle and can be transported to transit storage points with ease and minimum drudgery. Loading, unloading and stacking of fodder becomes very convenient after field baling. Also onward trading and distribution is quite convenient after baling. Left out straw from dwarf varieties can be baled directly after combining. But for taller biomass additional disc or drum or sickle type mower is essential before baling works. For managing high moisture biomass we need another machine called collection inversion cum liner rake (Photo D) so as to sun dry the biomass before pick up & storage. The baler machine can work on almost all types of biomass. About 20 MT of straw can be secured in one day by employing 75 HP tractor driven baler. Many leading international brands of straw or hay baler machines are active in India now – Claas, New Holland, John Deere, Kuhn are among the top players.

b) Flail Mower, Chopper Loader is also driven by 50 - 75 hp tractors. It pick up swath width of about 1300 to 1900 mm. Straw recovery rate with this machine is about 2 to 3 MT per hour depending on crop height and swath. Machine has option of blowing the fodder biomass back into field for sun drying or fertigation or mulching as per specific needs of the farmer. For high moisture biomass collection, inversion cum liner rake (Photo D) is also required so as to sun dry the biomass before pick up and storage. The machine can work on almost all types of biomass. The mower ensures added benefit of high speed silage and hay making due to inbuilt chopping and cracking facilities. About 20 MT of straw can be picked up in one day with this mower in loose form. Mechanisms used in the flail mowers are simple, but strong & sturdy. Therefore, low skill level workers and operators can also run this type of biomass recovery mowers. Major players for flail harvesters in India are Fimaks, John Deere, New Holland.

c) Combine prevention / reversal mowers -Under this category many kinds of smaller crop mowers are available now. Self propelled Reaper Binder with 10 HP diesel engine is gaining momentum in India due to its versatile usefulness in fodder as well as grain crops like wheat, rice, rain-fed sorghum, bajra, pulses, oil seeds etc. The machine harvests the crops at almost zero level - just 60 mm above the ground thus guarantees 100% straw recovery. Bundles made by the reaper binders are fully automatic (labour free) and are quite handy. BCS and Jashoda are top suppliers for reaper binders in India. The mower machine can harvest about 8 acre in one day.



E. PACKAGES OF PRACTICES OF IMPORTANT FODDER CROPS IN INDIA

SUMMER/KHARIF CROPS

Crop	Soil type	High yielding varieties	Sowing time	Seed rate (kg / ha)	Row Spacing cms	Fertilizer rate (kg/ha)	No. of irrigations	Harvesting time (days)	No. of cuts / year	Fodder yield (ton / ha)
Sorghum (Single cut)	Sandy Loam to Clay Loam	PC - 6, 9 HC - 136, 308 HJ - 513, CSV 21 F Pant Chari 5	June - July (North India) Feb to Nov (South India)	25-30	30-40	N - 90 P- 30	2-3	80-90 for late varieties and 65-57 for early ones	1	30-50
Sorghum (Multi-cut)	Sandy Loam to Clay Loam	SSG 988 CSH 24 MF CSH 20 MF CO FS 29 Pant Chari 6	March - July (North India) Feb to Nov (South India)	25-30	30-40	N - 60 P - 30 & N - 30 kg after every cut	5-6	First cut at 60 days and rest at 45 days interval	3-4 & 6-7 in case CO FS29	70-90
Maize	Sandy Loam to Clay Loam Good drainage	African Tall J-1006 Pratap Makka Chari 6 Vijay Composite	March - August (North India) Feb to Nov (South India)	60-80	30-40	N - 80 P- 40 & N - 30 kg after every cut	3-4	75-80	1	35-55
Pearl Millet	Sandy Loam	AVKB-19 GFB-1 FBC 10	March to July	8-10	30	N - 40 P- 20	2-3	First cut at 50 days and rest cuts at 35 days interval	3-4	25-50

E. PACKAGES OF PRACTICES OF IMPORTANT FODDER CROPS IN INDIA

SUMMER/KHARIF CROPS (contd)

Teosinte	Sandy Loam to Clay Loam	TL – 1	July	30-40	40-45	N – 90 P- 30	2-3	75 days stage	1	35-40
Cowpea	Sandy to Loam	UPC 618 UPC 625 UPC 622	March to July	30-35	30-45	N – 30 P- 40	2-3	60 -80	1	25 -30
Crop	Soil type	High yielding varieties	Sowing time	Seed rate (kg/ha)	Row Spacing cms	Fertilizer rate (kg/ha)	No. of irrigations	Harvesting time (days)	No. of cuts / year	Fodder yield (ton/ha)
Rice bean	Sandy Loam to Clay Loam	Bidhan 1 KRB – 4	April to August	20-25	30-35	N – 30 P- 40	2-3	70-90	1	20-25
Cluster bean	Sandy to Sandy Loam	HFG-156 Guara-80 Bundel Guar – 1,2,3	April to August	25-30	30-35	N – 30 P- 40	2-3	60-75	1	20-30



PACKAGES OF PRACTICES OF IMPORTANT FODDER CROPS IN INDIA

WINTER/RABI CROPS

Crop	Soil type	High yielding varieties	Sowing time	Seed rate (kg/ha)	Row Spacing cms	Fertilizer rate (kg/ha)	No. of irrigations	Harvesting time (days)	No. of cuts /year	Fodder yield (ton/ha)
Berseem	Loam to Clay Loam	Wardan, JB-1, BL - 1, 10, 42 Mescavi	October to November	25	20	N - 30 P- 60 K - 40	10-15	First cut at 60 days and rest at 25 days interval	5-6	70-110
Lucerne	Sandy to Loam	Anand - 2 (Annual type) RL - 88 and Anand Lucerne 3 (Perennial type)	October to November	25	20	N - 30 P- 80 K - 40	10 (Annual) 15 (Perennial)	First cut at 50 days and rest at 30 days interval	Annual - (6) Perennial (8 cut)	60-80 (Annual) 80-110 (Perennial)
Oats	Sandy Loam to Loam	Kent UPO 212 Harita (RO19) Bundel Jai 2004	October to November	80-100	20-25	N - 80 P- 40	3-4	First cut at 60 days and second cut at 50 % flowering	1-2	30-45)
Fodder Mustard	Sandy Loam to Loam	Chinese Cabbage	September to November	6-8	30-40	N - 60 P- 30	2-3	AT 50 % flowering	1	25-30
Fodder beet	Loam	Jamon, JK Kuber,	November to December	3	50	N - 120 P - 60 K - 40	8	Digging of roots at 100 days onward	1	75 - 100

PACKAGES OF PRACTICES OF IMPORTANT FODDER CROPS IN INDIA

PERENNIAL GRASSES/PASTURE LEGUMES/FODDER TREES

Crop	Soil type	High yielding varieties	Sowing time	Seed rate (kg/ha)	Row Spacing cms	Fertilizer rate (kg/ha)	No. of irrigations	Harvesting time (days)	No. of cuts / year	Fodder yield (ton/ha)
Hybrid Napier Grass	Sandy Loam to Clay Loam	CO 3, 4 PBN – 233 BNH 10 APBN – 1 IGFRI 10 Phule Jayawant	March to October in North India Year Round (South India)	20000 root slips/ stem cuttings	100 x 50	FYM – 15 ton N – 50 P- 80 K – 60 at planting N - 50 kg/ha after every cut	Every 15-20 days interval	I cut at 90 days after planting Rest cut at 45-60 days interval	7-8	200 to 350
Guinea Grass	Sandy Loam to Clay Loam	CO PGG-518, 616 Bundel Guinea - 1	March to August in North India Year Round (South India)	40000 root slips or 3-4 kg per ha	50 x 50	FYM -10 ton N – 50 P- 60 K – 40 at planting N 30 kg/ha after every cut	Every 30-35 days interval	I cut at 75 days after planting Rest cut at 45 days interval	7-9	100 to 120
Anjan/ Dhaman Grass	Sandy to Sandy Loam	Bundel Anjan -1, 3 CAZRI 78	March to September in South India June-July in North India	5-6 kg / ha	45 x 30	N – 40 P- 30 K –30 at planting	Rain fed	I cut at 60 days after planting Rest cut at 50 % flowering stage	3-4	10-12
Para Grass	Loam to Clay Loam	Local	July -August	5-6 quintals of stem cuttings	50 x 50	FYM – 10 ton N – 25 kg after each cut	Rain fed	I cut at 75 days after planting Rest cut at 30 days interval	6-8 in North India and 8-10 cuts in South India	18-25



PACKAGES OF PRACTICES OF IMPORTANT FODDER CROPS IN INDIA

PERENNIAL GRASSES/PASTURE LEGUMES/FODDER TREES

Crop	Soil type	High yielding varieties	Sowing time	Seed rate (kg/ha)	Row Spacing cms	Fertilizer rate (kg/ha)	No. of irrigations	Harvesting time (days)	No. of cuts / year	Fodder yield (ton/ha)
Stylo	Loam to Sandy Loam	Verano, Scabra Hamata	June-July in North India and March to September in South India	6-8	30	N – 25 P – 40	Rain fed	I cut at 60-70 days after sowing second cut at 60 days interval	3-4	15-35
Siratro, Clitoria ternatea	Sandy Loam to Clay Loam	Local	June-July in North India and March to September in South India	8-10	30	N – 25 P – 40	Rain fed	I cut at 70-80 days after sowing second cut at 60 days interval	2-3	15-25
Hedge Lucerne	Sandy Loam to Clay Loam	Local	June-July in North India and March to September in South India	2-3	45 x 10	N – 25 P – 60	Rain fed	I cut at 70-80 days after sowing second cut at 45 days interval	4-5	30-40
Gliricidia sepium	Loam to Clay Loam	Local	July to August in rainy season	2000 stem cuttings	500 x 100	N – 25 P – 60	Rain fed	After 5-6 months of planting lopping of tree branches as per need	2 -3 times	10-15
Subabool, Agasthi, Shevri	Sandy to loam	Local	July – August	4-5	500 x 100	N – 25 P – 60	Rain fed	After 5-6 months of planting lopping of tree branches as per need	2-3 times	10-15

SECTION III

HOUSING OF ANIMALS

Animal housing is also very important in harnessing the maximum potential of the animal. Stressful conditions significantly reduces productivity and it is therefore important to protect the animal from inclement weather.

Improper housing also predisposes the animal to hoof conditions.

The following chapters are included in this section:

- A. Animal Housing.
- B. Heat Stress.
- C. Measuring heat stress through symptoms.
- D. Measuring heat stress through indices.
- E. Managing heat stress.

Some high cost cattle shed options



Some low cost cattle shed options



A. ANIMAL HOUSING

It is important to provide clean and comfortable housing facilities to the dairy animals for their proper growth and optimum productivity. The milch animals should be protected from extreme weather conditions of summer, winter, scorching direct sunrays and winds by providing proper animal sheds.

During summer, the animals suffer from heat stress and they become restless. Sweating and panting, to some extent helps them cool their bodies. Reduced feed intake of the animals results into decreased milk production. Therefore, we must have a suitable housing for the animals.

- Animal shed must ensure minimum 5.5 feet x 10 feet floor space for one cow / buffalo. The flooring should be of rough concrete finish with 1.5% slope towards drain. The drain should be open, 8 inch wide, 3 inch deep having 1.0% cross slope so that the shed remains clean.
- Height of the ceiling should not be less than 10 feet may it be thatched or of AC Sheets, Brick or RCC.
- Shed should be open from three sides. Only western side should have wall. For every animal there should be ventilator of size 3 feet x 1 feet at the ceiling level. During winter remaining three open sides may be covered by gunny cloth.
- 2 feet wide and 1.5 feet deep manger should be located on western wall of the shed. Base of the manger may be 1 feet above the floor level. Trough for drinking water should be provided by the side of the manger.
- Eastern side of animal shed should have free loafing area. Animals are more comfortable under the shade of the tree. Loafing area, therefore should have 2-3 shady trees e.g. Neem.
- During summer, sprinkling of water on the animal at an interval of 15 to 20 minutes reduces heat stress as evaporation of water causes cooling of body.



Animal cooling systems are very important especially in high yielding crossbreds and exotic animals.

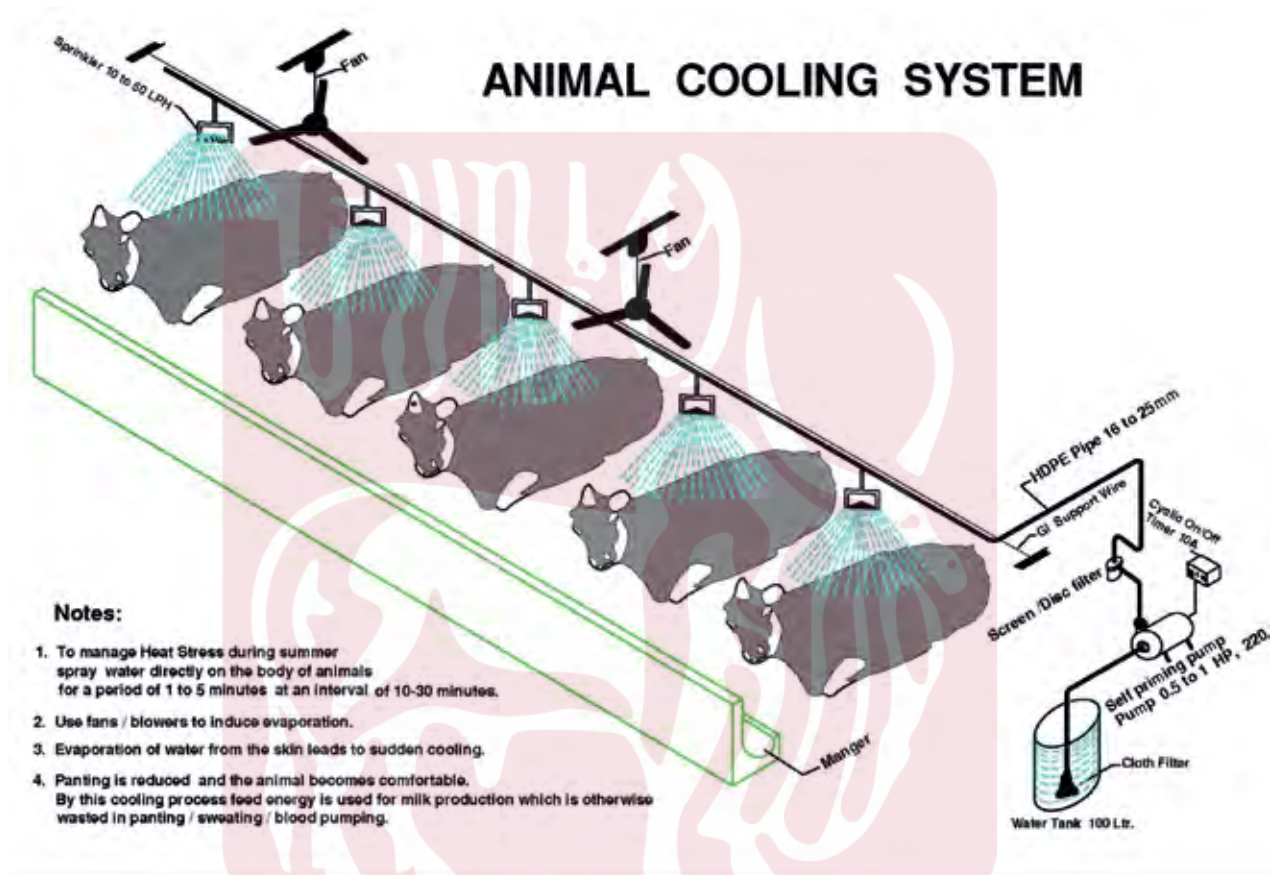


Cooling systems reduces heat stress and maintains milk production

B. HEAT STRESS

Heat stress on animals leads to productivity loss on account of following:

- Rise in body temperature, reduced feed intake, sweating, panting, increased pulse rate, increased peripheral blood flow, reduced growth hormones, high mortality, increased water intake, reduced milk production & reduced breeding efficiency.
- To combat the ill effects of heat stress, NDDB has developed a water misting based Animal Cooling System costing Rs 11000 for six animals.



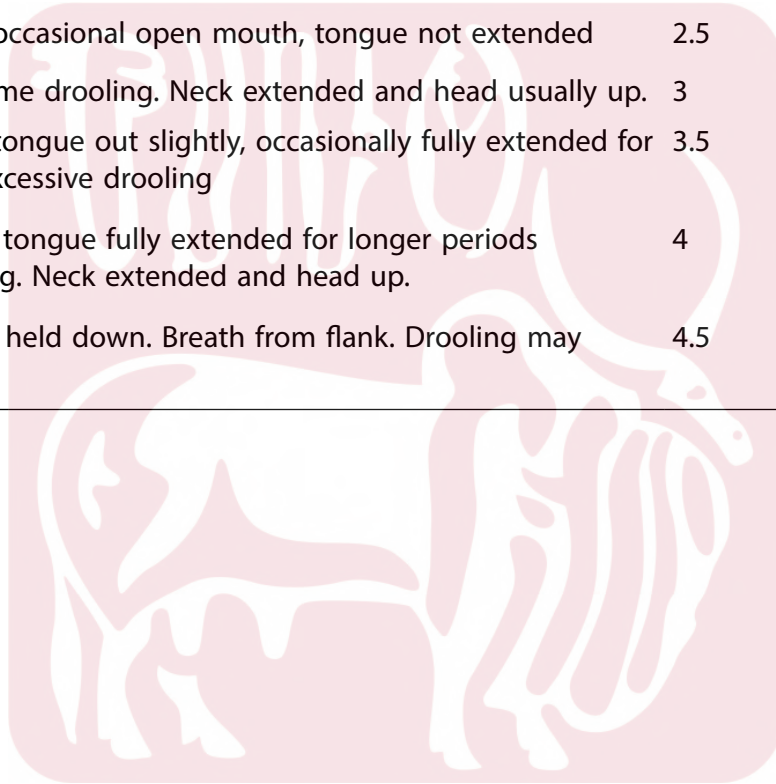
- One gram of water evaporation takes away 540 calories of metabolic heat generated by animals.
- Drop in temperature by water evaporation (so called zero energy cooling) from the animals body could exceed 13°C depending on humidity, thus bringing them back into comfort zone during hot summer days.

Cooling systems reduces heat stress and maintains milk production

C. MEASURING HEAT STRESS THROUGH SYMPTOMS

- Assessing the level of heat stress is important to prevent or reduce production losses due to heat stress or even prevent mortality in severe cases.
- Scoring the levels of heat stress by the symptoms (Panting Score) shown by animals would give an idea about the condition of the animals.

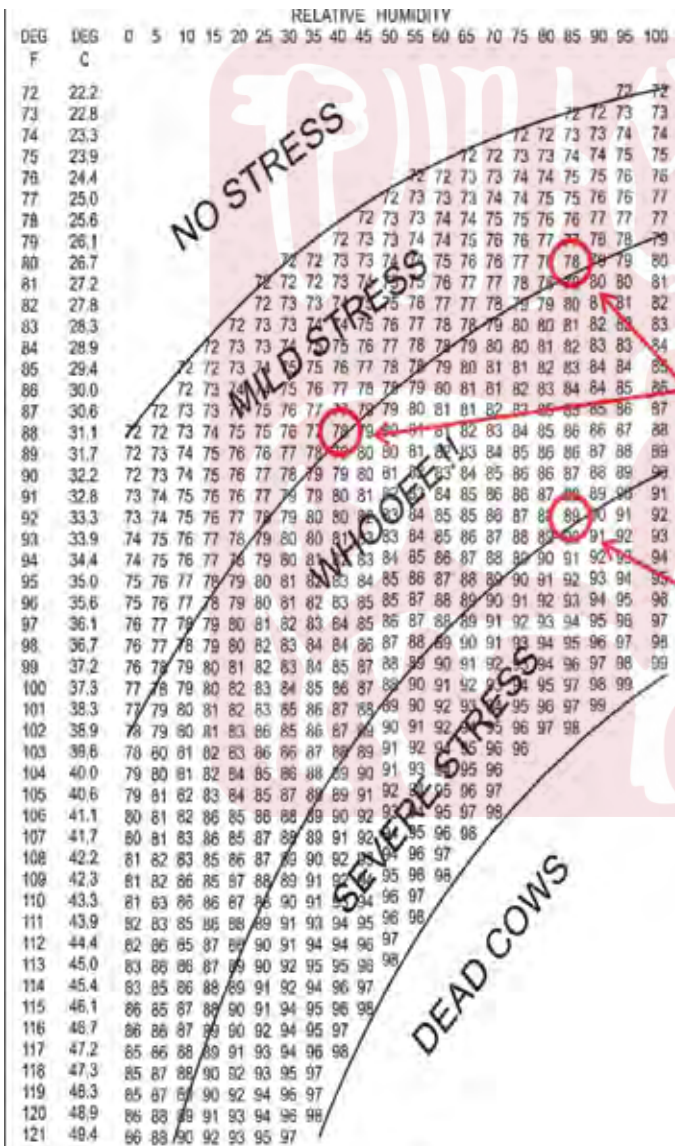
Breathing condition	Panting Score	Breaths/ minute
No panting– normal Difficult to see chest movement	0	<40
Slight panting, mouth closed, no drool or foam. Easy to see chest movement	1	40-70
Fast panting, drool or foam present. No open mouth panting	2	70-120
As for 2 but with occasional open mouth, tongue not extended	2.5	70-120
Open mouth + some drooling. Neck extended and head usually up.	3	120-160
As for 3 but with tongue out slightly, occasionally fully extended for slight periods + excessive drooling	3.5	>160
Open mouth with tongue fully extended for longer periods +excessive drooling. Neck extended and head up.	4	>160
As for 4, but head held down. Breath from flank. Drooling may cease.	4.5	May decrease



Identify heat stress well in time to avoid production losses

D. MEASURING HEAT STRESS THROUGH INDICES

- Measuring the level of heat stress through indices can give a fair idea on its effect on the animals so that preventive measures can be implemented well in time.
- The Thermal Humidity Index (THI) is used for this purpose.
- The principle of THI is that as the relative humidity at any given temperature increases, then the comfort factor decreases.
- Milk production begins to be affected above a THI of 78 which will occur at 27°C and 80% relative humidity or at 31°C at 40% relative humidity (RH). At a THI of 89, the animal is on the verge of severe heat stress.
- The chart below gives an indication of THI indices and levels of heat stress.



HOW TO FIND RELATIVE HUMIDITY (RH)

- A dry and wet bulb thermometer is needed.
- Keep it in the cow shed.
- Check the temperature reading on the dry bulb.
- Check the temperature reading on the wet bulb.
- Find the difference between the readings.
- Find the RH from the chart using the procedure mentioned (See RH chart on next page).
- Use the RH and dry bulb temperature to measure heat stress levels.



Different types of dry and wet bulb thermometers

Source: Dr Frank Wiersama (1990) Dept. of Ag Eng, The University of Arizona, Tucson, Arizona

Knowing heat stress indices help to identify the issue early

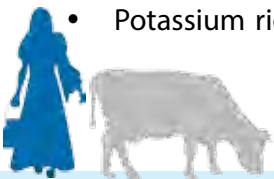
Relative Humidity Table

Dry Bulb Temperature ... Wet Bulb reads °C lower than Dry Bulb		1	2	3	4	5	6	7	8	9	10	12	14	16	18	20
2	>>>>	84	68	52	37	22	8									
4	>>>>	85	70	56	42	29	26	3								
6	>>>>	86	73	60	47	34	22	11								
8	>>>>	87	75	63	51	39	28	18	7							
10	>>>>	88	76	65	54	44	33	23	14	4						
12	>>>>	89	78	67	57	47	38	29	20	11	3					
14	>>>>	89	79	69	60	51	42	33	25	17	9					
16	>>>>	90	80	71	62	54	45	37	29	22	14					
18	>>>>	91	81	73	64	56	48	41	33	26	19	6				
20	>>>>	91	82	74	66	58	51	44	37	30	24	11				
22	>>>>	91	83	75	68	60	53	46	40	34	27	16	5			
24	>>>>	92	84	76	69	62	55	49	43	37	31	20	9			
26	>>>>	92	85	77	70	64	57	51	45	39	34	23	14	4		
28	>>>>	92	85	78	72	65	59	53	47	42	37	26	17	8		
30	>>>>	93	86	79	73	67	61	55	49	44	39	29	20	12	4	
32	>>>>	93	86	80	74	68	62	56	51	46	41	32	23	15	8	1
34	>>>>	93	87	81	75	69	63	58	53	48	43	34	26	18	11	5
36	>>>>	93	87	81	75	70	64	59	54	50	45	36	28	21	14	8
38	>>>>	94	88	82	76	71	65	60	56	51	47	38	31	23	17	11
40	>>>>	94	88	82	77	72	66	62	57	52	48	40	33	26	19	13
42	>>>>	94	88	83	77	72	67	63	58	54	50	42	34	28	21	16
44	>>>>	94	89	82	78	73	68	64	59	55	51	43	36	29	23	18

Procedure for taking the reading mentioned on the previous page

E. MANAGING HEAT STRESS

- Ensure adequate water availability to animals. A healthy normal cow needs about 100 liters of water to manage heat.
- Drinking water should be provided under shade to ensure cooling by evaporation.
- Ensure shade over the animals. If trees are not available thatched roof of a minimum height of 9 feet should be constructed. Agri-nets with 20% perforation could also be useful. In desert like situations, community shades could be introduced.
- Misting of water over the body of animals at least thrice in an hour is useful. Auto sprinklers with mini pumps and cyclic timers should be preferred.
- Air circulation in covered sheds should be increased. Ensure one ventilator of 3 x 1 feet per cow. Use ceiling fans or blowers wherever power is available.
- Create barriers against hot wind. Thatched wall should be preferred. Wet gunny cloth is another option.
- Feed the animals during morning, evening & night time.
- Prefer grazing during early morning & evening hours.
- Shave the hair coat (remove hair).
- Ration to be changed so as to provide same nutrients at reduced dry matter intake.
- Potassium rich mineral mixture should be preferred.



Managing heat stress can save your animal during summers

PART III

INFORMATION NETWORK FOR BETTER PRODUCTIVITY

The important facets of animal health, breeding and nutrition mentioned in the previous sections should be supported by an information system for recording the activities in the field so that a rich database is created which would be beneficial both to the farmers and policy makers.

NDDB has created such a system called the Information Network for Animal Productivity and Health (INAPH) which is being presently used in the field for recording various interventions in animal health, breeding and nutrition. A brief description of the information system and the benefits to the farmers are mentioned in the following sections:

Section I. Animal Identification

Section II. Animal Health

Section III. Animal Breeding

Section IV. Animal Nutrition (Ration Balancing Programme)

SECTION I

ANIMAL IDENTIFICATION

- The process of uniquely identifying an animal using a marking on the body of the animal is known as animal identification.
- Identification of an animal is very important while recording any interventions on it for creation of a reliable and rich database.
- The GoI has already passed a Prevention and Control of Infectious and Contagious Diseases in Animals (PCICDA) Act, 2009 which makes identification of the animal compulsory.
- This Act has been passed by the GoI so that adequate measures are taken to be in line with international policies.
- There are various methods for identification like tattooing, branding, ear tagging, RFID, injectables, bolus, etc.
- Ear tagging is the most common method of identification. It uses a 12 digit number to be printed on the ear tag. It is to be ensures that the number remains unique across the country.
- Ear tag does not cause any problem if applied properly and remains for many years on the ear of the animal.
- INPAH is able to record the ear tag of each animal registered with it along with all the details of the animal (breed, age, whether pregnant, milk yield, owner's details, village name etc.) so that a permanent passport of the animal is created which can be transferred or traced to any location in the country.
- DADF, GoI has authorised NDDDB to centrally manage unique animal identification system in the country.
- NDDDB generates and delivers unique ear tag numbers to all ear tag consumers, manufacturers and other concerned institutions in the country.
- In order to receive ear tag numbers, institutions shall apply to NDDDB along with copy of the firm ear tag purchase order.



Ear tag



Ear tag applicator



Ear tag applied correctly



SECTION II

INAPH AND ANIMAL HEALTH

- The information system on animal health is able to record all the interventions carried out in animal health like deworming, vaccination, treatment, disease testing, outbreak management, infertility camps etc.
- The recordings can be made both at individual animal level where an identification number is required, or at a mass level (like in mass vaccination, deworming or infertility camps) where only village-wise numbers of animals are recorded which does not require individual identification numbers.

The farmer is benefitted in the following ways:

1. All information of the animal is available just by entering the tag number in the system.
2. The farmer gets timely SMS alerts on his registered mobile on the services due on his animal like deworming, vaccination (for each disease), disease testing etc.
3. A health card of the animal detailing all the interventions carried out on the animal can be generated for reference just by entering the tag no. of the animal.
4. The farmer is alerted through SMS if any disease outbreaks occur in neighbouring villages so that timely preventive measures can be taken.

SECTION III

INAPH AND ANIMAL BREEDING

- INAPH information system is capable of recording all the interventions carried out in breeding programmes like AI done, Pregnancy Diagnosis, Calving, Milk Recording, Typing etc.
- Recording of the programme events in this system is done individual animal wise where a unique animal identification number (ear tag) is required. The data is used to manage programmes like AI delivery, progeny testing, pedigree selection, animal sale/purchase etc. It is used to select elite cows for production of high genetic merit bulls through Progeny Testing (See chapter F in Section XIII in Part I)

Use of INAPH system facilitates following benefits to farmers and concerned institutions:

1. All information on milk yield of the animal in various lactations are available in the system.
2. Animals are uniquely identified by an ear tag. Therefore farmer can receive the benefits of various government and non-government programmes like livestock insurance, vaccination, treatment etc.
3. The farmer gets timely SMS alerts on his registered mobile on the breeding services due on his animal like next heat due, pregnancy diagnosis date, expected calving date etc. Presently, SMS messages are forwarded in Hindi, Marathi, Gujarati and English.
4. Institutions associated with the farmer receives information about animal management practices being followed by the farmer.
5. INAPH data is used by various institutions implementing AI delivery programme in the country. The data helps research institutions to identify best milking animals and bulls in the country which should be used to increase the milk production of the future generations of dairy cattle and buffalo.
6. Central and State governments use INAPH data in making policies for the country.



SECTION IV

INAPH AND ANIMAL NUTRITION

Ration Balancing is a component of INAPH pertaining to Animal Nutrition. The ration balancing software consist of nutrient masters for nutritional requirements of various categories of dairy animals along with feed library comprising of nutritive value of feed and fodder available in various parts of the country.

Using this software, balanced ration for given animal can be formulated based on production and other physiological parameters with available feed resources at least cost.

Balanced ration formulation can be made both at individual animal level and at a herd level for group of animals having similar physiological and production profiles and such ration is recommended to the farmers.

The farmers feeding balanced ration to their animals are benefitted in the following ways:

1. The farmer gets a clear picture on the present cost of production per litre of milk.
2. The farmer understands the deficiencies or excesses in the present feeding regime especially with respect to availability of protein, total digestible nutrients, calcium and phosphorous.
3. The farmer is provided with a formula of a balanced ration based on the production and physiological status of the animal by re-adjusting the proportions of the feed being fed to the animal and/or by incorporating unconventional feed resources that may be available with him/in the village.
4. The feed costs are optimized for the present levels of production.
5. Improvement in productivity, reproductive efficiency and general health of animals, resulting in to increased profitability to the farmers.

FREQUENTLY ASKED QUESTIONS– ANIMAL HEALTH

Question: Should we allow animals to be vaccinated if the vaccinator does not bring vaccine in ice box?

Answer: Never, vaccines get spoiled in ambient temperature and is unable to provide protection to animals.

Question: Which animals cannot be vaccinated?

Answer: Sick animals, just calved animals (up to 3-4 weeks after calving) & calves till they attain 3-4 months of age should not be vaccinated.

Question: Can a pregnant animal be vaccinated?

Answer: Yes, there is no harm in vaccinating a pregnant animal. However, one should avoid vaccinating animals in the last month of pregnancy, as the animal as well as the fetus could be injured during restraining.

Question: Should we vaccinate unaffected animals during FMD outbreak in a village?

Answer: In an FMD affected village, it is not advisable to vaccinate animals not showing symptoms of FMD since it may already be in various stages of incubation even before any symptoms are seen. However, ring vaccination starting from 2-3 km away from the infected village and moving inward from periphery to the point of infection is very important in limiting the spread of the disease. Strict control on movement of animals, feed, fodder and people from infected areas are also equally important in controlling the outbreak.

Question: Can an animal be vaccinated against several diseases at a time?

Answer: Yes, in human beings and dogs, combined vaccines for multiple diseases are already in use for a long time. Now combined vaccines against FMD, HS and BQ are available for cattle and buffaloes also.

Question: What should we do if a rabid dog bites an animal?

Answer: Wash the wound immediately under running tap water for 5-10 minutes. In absence of a tap, pour clean water from a vessel. Clean the wound with ordinary bath soap gently. Apply tincture iodine and take the animal to the nearest Veterinary Officer.

Question: What should we do if a snake bites an animal?

Answer: Tie a tourniquet 3-4 inches above the site of the bite. Give a small incision at the site with clean blade and allow the wound to bleed. Wash the wound with detergent. Call the Veterinarian immediately.

Question: What should we do to treat tympany/bloat?

Answer: Feeding of lush green leafy fodder like Berseem, lucerne may result in formation and accumulation of gases in the rumen causing distension of rumen. In such cases, don't allow the animal to sit and do not provide water to drink. Give the animal a mixture containing 100 gm of rock salt, 30 gms of asafoetida, 100 ml turpentine oil and 500 ml linseed / vegetable oil and then consult a Veterinary officer immediately.

Question: Is there any harm if we consume milk from a cow suffering from subclinical mastitis?

Answer: Milk from cows having subclinical mastitis may contain toxins of certain bacteria that are not destroyed even by boiling. The toxins may produce diarrhoea or throat infection in humans.

Question: Is oxytocin injection given for letdown of milk harmful to animal or milk consumers?

Answer: Use of oxytocin injection is not recommended for milk let down except when used by a veterinarian for treating animals for some diseases.

Question: Should colostrum need to be fed to a new born calf?

Answer: Colostrum should be fed as early as possible to a new born calf in adequate quantities (minimum 1/10th of the body weight).

Question: Can we deworm pregnant animals?

Answer: Pregnant animals should be dewormed near the time of calving and again 6-7 weeks after calving after consultation with a veterinarian.



FREQUENTLY ASKED QUESTIONS– ANIMAL NUTRITION

Question: What is ration balancing?

Answer: All species require balanced ration for optimal growth, ration balancing is a process to balance the level of various nutrients of an animal, from the available resources, to meet its nutrient requirements for maintenance and production.

Question: Can we incorporate gram chuni, wheat bran, banana stem, bamboo leaf etc. and other home grown produce while balancing ration?

Answer: Yes, home grown produce, tree leaves etc. which are normally fed to animals can be incorporated while balancing ration. In fact the objective of ration balancing is to produce an optimum quantity of milk at the least cost from milch animals by readjusting, wherever required, the proportion of locally available dietary feed ingredients, so as to provide adequate amount of proteins, minerals, vitamins as well as energy.

Question: In case UMB is being offered to the animal for licking, how much quantity of urea treated straw should be fed to animal?

Answer: UMB and urea treated straw both should not be fed to animal at a time. If UMB is not given, we can offer urea treated straw to animal to the extent it eats.

Question: Is cattle feed required if we feed urea treated straw to the animal?

Answer: In case animal is neither pregnant nor lactating and is getting sufficient urea treated straw or ordinary straw along with UMB lick, cattle feed is not required. But for lactating and pregnant animals, cattle feed/bypass protein feed should also be fed along with urea treated straw as per recommendation made earlier in this booklet.

Question: Do we need to provide extra mineral mixture when we are feeding balanced cattle feed to animals?

Answer: As balanced cattle feed contains mineral mixture, we can reduce the recommended quantity of mineral mixture to 50%.

Question: What should we do if the animal does not lick urea molasses block?

Answer: To make the animal habituated to licking UMB, sprinkle flour, bran or cattle feed on the block for few days. Animal will start relishing it gradually.

Question: For how many days does one urea molasses block last?

Answer: One urea molasses block weighing 3 kg lasts for 5-7 days for one animal

FREQUENTLY ASKED QUESTIONS– ANIMAL BREEDING

Question: Why is improvement of indigenous breeds important? What are important indigenous breeds and where are they available?

Answer: Indigenous breeds are well adapted to our agro-climatic conditions and are resistant to many tropical diseases and can survive and produce milk on poor feed and fodder resources. Some of these breeds are well known for their high milk and fat production. However, the production potential of these animals has deteriorated over a period of time due to lack of selection. The high producing exotic breeds do not have the above characteristics and are very difficult to manage in tropical Indian scenario. Hence, indigenous breeds should be improved. Please see the inside covers for the various indigenous milch breeds of cattle & buffalo and their native breeding tracts.

Question: Which is most suitable animal for Dairying – indigenous cattle, crossbred cattle or buffalo?

Answer: Choice of breed or breed combination primarily depends on resource availability, climatic conditions, availability of feed and fodder and healthcare facilities, availability of market for milk, criteria for milk pricing etc. In resource poor situations, indigenous cattle and/or buffaloes could be preferred while with moderate to good resources crossbred cow could be preferred. Places where fat % is the price criteria, buffaloes may be preferred.

Question: What is an economic animal?

Answer: Economic animal is one which produces one calf in a year, resistant to diseases; produce maximum milk with minimum input cost i.e. minimal per litre milk production cost.

Question: What is a state breeding policy? Why should it be followed?

Answer: Every state has defined its own breeding policy based on geographical and climatic conditions of the state and distribution of different breeds in the state. Breeding policy is a guideline to indicate what breed and breed combination like indigenous, crossbred or exotic breed is most suitable in the given agro climatic condition of the state. It should be followed to get the optimum output from your animals and to conserve the native breed available in the state.

Question: What type of semen should be used to breed different type of animals? Whether AI Technician (AIT) carries semen doses of all breeds of semen so that I can choose the best option for my animal? What is sire directory? Is it available with every AIT?

Answer: Semen procured only from A and B graded semen stations should be used for breeding purpose. The semen used should be in accordance with the breeding policy of the state. The semen doses must be carried in cryocan (not in any other container). All AITs may not always carry the semen as per the breeding policy of the state hence an aware and progressive farmer should be vigilant and insist to know the breed, exotic blood level and pedigree details of the bull, the semen of which is being used to breed his animal.

Sire directory contains pedigree details of all bulls in the semen station. Ideally it should be available with AI technician. If not, the AIT should obtain it from the semen station.

Question: Is Artificial Insemination (AI) a treatment for infertility/repeat breeding?

Answer: No, AI is not a treatment for infertility or repeat breeding. It is an artificial method to inseminate an animal with semen of disease free High Genetic Merit (HGM) bull. If an animal is not able to conceive through natural service due to infertility then it won't conceive even through artificial insemination.

Question: Is there any advantage of using more than one dose of semen in one heat?

Answer: If done at correct time of heat using good quality semen and using correct AI technique following Standard Operating Procedure (SOP) one dose of semen is sufficient for successful conception. However, in a few cases, if the heat period is extended beyond normal duration; ovulation is also delayed and in such cases, second insemination may be required.

Question: Should I take the animal to a bull after AI?

Answer: No, the animal should never be taken to a bull after AI.

Question: What is the ideal success rate of AI?

Answer: 40% and above.

Question: Is AI successful in buffaloes?

Answer: Yes, AI in buffaloes is as successful as in cows. However, proper care should be taken for detection of heat and timely insemination of buffaloes for higher conception because buffalo exhibits silent heat wherein animals do not exhibit heat symptoms overtly and duration of heat is also reduced.

Question: Does AI produce only male calves or weak calves or, reduce milk yield of the dam?

Answer: Analysing large number of observations has revealed that there is no adverse effect of AI on male: female ratio, calf birth weight or milk production of dam. These are superstitions or myths which are propagated by vested interests without any scientific evidence.

Question: Which bull semen is most suitable for breeding a non-descript Indian cow to get better milk from its progeny?

Answer: Use of semen from indigenous bulls like Sahiwal/Gir/Red Sindhi etc. is most suitable depending on resources or breeding policy of the state. If the farmer has resources to maintain a crossbred animal and the state breeding policy permits it, he can use pure HF/Jersey semen for production of a crossbred progeny.



Question: How does milk recording help the farmer in general?

Answer: Milk recording helps the farmer to get a complete lactation record of his animal. He also gets an idea of performance of his animal as compared to the performance of other animal in his herd or village. This information helps him to take a decision on managing the animal, whether to retain it, cull it or use it for production of progenies for herd replacement.

Question: Why are different traits such as body conformation, milk components and growth rate being measured?

Answer: Milk yield is not the sole criteria for judging the performance of the animal. Milk should also be tested for other milk components like fat, protein and lactose content as these parameters decide the market price of milk. Body confirmation and growth rate are highly and positively correlated to production and reproduction traits.

Question: Why are my animals being tested for diseases under bull production programmes (PT & PS)?

Answer: For production of disease free semen, selected bull and its dam should be free from disease because certain diseases are spread to other animals through semen.

Question: What is sexed semen? Where it is available? What is the cost? Is it available with all AITs? How to verify whether sexed semen has been used on my animal? Is it available for all breeds and for buffaloes also? What are the advantages of using sexed semen over conventional semen? What is the success rate?

Answer: Such semen in which sperms of a single gender is present and calf of desired gender could be produced is called sexed semen. Its purity level is 80-90%, implying that 80-90% of the calves produced through this semen will be of same gender. On the other hand, ratio of male and female calves born out of conventional semen is 50:50.

As of now, no semen station is manufacturing sexed semen, hence it has to be imported from foreign countries, but it is now being produced by a few agencies.

Sexed semen is available at the rate of Rs.1200-2000/- per dose. However it is available at subsidized rate in a few States. Please note that sexed semen is not available with all the AITs.

For import of sexed semen it is necessary to take permission from Animal Husbandry Department. It is also mandatory to maintain records of the calf produced through sexed semen.

It is possible to check the quality of sexed semen. If the animal is inseminated through sexed semen, the farmers are requested to keep the straw safely and carefully read the information printed on the straw. From the details written on the straw, the farmer can judge whether his cow has been inseminated with sexed semen or not.

As of now, sexed semen is available for HF, Jersey, Gir, Sahiwal and Murrah breeds.

By using sexed semen, calf of desired sex may be obtained.

As number of sperms present in the sexed semen is less as compared to conventional semen, hence conception rate through sexed semen is also less by 10-20%.

Question: What is embryo transfer (ET)? Is it an alternative to AI to get my cow/buffalo conceived? My cow/buffalo is not getting conceived in spite of repeated AI, can I use ET to get it conceived? Who can provide me ET services? What is the cost? Can I have a choice of sex of calf through ET?

Answer: In ET technique, the embryos produced out of elite cow and buffalo is transferred to a recipient animal which acts as a surrogate mother and carries the embryo to full term. ET is a technique to increase the reproduction rate of genetically superior females – to get more calves in a life time than possible through normal reproduction.

ET is being carried out by a few organisations in India namely, SAG, Bidaj (Gujarat), PBGSBS, Haringhata (West Bengal), PLDB, Chandigarh, (Punjab), ULDB, Dehradun (Uttarakhand) and BAIF, Pune (Maharashtra) to produce HGM bulls for semen production. ET services cannot be provided at farmer's level on individual basis however the same may be conform with the above organisations.

Cost of ET may be estimated through breed of the embryo, its quality, successful conceptions etc.

Advantages of sexed semen may be taken to determine the sex of calf produce through ET.

An embryo cannot be transferred using an AI gun and requires specialized skills and transfer equipment. Therefore, do not believe if a person claims to have an embryo and proposes to transfer it into your animal. Check his antecedents properly.

BREEDS OF BUFFALO

MALE



Murrah

Native tract: Hissar, Rohtak, Gurgaon and Jind districts of Haryana



Jaffarabadi

Native tract: Junagadh, Jamnagar, Rajkot, Bhavnagar, Porbandar & Amreli districts of Gujarat



Nili Ravi

Native tract: Originally from Pakistan, found in bordering districts of Ferozpur and Amritsar in Punjab



Pandharpuri

Native tract: Solapur, Sangli and Kolhapur districts of Maharashtra



Mahesani

Native tract: Mahesana, Banaskantha & Sabarkantha districts of Gujarat



Surti

Native tract: Anand, Kheda and Baroda districts of Gujarat

FEMALE





National Dairy Development Board

Anand 388 001 Gujarat

Phone: (02692) 260148 / 260149 / 260160 • Fax: (02692) 260157 / 260159

Website: www.nddb.coop

May, 2020



राष्ट्रीय डेरी विकास बोर्ड

पशुपालन निर्देशिका

(पशुपालकों के लिए पशु स्वास्थ्य, प्रजनन और पोषण पर केंद्रित)



दुधारू गायों की भारतीय नस्ल

सांड



गाय



गिर

मूल स्थान : जूनागढ़, राजकोट, भावनगर और अमरेली जिला, गुजरात ।

हरियाणा

मूल स्थान : रोहतक, हिसार, सोनीपत, गुडगांव, जींद और झज्जर जिला, हरियाणा ।

साहीवाल

मूल स्थान : फिरोजपुर व अमृतसर जिला, पंजाब और श्री गंगानगर जिला, राजस्थान ।

राठी

मूल स्थान : बीकानेर और श्री गंगानगर जिला, राजस्थान ।

रेडसिंधी

मूल स्थान : पाकिस्तान का सिंध प्रांत । पंजाब, हरियाण, उत्तराखंड और राजस्थान में पाई जाती है ।

थारपारकर

मूल स्थान : जैसलमेर, बाडमेर और जोधपुर जिला, राजस्थान ।

कांकरेज

मूल स्थान : कच्छ, महेसाणा और बनासकांठा जिला, गुजरात ।

प्रस्तावना

सन् 2018-19 के दौरान भारत में अनुमानित दूध का उत्पादन 18.77 करोड़ टन रहा, इसके साथ ही भारत का विश्व में दुग्ध उत्पादन में प्रथम स्थान है जो सन् 1997 से लगातार जारी है। डेरी उद्योग हमारे अधिकांश दुग्ध उत्पादकों की आय का प्रमुख स्रोत है, जिनके पास या तो जमीन कम है या नहीं है। डेरी उद्योग को लाभकारी व दीर्घकालिक व्यवसाय बनाने के लिए यह अति आवश्यक है कि पशुपालकों को इष्टतम मूल्य पर उत्पादन बढ़ाने हेतु वैज्ञानिक कार्यप्रणाली को अपनाना होगा। इसके लिए किसानों को पशु स्वास्थ्य, प्रजनन व पोषण के मूलभूत सिद्धांतों के प्रति जागरूक होना चाहिए।

देश में दुग्ध उत्पादन को सन् 2020 तक दुगुना करने के लिए भारत सरकार द्वारा राष्ट्रीय डेरी योजना-1 की शुरुआत की गई। इस हेतु पशु प्रजनन, पोषण और पशु स्वास्थ्य के क्षेत्र में संकेंद्रित प्रयास की आवश्यकता है ताकि उत्पादन में वृद्धि के साथ साथ मूल्य अनुकूलतम किया जा सके। प्रजनन में तकनीकी जैसे रोगमुक्त उच्च आनुवंशिक गुणवत्ता वाले साइ के वीर्य से कृत्रिम गर्भाधान बढ़ाने की आवश्यकता है। संतुलित आहार के द्वारा दुग्ध उत्पादन की कीमत या लागत को कम करने हेतु पशु के आहार संसाधन को भी सुधारने की अविलंब आवश्यकता है। सबसे ज्यादा महत्वपूर्ण तो पशुओं में होने वाले रोगों की रोकथाम करना है जो पशु की पूर्ण उत्पादन क्षमता के दोहन हेतु अति आवश्यक है।

यह पुस्तिका – जो वैज्ञानिक डेरी अभ्यास पर आधारित है – पशुपालकों की आवश्यकताओं को ध्यान में रखकर बनाई गई है।

इस पुस्तिका में सचित्र उदाहरण सहित पशु स्वास्थ्य, प्रबंधन, पोषण, प्रजनन व हरा चारा उत्पादन इत्यादि पर किसानों को मूलभूत जानकारी प्रदान करने का प्रयास किया गया है, जो मौजूदा एवं नई तकनीक पर आधारित है। इस प्रकार की सूचनाएं सामान्यतः किसी भी एक स्रोत से किसानों को उपलब्ध नहीं है।

हम यह आशा करते हैं कि यह पुस्तिका पशुपालकों के लिए अत्यंत उपयोगी होगी।

दिलीप रथ

अध्यक्ष

राष्ट्रीय डेरी विकास बोर्ड



विषय सूची

क्रमांक	विषयवस्तु	वर्णन	पृष्ठ संख्या
		भाग-I पशु स्वास्थ्य और प्रजनन	1
1	अनुभाग – I	पशु का सामान्य परीक्षण	2
2	अनुभाग – II	नए पशु की खरीद तथा समूह में भर्ती	5
3	अनुभाग – III	नवजात बछड़ी की देखभाल	9
4	अनुभाग – IV	टीकाकरण द्वारा रोकथाम योग्य बीमारियां	12
5	अनुभाग – V	अन्य महत्वपूर्ण बीमारियां	21
6	अनुभाग – VI	चिचड़, मक्खी से होने वाली बीमारियां	29
7	अनुभाग – VII	चिचड़, मक्खी और कृमि नियंत्रण	32
8	अनुभाग – VIII	प्रजनन के बाद होने वाले रोग	35
9	अनुभाग – IX	गलत तरीके से खिलाने से होने वाली बीमारियां	40
10	अनुभाग – X	थनैला व चूचुक की बीमारियां	45
11	अनुभाग – XI	साधारण विषाक्तता परिस्थितियां	52
12	अनुभाग – XII	सामान्य जूनोटिक बीमारियां	55
13	अनुभाग – XIII	प्रजनन व उससे संबंधित गतिविधियां	58
14	अनुभाग – XIV	छोटी-मोटी व्याधियों के लिए परंपरागत उपचार	66
		भाग - II पशु पोषण एवं प्रबंधन	74
1	अनुभाग – I	पशु पोषण	75
2	अनुभाग – II	चारा उत्पादन	88
3	अनुभाग – III	पशुगृह / पशु आवास	104
		भाग - III बेहतर उत्पादकता के लिए सूचना तंत्र	110
1	अनुभाग – I	पशु पहचान	111
2	अनुभाग – II	इनाफ (INAPH) और पशु स्वास्थ्य	112
3	अनुभाग – III	पशु प्रजनन प्रबंधन में इनाफ (INAPH) प्रणाली का उपयोग	113
4	अनुभाग – IV	इनाफ (INAPH) और पशु पोषण	114
		अक्सर पूछे जाने वाले प्रश्न	115



भाग - I

पशु स्वास्थ्य और प्रजनन

पशु स्वास्थ्य पशु की अपेक्षित उत्पादन क्षमता के दोहन में महत्वपूर्ण भूमिका अदा करता है। एक बीमार पशु अपनी क्षमता के अनुसार प्रदर्शन नहीं कर सकता है। इसलिए बीमारी से होने वाले नुकसान को रोकने के लिए सही समय पर रोकथाम जरूरी है। पशु के नस्ल में सुधार करना भी समय की मांग है और पशुपालकों को नस्ल सुधार कार्यक्रम का हिस्सा बनाकर उन्हें इसके प्रति जागरूक करने की आवश्यकता है। इस उद्देश्य से इस पुस्तिका के भाग-I को चौदह (XIV) अनुभाग में निम्नलिखित रूप से विभाजित किया जाता है :

विषयवस्तु	वर्णन
अनुभाग - I	पशु का सामान्य परीक्षण
अनुभाग - II	नए पशु की खरीद तथा समूह में भर्ती
अनुभाग - III	नवजात बछड़ी की देखभाल
अनुभाग - IV	टीकाकरण द्वारा रोकथाम योग्य बीमारियां
अनुभाग - V	अन्य महत्वपूर्ण बीमारियां
अनुभाग - VI	चिचड़, मक्खी से होने वाली बीमारियां
अनुभाग - VII	चिचड़, मक्खी और कृमि नियंत्रण
अनुभाग - VIII	प्रजनन के बाद होने वाले रोग
अनुभाग - IX	गलत तरीके से खिलाने से होने वाली बीमारियां
अनुभाग - X	थनैला व चूचुक की बीमारियां
अनुभाग - XI	साधारण विषाक्तता परिस्थितियां
अनुभाग - XII	सामान्य जूनोटिक बीमारियां
अनुभाग - XIII	प्रजनन व उससे संबंधित गतिविधियां
अनुभाग - XIV	छोटी-मोटी व्याधियों के लिए परंपरागत उपचार

अनुभाग - I

पशु का सामान्य परीक्षण

पशुओं में कुछ मानदण्डों का सामान्य परीक्षण करने से पशुओं के स्वास्थ्य का पता चल जाता है जो आपको सही समय पर पशुचिकित्सक की सलाह या सहायता के लिए संकेत करता है ।

सही समय पर रोगों की रोकथाम करके रोगों से होने वाले नुकसान से बचा जा सकता है । इस अनुभाग में इसलिए निम्नलिखित पाठ सम्मिलित किए गए हैं —

- क. स्वस्थ पशु के लिए 7 प्रश्न
- ख. बुनियादी स्वास्थ्य मापदण्डों का निरीक्षण
- ग. शरीर अंक (स्कोरिंग)

क. स्वस्थ पशुओं के लिए 7 प्रश्न

1. व्यवहार- पशु अपने पर्यावरण के साथ सामान्य रूप से प्रतिक्रिया कर रहा है या नहीं ? पशु अजीब व्यवहार तो नहीं कर रहा है ?
2. रवैया- पशु का सिर, शरीर, पूंछ और कान सामान्य है या नहीं ? क्या पशु सामान्य रूप से चल रहा है ?
3. अवस्था- क्या पशु अच्छी अवस्था में है? ज्यादा दुबला और ज्यादा मोटा तो नहीं है?
4. क्या पशु अच्छी तरह से खाता है, पीता है और जुगाली करता है ?
5. क्या पशु अच्छी तरह से मल-मूत्र त्याग करता है?
6. अगर गाय दुधारू है तो क्या उसका दूध उत्पादन अचानक कम हो जाता है?
7. और कोई असामान्य लक्षण है?

किसी भी प्रकार का परिवर्तन दिखाई देने पर पशुचिकित्सक की सलाह लें ।

ख. बुनियादी स्वास्थ्य मापदण्डों का निरीक्षण

- **सांस लेने की दर:** (सांस लेना व छोड़ना) एक वयस्क पशु एक मिनट में 10-30 बार सांस लेता व छोड़ता है और एक बछड़ी 30-50 बार । इसका निरीक्षण पशु के दाईं ओर से या पीछे से किया जा सकता है ।
- **जुगाली:** एक मिनट में 40 बार से कम न हो और एक दिन में 7-10 घंटे ।
- **रूमेन की हलचल:** एक मिनट में 2-3 बार । यह पशु की बाईं पसली एवं कूल्हे के बीच वाले भाग पर हाथ रखने से पता चल जाता है ।
- **बाह्याकृति:** एक स्वस्थ पशु की त्वचा मुलायम व चमकीली और चिकनी होती है । उसके सींग व खुर में भी चमक होती है । उसकी आंखें सामान्य तथा विकृति रहित होती हैं । उसके थूथन नम होते हैं ।
- **बुखार:** सामान्यतया बुखार के साथ तेज सांसों, कंपकंपी और कभी-कभी दस्त होता है । कान, सींग और टांगें सामान्यतः ठंडा परंतु शरीर अधिक गरम होता है ।

उपर्युक्त मापदण्डों में किसी भी प्रकार का बदलाव होने पर तुरंत पशुचिकित्सक से संपर्क करें ।

शारीरिक अवस्था/दशा का आंकलन

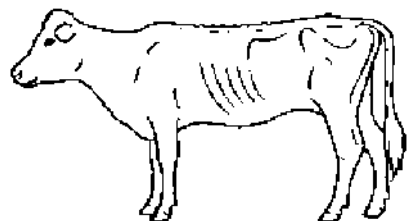
आंकलन	पीठ के बीच की रीढ़	हुक बोन का पिछला हिस्सा (तिरछी काट)	हुक बोन के बीच की लाइन का किनारे वाला हिस्सा	पूंछ, सिर व पिनबोन का मध्य कोष्ठ (पीछे और किनारे वाला जांच)	व्याख्या
अंक - I तीक्ष्ण तीव्र या निम्न अवस्था					अच्छे स्वास्थ्य में न होना । अच्छे प्रजनन व दूध देने में असमर्थ होगा ।
अंक - II ढांचा स्पष्ट					स्वास्थ्य अच्छा हो सकता है । परन्तु दूध उत्पादन कम और प्रजनन में कमी ।
अंक - III ढांचा और प्रावरण अच्छा					उच्च उत्पादक परंतु फैंट उत्पादन हेतु पर्याप्त नहीं ।
अंक - IV ढांचा भली-भांती से दृष्टिगोचर है					प्रसव के समय चयापचयी संबंधी समस्याएं ज्यादा हो सकती हैं ।
अंक - V अत्यधिक मोटापा					अत्याधिक मोटापा तथा चयापचयी और प्रजनन संबंधी समस्या ज्यादा होगी ।

दूध न देने वाली व प्रसव होने के बाद गाय का शरीर अंक 3.5 होना चाहिए । (शरीर स्कोरिंग का अध्याय देखें)

शीघ्र रोग-निदान हेतु अपने पशुओं का निकटता से परीक्षण करें ।

ग. शरीर अंक (स्कोरिंग)

- पशु स्वास्थ्य की अवस्था को पता करने के लिए शरीर अंकन (स्कोरिंग) बहुत जरूरी है ।
- कम अंक बीमारी या घटिया पोषण की तरफ इशारा करता है जबकि उच्च अंक प्रजनन और चयापचयी समस्या की संभावना को व्यक्त करता है ।



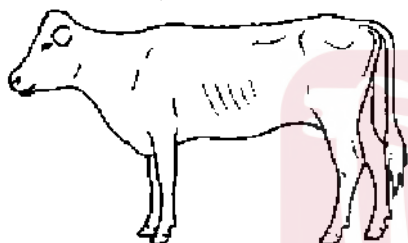
शरीर अंक - 1

शरीर अंक - 1

- अत्यधिक पतला/ब्रीस्केट या पूंछ के कटघरे में कोई वसा नहीं ।
- सभी कंकालीय संरचना दृष्टिगत होती है ।
- बाल निष्प्रभावी होते हैं ।
- बीमार हो सकता है और तनाव में उत्तरजीविता संदिग्ध होती है ।



पशु का शरीर अंक - 1



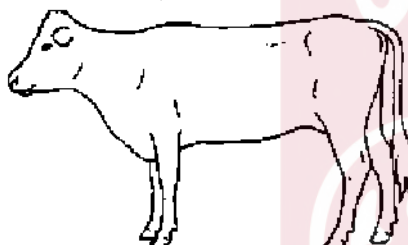
शरीर अंक - 2

शरीर अंक - 2

- पतला, रीढ़, कमर व पिनबोन बाहर निकला होता है ।
- पूंछ के कटघरे, कमर बोन व कोख को कुछ ऊतक ढंके रहते हैं ।
- मांस-पेशियां दिखती तो हैं परंतु अधिक नहीं, स्वास्थ्य ठीक-ठाक हो सकता है ।



पशु का शरीर अंक - 2



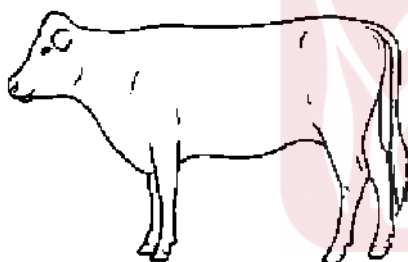
शरीर अंक - 3

शरीर अंक - 3

- रिबकेज (पसली ढांचा) केवल थोड़ा-सा दिखाई देता है ।
- कंधे के पीछे फैट का जमाव स्पष्ट होता है जो प्रसव के लिए आदर्श है ।
- ब्रीस्केट क्षेत्र में फैट का जमाव ।
- हुक व पिनबोन दृष्टिगत, परंतु बाहर निकला नहीं होता ।



पशु का शरीर अंक - 3



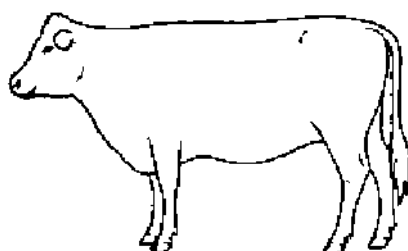
शरीर अंक - 4

शरीर अंक - 4

- कंकालीय संरचना पहचानना कठिन होता है ।
- पूंछ के निचले हिस्से व कंधे के पीछे वसा का जमाव स्पष्ट ।
- शरीर का ऊपरी हिस्सा समतल दिखता है ।
- पसलियों और जांघों के ऊपर वसा की परत का विकास होना शुरू हो जाता है ।
- जिन पशुओं का शरीर अंक 4 है उनमें ब्याने के समय चयापचय की समस्या हो सकती है ।



पशु का शरीर अंक - 4



शरीर अंक - 5

शरीर अंक - 5

- पशु स्थूल काय, आकार समतल हो जाती है ।
- ब्रीस्केट भारी और हड्डी संरचना प्रत्यक्ष नहीं ।
- पूंछ का निचला हिस्सा और कमर की हड्डी पूरी तरह से वसा के परत में ढक जाती है ।
- पशु का पिछला हिस्सा समतल और पूरी तरह से वसा से ढका होता है ।
- वसा के जमाव की वजह से पशु की गतिशीलता बाधित हो जाती है ।
- जिन पशुओं का शरीर अंक 5 या उससे ऊपर है उनमें चयापचय एवं प्रजनन की समस्या हो सकती है ।



पशु का शरीर अंक - 5

शरीर अंक स्वास्थ्य निगरानी हेतु सहायक पैमाना है ।

अनुभाग - II

नए पशु की खरीद तथा समूह में भर्ती

नया खरीदा हुआ पशु संक्रमण का वाहक हो सकता है और आपके पशु समूह में एक नई बीमारी को जन्म दे सकता है। अपने पास उपलब्ध संसाधनों के आधार पर जब आप एक बार यह निर्णय कर लेते हैं कि आपको किस प्रकार का पशु पालना है तो आपके लिए पशु खरीद में प्रोटोकाल का सख्ती से पालन करना जरूरी होता है। क्योंकि नए पशु से ही बीमारियों का पशु समूह में प्रवेश होता है, जिसे रोका जा सकता है। नए पशु की आयु को निर्धारित करना इसके लिए सहायक साधन होगा। इस अनुभाग में निम्नलिखित अध्याय हैं -

क. नए पशु की खरीद

ख. नए खरीदे गए पशु की समूह में भर्ती

ग. पशुओं का आयु निर्धारण

क. नए पशु की खरीद

नस्ल

- कोई किसान किस पशु नस्ल को रखना चाहता है इसका निर्णय उसके पास उपलब्ध संसाधन व उस क्षेत्र की अनुकूलता पर निर्भर करता है। पशु नस्ल पर निर्णय स्थानीय पशुचिकित्सक/कृषि विज्ञान केन्द्र/किसान कॉल सेंटर से विस्तृत विचार-विमर्श के पश्चात ही लेना चाहिए।

पशु खरीद के साधन/स्रोत

- ऐसे फार्म (सरकारी या निजी) जहां पर नियमित रूप से टीबी, जेडी, बुसेलोसिस, आईबीआर इत्यादि रोगों की जांच की जाती हो और बीमार पशुओं को हटाया जाता हो; पशु खरीद के आदर्श स्रोत होंगे।
- पशु को किसान के बाड़े से खरीदना बेहतर होगा न कि बाजार या मेले से क्योंकि बाजार में रोग फैलने का जोखिम ज्यादा होता है।

पशु खरीदते समय एक स्वस्थ पशु के सामान्य लक्षण

- **आंखें:** चमकीली, साफ और प्रवाह से रहित, पपड़ीदार व रक्त रंजित न हो।
- **नाक:** ठंडा, नम थूथन, नियमित जीभ फेरने के साथ नियमित सांस लेना, जो अस्वाभाविक न हो। घरघराहट, खांसी, छींक या अनियमित श्वसन के प्रति सचेत रहें।
- **आवरण (बाल):** चमकदार, साफ और उलझन रहित, चिचड़ों से रहित।
- **वजन:** नस्लीय औसत वजन; कमजोर व दुबले पशुओं के प्रति सचेत रहें।
- **मनोभाव (रवैया):** जिज्ञासु, सावधान व संतुष्ट; समूह से अलग खड़े पशुओं से सावधान — वे बदमिजाज हो सकते हैं।
- **चाल-चलन:** पशु आसानी से चले, लंगड़ा के नहीं; धीमी या असंगत चाल या बैठते समय कूबड से सावधान रहें; उठते समय पशु को कठिनाई न हो।
- **थन:** स्वस्थ; आकार जरूरी तौर पर एक अच्छे थन का सूचक नहीं है। इसके आगे उन्नत दुग्ध शिराएं होनी चाहिए। थन लदा हुआ और ज्यादा मांसल नहीं होना चाहिए। गाय को चलते समय ध्यान से देखें, थन एक तरफा झुका हुआ नहीं होना चाहिए।
- **शरीर अंक:** पशु स्वास्थ्य का एक महत्वपूर्ण सूचक है। एक स्वस्थ पशु का शरीर अंक 3-4 होना चाहिए। (शरीर अंक अध्याय देखें)
- **इतिहास:** पशु के प्रसव की संख्या, पूर्ववर्ती ब्याँत में दुग्ध उत्पादन का अभिलेख, कोई विशेष बीमारी जैसे- थनैला, गर्भाशय भ्रंश, जेर का रूकना, प्रसव में कठिनाई, दुग्ध ज्वर इत्यादि का विस्तृत ऐतिहासिक अभिलेख रखना जरूरी होता है।
- **आयु:** यद्यपि यह स्वास्थ्य से संबंधित नहीं है, फिर भी किसान को उसके दांत देखकर आयु का निर्धारण कर लेना चाहिए।

पशु परिवहन

- परिवहन के दौरान वे सभी कदम उठाने चाहिए जिससे पशु को तनाव से बचाया जा सके। पर्याप्त पीने का पानी, चारा, स्थान, विश्राम इत्यादि पशु को एक नियमित अंतराल पर परिवहन के दौरान उपलब्ध कराना चाहिए ताकि उन्हें तनाव और उससे होने वाली बीमारियों से बचाया जा सके। कुछ बिछावन जैसे धान-पुआल बिछाकर उन्हें फर्श भी मुहैया कराना चाहिए।

नए पशु खरीदते समय उचित पद्धति का अनुसरण करें।

ख. नए खरीदे गए पशु की समूह में भर्ती

संगरोधन (पशु को अलग रखना)

- नए खरीदे गए पशु को अन्य पशुओं से बिना संपर्क के कम से कम तीन सप्ताह तक अलग रखें। पशु समूह की देखभाल के पश्चात ही नए पशु पर ध्यान देना चाहिए।
- नए पशु की देखभाल के पश्चात बिना कपड़ा बदले अपने पशु समूह की ओर जाने से बचना चाहिए।
- संगरोधन के दौरान पशुओं को नियमित कृमिनाश और टीकाकरण करवाना चाहिए।
- दुधारू पशु के संदर्भ में हमेशा नए खरीदे पशु का दूध समूह के पशुओं के बाद में व अलग से निकालना चाहिए।
- हमेशा ऑल इन ऑल आउट प्रणाली अपनाएं। संगरोध की जगह को नए पशु आगमन से पहले स्वच्छ व विसंक्रमित करवाएं।

संगरोधन के दौरान परीक्षण

संगरोधन के दौरान निम्नलिखित जांच करना चाहिए –

1. दुधारू पशु में गुप्त थनैला की जांच करवाएं – यदि पशु संक्रमित पाया गया, तो उसका इलाज व जांच तब तक कराएं जब तक वह निरोगी न हो जाए। अगर उपचार व पुनः जांच के बाद भी, रोग (गुप्त थनैला) ठीक न हो तो उनमें दीर्घकालिक संक्रमण होने की सर्वाधिक संभावना है।
2. बुसेला की जांच
3. तपेदिक (बीटीवी) की जांच
4. जोन्स रोग की जांच

यदि पशु उपरोक्त में से किसी भी जांच में बीमार पाया जाता है, उसे पशु समूह में भर्ती न करें क्योंकि इन बीमारियों का कोई उपचार नहीं है और वे स्वस्थ पशुओं के संपर्क में आने पर आसानी से प्रभावित करते हैं। निम्नलिखित क्षेत्रीय प्रयोगशालाओं से आगे की जानकारी हेतु संपर्क किया जा सकता है :-

टिप्पणी:

उत्तरी क्षेत्र हेतु

1. संयुक्त निदेशक, पशु रोग अनुसंधान और निदान केंद्र, भारतीय पशुचिकित्सा शोध संस्थान, इज्जतनगर – 243122
2. संयुक्त निदेशक और प्रभारी उत्तर क्षेत्रीय रोग निदान प्रयोगशाला, जालंधर, पंजाब

पूर्वी क्षेत्र हेतु

1. संयुक्त निदेशक पूर्व क्षेत्रीय रोग निदान प्रयोगशाला, कोलकाता-700037
2. उप-निदेशक उत्तरी-पूर्व क्षेत्रीय रोग निदान प्रयोगशाला, खानापारा, गुवाहाटी -781022

दक्षिणी क्षेत्र हेतु

1. संयुक्त निदेशक, पशु स्वास्थ्य और पशु चिकित्सा, जैव-वैज्ञानिक संस्थान, हेब्ल, बैंगलोर-24

पश्चिमी क्षेत्र हेतु

1. संयुक्त निदेशक पश्चिम क्षेत्रीय रोग निदान प्रयोगशाला, औंध, पुणे – 411007

- जांच के लिए नमूना एकत्र करने, जांचने व अन्य सलाह हेतु स्थानीय पशुचिकित्सक से संपर्क किया जाना चाहिए। अनेक राज्य पशुपालन विभाग अपने प्रयोगशालाओं में ये जांच करते हैं।

उचित संगरोधन आपके पशु समूह को बीमारियों से बचाता है।

ग. पशुओं का आयु निर्धारण

पशु खरीदते समय उसकी आयु का निर्धारण जरूरी है क्योंकि विक्रेता के द्वारा उपलब्ध जानकारी हमेशा विश्वसनीय नहीं हो सकती ।

I. दांतों के द्वारा आयु निर्धारण

जन्म से 1 माह तक, दो या अधिक अस्थायी इनसाइजर दांत आ जाते हैं । एक माह पूरा होने पर सभी 8 इनसाइजर अस्थायी दांत आ जाते हैं ।



30 माह पर दंतक्रम

बीच के दो अस्थायी इनसाइजर स्थायी इनसाइजर के द्वारा प्रतिस्थापित होते हैं जो दो साल में पूरे तौर पर बड़े होते हैं ।

तीसरा स्थायी इनसाइजर 30 माह की आयु के आसपास उगता है (संकेत-मोटा तीर)



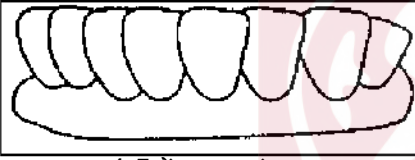
30 माह के बाद का दंतक्रम

चौथा स्थायी इनसाइजर 30 माह के बाद आता है ।



3 साल में दंतक्रम

इनसाइजर का दूसरा जोड़ा 3 साल में पूर्ण विकसित होता है ।



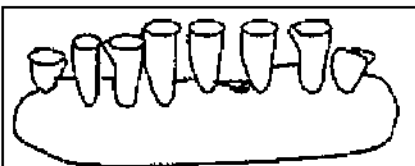
4-5 वें साल का दंतक्रम

4-5 साल तक पशु के सभी स्थायी इनसाइजर आ जाते हैं । (भैंस में यह समय 5-6 वर्ष है)



6 वें साल का दंतक्रम

छठवें साल, मध्यवर्ती इनसाइजर में घिसावट दिखने लगती है और वह ऊपर से समतल नजर आता है ।



10 वें साल का दंतक्रम

छः साल के बाद घिसावट एक नियमित प्रक्रिया के तहत आगे बढ़ती है और 10वें साल के बाद सभी इनसाइजर में सार्थक घिसावट और उनके बीच अंतराल दिखने लगता है ।



3 साल की गाय का दंतक्रम जिसमें 2 जोड़े पूर्ण विकसित इनसाइजर हैं



4-5 साल के गाय का दंतक्रम जिसमें 4 जोड़े स्थायी इनसाइजर है ।

II. सींग के छल्लों द्वारा आयु का निर्धारण

यह एक अच्छा मापदंड नहीं है और यह केवल कामचलाऊ या कच्चा अनुमान दे सकता है । सींग का पहला छल्ला 10-12 माह में प्रकट होता है । एक साल में लगभग एक छल्ला (बढ़) या जुड़ जाता है । परंतु 5वें साल, पहले तीन छल्ले शायद न दिखें और 8 साल के बाद कोई भी शायद दृष्टिगोचर न हों ।

खरीदने से पूर्व पशु की आयु का निर्धारण करें

अनुभाग - III

नवजात बछड़ी की देखभाल

बछड़ी भविष्य की गाय है । पशु स्वास्थ्य की दृष्टि से बछड़ी के जीवन को दो भागों में बांटा जा सकता है, पहला 24 घंटे तथा उसके बाद का समय । एक बछड़ी के लिए प्रथम 24 घंटे इतना महत्वपूर्ण है कि उसका बाकी जीवन उसी पर निर्भर करता है । बछड़ी जिसकी देखभाल प्रथम 24 घंटों में यदि अच्छी तरह से न की गई तो भले ही उसकी आनुवंशिक गुणता या उसे कितने भी अच्छे वातावरण में रखा गया हो, बीमारी से मर सकती है या हमेशा के लिए कमजोर व असमर्थ हो सकती है । बछड़ी के मरने का एक और महत्वपूर्ण कारण है-दस्त-जिसका प्रबंधन भी तब तक महत्वपूर्ण है जब तक कि उसका पूर्ण उपचार न हो जाए । इन बातों को ध्यान में रखते हुए इस अनुभाग में निम्नलिखित अध्यायों को सम्मिलित किया गया है -

क. नवजात बछड़ी की देखभाल

ख. बछड़ी में दस्त व उसका प्रबंधन

क. नवजात बछड़ी की देखभाल

स्वर्णिम काल – नवजात बछड़ी के संपूर्ण जीवन के लिए उसका पहला एक घंटा (प्रसव के बाद) सबसे निर्णायक होता है ।

याद रखने योग्य बिंदु:

- ❖ बछड़ी के नाक व मुंह को साफ करें । इससे उसे अच्छी तरह से सांस लेने व भविष्य में सांस की तकलीफ से बचाने में मदद मिलती है ।
- ❖ बछड़ी की मां द्वारा प्रसव के तुरंत बाद बछड़ी को चाटने देना चाहिए। इससे बछड़ी के शरीर में रक्त का संचार बढ़ता है और वह खड़ी होने तथा चलने हेतु तैयार हो जाती है ।
- ❖ गर्भनाल को उसके आधार से लगभग 2 इंच दूर किसी साफ औजार से काटें ।
- ❖ नाभि को 3.5% या अधिक सांद्रता वाले टिंक्चर आयोडीन के घोल में कम से कम 30 सेकंड तक डुबाना चाहिए (एक साधारण लेप लगाने से उद्देश्य की पूर्ति नहीं होगी) ।
- ❖ इसके बाद नाभिनाल के खुले छोर को एक साफ धागे से बांधकर बंद करें ।
- ❖ टिंक्चर आयोडीन के घोल में नाभि को डुबाने कि प्रक्रिया को 12 घंटे बाद फिर से दोहराएँ। गलत तरीके से नाभि का रखरखाव करने पर गंभीर संक्रमण हो जाता है ।
- ❖ एक नवजात बछड़ी को जन्म के पहले दो घंटे के अंदर 2 लीटर खीस या बोहली तथा 12 घंटे के अंदर 1-2 लीटर वजन के अनुसार खीस पिलाना चाहिए।
- ❖ कई बछड़ी अपनी मां से पर्याप्त मात्रा में खीस/बोहली जन्म के कुछ घंटे बाद तक नहीं लेती और इस तरह वो पर्याप्त रोग प्रतिरोधक क्षमता ग्रहण नहीं कर पाती है ।
- ❖ जन्म के 24 घंटों के बाद बोहली/खीस पिलाना बछड़ी को संक्रमण से दूर रखने में मदद नहीं करता है ।
- ❖ बछड़ी को उसके जीवन के प्रथम 3 महीने तक बीमारियों से बचाव हेतु पर्याप्त मात्रा में खीस/बोहली पिलाना चाहिए । खीस बछड़ी के लिए “जीवन पार-पत्र” है ।
- ❖ हाथ से खीस पिलाना: यह सुनिश्चित करने के लिए कि किसान एक बछड़ी को कितना खीस/बोहली पिलाता है । नवजात बछड़ी को खीस हाथ से पिलाने की विधि की अनुशंसा की जाती है ।
- ❖ प्रथम कृमिनाशक दवा 10-14 दिनों के भीतर देना चाहिए । उसके बाद बछड़ी को हर महीने एक बार 6 माह तक कृमिनाशक देना चाहिए ।
- ❖ जब बछड़ी 3 माह की हो जाये तब पशुचिकित्सक से टीकाकरण करवा लेना चाहिए ।
- ❖ अच्छी वृद्धि व जल्द वयस्कता हेतु 1-8 सप्ताह तक कॉफ-स्टार्टर बछड़ी को देना चाहिए ।

काफ-स्टार्टर का उदाहरण :

मक्का -- 52%; जौ -- 20%; सोयाबीन खल -- 20%; शीरा -- 5%;
नमक -- 0.5%; खनिज -- 1.5%; विटामिन -- 1.0%;



चाटने से बछड़ी खड़े होने हेतु प्रेरित होती है ।



नाभि को 7% टिंक्चर आयोडीन में डुबाना उसके संक्रमण को रोकने के लिए अति महत्वपूर्ण है ।



नवजात बछड़ी को (प्रसव के बाद) जितनी जल्दी हो सके खीस/बोहली पिलाना चाहिए ।



पर्याप्त खीस या बोहली बछड़ी को मिले इसलिए बोलत से खीस पिलाना चाहिए।

नवजात बछड़ी की समय पर देखभाल करना चाहिए ।

ख. बछड़ी में दस्त

- ❖ बछड़ियों में दस्त के विभिन्न कारण हैं ।
- ❖ दस्त के कारण बछड़ी में बहुत अधिक मात्रा में पानी व खनिज-लवण का हास हो जाता है ।
- ❖ दस्त और पानी का तीव्रहास होने की वजह से बछड़ी जल्द मर सकती है ।

बछड़ी में दस्त का प्रबंधन

- ❖ जितनी जल्दी हो सके पानी व खनिज-लवण इत्यादि की भरपाई करें । प्रतिदिन बछड़ी को 2-4 लीटर खनिज-लवण का घोल पिलाएं ।
- ❖ बछड़ी को दिया जाने वाला खनिज-लवण का घोल वह उसके सामान्य आहार के अतिरिक्त होना चाहिए ।
- ❖ जल्द से जल्द बछड़ी को पशु चिकित्सक को दिखाकर दस्त की वास्तविक वजह का पता लगाएं एवं उसका उचित उपचार करें ।
- ❖ बछड़ियां टेबल सुगर (सुक्रोज) को प्रभावी तौर पर पचा नहीं पाती और वह ज्यादा दस्त करती हैं जिससे बछड़ी के शरीर से ज्यादा पानी व खनिज-लवण का हास होता है । इसलिए ग्लूकोज श्रेयस्कर है ।

घर में खनिज लवण घोल बनाने का सूत्र
(एक लीटर गरम पानी के लिए)

ग्लूकोज - पांच चम्मच

सोडाबाई कार्ब - 1 चम्मच

नमक - 1 चम्मच

1 चम्मच = 5 ग्राम (लगभग)

निर्जलीकरण स्तर का निर्धारण

निर्जलीकरण स्तर (%)	लक्षण
5% तक	कोई लक्षण नहीं, पशु सामान्य रहता है
5-6%	दस्त, कोई लक्षण नहीं, तेज चूषक प्रतिक्रिया
6-8%	सौम्य अवसाद, त्वचा तन्मता* – 2-6 सैकेंड, अब तक स्तनपान, धंसी एवं कमजोर आंखें
8-10%	अवसादग्रस्त, जमीन पर लेटे हुए, आंखें अत्यधिक धंसी हुई, सूखे मसूढ़े, त्वचा तन्मता में 6 से अधिक सैकेंड
10-14%	खड़े होने में असमर्थ, कान-पूँछ व पैर ठंडे, त्वचा खिंची हुई, अचेत
14% से अधिक	मौत हो सकती है

* आंख के ऊपर की त्वचा, छाती व गर्दन के आसपास की त्वचा को खींचकर जब छोड़ा जाए तो उन्हें अपने वास्तविक स्थिति में तेजी से लौट आना चाहिए । यदि चमड़ी उठी हुई ठहर जाए तो उसे 'तन्मता' समझें । त्वचा को सामान्य अवस्था में लौटने में जो समय लगता है उससे निर्जलीकरण का पता चलता है ।

जिन बछड़ियों में 8% से अधिक निर्जलीकरण का लक्षण दिखाई पड़ता है उन्हें तुरंत नस के माध्यम से तरल चिकित्सा की आवश्यकता होती है और इसलिए तत्काल पशुचिकित्सक से संपर्क करें ।

बछड़ियों दस्त की रोकथाम

- ❖ बछड़ी को जन्म के 6 घंटे के अंदर पर्याप्त खीस या बोहली पिलाना सुनिश्चित करें ताकि उनकी रोग प्रतिरोधक क्षमता बढ़े ।
- ❖ जन्म के बाद बछड़ी का साफ-सुथरे व सूखे स्थान पर रख-रखाव सुनिश्चित करें ।
- ❖ बछड़ी को थन से दूध पिलाने के पूर्व थन की स्वच्छता सुनिश्चित करें ।

दस्त के पूर्व प्रबंधन से आपकी बछड़ी मरने से बच जाएगी ।

अनुभाग - IV

टीकाकरण द्वारा रोकथाम योग्य बीमारियां

हमारा देश बहुत सी बीमारियों के लिए स्थानिक क्षेत्र है जिसके कारण उत्पादन क्षमता घटने से बहुत अधिक आर्थिक हानि होती है । उनमें से कुछ बीमारियां तो अत्यधिक घातक हैं । सौभाग्यवश, उसमें से अधिकांश बीमारियों की रोकथाम हेतु हमारे देश में टीका उपलब्ध है, जिन्हें यदि समय पर क्षेत्र विशेष के पूरे पशुओं में (कम से कम 80%) लगाया जाए तो उन बीमारियों को आसानी से रोका जा सकता है । यह अनुभाग निम्नलिखित बीमारियों की व्याख्या करता है जिन्हें सही समय पर और नियमित टीकाकरण के द्वारा आसानी से रोका जा सकता है ।

- क. खुरपका-मुंहपका बीमारी (एफएमडी)
- ख. गलघोंटू
- ग. लंगड़ा बुखार
- घ. ब्रुसेल्लोसिस
- ड. संक्रामक गोजातीय राइनोट्रकाइटिस (आईबीआर)
- च. रेबीज़
- छ. एन्थ्रैक्स (गिलटी रोग)
- ज. थाइलेरियोसिस
- झ. गाय व भैंस में टीकाकरण-सारणी
- ञ. टीकाकरण के दौरान ध्यान देने योग्य महत्वपूर्ण बिंदु
- ट. टीकाकरण की असफलता के सामान्य कारण

क. खुरपका - मुंहपका बीमारी (एफएमडी)

- ❖ एक उच्च संक्रामक विषाणु जनित रोग है ।
- ❖ संपर्क, दूषित जल, वायु और चारे के माध्यम से फैलता है ।
- ❖ वयस्क पशुओं के लिए यह रोग यदा-कदा घातक होता है । परन्तु गायों में दूध उत्पादन व प्रजनन क्षमता तथा बैलों में भारवाहक क्षमता को स्वास्थ्य लाभ के बाद भी हानि पहुंचती है ।
- ❖ बछड़ा व बछड़ियों में यह सामान्यतः घातक होता है ।
- ❖ यह भेड़ व बकरी (आमतौर पर उप-नैदानिक और अनुरक्षण मेजबान है) और सुअर को भी प्रभावित करता है जो प्रवर्धन मेजबान है । (जो विषाणु को लगभग 3000 गुणा तक बढ़ाते हैं)

लक्षण



खुर में छाले



जीभ पर छाले



ऊपर के मसूढ़ों पर छाले



धन पर छाले

- ❖ दूध उत्पादन व कार्यक्षमता (भारवाहक पशु) में अत्यधिक कमी आती है ।
- ❖ बुखार, नाक से पानी जैसा स्राव और अत्यधिक लार गिरना ।
- ❖ जीभ, दंत उपधान, होंठ और मसूढ़ों इत्यादि में छाले होना ।
- ❖ पैर के खुर के बीच में छाले होने से लंगड़ापन हो सकता है ।
- ❖ चूचुक में छाले होने से थनैला हो सकता है ।
- ❖ पशुओं की खराब हालत स्वास्थ्य लाभ के बाद भी जारी रह सकती है ।

रोकथाम

- ❖ 4 माह या उससे अधिक आयु के सभी पशुओं को 6 माह में एक बार टीकाकरण कराएं ।
- ❖ संक्रमित पशुओं को स्वस्थ पशुओं से तुरंत अलग रखना चाहिए क्योंकि संक्रमित पशुओं के शरीर से निकलने वाले स्राव, गोबर, मूत्र में विषाणु होते हैं ।
- ❖ संक्रमित पशुओं के संपर्क में आए सभी आहार व हरे-सूखे चारे को नष्ट कर देना चाहिए ।
- ❖ संक्रमित पशुओं के लिए प्रयोग किए हुए सभी उपकरणों को साफ करके 4% सोडियम कार्बोनेट के घोल या पशु चिकित्सक द्वारा बताए गए घोल में कीटाणुरहित करना चाहिए ।
- ❖ जो व्यक्ति संक्रमित पशुओं की देखभाल करता हो उसे स्वस्थ पशुओं से दूर रहना चाहिए ।
- ❖ संक्रमित जगह को 4% सोडियम कार्बोनेट के घोल या पशु चिकित्सक के द्वारा बताए गए घोल से कीटाणुरहित करना चाहिए ।
- ❖ भेड़, बकरी और सुअरों को टीका लगाने से रोग नियंत्रित हो जाएगा ।
- ❖ संबंधित अधिकारियों को शीघ्र सूचना देने से उन्हें रोग नियंत्रण के लिए शीघ्र आवश्यक कार्रवाई करने में मदद मिलेगी जिससे रोग के फैलाव को कम या सीमित करने में मदद मिलेगी ।

खुरपका मुंहपका का प्रबंधन

- ❖ इसका केवल लाक्षणिक (सिंप्टोमैटिक) उपचार संभव है ।
- ❖ घावों के दर्द को कम करने के लिए उन पर इमोलिफेंट लगाएं ।
- ❖ उपयुक्त सलाह के लिए पशु-चिकित्सक से संपर्क करें ।

आर्थिक हानि से बचने के लिए अपने पशुओं को नियमित खुरपका-मुंहपका का टीका लगवाएं ।

ख. गलघोटू

- ❖ यह गाय/भैंसों में होने वाली जीवाणु जनित बीमारी है जो प्रायः बरसात के मौसम में होती है ।
- ❖ मृत्युदर 80% तक हो सकता है ।
- ❖ इस रोग के जीवाणु आर्द्र व नम अवस्था में दीर्घकाल तक जीवित रहते हैं ।

लक्षण

- ❖ उच्च ताप (बुखार), दूध उत्पादन में अचानक कमी ।
- ❖ लार गिरना और नाक से पानी बहना ।
- ❖ गले में तीव्र सूजन ।
- ❖ सांस लेने में कठिनाई, पशु घुर्र-घुर्र की आवाज निकालता है ।
- ❖ लक्षण दिखने के 1-2 दिनों के अंदर पशु सामान्यतः मर जाता है ।
- ❖ भैंस गायों की तुलना में ज्यादा संवेदनशील होते हैं ।
- ❖ पशु खासतौर पर भैंस, लक्षण आने के बाद शायद ही बच पाते हैं ।
- ❖ बीमारी-विशेष-क्षेत्र में अधिकांश मृत्यु अधिक आयु वाले बछड़ों व कम आयु वाले वयस्कों में होती है ।



गला और पशु की छाती में शोफ

रोकथाम

- ❖ बीमार पशुओं को स्वस्थ पशुओं से अलग करना चाहिए और उनका दाना, चारा और पानी की अलग व्यवस्था करनी चाहिए ।
- ❖ बरसात के मौसम में ज्यादा पशुओं को एक जगह पर एकत्र होने से बचाएं ।
- ❖ विशेष-क्षेत्र में 6 माह व उससे अधिक आयु के सभी पशुओं को बरसात शुरू होने के पहले ही टीकाकरण करवा देना चाहिए ।

उपचार

- ❖ जब बुखार की शुरुआत होती है — तभी इलाज करने पर शायद पशु की जान बच जाए, अन्यथा इस रोग में उपचार प्रभावी नहीं है ।
- ❖ लक्षण विकसित होने के बाद कुछ ही पशु की जान बच पाती है ।
- ❖ संक्रमण की शुरुआती अवस्था में उपचार न करने पर मृत्यु दर 100 प्रतिशत पहुंच जाती है ।

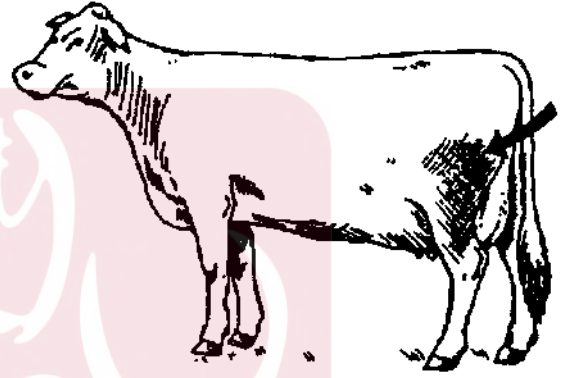
अपने पशुओं में हर साल बारिस से पहले गलघोटू बीमारी का टीकाकरण कराएं ।

ग. लंगड़ा बुखार

- ❖ गायों की जीवाणु जनित एक बीमारी है, जिसमें मांसपेशियों में हवा भरने के साथ-साथ सूजन हो जाता है ।
- ❖ भैंस इस बीमारी से बहुत कम ग्रस्त होते हैं ।
- ❖ इस रोग के मुख्य स्रोत दूषित चारागाह होते हैं ।
- ❖ सामान्यतः इस रोग से 6 माह से 2 साल के स्वस्थ पशु ज्यादातर प्रभावित होते हैं ।

लक्षण

- ❖ अचानक तेज बुखार (107-108°F) और पशु खाना और जुगाली छोड़ देता है ।
- ❖ विशिष्ट रूप से गर्म और दर्दयुक्त सूजन कमर और कूल्हे में विकसित होने से लंगड़ापन आता है । कभी-कभी सूजन कंधे, छाती और गले तक फैल जाता है । सूजन वाली जगह को दबानेपर गैस जमा होने के कारण चर-चर की आवाज आती है ।
- ❖ लक्षण उभरने के 24-28 घंटे के भीतर पशु मर जाता है । मृत्यु के तुरंत पहले सूजन ठंडा व दर्द रहित हो जाता है ।



पैर में सूजन

रोकथाम

- ❖ बीमारी विशेष क्षेत्र में बरसात के शुरू होने से पूर्व 6 माह व उससे अधिक आयु के सभी पशुओं का टीकाकरण करवाना चाहिए ।
- ❖ बीमारी विशेष क्षेत्र में मिट्टी के ऊपरी तह को भूसा के साथ जलाने से रोग के जीवाणुओं का निराकरण करने में मदद मिलती है ।
- ❖ शव को दबाने के समय उस पर चूना डाल देना चाहिए ।

उपचार

- ❖ संक्रमण की शुरूआती अवस्था में उपचार प्रभावी हो सकता है । फिर भी अधिकांश मामलों में उपचार सार्थक (लाभदायक) नहीं होता ।

विशेष क्षेत्र में अपने पशुओं को सालाना लंगड़ा बुखार बीमारी का टीकाकरण कराएं ।

घ. बुसेलोसिस (छूतदार गर्भपात)

- ❖ गाय/भैंसों में यह एक महत्वपूर्ण जीवाणुजनित बीमारी है ।
- ❖ दूध उत्पादन की हानि, बछड़ी की हानि, बीमार या कमजोर बछड़ी का पैदा होना, बार-बार गरमी में आना और थनैला भी होता है ।
- ❖ संक्रमित पशु के बिना उबले हुए दूध को पीने से या गर्भाशय के स्त्राव के संपर्क में आने से इंसान भी इस बीमारी से प्रभावित हो सकता है ।
- ❖ यह बीमारी भारत में पशुओं और इंसानों में वृहत् रूप में प्रचलित है ।

लक्षण



जोड़ों में सूजन



गर्भपात



जेर का रूकना

- ❖ गर्भपात विशेषतः गर्भ के 5वें माह के बाद होता है ।
- ❖ एक संक्रमित पशु में, गर्भपात की संभावना प्रसव की संख्या के साथ कम होती है ।
- ❖ ऐसा भी हो सकता है कि चौथे प्रसव के बाद कोई गर्भपात नहीं हो । परंतु गाय व बछड़ी संक्रमित हो सकते हैं ।
- ❖ जेर के रूकने से संक्रमण और पशु की मृत्यु भी हो सकती है ।

रोकथाम

- ❖ केवल बछड़ी को 4-8 माह की आयु में टीकाकरण कराएं (जीवन में - एक बार) ।
- ❖ 5वें माह के बाद होने वाले गर्भपात को बुसेलोसिस की शंका से देखें ।
- ❖ आदर्शतः संक्रमित पशु को समूह से हटा दें । यदि ऐसा करना संभव न हो तो उस पशु को अन्य पशुओं से उसके प्रसव/गर्भपात के तुरंत बाद कम से कम 20 दिनों के लिए अलग कर देना चाहिए ।
- ❖ गर्भपात हुए बच्चे, जेर, दूषित बिछावन, दाना, चारा इत्यादि को कम से कम 4 फीट गड्ढे में चूना डालकर दबा देना चाहिए । इन पदार्थों में बहुत अधिक मात्रा में जीवाणु पाए जाते हैं, जिनका निपटारा यदि सही तौर पर न हो तो ये बीमारी फैलने का कारण बन सकता है (चारा, पानी व चारागाह को दूषित करके) ।
- ❖ गर्भपात हुए पशु को अलग करने के बाद शेड को संक्रमण मुक्त करें ।
- ❖ जब पशु अलग हो तो उसके गर्भाशय से निकलने वाला मटमैला स्त्राव (लोशिया) जिसमें अधिक मात्रा में जीवाणु होते हैं — को 1-2% सोडियम हाइड्रोक्साइड या 5% सोडियम हाइपोक्लोराइट (ब्लीच) से रोज संक्रमण मुक्त करना जब तक लोशिया का बहाव बंद न हो जाए (सामान्यतः 10-15 दिन) ।
- ❖ यह बीमारी जूनोटिक है इसलिए संक्रमित पदार्थों को खुले हाथ से नहीं पकड़ना या छूना चाहिए ।

उपचार

- ❖ एक बार पशु के प्रभावित या संक्रमित हो जाने के बाद इसका कोई प्रभावी इलाज नहीं है क्योंकि जीवाणु पशु के शरीर में मौजूद रहता है । शंका की स्थिति में पशुचिकित्सक से संपर्क करें ।
- ❖ इंसानों में इस बीमारी का उपचार हो सकता है बशर्ते उपचार के लिए सही रास्ते का अनुसरण किया जाए ।

सिर्फ एक बार बछड़ी को 4-8 माह की आयु में टीकाकरण करने से जीवन भर के लिए उसे बुसेलोसिस से बचाया जा सकता है ।

ड. संक्रामक गौप्रजातीय राइनोट्रेकाइटिस (आईबीआर)

- ❖ एक महत्वपूर्ण विषाणुजनित बीमारी है जो पालतू और जंगली गाय एवं भैंसों को प्रभावित करती है ।
- ❖ इसके तीन रूप हैं – श्वास-प्रश्वास संबंधी, लैंगिक ओर दिमागी । श्वास-प्रश्वास संबंधी और लैंगिक रूप ज्यादा पाए जाते हैं । भारत में यह बीमारी ज्यादा प्रचलित है ।
- ❖ इस रोग से गर्भपात, जेर का रूकना, दूध उत्पादन में मामूली कमी और बछड़ियों की मृत्यु भी हो सकती है । संक्रमण वीर्य के द्वारा भी फैल सकता है ।

लक्षण



लार गिरना

- ❖ खांसी, दोनों नाक से वृहत मात्रा में सीरमी स्राव निकलना और बुखार ।
- ❖ राइनाइटिस, नेत्रशोथ (एक या दोनों में) और आंखों से स्राव निकलना ।
- ❖ इसके लैंगिक रूप में योनिमुख में सूजन, पेपुल्स जो बाद में फोड़ा बन जाता है ।
- ❖ गर्भपात – सामान्यतः 6-8 माह के गर्भकाल में होता है ।



लैंगिक रूप - योनि में फुंसी

- ❖ श्वसन और लैंगिक रूप के सरल मामले सामान्यतः 5-10 दिन में ठीक हो जाते हैं । संक्रमित पशु विषाणु को जीवन भर वहन कर सकता है ।
- ❖ 6 माह से कम आयु वाली बछड़ियों के मस्तिष्क को यह रोग प्रभावित करने के कारण उनमें मृत्यु दर अधिक होती है ।



श्वसन रूप -- लाल नाक



श्वसन रूप -- श्लेष्मा झिल्ली का गल जाना

रोकथाम और नियंत्रण

- ❖ नए पशुओं को जांच के बाद ही खरीदें ।
- ❖ जो पशु रोगरहित हों उन्हें ही समूह में शामिल करें ।
- ❖ आईबीआर का कोई भी टीका भारत में वर्तमान में नहीं बनाया जाता ।
- ❖ यदि उपरोक्त लक्षण दिखाई दे तो इस बीमारी को फैलने से रोकने के लिए तुरंत पशुचिकित्सक से संपर्क करें ।



अपने पशु को बचाने के लिए समय पर टीका लगवाएं

आईबीआर एक उभरती हुई बीमारी है जिसको नियंत्रित करने की आवश्यकता है ।

च. रेबीज़ (जलातंक रोग)

- ❖ यह एक बहुत ही घातक विषाणुजनित बीमारी है जो प्रमुखतः रेबीज़ से ग्रस्त कुत्ते के काटने पर फैलती है ।
- ❖ इंसानों में यह बीमारी कुत्ते के काटने पर होती है ।
- ❖ जंगली मांसभक्षी और चमगादड़ भी इस बीमारी के लिए अधिकाधिक खतरा प्रस्तुत करते हैं, जहां यह बीमारी प्रचलित है । भारत में यह बीमारी विशेष क्षेत्री (इंडेमिक) है ।

लक्षण

- ❖ अधिक सक्रियता
- ❖ मुंह से लार गिरना (बहना या टपकना)
- ❖ खास प्रकार की आवाज निकालना जिसे आर्तनाद कहते हैं ।
- ❖ आक्रामकता और लकवा
- ❖ प्रथम लक्षण दृष्टिगोचर होने के 24-28 घंटे के भीतर पशु की मृत्यु हो जाती है, जो अधिकांशतः 3 सप्ताह के अंदर या कुत्ते के काटने के 5-6 माह के भीतर दिखाई पड़ता है। एक बार लक्षण दिखने पर मृत्यु निश्चित है ।



चिल्लाना और लार गिरना

रोकथाम

- ❖ कुत्ते के काटने पर हुए घाव को बहते हुए पानी में 5-10 मिनट के लिए धोएं ।
- ❖ नहाने के साबुन से घाव को धीरे-धीरे धोएं ।
- ❖ अपने पशुचिकित्सक से तुरंत सलाह लें ।
- ❖ संदेहास्पद मामले में कुत्ते के काटने के बाद वाला टीकाकरण करवाना जरूरी है ।
- ❖ अपने पालतू कुत्ते व बिल्लियों को इस रोग का वार्षिक टीकाकरण करवाकर उन्हें इस खतरनाक बीमारी से सुरक्षा प्रदान करें ।



रेबीज़ के लकवा रूप

अपने पशु को समय पर टीका लगवाएं और बीमारियों से बचाएं ।

छ. एन्थ्रैक्स (गिलटी रोग)

- ❖ एक घातक जीवाणुजनित बीमारी है जो सभी खेतिहर पशुओं को प्रभावित करती है ।
- ❖ उच्च बुखार, श्वसन में कठिनाई, प्राकृतिक छिद्र से रक्त बहना और अचानक मृत्यु इस बीमारी के खास लक्षण हैं ।
- ❖ जीवाणु से दूषित चारा व दाना के खाने से यह रोग पनपता है । इस रोग के जीवाणु भूमि में 30 साल तक जीवित रह सकते हैं ।
- ❖ प्रारंभिक अवस्था में इलाज किया जाए तो प्रभावी होता है, अन्यथा पशु की मृत्यु हो सकती है ।
- ❖ मनुष्यों में संक्रमण बिना पके मांस के खाने से, संक्रमित पशु के संपर्क में आने या जीवाणुओं के श्वसन से होता है ।

रोकथाम



अचानक मृत्यु

- ❖ विशेष क्षेत्र में पशुओं के नियमित वार्षिक टीकाकरण से इस बीमारी को रोका जा सकता है ।
- ❖ विशेष क्षेत्र में रोग होने के कम से कम 1 माह पहले ही टीकाकरण करवा देना चाहिए ।
- ❖ गिलटी रोग से मरे हुए पशु के शव को काट कर कभी भी खोलना या देखना नहीं चाहिए ।



नाक से रक्त बहना

- ❖ यदि उपरोक्त बीमारियों के लक्षण दिखाई दें तो अपने पशु चिकित्सक से संपर्क कर रोग नियंत्रण विधियों के बारे में सलाह लें ।

ज. थाइलेरियोसिस (एक प्रोटोजोआ जनित रोग)

- ❖ युवा संकर विदेशी गाय ज्यादा संवेदनशील हैं । गाय की भारतीय नस्ल (जेबु) अपेक्षाकृत रोग प्रतिरोधी हैं ।
- ❖ भैंसे भी संक्रमित होती हैं परंतु लक्षण मंद होते हैं ।
- ❖ बुखार, सूजी हुई बाह्य लासिका ग्रंथि, श्लेष्मा झिल्ली का फीका पड़ना, रक्तल्पता, नाक से स्राव आना, पीलिया, लार गिरना, तेज और उथला श्वसन, पानी भरी आंखें इत्यादि आम लक्षण हैं ।
- ❖ गाय का स्वास्थ्य तेजी से गिरता है ।
- ❖ कुछ पशु धैर्यहीन या चिड़चिड़ा लक्षण दिखाते हैं जैसे – पैर मारना, सिर टकराना, लेटना, अचेतन और मृत्यु ।



थाइलेरियोसिस से ग्रस्त बछड़ी में सूजी हुई लासिका ग्रंथि

रोकथाम और उपचार

- ❖ चिचड़ियों का नियमित नियंत्रण इन संक्रमणों को दूर रखने का सबसे अच्छा तरीका है । (चिचड़ नियंत्रण का अध्याय देखें)
- ❖ यदि इन बीमारियों में उपरोक्त लक्षण दिखाई दें तो पशु चिकित्सक से उपचार कराएं, क्योंकि उपचार शुरूआती अवस्था में ज्यादा प्रभावी होते हैं । उपचार में देरी से पशु की मृत्यु हो सकती है ।
- ❖ थाइलेरियोसिस के नियंत्रण के लिए सभी विदेशी व संकर नस्ल के पशु जिनकी आयु 3 माह व उससे अधिक है उसको जीवन में एक बार टीकाकरण कराएं ।

झ. गाय और भैंस में टीकाकरण - सारणी

क्र.	बीमारी का नाम	प्रथम खुराक पर आयु	वर्धक/समर्थक खुराक	अनुवर्ती खुराक
1	खुरपका मुंहपका रोग	4 माह और अधिक	प्रथम खुराक के 1माह बाद	6 माह
2	गलघोंटू	6 माह और अधिक	-	वार्षिक रोग-विशेष क्षेत्र में
3	लंगडा बुखार	6 माह और अधिक	-	वार्षिक रोग-विशेष क्षेत्र में
4	बुसेलोसिस	4-8 माह की आयु (केवल बछड़ियों में)	-	जीवन में एक बार
5	थाइलेरियोसिस	3 माह और अधिक	-	जीवन में एक बार – सिर्फ विदेशी ओर संकर नस्ल
6	गिलटी रोग	4 माह और अधिक	-	रोग विशेष क्षेत्र में वार्षिक
7	आई.बी.आर	3 माह और अधिक	प्रथम खुराक के 1 माह बाद	6 माह (टीका वर्तमान में भारत में नहीं बनता)
8	जलातंक रोग (कुत्ते के केवल काटने के बाद)	कुत्ते के काटने के तुरंत बाद	चौथे दिन (कुत्ते के काटने के)	7,14,28 और 90वें दिन प्रथम खुराक के बाद)

ज. टीकाकरण के दौरान ध्यान देने योग्य महत्वपूर्ण बिंदु

- ❖ टीकाकरण के समय पशु का स्वास्थ्य अच्छा होना चाहिए ।
- ❖ जहां भी निर्धारित किया है वहां पर टीके को प्रशीतन में तब तक रखा जाना चाहिए जब तक कि उसे पशु में लगा नहीं दिया जाता ।
- ❖ दवा निर्माता के द्वारा दिए गए रूट व मात्रा निर्देश का सख्ती से पालन करें ।
- ❖ रोगों के सही तौर पर नियंत्रण के लिए टीकाकरण कवरेज कम से कम 80% पशुओं में होना चाहिए ।
- ❖ टीकाकरण को अंजाम देने के 2-3 सप्ताह पहले पशुओं को कृमिनाशक दवा खिलाना लाभदायक होता है । इससे उनमें रोग-प्रतिरोधक अनुक्रिया बेहतर हो जाती है ।
- ❖ बीमारी होने के अंदेशा के कम से कम एक माह पूर्व टीकाकरण करना चाहिए ।
- ❖ गर्भ के अग्रिम अवस्था में पशु के टीकाकरण से बचना चाहिए यद्यपि अधिकांश मामलों में कुछ भी अशुभ नहीं हो सकता है ।

ट. टीकाकरण की असफलता के सामान्य कारण

- ❖ टीका बनने से टीकाकरण तक कोल्डचैन को कायम रखने का अभाव ।
- ❖ कमजोर और असंगत पोषित पशुओं में अपर्याप्त या कम रोग-प्रतिरोधक अनुक्रिया ।
- ❖ समूह के कुछ ही पशुओं का टीकाकरण किए जाने पर पूरे समूह में रोगप्रतिरोधक क्षमता का अभाव ।
- ❖ टीका की घटिया गुणवत्ता – बार-बार द्रवित और ठंडा करने पर गुणवत्ता का हास होता है ।
- ❖ कम क्षमतावान या अप्रभावी टीका – नस्ल विविधता (तब्दीली) के मामले में हो सकती है ।

टीकाकरण ही रोगों को रोकने के लिए सबसे आसान और सस्ता तरीका है ।

अनुभाग - V

अन्य महत्वपूर्ण बीमारियां

कुछ और बीमारियां हैं जिनसे भारी आर्थिक नुकसान होता है परंतु उन्हें टीकाकरण के द्वारा रोका नहीं जा सकता क्योंकि इन बीमारियों के लिए टीका उपलब्ध नहीं है। इनमें से कुछ बीमारियां स्वसीमित है और संक्रमण के दौरान सही देखभाल और उपचार स्वास्थ्यलाभ में सहायक हो सकती हैं।

इसके अलावा, कुछ बीमारियां जो लाइलाज हैं उन्हें अलग-थलग करके समूह से हटाना ही एक मात्र विकल्प है जिससे अन्य स्वस्थ पशुओं में संक्रमण को रोका जा सके। लक्षण बीमारी के अतिकाल में दिखाई देते हैं और पशु में कोई लक्षण दिखने से पहले ही पशु बीमारी या संक्रमण को फैला सकता है। यह अनुभाग निम्नलिखित महत्वपूर्ण अवस्थाओं में विभाजित किया जाता है -

- क. जोन्स बीमारी (जेडी)
- ख. गोजातीय तपेदिक (बीटीबी)
- ग. कवक विषाक्तता
- घ. तीन दिवसीय बुखार (एफीमेरल बुखार)
- ड. पैर का सड़ना
- च. डर्मेटोफ़ाइटोसिस
- छ. डर्मेटोफिलोसिस
- ज. ढेलेदार/लंपी त्वचा रोग

क. जोन्स बीमारी (जेडी)

- ❖ जुगाली करने वाले पशुओं में यह एक महत्वपूर्ण जीवाणु जनित रोग है जो दीर्घकालिक दस्त का कारक है जिससे भारी आर्थिक हानि होती है ।
- ❖ अच्छी भूख के बावजूद वजन में कमी होना ।
- ❖ 'बॉटलनुमा जबड़ा' भी दिखाई पड़ सकता है ।
- ❖ एक बार रोग के लक्षण दिखने पर पशु का स्वास्थ्य ठीक नहीं होता बल्कि और बिगड़ने लगता है ।



भार में कमी

रोकथाम और नियंत्रण

- ❖ जोन्स बीमारी की इलाज असाध्य है ।
- ❖ रोगी पशु को फार्म से हटा देना चाहिए क्योंकि वह अन्य स्वस्थ पशुओं को संक्रमित कर सकता है ।
- ❖ नए पशुओं को जांच के बाद ही खरीदें ।
- ❖ अपने पशुओं की नियमित जांच कराते रहें ।
- ❖ पशु चिकित्सक से अपने पशुओं को जोन्स रोग की जांच कराएं ।

ख. गौजातीय तपेदिक या क्षय रोग (बीटीबी)

- ❖ यह भी गाय और भैंस का एक महत्वपूर्ण जीवाणु जनित रोग है ।
- ❖ सालों तक यह रोग विकसित होता है और परिणामतः कमजोरी, खांसी और शारीरिक भार में कमी ।
- ❖ भूख में कमी, क्षीणता (निर्बलता), श्वसन में कठिनाई, लसिका ग्रंथियों में विवर्धन और दस्त ।
- ❖ यह रोग मनुष्यों में भी संचरित हो सकता है ।

रोकथाम और नियंत्रण

- ❖ गौजातीय तपेदिक भी असाध्य है ।
- ❖ इस रोग से ग्रसित पशु को फार्म से हटा देना चाहिए जिससे कि स्वस्थ पशुओं में यह रोग न फैले ।
- ❖ नए पशुओं को जांच के बाद ही खरीदें ।
- ❖ केवल रोगरहित पशुओं को ही अपने बाड़े में भर्ती करें ।
- ❖ अपने पशुओं की नियमित जांच कराएं ।
- ❖ किसी पशुचिकित्सक से सलाह कर पशु में तपेदिक की जांच कराएं ।

तपेदिक व जोन्स बीमारी से बचने के लिए केवल रोग रहित पशु ही खरीदें ।

ग. कवक विषाक्तता

- ❖ यह बीमारी पशु फीड (दाना) जैसे मूंगफली की खल, मक्का इत्यादि तथा नमी में भंडारित चारा (धान पुआल आदि) के ऊपर वृद्धि करने वाले कवक द्वारा पैदा किए गए विष से होती है। इसे गाय व भैंस में "अफ़्लाटोक्सिकोसिस" और "डेगनेला" जैसे बीमारियाँ होने कि संभावना है।
- ❖ यह विष काफी गाढ़ा होता है कि वह पशु के स्वास्थ्य और प्रदर्शन को भारी क्षति पहुंचाता है।
- ❖ उत्पादन में कमी का आर्थिक असर मृत्यु के कारण होने वाले असर से कई गुना ज्यादा होता है। दुग्ध उत्पादन में 15% से अधिक की कमी आ सकती है।



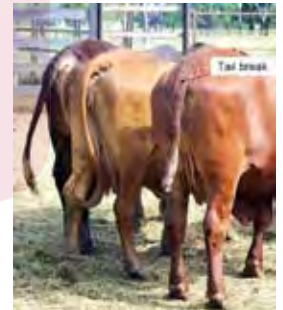
पशु चारे में फफूंदी



भूसे में फफूंदी

लक्षण

- ❖ भूख, शारीरिक अवस्था (दशा) में उत्तरोत्तर हास, दस्त भी हो सकता है।
- ❖ बाल झड़ना, पूंछ और कान का आंशिक रूप में झड़ना।
- ❖ पैर में सड़ाव।
- ❖ अधिक दुग्ध देने वाली गायों में यह लक्षण पहले पाया जा सकता है।



कवक विष के कारण पूंछ व पैर में सड़ाव के लक्षण

- ❖ दाना खपत में कमी, प्रजनन क्षमता में कमी, गर्भपात, वजन में कमी, कीटोसिस बीमारी, जेर का रूकना, बच्चेदानी की सूजन, थनैला और कम रोग प्रतिरोधक क्षमता की वजह से अन्य बीमारियों से ग्रसित हो सकता है।

रोकथाम

- ❖ कवक से संक्रमित और नमी वाले जगह पर भंडारित चारा व दाना पशुओं को न खिलाएं।
- ❖ पशुओं को पर्याप्त मात्रा में खनिज मिश्रण और हरा चारा खिलाएं।
- ❖ यदि उपरोक्त लक्षण दिखाई दें तो तुरंत पशु चिकित्सक से सलाह लें।

कवक से ग्रस्त चारा-दाना खिलाने से बचें - कवक विषाक्तता को रोकें।

घ. तीन दिवसीय बुखार (एफीमेरल बुखार)

- ❖ यह गाय और भैंस का विषाणु जनित रोग है ।
- ❖ यह कीड़ों से संचरित या प्रसारित होने वाला रोग है ।
- ❖ यह तीन दिनों तक कायम रहता है ।
- ❖ इस रोग से ग्रसित होने की दर ज्यादा है परंतु मृत्यु दर कम (1-2%) है ।

लक्षण

- ❖ द्विअवस्था से बहुअवस्था वाला बुखार कंपकंपी के साथ, आंखों से आंसू और भूख में कमी ।
- ❖ नाक से पानी बहना, लार गिरना, सांस लेने में कठिनाई, उदासी, अकड़न, लंगड़ापन और दुग्ध उत्पादन में अचानक गिरावट ।

रोकथाम और उपचार

- ❖ कुछ ही दिनों में तत्कालिक स्वास्थ्य लाभ होता है ।
- ❖ सही तरीके से मक्खी नियंत्रण बीमारी को कम करने में मददगार होता है । (मक्खी प्रबंधन का अध्याय देखें)
- ❖ पूर्णतः विश्राम सबसे अच्छा उपचार है । बीमारी से ठीक हुए पशुओं को कुछ दिन तनाव या काम से दूर रखें क्योंकि यह बीमारी दुबारा हो सकती है ।
- ❖ लक्षण सूचक उपचार के लिए पशु चिकित्सक की सलाह लें ।



नाक से पानी बहना, लार गिरना



उठने में असमर्थता

सही तरीके से मक्खी का नियंत्रण तीन दिवसीय बुखार (एफीमेरल बुखार) को रोक सकता है ।

ड. पैर का सड़ना

- ❖ यह एक जीवाणु जनित संक्रमण है जिसका दुग्ध व्यवसाय में बहुत अधिक आर्थिक महत्व है ।
- ❖ इसकी व्यापकता दशा (काल), साल के मौसम, चारा चरने का समय, गृह-प्रणाली, फर्श के प्रकार इत्यादि पर निर्भर करता है ।
- ❖ पथरीली जमीन, नुकीले कंकड, इत्यादि से इस रोग की संभावना बढ़ जाती है ।

लक्षण



पैर सड़ने से हुआ घाव

- ❖ बुखार और भूख में कमी
- ❖ दुग्ध उत्पादन में कमी
- ❖ खुरों के बीच सूजन
- ❖ घाव से बदबू आना
- ❖ लंगड़ापन – पशु अपने पैर को दबाव से मुक्ति के लिए हवा में उठाता है ।



गंधीर पैर सड़न

- ❖ अक्सर पिछला पैर प्रभावित होने के कारण पशु अपनी उंगलियों पर चलने और खड़े होने का प्रयास करता है ।

रोकथाम व उपचार

- ❖ चोट के स्रोत को हटा दें और पशु के पैरों को शुष्क व स्वच्छ रखें ।
- ❖ जो पशु सक्रिय रूप से संक्रमण के जीवाणु को झाड़ते/बाहर निकालते रहते हैं, उन्हें तब तक अलग रखें जब तक उसमें लंगड़ेपन के लक्षण अदृश्य न हो जाएं ।
- ❖ पानी पीने के स्थान और प्रवेशद्वार व अन्य रास्तों पर पानी इकट्ठा न होने दें ।
- ❖ 5% कॉपरसल्फेट और 10% जिंक सल्फेट के रोगाणुनाशक घोल को पैर डुबकी में इस्तेमाल करने से अच्छा परिणाम आता है ।
- ❖ शारीरिक प्रणालीगत उपचार स्थानिक उपचार से अधिक महत्वपूर्ण है ।
- ❖ रोग की पहचान व तुरंत प्रतिजैविक का इंजेक्शन जरूरी है । यदि 3-4 दिन में स्थिति में सुधार न दिखे तो इसका अर्थ है संक्रमण निचले स्तर के ऊतकों तक पहुंच चुका है ।
- ❖ उपरोक्त लक्षण दिखने पर तुरंत पशुचिकित्सक से संपर्क करें ।



नियमित पैर डुबकी का इस्तेमाल पैर की सड़न रोकने में उपयोगी है ।

पैरों की उचित देखभाल बहुत महत्वपूर्ण है ।

च. डर्मेटोफ़ाइटोसिस

- ❖ शृंग (त्वचा एवं बालों) उत्तक का फफूंदी रोग
- ❖ फफूंदी के एक समूह 'डर्मेटोफ़ाइट्स' द्वारा जनित रोग है।
- ❖ रोग ग्रसित पशु से सीधा संपर्क इस रोग के प्रसार का मुख्य तरीका है।
- ❖ मनुष्यों में भी प्रसारित हो सकता है।
- ❖ यद्यपि इस रोग में बने घाव अत्यंत बदसूरत होते हैं, किन्तु इस रोग से आर्थिक हानि सीमित ही होती है।
- ❖ घावों की वजह से पशु को थोड़ी परेशानी संभव है और कुछ पशुओं में द्वितीयक जीवाणु संक्रमण भी हो सकता है।

लक्षण

- ❖ त्वचा पर मौजूद गोल एवं थोड़े उभरे हुए क्षेत्र को पपड़ी/छिलका कहते हैं।
- ❖ घावों का आकार परिवर्तनशील है और यह बहुत व्यापक भी हो सकता है।



डर्मेटोफ़ाइटोसिस में पपड़ी का बनना।

रोकथाम और उपचार

- ❖ सामान्यतया यह अपने आप बिना किसी उपचार के ठीक हो जाता है, किन्तु इसमें कई महीने लग सकते हैं।
- ❖ पशु बाड़े को नियमित रूप से साफ एवं कीटाणु रहित करते रहें।
- ❖ पशुओं की भीड़भाड़ को कम रखें एवं उनमें सीधा संपर्क न होने दें।
- ❖ पशुओं को अधिक समय तक धूप में रखें।
- ❖ घावों से पपड़ी को रगड़कर हटाने के बाद ही दवाई लगाएँ क्योंकि दवाई पपड़ी के नहीं भेद सकती है।
- ❖ सारी पपड़ी को एकत्रित कर जला दें जिससे यह दूसरे पशुओं को संक्रमित नहीं करे।
- ❖ उचित उपचार के लिए पशु चिकित्सक से संपर्क करें।

छ. डर्मेटोफिलोसिस

- ❖ त्वचा को प्रभावित करने वाली यह बीमारी “डर्मेटोफिलस कॉंगोलेन्सिस” नामक जीवाणु से होती है।
- ❖ रोगी पशु से सीधा संपर्क एवं रक्त चूसने वाले कीड़ों के काटने से यह रोग फैलता है।
- ❖ लंबे समय तक चलने वाली बारिश, उच्च तापमान एवं नमी तथा बाह्य परजीवियों की मौजूदगी इस बीमारी के फैलने में सहायक होते हैं।
- ❖ यह जीवाणु त्वचा पर तब तक सुसुप्तावस्था में रह सकता है जब तक परिस्थितियाँ उसके अनुकूल न हों।
- ❖ यह मनुष्यों में भी फैल सकता है।

लक्षण

- ❖ त्वचा शोथ एवं खुरंट बनना इस बीमारी के लक्षण है।
- ❖ इस बीमारी के लक्षणों को तीन अवस्थाओं में देखा जा सकता है (i) बाल एक पैट ब्रुश की तरह चिपक जाते हैं। (ii) शुरुआती घावों के आपस में मिलने से पपड़ी/खुरंट बन जाता है। (iii) त्वकीय शृंग पदार्थ के एकत्रित होने से मस्सों जैसे घाव बन जाते हैं।
- ❖ अधिकतर पशु शुरुआती संक्रमण के ३ सप्ताह के अंदर स्वतः ही ठीक हो जाते हैं।
- ❖ सूखे मौसम की शुरुआत घाव भरने की गति को बढ़ा देती है।
- ❖ विस्तृत घाव वाले पशुओं में उत्पादन में अत्यधिक हानि होती है।
- ❖ बछड़ों में इससे मृत्यु भी हो सकती है।



डर्मेटोफिलोसिस में खुरंट का बनना

रोकथाम और उपचार

- ❖ अत्यधिक नम अवस्था बनने से रोकें।
- ❖ बाह्यपरजीवियों का उचित प्रबंधन।
- ❖ मनुष्यों में संक्रमण रोकने के लिए पीड़ित पशुओं की देखभाल के बाद हाथ जीवाणु रोधी साबुन से धोने चाहिए।
- ❖ उचित उपचार के लिए पशु चिकित्सक से संपर्क करें।

ज. ढेलेदार/लंपी त्वचा रोग

- ❖ ढेलेदार/लंपी त्वचा रोग
- ❖ यह एक विषाणु जनित रोग है जो की चेचक के विषाणु से होता है।
- ❖ भारत में यह उभरती हुई बीमारी है।
- ❖ रक्त चूसने वाले कीड़े एवं चिंचड़ियाँ इसे फैला सकते हैं।
- ❖ विषाणु के प्रसार में बीमार पशु से सीधा संपर्क महत्वपूर्ण नहीं है।

लक्षण

- ❖ बुखार एवं उत्पादन में उल्लेखनीय गिरावट।
- ❖ सतही लसिका ग्रंथियों में सूजन।
- ❖ नाक में सूजन, नेत्रशोथ एवं अत्यधिक लार का स्राव।
- ❖ बुखार शुरू होने के 48 घंटे के अंदर पूरे शरीर पर 2-5 सेमी व्यास की त्वकीय गांठें दिखाई देती हैं।
- ❖ ये गांठें गोल, कड़ी एवं उभरी हुई होती हैं जो की त्वचा, उपत्वचा एवं कभी कभी मांसपेशियों को भी प्रभावित करती हैं।
- ❖ बड़ी गांठें उत्तकक्षयी और अंत में रेशेदार बन जाती हैं जो की कई महीनों तक बनी रह सकती हैं।
- ❖ छोटी गांठें बिना किसी समस्या के ठीक हो जाती हैं।
- ❖ इन गांठों में मक्षिकता भी आ सकती है। मुँह, आहार नाल, श्वसन नाल एवं फेफड़ों की श्लेष्मा झिल्ली में फफोले, कटान एवं छाले विकसित हो सकते हैं।
- ❖ गर्भवती पशु का गर्भपात हो सकता है और वह कई महीनों तक मद में नहीं आता है।
- ❖ सांड अल्पकालिक और पूर्णकालिक तौर पर बधिया हो सकते हैं।

रोकथाम और उपचार

- ❖ चिंचड़ियों एवं रक्त चूसी कीड़ों की उचित रोकथाम
- ❖ अगर लक्षण दिखाई दें तो तुरंत पशु चिकित्सक से संपर्क करें।



सतही लसिका ग्रंथियों में सूजन।



शरीर और सिर पर गांठें।



अनुभाग - VI

चिचड़, मक्खी से होने वाली बीमारियां

पशुपालकों के लिए चिचड़ का संक्रमण एक वृहद समस्या है । बहुत से किसानों के लिए इसे नियंत्रित करना एक समस्या है । चिचड़ और काटने वाली मक्खियां पशुओं को अत्यधिक तंग करते हैं और बहुत अधिक मात्रा में उनका रक्त चूस लेने के कारण उनका दुग्ध उत्पादन कम हो जाता है । वे कुछ बीमारियों को पशु में संचरित भी करने के लिए जिम्मेदार हैं, जो रक्त कोशिकाओं को नष्ट करते हैं । संक्रमित पशुओं का यदि समय पर उपचार नहीं किया गया तो वे या तो मर जाएंगे या वे दीर्घकाल तक बीमार बने रहेंगे । इसलिए इन बीमारियों के लक्षणों को समझना व जानना जरूरी है ताकि समय पर पशुचिकित्सक से सलाह लेकर उपचार किया जा सके । निम्नलिखित अध्याय का समावेश इस अनुभाग के अंतर्गत किया गया है -

- क. एनाप्लाज्मोसिस
- ख. बबेसियोसिस
- ग. सर्पा
- घ. थाइलेरियोसिस (अनुभाग IV के अध्याय 'ज' में देखें)

चिचड़ से होने वाले रोग

- ❖ एनाप्लाज्मोसिस, बबेसियोसिस और थाइलेरियोसिस (अध्याय-ज, अनुभाग – IV में पहले से ही समावेश कर लिया गया है) चिचड़ से होने वाले प्रमुख तीन रोग हैं जो रक्त को प्रभावित करते हैं ।

क. एनाप्लाज्मोसिस

- ❖ एनाप्लाज्मोसिस एक छोटे प्रकार के जीवाणु से होता है जिसे रिकेटसिया कहते हैं ।
- ❖ एनाप्लाज्मोसिस रक्त से दूषित सुई या कृत्रिम घर्भाधान के दस्तानों से भी फैल सकता है ।
- ❖ बछड़ियां गायों की अपेक्षा एनाप्लाज्मोसिस के प्रति रोग प्रतिरोधक हैं ।
- ❖ रोग-विशेष क्षेत्रों में इसके धारक पशु होते हैं जो संक्रमण भंडार की तरह होते हैं ।
- ❖ दीर्घकालिक संक्रमित गाय वयस्कावस्था में बीमार हो सकती है ।
- ❖ बुखार, दुग्ध उत्पादन में कमी, रक्त अल्पता, पीलिया, गर्भपात सामान्य लक्षण हैं ।
- ❖ बाद की अवस्थाओं में अक्षमता, असमन्वित चाल, झकझोरने पर अवरूद्ध सांसों और तेज नाड़ी दर सामान्यतः देखे जाते हैं ।
- ❖ शुरूआती अवस्था में ही उपचार करने पर बीमारी को रोका जा सकता है ।

ख. बबेसियोसिस

- ❖ यह प्रोटोजोआ जनित (सूक्ष्मजीव) रोग है ।
- ❖ बुखार, दुर्बलता, बढ़ी हुई सांस दर एकदम दुग्ध उत्पादन में कमी, मांसपेशियों की कंपकपी, रक्त अल्पता, पीलिया, गर्भपात, कब्ज या दस्त इसके सामान्य लक्षण हैं ।
- ❖ तुरंत उपचार से पशु को ठीक किया जा सकता है ।
- ❖ बाद में वजन में कमी, मूत्र में रक्त आना और दिमागी लक्षण इत्यादि की संभावना होती है ।
- ❖ उपचार के 24 घंटे बाद यदि मूत्र का रंग सामान्य नहीं होता तो उपचार दुबारा करना बेहतर होता है ।
- ❖ बबेसियोसिस में 'रेडवाटर बीमारी' से भ्रमित न हों जो कि एक जीवाणुजनित घातक बीमारी है और उन क्षेत्रों में देखी जाती है जहां फ्लुक संक्रमण अधिक होता है ।



इलाज के पहले मूत्र (i) उन्नतशील सुधार (ii से iv) से सामान्य (v) तुरंत उपचार के बाद

ग. सर्रा

- ❖ गाय और भैंस में होने वाला प्रोटोजोआ जनित एक महत्वपूर्ण रोग है ।
- ❖ यह रोग काटने वाली मक्खियों द्वारा संचरित होता है ।
- ❖ गाय और भैंस भी घोड़े व ऊंट के लिए इस रोग के कोश मेजबान है ।
- ❖ संक्रमित पशु के रक्त, कभी-कभी मांस व दूध इस रोग के स्रोत होते हैं ।
- ❖ रक्त अल्पता की वजह से उत्पादन में अत्यधिक कमी आती है । तनाव ग्रस्त पशु में इस रोग की संभावना अधिक होती है ।

काटने वाली मक्खियां जो सर्रा को संचरित करती हैं ।



टवानस



स्टोमोक्सिस



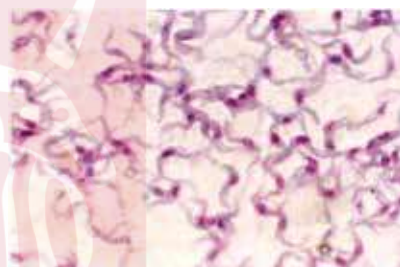
हीमेटोबिया

लक्षण



कमजोर व रक्त अल्प पशु

- ❖ रक्त अल्पता, भार में कमी, और कमजोरी
- ❖ गर्भपात, बांझपन और भैंस में समयपूर्व कमजोर बछड़ी का जन्म



रक्त में सर्रा के रोगाणु

- ❖ गाय को उच्च मृत्यु दर वाली दीर्घकालिक बीमारी हो सकती है जो 2 साल तक चल सकती है ।
- ❖ दो सप्ताह से दो माह में मृत्यु हो सकती है ।
- ❖ शरीर के निचले हिस्सों में शोफी सूजन (पैर, ब्रीस्केट और उदर) देखा जा सकता है ।
- ❖ लसिका ग्रंथियों में भी सूजन हो सकती है ।
- ❖ स्नायुविक लक्षण जैसे सिर लटकाना, चकरी, अंधापन, अति उत्तेजना, हाथ-पैर मारना भी देखा जाता है ।

रोकथाम

- ❖ काटने वाली मक्खियों का नियंत्रण करें । (अनुभाग VIII में देखें)
- ❖ पर्याप्त हवा और सूर्य का प्रकाश शेड में उपलब्ध होना चाहिए ।
- ❖ शेड और आसपास के क्षेत्रों में कीटनाशक का प्रयोग पशुचिकित्सक की सलाह के अनुसार किया जा सकता है ।

उपचार

- ❖ लक्षणों को देखकर पशुचिकित्सक को तुरंत बुलाएं ।
- ❖ तुरंत उपचार से पशु को ठीक किया जा सकता है ।

काटने वाली मक्खियों को नियंत्रित करें - सर्रा रोकें

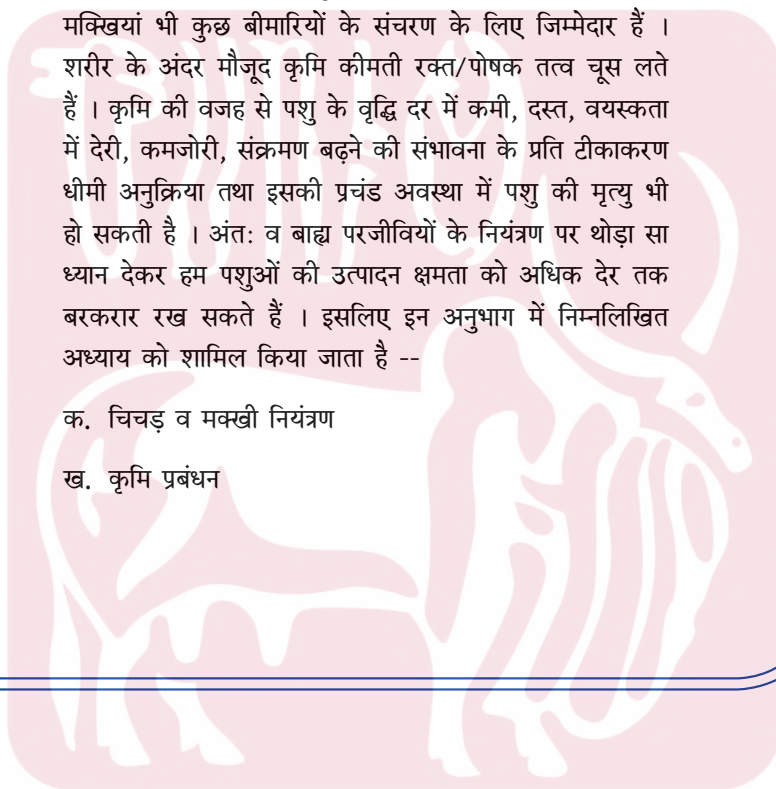
अनुभाग - VII

चिचड़, मक्खी और कृमि नियंत्रण

बाह्य (चिचड़, मक्खियां) और अंतः परजीवी (कृमि) दोनों ही पशु की उत्पादन क्षमता में अत्यधिक कमी के कारण होते हैं। जैसा कि पहले के अनुभाग में चर्चा की गई है चिचड़ और मक्खियां भी कुछ बीमारियों के संचरण के लिए जिम्मेदार हैं। शरीर के अंदर मौजूद कृमि कीमती रक्त/पोषक तत्व चूस लते हैं। कृमि की वजह से पशु के वृद्धि दर में कमी, दस्त, वयस्कता में देरी, कमजोरी, संक्रमण बढ़ने की संभावना के प्रति टीकाकरण धीमी अनुक्रिया तथा इसकी प्रचंड अवस्था में पशु की मृत्यु भी हो सकती है। अंतः व बाह्य परजीवियों के नियंत्रण पर थोड़ा सा ध्यान देकर हम पशुओं की उत्पादन क्षमता को अधिक देर तक बरकरार रख सकते हैं। इसलिए इन अनुभाग में निम्नलिखित अध्याय को शामिल किया जाता है --

क. चिचड़ व मक्खी नियंत्रण

ख. कृमि प्रबंधन



क. चिचड़ और मक्खी का नियंत्रण

- ❖ चिचड़ एनाप्लाज्मोसिस, थाइलेरियोसिस और बबेसियोसिस जैसी बीमारियों (चिचड़ से होने वाला रोग-अध्याय देखें) का संचरण करते हैं ।
- ❖ काटने वाली मक्खियां सर्रा व तीन दिवसीय बुखार नामक रोगों को संचरित करती हैं । (संबंधित अध्याय देखें)
- ❖ इनकी अत्यधिक संख्या में संक्रमण से रक्त अल्पता व उत्पादन में कमी हो जाती है ।
- ❖ चिचड़ व काटने वाली मक्खियां पशुओं के लिए असुविधाकारक होते हैं ।
- ❖ ये जिस जगह पर काटते हैं वहां पर एलर्जिक प्रतिक्रिया हो सकती है ।
- ❖ ये भारी संख्या में अण्डे देती हैं जिसकी वजह से पुनः इनकी संख्या बढ़ जाती है ।



विभिन्न प्रकार के चिचड़



अण्डों के संग चिचड़



चिचड़ी के काटने से चमड़ी में एलर्जी



मक्खी के काटने से चमड़ी में एलर्जी

I. चिचड़ नियंत्रण

- ❖ किसी भी पशु को खरीदने के बाद उसे दूसरे पशुओं के साथ मिलाने के पूर्व पूरी तरह से चिचड़ रहित कर देना चाहिए ।
- ❖ समय-समय पर चिचड़ों को मारने की दवा पशुओं पर लगानी चाहिए।
- ❖ एक वयस्क चिचड़ लगभग 3000 अंडे देती है और उसके लार्वा बिना भोजन के 2-7 माह तक जीवित रह सकते हैं जो जलवायु पर निर्भर करता है ।
- ❖ चिचड़ के पुनः संक्रमण से बचने के लिए चिचड़नाशक दवा का इस्तेमाल गाय के शरीर के साथ गौशाला की दीवार में मौजूद दरारों में भी करना चाहिए।
- ❖ चिचड़ नाशक दवा को समय-समय पर प्रतिरोधक विकसित होने से रोकने के लिए बदलते रहना चाहिए ।
- ❖ चिचड़नाशक दवा को उसके सही सांद्रता पर ही लगाना चाहिए ।
- ❖ पशुचिकित्सक से सही चिचड़ नाशक दवा और उसकी खुराक के बारे में सलाह लें ।

II. मक्खी नियंत्रण

- ❖ नियमित रूप से गोबर व गौ मूत्र का सही जगह पर निपटारा करें । निपटारा गौशाला से दूर होना चाहिए ।
- ❖ गोबर-मूत्र के किसी भी जमाव से बचना चाहिए ।
- ❖ शाम के समय गौशाला में नीम की पत्तियों को जलाकर धुआं करने से मक्खियों के उपद्रव से बचने में सहायता मिलती है ।
- ❖ मक्खियों को भगाने वाले पदार्थ को सही मात्रा/सांद्रता में उपयोग करें ।

काटने वाली मक्खियों व चिचड़ों को दूर भगाने के लिए प्राकृतिक मक्खी निरोधक जैसे नीम के तेल इत्यादि का नियमित इस्तेमाल किया जा सकता है । इससे रासायनिक जैसा बुरा प्रभाव पशु में नहीं होता और मक्खी में प्रतिरोधक क्षमता विकसित होने का भी खतरा नहीं होता । हमेशा दवा बालों की विपरित दिशा में लगानी चाहिए । दवा पूरे शरीर खासकर नीचे के हिस्सों व पैरों पर लगाएं ।

चिचड़ व मक्खी को नियंत्रित करें -- रक्त जनित संक्रमण को रोकें ।

ख. कृमि प्रबंधन

- ❖ कृमि परजीवी हैं जो पशु के पाचनतंत्र के अंदर रहकर उसके उत्तक द्रव या रक्त को चूसते हैं। ये फेफड़े, श्वसननली तथा आंख इत्यादि में भी पाए जा सकते हैं।
- ❖ इनके अंडे गोबर के साथ बाहर आते हैं जो चारागाह, दाना या पानी के स्रोतों को दूषित करते हैं और कुछ इंसानों में भी बीमारी पैदा करते हैं।
- ❖ मूलतः चार प्रकार के कृमि होते हैं: (i) गोलकृमि और (ii) फीताकृमि (पाचनतंत्र में पाए जाते हैं) (iii) फ्लुक (चपटे कृमि - रूमेन व लीवर में पाए जाते हैं): (iv) सिस्टोसोम – (रक्त शिराओं में पाए जाते हैं) (नीचे चित्र में देखें)
- ❖ कृमि के प्रकार के आधार पर विभिन्न प्रकार की उपचार की जरूरत होती है।

कृमि उपद्रव के लक्षण

- ❖ दस्त, वयस्कता में देरी, शरीर वृद्धि दर व दुग्ध उत्पादन में कमी, प्रजनन क्षमता में कमी, काम करने की क्षमता और दाना रूपांतरण क्षमता में कमी, बीमारी के प्रतिरोधक क्षमता में कमी और रक्त अल्पता इत्यादि।
- ❖ एम्फीस्टोम के उपद्रव (रूमेन व लीवर फ्लुक) में प्रचंड दुग्ध युक्त दस्त और निचले जबड़े में पानी भर जाना (बोतल जॉ) भी देखा जा सकता है।
- ❖ लीवर- फ्लुक के संक्रमण में पीलिया देखा जा सकता है।
- ❖ फीताकृमि के संक्रमण में लटकता हुआ उदर और गोबर में इसका हिलता हुआ छोटा सफेद टुकड़ा देखा जा सकता है। इसकी लंबाई की वजह से अंतड़ी में रुकावट भी हो सकती है।
- ❖ हुक कृमि (एक प्रकार का रक्त चूसने वाला गोलकृमि) और सिस्टोसोम के उपद्रव से प्रचंड रक्त अल्पता और खूनी दस्त हो सकता है।
- ❖ नाक बहना, सांस लेने में खरटिं और छोटी सांस सिस्टोसोमस के संक्रमण में देखा जा सकता है। फेफड़े में कृमि की वजह से खांसी हो सकती है।



विभिन्न प्रकार के कृमि



कमजोर पशु



बोतल जैसा जबड़ा

रोकथाम और उपचार

- ❖ बछड़ी को प्रथम कृमिनाशक की खुराक 7-10 दिन की उसकी आयु पर देना तथा उसे मासिक रूप से तब तक दोहराना जब तक बछड़ी 6 माह की न हो जाए।
- ❖ 6 माह या उससे अधिक आयु के सभी पशुओं को साल में दो बार कृमिनाशक दवा-पहलीबार बरसात के पहले और दूसरी बार बरसात के अंत में देनी चाहिए। रूमेन बाईपास से बचने हेतु दवा मुंह में देने की बजाए जीभ के पीछे देनी चाहिए।
- ❖ जमीन में इनके अंडों की संख्या कम करने के लिए कृमिनाशक दवा सामूहिक रूप से बड़े स्तर पर चाहिए।
- ❖ गाभिन पशुओं को भी कृमिनाशक दवा दो बार – पहली खुराक प्रसव के आसपास और दूसरी खुराक प्रसव के 6-7 सप्ताह बाद देनी चाहिए।
- ❖ यदि उपचार से पशु को फायदा नहीं होता तो उसके गोबर को पशुचिकित्सक से जांच कराकर कृमि संक्रमण अनुसार सही दवा का प्रयोग करना चाहिए।
- ❖ नम स्थान पर घोंघे इत्यादि पनपते हैं जहां फ्लुक और सिस्टोसोम के संक्रमण का अंदेशा हो सकता है क्योंकि इन परजीवियों का जीवन चक्र घोंघे के बगैर पूरा नहीं हो सकता।
- ❖ दवा के प्रति प्रतिरोध से बचने के लिए एक ही किस्म की दवा बार-बार प्रयोग न करें।
- ❖ किसी भी प्रकार की कृमि के प्रभावी उपचार हेतु यह आवश्यक है कि हम किसी जानकार व्यक्ति से सलाह लेकर दवा का पर्याप्त मात्रा में प्रयोग करें।

अपने पशुओं को नियमित कृमिनाशक दवा दें -- उत्पादन में वृद्धि करें

अनुभाग - VIII

प्रजनन के बाद होने वाले रोग

प्रजनन के तुरंत बाद शरीर में पोषक तत्वों व खनिज लवण की आवश्यकता बढ़ जाती है। उचित खान-पान और प्रबंधन के बावजूद पशुओं में गर्भावस्था के दौरान कुछ पोषक तत्वों की कमी की वजह से बीमारी के हालात पैदा हो जाते हैं जिसे हम “मेटाबोलिक (चयापचय) या प्रोडक्सन डिजीज” कहते हैं जिसकी वजह से दूध उत्पादन क्षमता में कमी होना या फिर सही समय पर उपचार न होने से पशु मर भी सकता है। इस प्रकार की बीमारी में लक्षण का पता होना ज्यादा महत्वपूर्ण है; जिससे कि पशु उपचार में आसानी हो। इस अध्याय में निम्नलिखित बीमारियों की स्थिति का वर्णन किया गया है।

- क. हाइपोकैल्शिमिया (दुग्ध ज्वर)
- ख. हाइपोमैग्निमिया
- ग. कीटोसिस (शर्करा की कमी)
- घ. पोस्ट पार्टुरिएंट हिमोग्लोबिन्यूरिया (प्रसव उपरांत मूत्र में रक्त आना)
- ङ. गर्भाशय का बाहर निकलना (प्रोलैप्स ऑफ यूटेरस)
- च. जेर का नहीं गिरना (आर.ओ.पी)
- छ. थनों में शोफ (इडीमा)
- ज. फैटी लीवर सिंड्रोम

क. हाइपोकैल्शिमिया (दुग्ध ज्वर)

- ❖ यह रोग रक्त में कैल्शियम की मात्रा कम होने के कारण होता है, जो कि वास्तव में बुखार नहीं है। इस रोग की वजह से कठिन प्रसव, जेर का नहीं गिरना (आर.ओ.पी) और गर्भाशय भ्रंश (युटेराइन प्रोलैप्स) हो सकता है।
- ❖ प्रसव के 72 घंटे के अंदर पाया जाता है। शुरूआती चरणों में कोख एवं लॉयन के ऊपर उत्तेजना के साथ हल्के झटके, कान झुक जाते हैं, एवं सिर को हिलाना, लक्षण पाए जाते हैं।
- ❖ ब्याने के 48 घंटों के दौरान पूरा दूध निकालना, दुग्ध ज्वर को बढ़ावा देता है।
- ❖ पशु खड़ा होने में असमर्थ होता है और बाद की अवस्था में सुस्त हो जाता है जिसमें पहले वो अपना सिर एक तरफ मोड़ लेता है और बाद में पार्श्व स्थिति से (आगे की ओर खींचकर भूमि पर रख) देता है। आंखों की प्रतिक्रिया समाप्त हो जाती है।
- ❖ आखिरी क्षण में तापमान सामान्य से कम होने के साथ पशु बेहोशी की हालत में चला जाता है।
- ❖ हाइपोकैल्शिमिया (दुग्ध ज्वर), सब क्लीनिकल रूप में भी पाया जाता है जिससे पशुओं में बुखार, गर्भाशय में सूजन (मेट्राइटिस), और शर्करा की कमी (कीटोसिस) होने की संभावना बढ़ जाती है जो कि नुकसान का एक बड़ा कारण हो सकता है।

दुग्ध ज्वर की अवस्थाएं



उठने में असमर्थता



सिर को एक तरफ मोड़ना



पार्श्व स्थिति (लेट जाना)

दुग्ध ज्वर की रोकथाम व उपचार

- ❖ गर्भावस्था के आखिरी काल में कैल्शियम की खुराक ज्यादा नहीं देनी चाहिए।
- ❖ दुग्ध ज्वर संभावित पशु में ब्याने के 12-24 घंटे पहले से ब्याने के 48 घंटे तक कैल्शियम की 3-4 खुराक (40-50) ग्राम प्रति खुराक देने से लक्षण में कमी आती है।
- ❖ ब्याने के 3 सप्ताह पहले ऋणात्मक लवण जैसे कि अमोनियम क्लोराइड एवं मैग्नेशियम सल्फेट या अमोनियम सल्फेट (50-100 ग्राम प्रतिदिन) खिलाना चाहिए।
- ❖ लक्षण दिखाई देने पर पशु चिकित्सक से तुरंत संपर्क करें जिसके तुरंत उपचार से पशु ठीक हो सकता है। यदि कोई उपचार न किया जाए, तो पशु मर भी सकता है।
- ❖ कुछ पशुओं में 24-48 घंटे के भीतर पुनः उपचार करने की आवश्यकता होती है।
- ❖ प्रजनन के समय पशु के मूत्र का पी.एच. 6.5-7.0 के बीच होता है, पी.एच. ज्यादा बढ़ने पर दुग्ध ज्वर होने की संभावना बढ़ जाती है।

ख. हाइपोमैग्निमिसिमिया

- ❖ रक्त में मैग्निशियम की मात्रा कम होने के कारण होता है; जिसमें दूध देने वाले पशु ज्यादा प्रभावित होते हैं। कभी-कभी ये बछड़ों से भी हो सकता है।
- ❖ पशु अचानक से सिर को झटकना शुरू कर देता है, कराहट भरी आवाज करता है, तेज भागना ओर पैरों को जमीन पर पटकना शुरू कर देता है।
- ❖ मामूली अवस्था में पशु बिना पैर मोड़े चलता है, छूने से या किसी आवाज से उत्तेजित हो जाता है, बार-बार मूत्र करता है और 2-3 दिनों के बाद एंठन अवस्था में जा सकता है।
- ❖ ये हाइपोकैल्शिमिया के साथ भी हो सकता है। इलाज न होने पर पशु की मृत्यु हो सकती है।
- ❖ जिस मिट्टी में पोटैश व नाइट्रोजन की अधिकता पाई जाती है वो ज्यादा जोखिम वाले क्षेत्र हैं।

हाइपोमैग्निमिसिमिया की रोकथाम व उपचार

- ❖ जिन पशुओं में इसका खतरा हो, प्रतिदिन लगभग 50 ग्राम मैग्नीशियम आक्साइड दें।
- ❖ लक्षण दिखाई देने पर पशु चिकित्सक से तुरंत संपर्क करें। तुरंत उपचार से पशु ठीक हो सकता है।
- ❖ कुछ पशुओं में 24-48 घंटे के भीतर पुनः उपचार करने की आवश्यकता होती है।

समय पर उपचार आपके पशु की रक्षा करेगा।

ग. कीटोसिस (शर्करा की कमी)

- ❖ यह रोग दुधारू पशुओं में ज्यादा होता है, जो सामान्यतः दूध देने के उपरांत शुरूआत के 2-3 महीनों में होने की संभावना होती है ।
- ❖ शुरूआती चरण के लक्षण - भूख में कमी, दूध में कमी, सुस्त पड़ना और गोबर भी लसदार व चिपचिपा होता है ।
- ❖ जैसे-जैसे ये रोग बढ़ता है शारीरिक भार में गिरावट; पाइका (जिसमें पशु कड़ी चीजों/वस्तुओं को खाने का प्रयास करता है) कूबड़ पीठ, इत्यादि लक्षण दिखाई देते हैं । कुछ पशु तो उत्तेजित और आक्रामक भी हो जाते हैं ।
- ❖ मांद व शरीर को चाटना, सिर और नाक को दबाना, बार-बार दांत कटकटाना, आवाज करना इत्यादि लक्षण दिखते हैं । चाल में अनियमितता के साथ-साथ लड़खड़ाना, वृत्त में घूमना और गिरना इत्यादि लक्षण भी दिखते हैं ।
- ❖ एक बार गाय में अगर ऐसी परिस्थिति पैदा हो गई तो पुनरावृत्ति की संभावना बढ़ जाती है ।

कोटोसिस की रोकथाम एवं उपचार

- ❖ दुग्धकाल की पिछली अवस्था में और सूखी हुई गाय में (गाय जब दूध नहीं दे रही होती है) उचित आहार देना ।
- ❖ ब्याने के समय शारीरिक स्कोर 5 के मानक अनुसार 3.5 होना चाहिए ।
- ❖ कुछ बीमारियां जैसे कि जेर नहीं गिरना (आर.ओ.पी.), गर्भाशय में सूजन (मेट्राइटिस), थनैला, पर्यावरणीय तनाव इत्यादि न होने का प्रबंधन अच्छे तरीके से करना चाहिए ।
- ❖ चारे में अचानक बदलाव नहीं करना चाहिए, अत्यधिक चारा नहीं देना चाहिए ।
- ❖ ऊपर दर्शाए गए लक्षण दिखने पर पशु चिकित्सक से संपर्क करें ।



कीटोसिस में वजन घटना

घ. पोस्ट पार्टुरिएंट हिमोग्लोबिन्यूरिया (प्रसव उपरांत मूत्र में रक्त आना)

- ❖ प्रसव उपरांत, ज्यादा दूध देना फॉस्फोरस और कॉपर की कमी, ज्यादा मात्रा में शलजम, रेपसीड (ब्रासिका प्रजाति) चुकंदर का गुदा खिलाना । ये सब इस रोग के प्रमुख कारक हैं ।
- ❖ हिमोग्लोबिन्यूरिया के लक्षण - दूध उत्पादन में अचानक कमी, बुखार, दस्त, रक्त की कमी, कमजोरी, शरीर का पीला पड़ना, खूर और कान का झड़ना ।
- ❖ कुछ बीमारियां जैसे कि लाल मूत्र (बबेसिओसिस), थाइलेरियोसिस, ये भी होने की संभावना पाई गई है ।
- ❖ उपर्युक्त लक्षण जब दिखाई दें, तब पशु चिकित्सक से संपर्क करें ।



हिमोग्लोबिन्यूरिया

समय पर उपचार से ही आपके पशुओं की रक्षा होगी ।

ड. गर्भाशय का बाहर निकलना (प्रोलैप्स ऑफ यूटेरस)

- ❖ गाय की तुलना में ये भैंस में आम है ।
- ❖ ये अनुवांशिक भी हो सकता है और ब्याने के बाद या पहले भी हो सकता है ।
- ❖ बाहर निकले हुए भाग को धीरे-धीरे या कोमलता से साफ-सुथरी जगह पर रखना है तथा इसे मिट्टी/मक्खी/पक्षियों इत्यादि से बचाना भी है ।
- ❖ हमें गर्भाशय को वापस डालने का या उससे कुछ निकालने का प्रयास नहीं करना चाहिए वरना रक्तस्राव की संभावना बढ़ जाती है ।
- ❖ गर्भाशय अगर ज्यादा गंदा हो तो उसे लवण घोल (सलाइन सोल्यूशन) से कोमलता से साफ करना चाहिए ।
- ❖ बाकि उपचार के लिए जल्द से जल्द पशु चिकित्सक को बुलाना चाहिए ।
- ❖ ग्रसित पशु का पिछला हिस्सा थोड़ा ऊंचे स्थान पर रखना चाहिए ।
- ❖ पशु खरीदने से पहले योनि भाग जाँच लें कि उनमें कोई सिलाई के निशान तो नहीं हैं ।



ब्याने के बाद गर्भाशय का बाहर निकलना

च. जेर का नहीं गिरना (आर.ओ.पी)

- ❖ सामान्यतः भ्रूण झिल्ली ब्याने के 3-8 घंटे के अंतराल पर बाहर निकल जाती है ।
- ❖ अगर भ्रूण झिल्ली ब्याने के 12 घंटे बाद भी न निकल पाए उसे हम आर.ओ.पी. से परिभाषित करते हैं ।
- ❖ खुद से जेर को न खींचें ।
- ❖ आर.ओ.पी. होने की संभावना ज्यादातर गर्भपात कठिन प्रसव, दुग्ध ज्वर, जुड़वा बच्चे, ब्याने के समय ज्यादा जोर लगाना (प्रसव प्रेरक), संक्रमण और पर्याप्त पोषक तत्वों की कमी से बढ़ जाती है ।
- ❖ कुछ जटिल समस्याओं जैसे कि गर्भाशय में सूजन (मेट्राइटिस), सेप्टिसीमिया (जहर फैलना) से बचने के लिए पशु चिकित्सक से संपर्क करें ।
- ❖ निकाले हुए जेर (प्लेसेंटा) को गड्ढा खोद कर ढंक देना चाहिए । खुले हाथों से न छुएं ।



जेर को खुद से कभी नहीं खींचें ।

छ. थन में शोफ (इडीमा)

- ❖ थन में ज्यादा मात्रा में द्रव/तरल भरने से होता है और कभी-कभी ब्याने के समय कोख में भी द्रव भर जाता है ।
- ❖ इसका मुख्य कारण है कि थन की तरफ रक्त का संचार ज्यादा होता है परंतु थन से नहीं हो पाता है, साथ ही रक्त कोशिकाओं की पारगम्यता भी बढ़ जाती है ।
- ❖ ज्यादा दूध देने वाले पशुओं में होने की संभावना अधिक होती है उसमें भी खासकर हिफर (बछड़ियों) में ।
- ❖ थन को छूने पर दर्द या गर्म लगने का एहसास नहीं होता है इसलिए प्रकट रूप के थनैला से भ्रमित नहीं होना चाहिए ।
- ❖ पूर्व प्रवृत्ति (प्रिडिस्पोजिंग) का कारण अनुवांशिक, चारे में कमी, मोटापा, व्यायाम की कमी से हो सकता है ।
- ❖ ये स्थायी भी हो सकता है और पूरे दुग्धकाल तक जारी रहता है ।
- ❖ अगर पशु के थन में शोफ का पता चले तो पशु चिकित्सक की सलाह लें ।



थन में शोफ

उचित प्रबंधन ही समाधान को बढ़ावा देगा ।

ज. फैटी लीवर सिंड्रोम

- ❖ पशु जब चारा लेना बंद कर देता है तब 24 घंटे के भीतर फैटी लीवर होने की संभावना होती है ।
- ❖ आमतौर पर ये रोग ब्याने के समय होता है । पशु जब चारा लेना बंद कर देता है तब नकारात्मक ऊर्जा की वजह से शरीर में संग्रहित वसा टूटने लगती है ।
- ❖ टूटी हुई वसा जब लीवर में जाकर जमा होने लगती है तब लीवर वसा से भर जाता है जिससे गाय कमजोर होने लगती है ।
- ❖ एक बार लीवर में जब वसा जमा हो जाती है, इसकी मात्रा तब तक कम नहीं होती जब तक वो सकारात्मक ऊर्जा में तब्दील नहीं हो जाती, जोकि लगभग ब्याने के दस सप्ताह के बाद तक भी रह सकती है, विशेष रूप से तब जब फैटी लीवर गंभीर हो ।
- ❖ मोटी गाय (जिसका बॉडी स्कोर 3.5 से ज्यादा हो) में फैटी लीवर होने की संभावना ज्यादा होती है । (कृपया बॉडी स्कोर वाले अध्याय को पढ़ें)
- ❖ विशेष रूप से दुधारू पशुओं में आर्थिक रूप से ज्यादा महत्वपूर्ण है क्योंकि जिस गाय में फैटी लीवर हो जाता है वह चयापचय और कई संक्रामक बीमारियों से ग्रसित हो जाती है ।

लक्षण

- ❖ दूध में कमी
- ❖ कम भूख लगना
- ❖ दुग्ध ज्वर, कीटोसिस, थनैला, भ्रूण झिल्ली का नहीं निकलना इत्यादि की संभावना
- ❖ प्रजनन क्षमता में कमी
- ❖ रक्त की जांच से इस बीमारी को पहचान सकते हैं ।
- ❖ मृत्यु दर ज्यादा हो सकती है ।

रोकथाम/निवारण

- ❖ फैटी लीवर के लिए कोई सिद्ध उपचार नहीं है ।
- ❖ सिर्फ ये सुनिश्चित करना है कि ब्याने के समय गाय की शारीरिक स्थिति सही हो जिससे वसा न टूटे और फैटी लीवर न हो ।
- ❖ बछड़ों में आदर्श बॉडी स्कोर 3.0 से 3.5 होना चाहिए । गाय जब सूखी अवस्था में जाए तब भी यही स्कोर होना चाहिए और पूरी सूखी अवधि (ड्राय पिरियड) तक उन के वजन में कोई परिवर्तन होना नहीं चाहिए ।
- ❖ इस अवस्था में आहार खिलाने में कोई बदलाव न करें ।
- ❖ उपयुक्त लक्षण देखने पर तुरंत पशु चिकित्सक से संपर्क करें ।
- ❖ ज्यादा मोटे पशुओं में ग्लूकोज देना एक निवारक उपाय हो सकता है ।
- ❖ तनाव को कम करना फैटी लीवर की रोकथाम के लिए महत्वपूर्ण है । वातावरण में अचानक परिवर्तन से पशुओं को बचाना चाहिए ।



मोटी गाय में लीपीडोसिस की संभावना ज्यादा होती है ।

गर्भवती गाय को ज्यादा खिलाना भी नुकसानदायक है ।

अनुभाग - IX

गलत तरीके से खिलाने से होने वाली बीमारियां

गाय का पाचन तंत्र काफी जटिल होता है, क्योंकि उसका पेट चार भागों में बंटा होता है। उनके पेट में बहुत प्रकार के जीवाणु पाए जाते हैं, जो कि भोजन को तोड़ने में सहायता प्रदान करते हैं जिससे पाचन क्रिया में मदद मिलती है और शरीर को अच्छा पोषक तत्व मिल जाता है। चारे में किसी भी प्रकार का अचानक बदलाव या गलत तरीके से खिलाने पर पेट में पाए जाने वाले बहुत सारे जीवाणुओं का संतुलन बिगड़ जाता है जिसकी वजह से कुछ अवांछनीय जीवाणुओं की संख्या बढ़ जाती है और इसकी वजह से लेमिनाइटिस (पैरों में सूजन) होने की संभावना हो सकती है या फिर ज्यादा घातक (एक्यूट एसिडोसिस) होने पर पशु मृत्यु भी हो सकती है। इस स्थिति में, जीवाणुओं के पाचन उपरांत निकले हुए अवशेष की वजह से सामान्य परिस्थितियों से अवगत होना जरूरी है जिससे कि हम पशु चिकित्सक की सलाह ले सकें या उससे संबंधित उपचार करवा सकें। कुछ निम्नलिखित परिस्थितियों का वर्णन इस अध्याय में किया गया है:

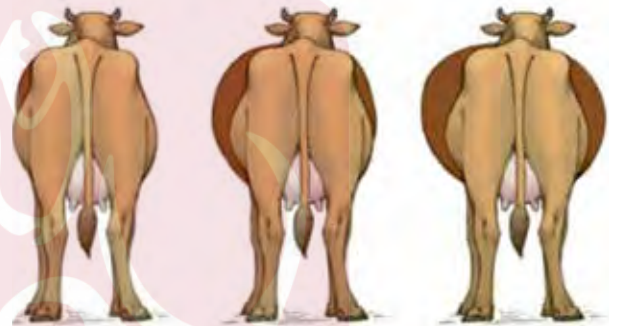
- क. ब्लोट (अफरा/पेट फूलना)
- ख. रूमेन एसिडोसिस (घातक आमाशय अम्लता)
- ग. सब अक्यूट रूमेनल एसिडोसिस
(अल्प-घातक आमाशय अम्लता)
- घ. पैर में सूजन (लेमिनाइटिस)

क. ब्लोट (अफरा/पेट फूलना)

- ❖ ब्लोट अपच का ही एक प्रकार है, जिसने रूमेन में गैस का संचय ज्यादा मात्रा में हो जाता है ।
- ❖ जब पशु हरे नरम घास को चारे के रूप में लेता है, विशेषरूप से गीले चारे को, तब ब्लोट होने की संभावना होती है । कुछ पौधे जैसे क्लोवर, ल्यूर्सन, और अल्फा-अल्फा (रिजका) इत्यादि ब्लोट होने के लिए खतरनाक है लेकिन तेज वृद्धि वाले पौधे भी इनके कारक हैं ।
- ❖ अवांछनीय पदार्थ की वजह से (अहारनली में रूकावट) ब्लोट हो सकता है जिससे गैस का उत्सर्जन नहीं होगा और रूमेन में गैस भर जाएगा ।
- ❖ कभी-कभी बचे हुए खाने को खिलाने से जैसे कि सूखी हुई रोटी खिलाने से भी ब्लोट हो सकता है ।

अफरा (ब्लोट) के लक्षण

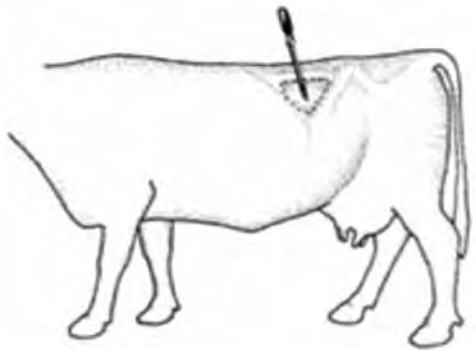
- ❖ बायीं कोख फूल जाती है ।
- ❖ पशु अपने पेट पर लात मारता है या फिर पिछले दोनों पैरों को फैलाकर खड़ा होता है ।
- ❖ सांस लेने में कठिनाई होती है ।
- ❖ प्रचंड रूप में आने पर दम घुटने की वजह से पशु की मृत्यु हो जाती है ।



ब्लोट मध्यम से घातक भी हो सकता है ।

रोकथाम और उपचार

- ❖ सुबह के समय पशु को गीले चारागाह में न जाने दें ।
- ❖ चारागाह में पशु को भेजने से पहले कुछ सूखा व हरा चारा खिलाना चाहिए ।
- ❖ घातक होने पर बायीं कोख में तेज धार वाले चाकू से छिद्र कर दें, जिससे कि गैस निकल जाए, ये जल्दी करना जरूरी है, संकोच करने पर पशु मर भी सकता है ।



बायीं कोख में छिद्र करने का स्थान

वयस्क पशुओं के लिए घरेलू उपचार

- 300-500 मि.ली. दिन में एक बार 2 से 3 दिन तक नारियल/ वनस्पति/मूंगफली का तेल पिलाएं या
- उपर्युक्त उपाय के साथ 30-40 मि.ली. तारपीन का तेल पिलाएं या
- आधे लीटर पानी में एक चम्मच डिटरजेंट पाउडर घोलकर पिलाएं । या 4-6 केले के पत्ते खिलाएं (मध्यम ब्लोट)

ब्लोट का सही समय पर उपचार पशु को बचाएगा।

ख. रूमेन एसिडोसिस (घातक आमाशय अम्लता)

❖ एसिडोसिस क्लिनिकल या सबक्लिनिकल प्रकार के होते हैं ।

❖ वैसा चारा जिसमें कार्बोहाइड्रेट कम समय में व तेजी से पचता है, बड़ी मात्रा में खिलाने से क्लिनिकल एसिडोसिस होता है ।

❖ गंभीर क्लिनिकल मामलों में रूमेन फूल जाता है और साथ ही साथ दर्द भी होता है, जिसे पशु पेट में बार-बार लात मारकर दर्शाता है; जिसमें पशु को भूख न लगना और दस्त लगना सामान्य बात है ।

❖ ज्यादा घातक मामलों में पशु 24-48 घंटों के भीतर लेट जाता है, जोकि दुग्ध ज्वर के जैसा दिखता है । पशु मूत्र व गोबर करना भी बंद कर देता है ।

❖ चारे की तुलना में ज्यादा सूखा/दाना खिलाने से सबक्लिनिकल एसिडोसिस की संभावना ज्यादा होती है ।

❖ भूख कम लगना, वजन में कमी, अस्पष्टीकृत दस्त और कमजोरी सबक्लिनिकल एसिडोसिस के लक्षण हैं । इसकी वजह से पैर में सूजन आना और लंगड़ापन होने की संभावना होती है ।

❖ ज्यादा घातक क्लिनिकल मामलों में रोग का निदान नहीं हो पाता है । कुछ पशुओं में सुधार की प्रक्रिया दिखती है परन्तु 3-4 दिन बाद बीमारी और भी गंभीर हो जाती है ।



एसिडोसिस में दस्त

एसिडोसिस की रोकथाम और उपचार

❖ पशु चिकित्सक से संपर्क कर सही तरीके से चारा खिलाएं ।

❖ पशुओं को सुबह में दाना खिलाने से पहले चारा दें, जिससे लार सही मात्रा में बने ।

❖ वैसा चारा, जिसमें कार्बोहाइड्रेट कम समय में व तेजी से पचता हो, न दें ।

❖ क्लिनिकल एसिडोसिस होने पर पशु चिकित्सक से तुरंत संपर्क करें ।

ग.सब अक्वूट रूमेनल एसिडोसिस (अल्प-घातक आमाशय अम्लता)

- ❖ पशु के आहार में उच्च रेशेदार तत्वों से अचानक अत्यधिक अनाज वाले तत्वों में किए गए परिवर्तन के कारण आमाशय में अत्यधिक अम्ल उत्पादन की वजह से होता है। (अम्लता से पृथक सामान्यतया यह लेक्टिक अम्ल नहीं होता है।)
- ❖ उत्पादन क्षमता में गिरावट का एक महत्वपूर्ण कारण है।
- ❖ मुख्यतया यह त्रुटिपूर्ण तरीके से संतुलित/मिश्रित किए गए आहार, आहार में रेशेदार तत्वों की कमी या आहार को बहुत महीन पीसने से होता है।

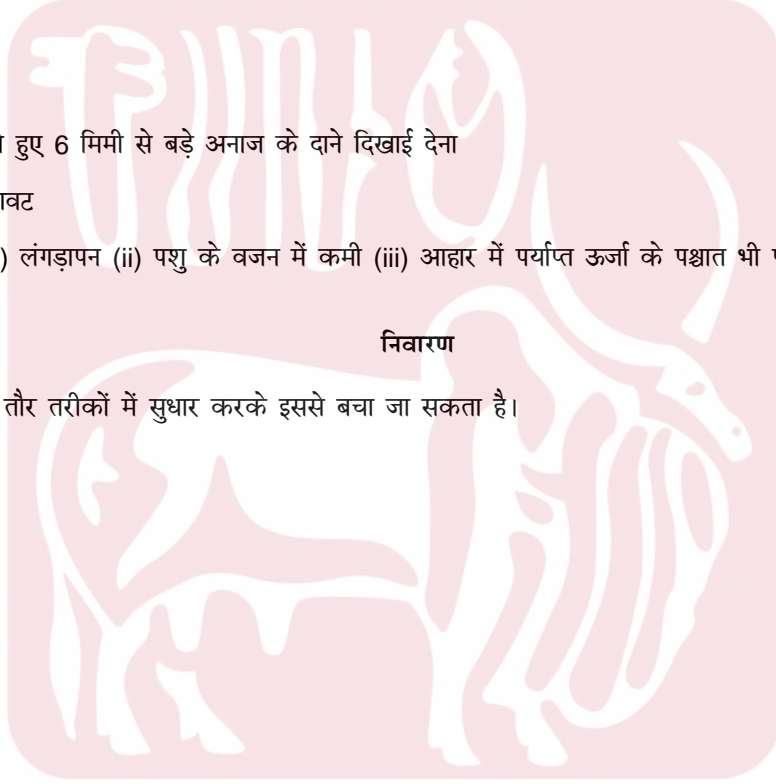
लक्षण

- पशु के चरने में कमी
- जुगाली में कमी
- हल्के दस्त
- झागदार गोबर
- गोबर में बिना पचे हुए 6 मिमी से बड़े अनाज के दाने दिखाई देना
- दुग्ध वसा में गिरावट

द्वितीयक परिणाम : (i) लंगड़ापन (ii) पशु के वजन में कमी (iii) आहार में पर्याप्त ऊर्जा के पश्चात भी पशु में शारीरिक दुर्बलता।

निवारण

पशु के खान पान के तौर तरीकों में सुधार करके इससे बचा जा सकता है।



ग. पैर में सूजन (लेमिनाइटिस)

- ❖ ज्यादातर यह वयस्क दुधारू गायों, जब वो सबसे ज्यादा दूध दे रही होती हैं, में देखा गया है; जो कि अक्सर पशु समूह की समस्या है ।
- ❖ ज्यादा दाना/प्रोटीन, कम चारा, थनैला, गर्भाशय में सूजन एसिडोसिस इत्यादि इस रोग के कारण हैं ।
- ❖ ये सबक्लिनिकल (गुप्त), एक्यूट (प्रकट), और क्रोनिक (स्थिर/जीर्ण) अवस्था में पाए जाते हैं ।
- ❖ खुरदरा फर्श, लेटने वाला स्थान का पर्याप्त न होना इस बीमारी के कारण हैं ।



सबक्लिनिकल लेमिनाइटिस में खुर के तलवे में छाले

एक्यूट लेमिनाइटिस में पशु पार पैर के साथ खड़ा है

क्रोनिक लेमिनाइटिस में विकृत खुर

क्रोनिक लेमिनाइटिस में तलवे का गिरना

लेमिनाइटिस के रोकथाम

- ❖ मुलायम फर्श की व्यवस्था करना ।
- ❖ संतुलित आहार की व्यवस्था हो जिसमें उपयुक्त मात्रा में चारा देना
- ❖ हरेक 15 दिनों पर 2-4 दिनों तक 5% कॉपरसल्फेट से पशु के पैर धोने की आदत हो ।
- ❖ नियमित 6 महीने के अंतराल पर खुर छीलने या काटने की व्यवस्था होनी चाहिए ।
- ❖ पशु के बैठने की उचित व्यवस्था हो, जिससे वह ज्यादा देर तक खड़ा न रह सके ।
- ❖ खुर में कोई चोट और लेमिनाइटिस के लक्षण न हों, नियमित अंतराल पर खुर की जांच करें ।



गंभीर रूप से लंगड़ापन में धनुषाकार पीठ



बिना छिला हुआ खुर



बिना छिला और छिला हुआ खुर



छिला हुआ खुर

उच्च दुधारू पशु में खुर की देखभाल आवश्यक है ।

अनुभाग - X

थनैला व चूचुक की बीमारियां

दूध व्यवसाय से जुड़े किसानों के लिए थनैला एक ऐसी मुसीबत है, जिससे उनका काफी नुकसान होता है। इसकी वजह से दूध उत्पादन में कमी, दूध का अचानक कम होना या बंद होना, हमेशा के लिए थन का खराब होना अथवा ज्यादा घातक होने पर पशु मृत्यु भी हो सकती है।

शुद्ध विदेशी नस्लें जैसे कि एच.एफ., जर्सी इत्यादि थनैला रोग के प्रति अधिक संवेदनशील होती हैं, संकर प्रजाति के पशु भी संवेदनशील होते हैं।

स्थानीय नस्ल की गायों में कम संवेदनशीलता पाई जाती है क्योंकि उनकी दूध उत्पादन क्षमता कम होती है और साथ ही रोग प्रतिरोधक क्षमता अच्छी होती है। भैंस थनैला रोग से बहुत कम प्रभावित होती हैं।

हमारे किसान (पशुपालक) ज्यादा दूध उत्पादन के लिए क्रॉसब्रीडिंग की तरफ ज्यादा ध्यान दे रहे हैं जोकि थनैला वृद्धि का एक और कारण है। इसलिए दूध व्यवसाय को लाभकारी बनाने के लिए थनैला की रोकथाम एक निर्णायक भूमिका निभा सकती है। किसानों को उचित जानकारी देकर ही किसानों के घरों पर थनैला को रोका या समाप्त किया जा सकता है।

चूचुक (टीट) में होने वाली बीमारियां प्रत्यक्ष रूप से उत्पादन में नुकसान नहीं पहुंचाती अपितु चोट लगने के कारण, दोहन के दौरान होने वाली तकलीफ की वजह से दूध में कमी आ जाती है। इसकी वजह से थनैला होने की संभावना भी बढ़ जाती है। इसका वर्णन निम्नलिखित अध्यायों में किया गया है:

- क. प्रकट रूप का थनैला (अक्यूट (क्लिनिकल) मस्टाइटिस)
- ख. स्थिर रूप का थनैला (क्रोनिक मस्टाइटिस)
- ग. गुप्त प्रकार का थनैला (सब-क्लिनिकल मस्टाइटिस)
- घ. बछड़ी (हीफर) में थनैला
- ड. चूचुक मस्सा (टीट वार्ट)
- च. अल्सरेटिव मैमिलाइटिस
- छ. स्यूडो काऊ पॉक्स (मिल्कर्स नोड्यूल)

क. नैदानिक रूप का थनैला (अक्यूट या क्लिनिकल मस्टाइटिस)

यह थन की सूजन का गंभीर रूप है जिसमें थन एवं दूध में लक्षण अच्छे से दिखते हैं। ज्यादा दूध देने वाले पशुओं में ये होने की संभावना ज्यादा होती है। मुख्यतः यह जीवाणु (100 से अधिक प्रकार के) होते हैं। विषाणु और कभी-कभी कवक व शैवाल से भी हो सकता है।

इस रोग को फैलाने वाले प्रमुख कारक



गंदे पशु/बाड़ा



गलत तरीके से दूध निकालना

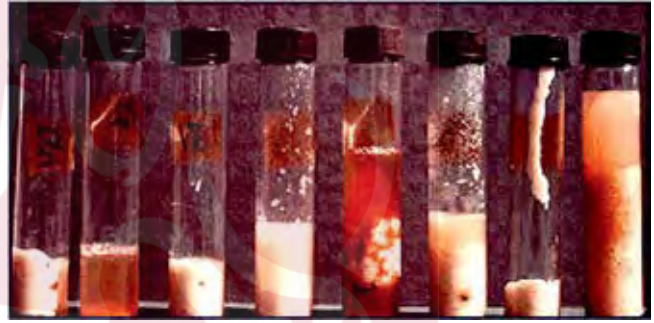


चूचुक/थन में चोट लगना

प्रमुख लक्षण



प्रकट रूप थनैला में सूजा हुआ थन



प्रकट रूप थनैला में दूध की भौतिक अवस्था में बदलाव

रोकथाम

- ❖ रोग को फैलाने वाले प्रमुख कारक का सही तरीके से प्रबंधन
- ❖ दूध दुहने से पहले साफ पानी से थन को साफ करना, तत्पश्चात साफ तौलिये से पोंछ कर सुखाना। प्रत्येक पशु के लिए अलग तौलिया इस्तेमाल करें। डिस्पोजेबल पेपर तौलिया भी एक विकल्प हो सकता है। बार-बार गंदे तौलिया का प्रयोग भी थनैला का एक कारण है।
- ❖ दूध जल्दी, पूरा और स्वच्छ तरीके से निकालें।
- ❖ स्थिर रूप से ग्रसित थनैला वाले पशु का दूध अंत में निकालें। (इसी अध्याय में देखें।)
- ❖ दुहने के तुरंत बाद टीट डिपिंग या स्प्रे का इस्तेमाल करें।
- ❖ दुहने के पश्चात 30-45 मिनट तक पशु को बैठने नहीं देना है।
- ❖ गुप्त प्रकार के थनैला के लिए निरंतर जाँच व उनका उपचार करवाएं। (इसी अध्याय में देखें)
- ❖ पशुओं के बाड़े समतल एवं सूखा रखें।
- ❖ गाय के सूखने (जब दूध देना बंद कर दे) 2 सप्ताह बाद और ब्याने के 2 सप्ताह पहले से टीट डिपिंग/स्प्रे का इस्तेमाल करें।
- ❖ मक्खी रोकथाम की व्यवस्था करें।

उपचार

- ❖ पशु चिकित्सक से जल्दी संपर्क करें, जिससे जल्दी उपचार हो (2-3 घंटे की भीतर हो जाए) और ठीक होने की संभावना बढ़े। चिकित्सा में देरी करने पर थन खराब हो सकता है और पशु की मृत्यु भी हो सकती है।
- ❖ थनैला ग्रसित जिस गाय का उपचार चल रहा हो, कम से कम 4 दिनों तक उसके दूध का इस्तेमाल न करें। जरूरत पड़ने पर पशु चिकित्सक की भी सलाह लें।

थनैला की जल्दी पहचान और उपचार थन व पशु हानि से बचाता है।

ख. स्थिर प्रकार का थनैला (क्रोनिक मस्टाइटिस)

- ❖ थनों में लंबे समय तक संक्रमण के कारण होता है ।
- ❖ ज्यादातर ये सबक्लिनिकल प्रकार में पाया जाता है ।
- ❖ सब क्लिनिकल प्रकार में जाने से पहले कभी-कभी ये क्लिनिकल प्रकार में भी हो सकता है ।
- ❖ इस बीमारी का परिणाम यह होता है कि थन में गाँठ हो जाती है ।

इस बीमारी होने के प्रमुख कारक

- ❖ गुप्त प्रकार के थनैला (सबक्लिनिकल मस्टाइटिस) को नजरअंदाज करना
- ❖ क्लिनिकल मस्टाइटिस का गलत तरीके से उपचार
- ❖ गंदा बाड़ा



गंदा बाड़ा



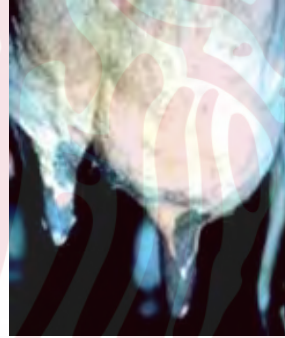
गलत तरीके से थनैला का उपचार

प्रमुख लक्षण

प्रभावित थन में क्षय होने या फाइब्रोसिस की वजह से उत्पादन क्षमता में कमी आती है
थन में अगर एट्रोफी/फाइब्रोसिस हो जाए तो सही होने की संभावना बहुत कम होती है ।



क्रोनिक मस्टाइटिस के कारण थन के एक भाग का क्षय (एट्रोफी)



क्रोनिक मस्टाइटिस के कारण थन के एक भाग में फाइब्रोसिस और कड़ापन

रोकथाम

- ❖ ग्रसित गाय को पशु समूह से अलग कर दें । स्थिर थनैला से ग्रसित गाय का दूध अंत में निकालें ।
- ❖ गुप्त प्रकार के थनैला के लिए नियमित अंतराल पर जांच करें और सकारात्मक पाए जाने पर उसका उपचार करवाएं ।
- ❖ बाड़े की स्वच्छता को महत्व देना चाहिए ।

उपचार

- ❖ सामान्यतः इसमें प्रतिसूक्ष्मजीवी उपचार प्रभावशाली नहीं है ।
- ❖ स्थिर प्रकार के थनैला से ग्रसित पशु को हटा दें ।

समय पर कार्रवाई से स्थिर प्रकार के थनैला को रोका जा सकता है ।

ग. गुप्त प्रकार का थनैला (सब-क्लिनिकल मस्टाइटिस)

- ❖ यह अधिक प्रचलित प्रकार का थनैला है – इस प्रकार के थनैला के कारण लगभग 70% का नुकसान होता है ।
- ❖ दुग्धकाल को लंबे समय तक प्रभावित करने की वजह से ये ज्यादा नुकसान का एक कारण है ।
- ❖ दूसरे प्रकार का थनैला (प्रकट व स्थिर) इस अवस्था के बाद आते हैं ।

लक्षण

- ❖ दूध उत्पादन में थोड़ी सी कमी, इसके अलावा कोई और लक्षण नहीं दिखते हैं ।
- ❖ थन या दूध में कोई भौतिक बदलाव न होने की वजह से सामान्यतः पहचान में नहीं आता है ।

एस. सी. एम. की पहचान



YELLOW NORMAL	YELLOWISH GREEN SUSPECTED	GREEN SUB CLINICAL	BLUE CLINICAL
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कैलिफोर्निया मस्टाइटिस टेस्ट (सीएमटी)

स्ट्रीप कप टेस्ट

- ❖ सीएमटी:- बराबर मात्रा में दूध और सीएमटी रिएजेन्ट को लेकर उसे घुमाते हुए अच्छे से मिला लें, एससीएम दूध एक चिपचिपे घोल की तरह बन जाता है । सीएमटी प्रतिक्रिया 20 सेकेन्ड के अंदर समाप्त हो सकती है, इसलिए इसकी माप (रीडिंग) जल्दी लें । सारे थनों को अलग-अलग जांच करें ।
- ❖ सीएमटी शुरूआत (10 दिनों से कम) के दुग्ध काल में या पशु के लगभग सूखी अवस्था में आने पर झूठी सकारात्मक प्रतिक्रिया (फाल्स पोजिटिव रिएक्सन) दे सकती है ।
- ❖ स्ट्रीपकप टेस्ट:- काली सतह के विपरीत देखने पर एस.सी.एम. वाले दूध में छोटे टुकड़े मिलते हैं । टुकड़े के आकार एस.सी.एम. की गंभीरता के हिसाब से वृद्धि होती है ।
- ❖ पेपर टेस्ट: हरा रंग एससीएम को दर्शाता है ।
- ❖ फोल्ड मस्टाइटिस टेस्ट (क्षेत्रीय थनैला परीक्षण): ये सीएमटी की तरह ही किया जाता है, जिसमें हम सीएमटी रिएजेन्ट के स्थान पर 3% डिटर्जेंट का घोल लेते हैं ।

एस. सी. एम. की रोकथाम

- ❖ प्रकट रूप के थनैला की रोकथाम के बारे में जिन बिंदुओं का उल्लेख किया गया, उसके अनुरूप इसका भी वही ध्यान रखें ।
- ❖ सप्ताह में कम से कम एक बार एस.सी.एम. के लिए जांच करें ।
- ❖ हरेक थन की जांच अलग-अलग करें ।
- ❖ नए खरीदे हुए पशु को झुंड में मिलाने से पहले एस.सी.एम. की जांच कर लें और सकारात्मक पाए जाने पर उसका उपचार करवाएं ।
- ❖ एस.सी.एम. सकारात्मक पशुओं का दूध अंत में निकालें ।
- ❖ अगर पशु को खुले में बांधते हो तो उसका स्थान अक्सर बदलते रहें ।
- ❖ दूध निकालने के दौरान कोई चिकनाई वाले पदार्थ का इस्तेमाल न करें, अगर करते हो तो इस्तेमाल करने से पहले उसे गर्म कर लें ।

उपचार

- ❖ ठीक उपचार के लिए पशु चिकित्सक की सलाह लें ।
- ❖ प्रकट व स्थिर प्रकार के थनैला की तुलना में एससीएम के ठीक होने के आसार ज्यादा हैं ।
- ❖ समय पर एस.सी.एम. का उपचार होने पर प्रकट एवं स्थिर प्रकार का थनैला होने की संभावना कम हो जाती है ।

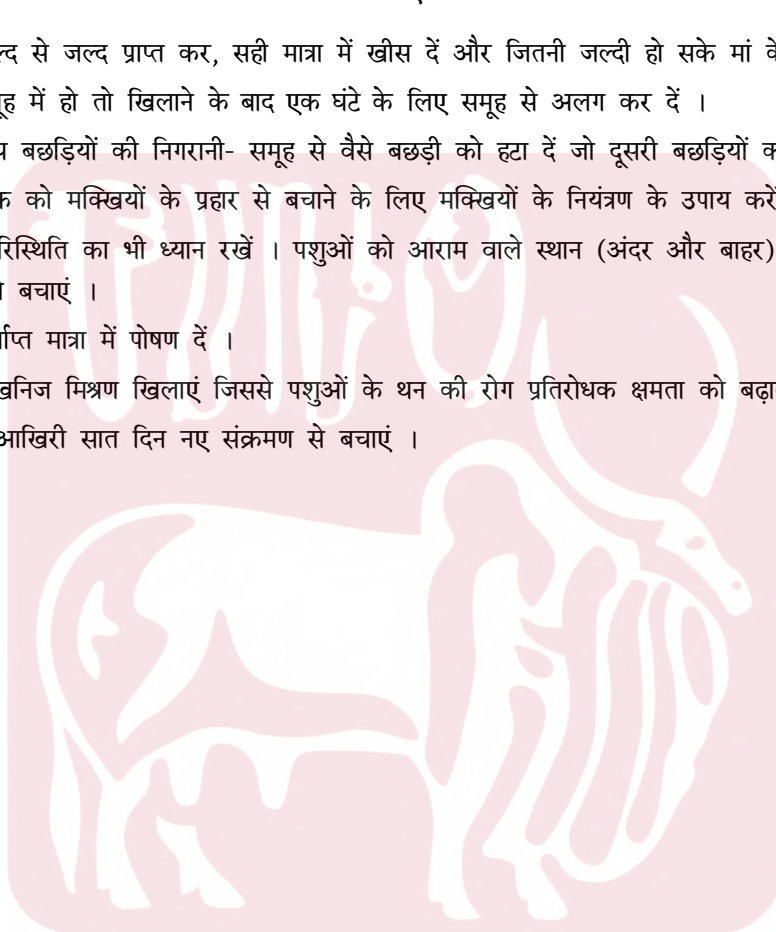
एस.सी.एम. का उपचार नुकसान को कम करेगा ।

घ. बछड़ी (हीफर) में थनैला

- ❖ परंपरागत रूप से लोगों का मानना है कि बछड़ियों में थनैला नहीं होता है जोकि सत्य नहीं है ।
- ❖ सामान्यतः विकासशील थन का परीक्षण देखकर या छूकर करने के दौरान, थन में तरल पदार्थ का भरना और थनों में सूजन या फिर अप्राकृतिक स्राव (छिछड़ापन और थक्का जमना) आना बछड़ियों में थनैला को पहचानने में मदद करता है ।
- ❖ बछड़ियों के चूचुक (टीट) में पपड़ी पड़ना या चोट लगने से भी रोग फैल सकता है, जिसका उपचार पशु चिकित्सक की सलाह से करवाएं ।

रोकथाम एवं नियंत्रण

- ❖ बछड़ियों को जल्द से जल्द प्राप्त कर, सही मात्रा में खीस दें और जितनी जल्दी हो सके मां के पास से हटा दें ।
- ❖ अगर बछड़ी समूह में हो तो खिलाने के बाद एक घंटे के लिए समूह से अलग कर दें ।
- ❖ दूध पिलाते समय बछड़ियों की निगरानी- समूह से वैसे बछड़ी को हटा दें जो दूसरी बछड़ियों को चूसती हैं ।
- ❖ त्वचा और चूचुक को मक्खियों के प्रहार से बचाने के लिए मक्खियों के नियंत्रण के उपाय करें ।
- ❖ वातावरण की परिस्थिति का भी ध्यान रखें । पशुओं को आराम वाले स्थान (अंदर और बाहर) गीलापन, जीवाणुओं से भरे हुए स्थान से बचाएं ।
- ❖ बछड़ियों को पर्याप्त मात्रा में पोषण दें ।
- ❖ उचित मात्रा में खनिज मिश्रण खिलाएं जिससे पशुओं के थन की रोग प्रतिरोधक क्षमता को बढ़ावा मिले ।
- ❖ ब्याने के पहले आखिरी सात दिन नए संक्रमण से बचाएं ।



बछड़ियों में थनैला पर नियंत्रण - दुधारु पशुओं में थनैला होने की संभावना को कम करता है ।

चूचुक की बीमारियां

- ❖ चूचुक की ऐसी बहुत सारी परिस्थितियां जिससे दूध निकालने में कठिनाई होती है और कुछ तो दूध दुहने वाले से भी फैल सकता है ।

ड. चूचुक मस्सा (टीट वार्ट)

- ❖ चूचुक मस्सा विषाणु के कारण होता है और यह संक्रमण के होने की संभावना बछड़ियों में ज्यादा है ।



पर की तरह चूचुक मस्सा

- ❖ चूचुक मस्सा एक मांसल गांठ की तरह या पर की तरह दिखता है ।
- ❖ चूचुक मस्सा देखने में भद्दा लगता है पर कोई गंभीर भौतिक समस्या नहीं है । लेकिन दुहने के समय बाधा डालती है ।



मांसल चूचुक गांठ

उपचार

- ❖ आमतौर पर उपचार की जरूरत नहीं है, ज्यादातर मस्सा अंततः स्वतः ही छोटे/कम हो जाते हैं ।
- ❖ शल्यचिकित्सा (सर्जरी) से इसे हटा सकते हैं, पर दुबारा होने की संभावना हो सकती है ।
- ❖ इसे पूर्ण विकसित (पकने) के बाद हटाना चाहिए । मस्सा जल्दी हटाने पर और ज्यादा बढ़ने की संभावना हो जाती है तथा विषाणु फैल सकते हैं ।
- ❖ बड़े आकार के लटकते हुए मस्से को उसके बेस (आधार) के चारों तरफ धागे बांधकर धीरे-धीरे हटाया जा सकता है । मस्सा सूख जाएगा और एक महीने के भीतर गिर जाएगा ।
- ❖ उपचार संबंधी और जानकारी के लिए पशुचिकित्सक की सलाह लें ।

रोकथाम

- ❖ स्टाल (गोशाला) में जीवाणुनाशक की मदद से इसके प्रसार को कम कर सकते हैं ।
- ❖ मक्खी पर नियंत्रण भी बहुत जरूरी है, जोकि विषाणु फैलाने का एक माध्यम है ।
- ❖ बछड़ियों को गाय जो कि युवा हो, उनके साथ रखने पर भी चूचुक मस्सा होने से बचाया जा सकता है ।

च. अल्सरेटीव मेमीलाइटिस

- ❖ अल्सरेटीव मेमीलाइटिस अपेक्षाकृत कम होता है, परंतु झुंड/समूह में जल्दी फैलता है, जिसमें पहली बार प्रभावित होने से दर्द और बेचैनी होती है ।
- ❖ पहली ब्यांत वाले गाय में ज्यादातर पाया गया है ।
- ❖ ये विषाणु से होता है ।
- ❖ मेमीलाइटिस के घाव पूरे थन में और पेरिनियम (योनिमुख के बीच का भाग) में भी फैल सकता है ।
- ❖ ये दूध पीते बछड़े के मुँह को भी प्रभावित कर सकता है । लक्षण छोटे-छोटे असामान्य तरल पदार्थ भरे हुए छाले/फफोले से लेकर बड़े भाग में फोड़े और छाले के रूप में पाए जाते हैं ।



अल्सरेटीव मेमीलाइटिस

उपचार

- ❖ कोई विशेष उपचार उपलब्ध नहीं है ।
- ❖ संक्रमित गाय को दूसरों से अलग रखना चाहिए ।
- ❖ बीमारी को फैलने से बचाने के लिए आयोडीन डिप की मदद से संक्रमण रोका जा सकता है ।
- ❖ थन क्रीम त्वचा पर लगाएं ।

रोकथाम

- ❖ फार्म में ये बीमारी अगर एक बार हो जाए, तो दूर करना कठिन है ।
- ❖ नए खरीदे हुए पशुओं को उचित तरीके से अलग रखें । फार्म की अच्छी साफ-सफाई और काटने वाले मक्खी-मच्छर पर नियंत्रण इस बीमारी को दूर कर सकता है ।

छ. स्यूडो काऊ पॉक्स (मिल्कर्स नोड्यूल)

- ❖ गाय में चूचुक की बीमारियों में ये सबसे आम संक्रमण है ।
- ❖ ये विषाणु के कारण होता है और गौ चेचक से भ्रमित न हों, जोकि आम नहीं/दुर्लभ है ।
- ❖ जब रोग प्रतिरोधक क्षमता अल्पकालिक हो, बीमारी ठीक होने के बाद भी गाय में संक्रमण होने की संभावना अधिक होती है (अक्सर छः महीने से कम) ।

लक्षण

- ❖ संक्रमण के कारण शुरूआती चरणों में चूचुक के कुछ भाग में सूजन और लालीपन पाए जाते हैं ।
- ❖ दो दिनों के पश्चात ग्रसित भाग में नारंगी रंग के दानेदार उभार दिखते हैं, जिसके ऊपर पपड़ी जमी होती है ।
- ❖ पहले लक्षण के सात से दस दिनों पश्चात पपड़ी गिरने लगती है जोकि घोड़े की नाल व अंगुठी की आकार का हिस्सा जैसा निशान छोड़ देता है । जो स्यूडो काऊ पॉक्स की विशेषता होती है ।
- ❖ ग्रसित भाग से भी साथ-साथ वृद्धि होने से चूचुक की पूरी लंबाई पपड़ी से ढक जाती है ।
- ❖ खराब चूचुक का घाव पहले लक्षण के लगभग एक महीने में भर जाता है ।

- ❖ स्यूडो काऊ पॉक्स का घाव ज्यादातर चूचुक पर ही होता है । जबकि 10% ग्रसित गायों की थन की त्वचा पर भी होता है ।

- ❖ ये गाय से मनुष्य में भी फैल सकता है । मनुष्य की त्वचा में संक्रमण होने की वजह से इसे 'मिल्कर्स नोड्यूल' कहते हैं; और ये स्थानीय (लोकलाइज्ड) संक्रमण दर्द भरा होता है ।



स्यूडो काऊ पॉक्स



स्यूडो काऊ पॉक्स से चूचुक पपड़ी से ढका हुआ

उपचार

- ❖ पपड़ी को हटाने के बाद उपयुक्त कीटाणुनाशक का इस्तेमाल करें ।
- ❖ इमोलीएन्ट (त्वचा को मुलायम करने वाला) टीट डिप और स्प्रे चूचुक की त्वचा से जीवाणु और विषाणु के प्रभाव को कम करने के लिए लाभदायक होगा ।
- ❖ उपयुक्त लक्षण दिखने पर पशु चिकित्सक की सलाह लें ।

रोकथाम

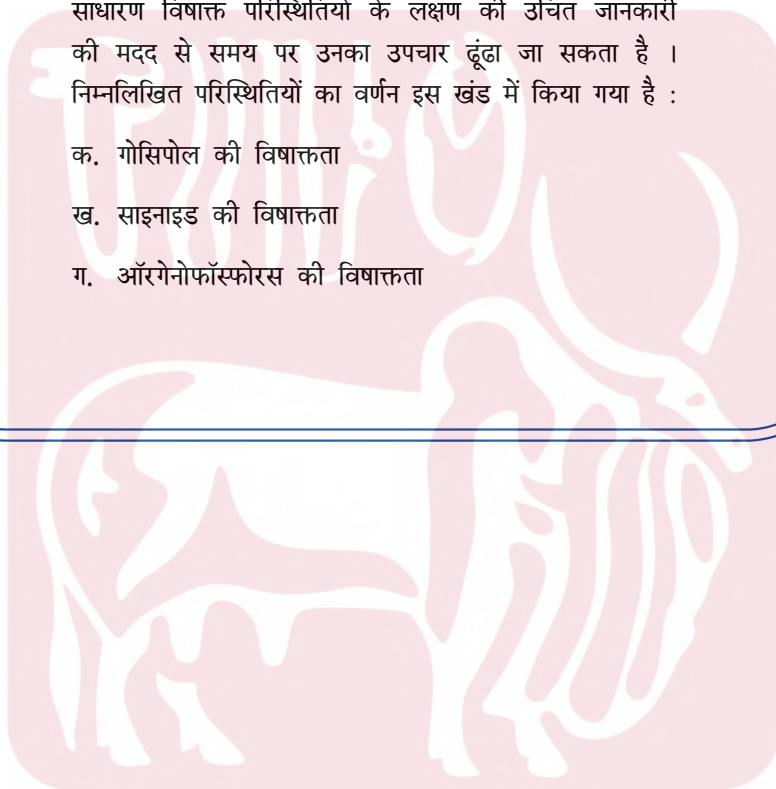
- ❖ नए खरीदे हुई गाय को पशु समूह में मिलाने से पहले उचित तरीके से अलग रखें ।
- ❖ अच्छे तरीके से टीट डिंपिंग के लिए आइडोफोर का इस्तेमाल, नियंत्रण के लिए प्रभावी उपाय है ।
- ❖ गौशाला की उचित स्वच्छता बनाए रखें ।

अनुभाग - XI

साधारण विषाक्तता परिस्थितियां

पशुओं के शरीर में जहर फैलाने वाले बहुत सारे पौधे और रसायनिक पदार्थ पाए जाते हैं। कुछ तो ऐसे हैं जिसकी वजह से मृत्यु भी हो सकती है अगर उन्हें अनुपचारित छोड़ दें। कुछ साधारण विषाक्त परिस्थितियों के लक्षण की उचित जानकारी की मदद से समय पर उनका उपचार ढूंढा जा सकता है। निम्नलिखित परिस्थितियों का वर्णन इस खंड में किया गया है :

- क. गोसिपोल की विषाक्तता
- ख. साइनाइड की विषाक्तता
- ग. ऑरगेनोफॉस्फोरस की विषाक्तता



क. गोसिपोल की विषाक्तता

- ❖ ये बिनौला या बिनौले से बना उत्पाद खाने के कारण होता है, जिसमें फ्री गोसिपोल पाया जाता है, जिसे ज्यादा खिलाने से ज्यादा दूध देने वाले दुधारू पशुओं में प्रभाव पड़ता है ।
- ❖ लंबे समय तक गोसिपोल देने से दूसरे रूमीनेंट (जुगाली वाले पशुओं) में भी हो सकता है ।

लक्षण

- ❖ गाय और भैंस में अनियमित ऋतु चक्र और नर में कामेच्छा शक्ति (लिबिडो) कम होना ।
- ❖ शारीरिक भार में कमी, कमजोरी, भूख न लगना और तनाव के प्रति संवेदनशीलता ।
- ❖ वयस्क दुधारू पशुओं में कमजोरी, सुस्ती, भूख न लगना, पशु की छाती में पानी भरना और सांस लेने में तकलीफ साथ ही गेस्ट्रोइन्टेराइटिस, मूत्र में रक्त आना और प्रजनन संबंधी समस्याएं इत्यादि हो सकती हैं ।

रोकथाम

- ❖ जितना जल्दी हो सके चारे से बिनौले से बना उत्पाद निकाल दें । ज्यादा ग्रसित पशु 2 सप्ताह के बाद भी मर सकता है अगर हम बिनौले से बना उत्पाद देना बंद भी कर दें ।
- ❖ पशु भार वृद्धि में कमी और तनावी संवेदनशीलता ग्रसित पशुओं में कुछ सप्ताह तक पाई जाती है, जबकि बिनौले से बने उत्पादों को चारे में देना हमने बंद कर दिया हो ।
- ❖ उच्च गुणवत्ता वाले आहार के साथ-साथ अगर हम लाइसिन, मेथियोनिन और फैट सॉल्यूबल विटामिन दें तो ये चिकित्सीय सहायक की भूमिका निभा सकते हैं ।
- ❖ आगे की सलाह के लिए पशु चिकित्सक से संपर्क करें ।

ख. साइनाइड की विषाक्तता

- ❖ कुछ पौधे जैसे कि ऐरो घास, वेलनेट घास, ज्वार प्रजाति के युवा पौधे, टेपियोका की पत्तियाँ इत्यादि के खाने से साइनाइड की विषाक्तता बहुत जल्दी होती है ।

लक्षण

- ❖ विषयुक्त चारा खाने के 15-20 मिनट से लेकर कुछ घंटों में इसके लक्षण आ जाते हैं ।
- ❖ शुरू के लक्षणों में उत्तेजना उसके बाद सांस लेने में तकलीफ होती है, जिससे पशु जल्दी-जल्दी सांस लेता है, ज्यादा मात्रा में लार का स्राव होना दिखाई देता है । श्लेष्मा झिल्ली लाल व चमकदार दिखती है, परंतु बाद में नीली हो जाती है ।
- ❖ पशु गिरता है, संघर्ष करता है और एक घंटे के अंदर मर जाता है ।

रोकथाम और नियंत्रण

- ❖ वैसी घास को न खिलाएं जिसमें ये जहर पाया जाता हो, जब तक कि वो 15-18 इंच लंबा न हो जाए ।
- ❖ ज्वार को चारे के रूप में तभी इस्तेमाल करें जब तक कि वो कुछ फिट लंबा न हो जाए ।
- ❖ उस समय जब पशु पर्यावरण में बदलाव की वजह से तनाव महसूस करे तब चरने के समय बारीकी से नजर रखें ।
- ❖ अगर साइनाइड की विषाक्तता के लक्षण दिखाई दें तो पशुचिकित्सक की मदद तुरंत लें ।
- ❖ समय पर उपचार बहुत ही कारगर होता है ।

लक्षण की पहचान और तुरंत उपचार से पशु को बचा सकते हैं ।

ग. ऑरगेनोफॉस्फोरस (ओ.पी) की विषाक्तता

- ❖ पौधों में कीट और पशुओं में किलनी (चिचड़ी) की रोकथाम के लिए कीटनाशक के उपयोग से होता है ।
- ❖ ज्यादातर कीटनाशक में ऑरगेनोफॉस्फोरस (ओ.पी) नामक यौगिक पाए जाते हैं, जोकि सक्रिय जहर है ।

गाय और भैंस में ओ.पी. विषाक्तता के सामान्य लक्षण

- ❖ ज्यादा सुस्त या कमजोरी
- ❖ ज्यादा मात्रा में लार का स्राव
- ❖ बार-बार मूत्र त्याग करना
- ❖ दस्त, पेट में दर्द और सांस लेने में तकलीफ
- ❖ अनैच्छिक मांसपेशियों में संकुचन और शिथिलता जोकि त्वचा के अंदर दिखाई देता है ।
- ❖ घबराहट, अटैक्सिया, डरना और उद्वेग
- ❖ पुतली का संकुचन

रोकथाम और नियंत्रण

- ❖ चिचड़ी को मारने वाली दवा पशु के शरीर पर छिड़कने या लगाने से पहले उचित मात्रा में पानी पिलाना चाहिए ।
- ❖ कीटनाशकयुक्त चारे को पशुओं को खिलाने से पहले अच्छी तरह धो कर साफ करना चाहिए ।
- ❖ कीटनाशक को उसमें दिए हुए मात्रा और समय के निर्देशानुसार ही लगाएं ।
- ❖ बाह्य परजीवी को हटाने/भगाने के लिए कीटनाशक का प्रयोग उन पशुओं पर न करें जो ज्यादा बीमार हों, कमजोर हों या स्वास्थ्य लाभ ले रहे हों या पशु ज्यादा तनाव में हो ।
- ❖ बाह्य परजीवी को हटाने के लिए सामान्यतः 3 महीने से कम आयु के बछड़ों में कीटनाशक का प्रयोग न करें ।
- ❖ कीटनाशक वाले पात्र (नया या उपयोग किया हुआ) या कीटनाशक युक्त चारे को पशुओं से दूर रखें ।
- ❖ किसी दूसरे कीटनाशक या पशु स्वास्थ्य उत्पादों को साथ नहीं लगाना है, उसकी जांच लेबल में देखकर करें ।
- ❖ लक्षण का पता चलने पर तुरंत पशुचिकित्सक से संपर्क करना चाहिए, ताकि समय पर उपचार से पशु को बचाया जा सकें ।
- ❖ लक्षण की पहचान और तुरंत उपचार से पशु को बचा सकते हैं ।

ओ.पी. विषाक्तता का उपचार जल्द करवाने से बचने के आसार बढ़ जाते हैं ।

अनुभाग - XII

सामान्य जूनोटिक बीमारियां

वे बीमारियां और संक्रमण जो प्राकृतिक रूप से पशुओं और इंसानों के बीच संचरित होते हैं, जूनोसिस कहलाते हैं। ये बीमारियां सभी ज्ञात संक्रामक रोगों का 61% हिस्सा बनाते हैं। ज्ञातव्य हो कि 175 आने वाली बीमारियों में 75% बीमारियां जूनोटिक हैं।

गंदगी, गरीबी, कुपोषण, शिक्षा का अभाव, पशुओं से नजदीकी संपर्क इत्यादि कुछ पूर्व निर्धारित कारक हैं, जो जूनोटिक बीमारियों को जन्म देते हैं।

ऐसा अनुमान है कि लगभग 45 जूनोटिक बीमारियां गायों से संचरित होती हैं। डेरी किसान या पशुपालक जो अपने पशुओं के संपर्क में रहते हैं उनका हमेशा इन बीमारियों से ग्रस्त होने का खतरा रहता है। विशेषतः इनमें से कुछ बीमारियां हमारे देश के पशुओं में प्रचलित हैं। किसानों को इनके बारे में जानना जरूरी है, ताकि वे चिकित्सक की सलाह से समय पर सही उपचार करा सकें। यह अनुभाग गायों के द्वारा संचरित होने वाले निम्नलिखित जूनोटिक बीमारियों के बारे में संक्षिप्त रूप से वर्णन करता है:-

- क. इंसानी बुसेलोसिस
- ख. इंसानी तपेदिक (क्षयरोग)
- ग. लेप्टोस्पाइरोसिस
- घ. गैस्ट्रो-इंटेस्टाइनल जूनोटिक बीमारियां
- ड. चिचड़ जनित जूनोटिक बीमारियां

क. इंसानी बुसेलोसिस

- ❖ भारत में बुसेलोसिस को एक प्रमुख लोक स्वास्थ्य समस्या के तौर पर जाना जाता है ।
- ❖ भारत में इंसानी बुसेलोसिस के 10% से भी कम मामले चिकित्सकीय रूप से पहचाने और उपचार किए जाने या सूचना के अंतर्गत आते हैं ।
- ❖ इसके मुख्य लक्षण हैं – रूक-रूक कर होने वाला बुखार, जोड़ों में दर्द व सूजन, पसीना आना, चक्कर आना, सिरदर्द, छाती व पेट में दर्द इत्यादि । यद्यपि और भी विस्तृत लक्षण देखे जा सकते हैं ।
- ❖ संक्रमित गाय का दूध पीने से या उसके शरीर के स्राव का चमड़ी या आंख की श्लेष्मा झिल्ली के संपर्क में आने से मनुष्य इस रोग से पीड़ित हो सकता है (अनुभाग-IV के अध्याय-घ गौ बुसेलोसिस में देखें)
- ❖ एस-19 टीका गलती से सूई लगने पर से भी यह संक्रमण हो सकता है ।

ख. इंसानी तपेदिक (क्षयरोग)

- ❖ यह रोग इंसानों में गोजातीय तपेदिक के द्वारा ही होता है (अनुभाग-V के अध्याय ख में देखें) और इंसानी तपेदिक के जीवाणु लक्षण और घाव में समानता होती है । इसमें अंतर करने के लिए विशेष व कठिन जांच की आवश्यकता होती है ।
- ❖ इंसानी तपेदिक जीवाणु के विपरीत जूनोसिस (जिसमें संक्रमण गायों में होता है) का महत्व भी प्राथमिकता पा रहा है ।
- ❖ जब तक बीमारी बिल्कुल अग्रिम अवस्था में नहीं पहुंच जाती इसके कोई लक्षण दिखाई नहीं देते । इसके सामान्य लक्षण हैं – खांसी, शारीरिक भार में कमी, भूख में कमी इत्यादि ।
- ❖ इंसानों में यह बीमारी संक्रमित गाय का दूध पीने से या संक्रमित पशुओं से नजदीकी संपर्क से फैलता है ।

ग. लेप्टोस्पाइरोसिस

- ❖ गाय इस रोग के प्रमुख मेजबानों में से एक है ।
- ❖ इंसानों में इसका संक्रमण दूषित मूत्र या गर्भाशयी स्राव के संपर्क में आने से या इस रोग से संक्रमित गाय का दूध निकालने से होता है । संक्रमण दर बरसात में ज्यादा होती है ।
- ❖ इसके प्रमुख लक्षण हैं – बुखार, सिरदर्द, उल्टी होना, दस्त, पीलिया और शरीर में दाने हो जाना इत्यादि ।

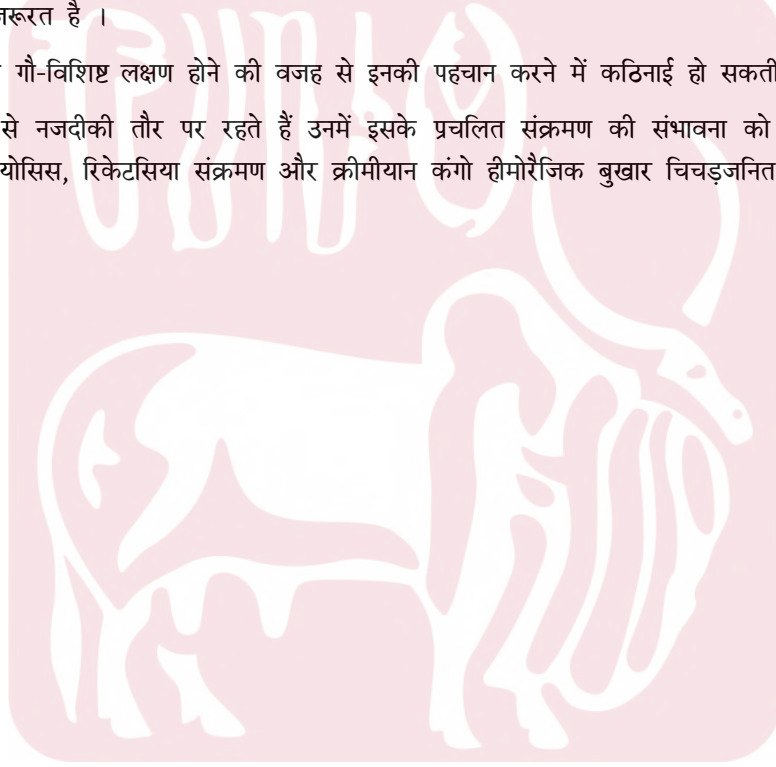
यदि तुरंत पहचान कर उपचार किया जाए तो जूनोटिक बीमारियों को रोका जा सकता है ।

घ. गैस्ट्रो इंटेस्टाइनल जूनोटिक बीमारियां

- ❖ ऐसी विभिन्न प्रकार की जूनोटिक बीमारियां हैं जो अंतडियों को प्रभावित करती हैं। साल्मोनेल्ला, इ.कोलाई, कैम्पाइलोबैक्टर, रोग विषाणु, क्रिप्टोस्पोरिडिया और जिआरडिया इत्यादि इसके कुछ उदाहरण हैं।
- ❖ इस रोग का संक्रमण गोबर से दूषित खाद्य को खाने से होता है। इसकी संभावना ग्रामीण क्षेत्र में अधिक होती है, क्योंकि गांवों में इंसानों का गायों से नजदीकी संपर्क होता है।
- ❖ युवा, कुपोषित, रोग प्रतिरोधक अक्षम और गर्भवती महिलाएं सामान्यतः इस रोग के प्रति अतिसंवेदनशील होते हैं।
- ❖ इन रोगों का प्रमुख लक्षण – बुखार, दस्त, भूख में कमी, शरीर भार में कमी, निर्जलीकरण इत्यादि।

ड. चिचड़जनित जूनोटिक बीमारियां

- ❖ चिचड़जनित संक्रमण हमारे देश के विभिन्न क्षेत्रों में देखे जाते हैं, जो जूनोटिक बीमारियों का एक समूह है और उनकी ओर ध्यान देने की जरूरत है।
- ❖ इन बीमारियों के गौ-विशिष्ट लक्षण होने की वजह से इनकी पहचान करने में कठिनाई हो सकती है।
- ❖ जो लोग गायों से नजदीकी तौर पर रहते हैं उनमें इसके प्रचलित संक्रमण की संभावना को नजरअंदाज नहीं किया जा सकता। बबेसियोसिस, रिकेट्सिया संक्रमण और क्रीमीयान कंगो हीमोरैजिक बुखार चिचड़जनित संक्रमण के उदाहरण हैं।



यदि तुरंत पहचान कर उपचार किया जाए तो जूनोटिक बीमारियों को रोका जा सकता है।

अनुभाग - XIII

प्रजनन और उससे संबंधित गतिविधियां

हमारे देश में लंबे समय से गाय व भैंस में दुग्ध उत्पादन बढ़ाने के लिए चयनित प्रजनन चलता आ रहा है और कुछ क्षेत्रों में सराहनीय उन्नति भी हुई है परन्तु अधिकांशतः गायें और भैंसें अभी तक नस्ल सुधार से दूर हैं इसलिए इनकी दुग्ध उत्पादन क्षमता कम है। हमारे देश में दुग्ध उत्पादन में बढ़ोतरी के लिए देसी गायों (नॉन डिस्क्रिप्ट) की उत्पादन क्षमता में वृद्धि हेतु उनमें संकर प्रजनन (क्रॉस ब्रीडिंग) जैसी वैज्ञानिक विधि का प्रयोग करना होगा। इसके साथ-साथ देशी नस्ल के दुधारू पशुओं का उनके ही परिवेश (क्षेत्रों) में दुग्ध उत्पादन क्षमता में सुधार लाना भी जरूरी है। प्रोजेनी टेस्टिंग: पीटी (संतति परीक्षण) और पेडिग्री सिलेक्शन: पीएस (वंशावली चयन) कार्यक्रमों के साथ-साथ कृत्रिम गर्भाधान और दूध रिकॉर्डिंग जैसी गतिविधियों द्वारा स्थायी आनुवंशिक प्रगति देखी गई है। दुग्ध व्यवसाय में लाभ के लिए यह आवश्यक है कि हर साल गाय/भैंस का प्रसव हो। निम्नलिखित अध्याय प्रजनन के विभिन्न पक्षों पर रोशनी डालेंगे :-

- क. गर्मी के लक्षण, गर्भाधान का सही समय
- ख. कृत्रिम गर्भाधान के लाभ
- ग. दुधारू पशु में दूध सुखाना
- घ. सामान्य प्रसव और प्रसव में कठिनाई
- ड. बांझपन एवं बांझपन का प्रबंधन
- च. संतति परीक्षण पर संक्षिप्त जानकारी
- छ. वंशावली चयन पर संक्षिप्त जानकारी

क. गर्मी

पशुओं का गर्मी में आना ऐसी अवस्था है जिसमें मादा पशुओं की अन्य पशुओं में रुचि दिखाई पड़ती है। यह अवस्था 6 से 30 घंटे तक हो सकती है। सामान्यतया वयस्क बछड़ी / गाय / भैंस हर 21 दिनों में गर्मी में आती है परन्तु यह 18 से 24 दिनों में भी आ सकती है।

- ❖ गायों में उत्पादक काल बढ़ाने के लिए यह जरूरी है कि प्रसव के 60-90 दिनों के अंदर उनका गर्भाधान हो जाए। इससे पशु एक साल में एक बच्चा देने में समर्थ होगा।
- ❖ प्रसव अंतराल लंबा होने पर जीवन काल के दुग्ध उत्पादन पर हानिकारक प्रभाव पड़ता है।
- ❖ दुधारू पशुओं के बेहतर प्रजनन प्रबंधन हेतु गर्मी की पहचान एक निर्णायक कारक होता है।
- ❖ भविष्य में गाय की गर्मी या प्रसव (ब्याने) का अनुमानित दिन जानने के लिए गाय की गर्मी और गर्भाधान की तारीखों का अभिलेखन अति आवश्यक है ताकि उन्हें उसी के अनुसार प्रबंधित किया जा सके।

पशुओं के गर्मी में आने के लक्षण

- ❖ बार-बार रंभाना।
- ❖ पूंछ उठाना।
- ❖ योनी में सूजन और अधिक रक्तप्रवाह के कारण गुलाबी-लाल रंग।
- ❖ योनी से गाढ़े चिपचिपे और पारदर्शी द्रव का निकलना।
- ❖ बार-बार मूत्र त्याग करना।
- ❖ चारा-दाना कम खाना और दूध का कम होना।
- ❖ पशु का बेचैन होना, दूसरे जनवारों को सूंघना और उन पर चढ़ना।
- ❖ गर्मी में आने के 10 से 12 घंटे के बाद पशु का साँड़ या अन्य पशु को अपने ऊपर चढ़ने देना। यह कृत्रिम गर्भाधान का सर्वाधिक उपयुक्त समय होता है।



जब एक गाय के ऊपर कोई दूसरी गाय चढ़ती है तो उसका स्थिर खड़ी रहना ही कृत्रिम गर्भाधान का सही समय है।

गर्भाधान का सही समय

- ❖ गर्मी में आने के 12 से 14 घंटे या अधिकतम 18 घंटे के बाद ही कृत्रिम गर्भाधान करना चाहिए। यदि पशु सुबह गर्मी में आता है तो उसका गर्भाधान शाम को कराना चाहिए, इसी तरह शाम को गर्मी में आने वाले पशु को अगले दिन सुबह में गर्भाधान करवाना चाहिए।
- ❖ यदि पशु गाभिन नहीं हुआ तो वह 18 - 21 दिनों बाद पुनः गर्मी में आएगा।
- ❖ पशु लगभग 21 दिनों के अंतर पर पुनः गर्मी में आता है। अतः 21 दिन बाद पशु का गर्मी के लक्षणों के लिए फिर से निरीक्षण करना चाहिए, विशेषतः सुबह और शाम के समय।
- ❖ भैंसों में विशेष ध्यान देना चाहिए क्योंकि उनमें गर्मी के लक्षण अधिक स्पष्ट नहीं होते हैं।

गर्मी के लक्षण समय से पहचाने और गाय/भैंसों को समय से गाभिन कराएं।

ख. कृत्रिम गर्भाधान के लाभ

- ❖ कृत्रिम गर्भाधान में केवल उन्नत साँड़ों के वीर्य का प्रयोग किया जाता है तथा ये साँड़ सभी बीमारियों से मुक्त होते हैं ।
- ❖ इससे प्रजनन संबंधी बीमारियों को फैलने से रोका जा सकता है।
- ❖ कृत्रिम गर्भाधान कराते समय जननांगों की बीमारियों का भी पता लग जाता है ।
- ❖ कृत्रिम गर्भाधान द्वारा एक साँड़ से एक समय में अनेक पशुओं का गर्भाधान कराया जा सकता है।
- ❖ जब गाय/भैंस गर्मी में आती है तब साँड़ को दूढ़ने की बजाय एक प्रशिक्षित कृत्रिम गर्भाधानकर्ता द्वारा उन्नत साँड़ के वीर्य से पशु का समय पर कृत्रिम गर्भाधान किया जा सकता है।
- ❖ उच्च आनुवांशिक गुणवत्ता वाले साँड़ के वीर्य का आयात किया जा सकता है और इसका उपयोग साँड़ के मरने के बाद भी किया जा सकता है।
- ❖ कृत्रिम गर्भाधान किसान के घर जाकर किया जा सकता है जिससे मादा पशु को गर्भाधान के लिए ले जाने की जरूरत नहीं पड़ती और किसान का समय भी बचता है ।
- ❖ पशुओं की नस्ल में तेजी से सुधार होता है।
- ❖ यह तकनीक सुगम और सस्ती भी है ।



किसान के घर पर प्रशिक्षित गर्भाधानकर्ता द्वारा कृत्रिम गर्भाधान ।

कृत्रिम गर्भाधान के बाद ध्यान देने वाली बातें

- ❖ पशु को कृत्रिम गर्भाधान करने के 21 दिन बाद गर्मी के लक्षणों के लिए पशु का पुनः निरीक्षण करना चाहिए ।
- ❖ कृत्रिम गर्भाधान कराने के 60 दिन बाद गर्भ परीक्षण भी करवाना चाहिए।
- ❖ तीन बार गर्भाधान कराने के बाद भी यदि गर्भ नहीं ठहरता है तो पशु चिकित्सक से संपर्क करना चाहिए।

दुग्ध उत्पादन बढ़ाने के लिए सस्ती और सरल विधि अपनाएं कृत्रिम गर्भाधान करवाएं ।

ग. दुधारू पशुओं में दूध सुखाना

दुधारू पशुओं के दुग्ध उत्पादन चक्र में ड्राई पीरियड (सूखी अवधि) एक महत्वपूर्ण अवस्था होती है। अगले प्रसव (ब्यांत) के बाद बेहतर स्वास्थ्य तथा दुग्ध उत्पादन के लिए दुधारू पशुओं को दो ब्यांत के बीच विश्राम देना आवश्यक है। विश्राम देने से थन के ऊतकों को फिर से बनने का मौका मिलता है। इसी अवस्था में दुधारू पशु और उनके थन, आने वाले ब्यांत के लिए अपने आपको तैयार करते हैं। इसलिए इस अवस्था में किसी भी प्रकार की गड़बड़ी से, प्रसव के बाद, पशु के स्वास्थ्य व उसके दुग्ध उत्पादन क्षमता पर बुरा प्रभाव पड़ता है।

कभी-कभी दूध सुखाने की प्रक्रिया के दौरान दुग्ध उत्पादन की अधिक मात्रा जटिलता पैदा करती है। इसलिए दूध सुखाने की प्रक्रिया उसकी निश्चित तिथि से लगभग 15 दिन पहले उसके संतुलित आहार में कमी के साथ शुरू करनी चाहिए। पशु की खुराक में ऊर्जा वाले तत्वों की कमी और अधिक रेशे वाले आहार खिलाने से पशु को दुग्ध उत्पादन के लिए कम पोषक तत्व मिल पाएगा। आहार की कटौती दुग्ध उत्पादन को कम करने के लिए जरूरी है जो दूध सुखाने की प्रक्रिया को प्रभावी व सरल बनाती है।

दुग्ध सुखाने की अवधि: पशुओं को लगभग 60 दिनों के लिए सूखा रखना चाहिए। यदि उन्हें इससे ज्यादा दिनों तक सूखा रखा जाता है तो वे मोटे हो जाएंगे जिससे प्रसव में कठिनाई भी हो सकती है।

दूध सुखाने की विधि



आदर्शतः दूध सुखाने के बाद एक सप्ताह के लिए गाय को निर्वाह आहार पर रखना चाहिए।

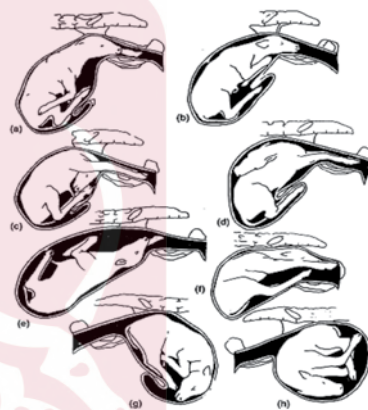
घ. सामान्य प्रसव और प्रसव में कठिनाई

- ❖ प्रसव सामान्यतः बिना मदद के सरलता से हो जाता है ।
- ❖ आम तौर पर प्रसव के एक दिन पहले गाभिन पशु की योनि से द्रव का स्राव होता है ।
- ❖ गायों में बच्चा, पानी की थैली फटने के 30 - 50 मिनट बाद बाहर आ जाता है परंतु इसमें 2 घंटे का समय भी लग सकता है ।
- ❖ बछड़ियों में पानी की थैली फटने के बाद भी प्रसव में 4 घंटे तक का समय लग सकता है ।
- ❖ पानी की थैली फटने के बाद प्रसव यदि निर्धारित समय के भीतर नहीं होता है तो उसे कठिन प्रसव कहते हैं। इस परिस्थिति में पशुचिकित्सक को बुलाना पड़ सकता है।
- ❖ पानी की थैली फूटने के बाद यदि सिर व अगले दोनों पैर दिखाई दें तो पशु-चिकित्सक को बुलाने की आवश्यकता नहीं होती और प्रसव सामान्य रूप से हो जाता है ।

- ❖ ऐसी परिस्थिति में बच्चे के पैरों को पकड़कर नीचे की ओर हल्के-हल्के खींचा जा सकता है।
- ❖ जब बच्चे के दोनों अगले पैर व सिर न दिखाई दें तो बच्चे को खींचकर निकालने का प्रयास न करें।



सामान्य प्रसव में बच्चे का सिर;
दो अगले पैर दिखाई देंगे



प्रसव के दौरान बच्चे की स्थिति प्रसव
में कठिनाई पैदा कर सकती है ।

- ❖ असामान्य प्रसव में या पानी की थैली फटने पर कुछ भी बाहर न आए तो तुरन्त पशु चिकित्सक को बुलाना चाहिए ।
- ❖ इन परिस्थितियों में मदद में देरी के कारण प्रसव में कठिनाइयां आ सकती हैं ।

प्रसव के बाद निगरानी

- ❖ सामान्य परिस्थितियों में प्रसव के लगभग 45 दिनों के अंदर पशु को गर्मी में आ जाना चाहिए।
- ❖ प्रसव के बाद पहली गर्मी छोड़कर दूसरी गर्मी में या प्रसव के 60-90 दिनों के बीच पशु का गर्भाधान करवा लेना चाहिए।
- ❖ यदि प्रसव के 60 दिनों के बाद भी गाय गर्मी में न आए तो पशुचिकित्सक से सलाह लेनी चाहिए।

प्रसव की कठिनाई को पहले से पहचानें और बच्चे को बचाएं ।

ड. बांझपन

- ❖ बांझपन प्रजनन क्षमता में एक अस्थायी बाधा की अवस्था है जिसमें मादा पशु गर्भधारण नहीं कर पाता। सामान्य परिस्थितियों में मादा पशु का प्रसव प्रति 12-14 माह में होना चाहिए।
- ❖ बांझपन के अनेक कारण हैं: (i) जनन अंगों के रोग (ii) संक्रामक बीमारियां (iii) पशु का गर्मी में न आना, बार-बार गर्मी में आना, मूक (अस्पष्ट) गर्मी, अण्डाशय में छाले होना (सिस्टिक ओवरी) (iv) शरीर रचना के कारण (v) त्रुटिपूर्ण कृत्रिम गर्भाधान तकनीक।
- ❖ बांझपन की वजह से गर्भधारण, प्रसव और दुग्ध उत्पादन में देरी होती है। किसानों को उत्पादनहीन पशु को पालने से आर्थिक हानि उठानी पड़ती है।

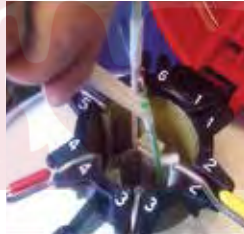
बांझपन का प्रबंधन

- ❖ पशु को गर्मी के सही समय पर गर्भाधान करवाएं (गर्मी का अध्याय देखें)
- ❖ कुछ गायों में गर्मी ज्यादा लंबे समय तक रहती है अतः उनमें दुबारा गर्भाधान की आवश्यकता हो सकती है।
- ❖ मूक (अस्पष्ट) गर्मी की पहचान हेतु खासकर भैंसों में, सतर्कतापूर्वक गहन निरीक्षण की आवश्यकता होती है।
- ❖ पशु को जन्म के बाद से ही सही पोषण प्रदान करें।
- ❖ पशु को जन्म के बाद से ही पर्याप्त खनिज मिश्रण दें।
- ❖ ग्रीष्म ऋतु आने पर पशुओं में गर्मी के प्रभाव को कम करने के लिए 24 घंटे ठंडा और साफ पानी का प्रबंध करें। इसके अतिरिक्त पशु को पर्याप्त आवास तथा शीतलन प्रणाली की व्यवस्था भी करें।
- ❖ प्रशिक्षित गर्भाधानकर्ता से ही कृत्रिम गर्भाधान करवाएं।
- ❖ सामान्य परिस्थितियों में नियमित गर्मी में आने वाले पशु, यदि तीन बार गर्भाधान करने पर भी गाभिन न हो तो समस्या के निदान के लिए पशुचिकित्सक से सलाह करें। बार-बार गर्भाधान करने से जनन अंगों को स्थायी नुकसान हो सकता है।
- ❖ शरीर रचना में गड़बड़ी के कारण भी पशु में गर्भ नहीं ठहरता।
- ❖ जनन अंगों में संक्रामक बीमारी होने से भी बांझपन हो सकता है। इसके लिए पशु चिकित्सक से सही सलाह लें तथा उपचार करवाएं।

सामान्य गर्मी के दौरान गर्भ ठहराव के लिए जिम्मेदार कारक



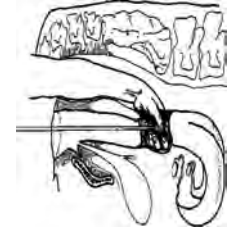
गर्मी की सही पहचान



हिमिकृत वीर्य का सही रख-रखाव



गर्भाधान का सही समय व तकनीक



कृत्रिम गर्भाधान के वक्त वीर्य रखने का सही स्थान

- ❖ केवल समय से पशु के गर्मी की पहचान करना किसान पर निर्भर होता है।
- ❖ वीर्य का सही प्रबंधन, सही समय पर गर्भाधान, सही कृत्रिम गर्भाधान तकनीक और वीर्य को जनन अंग में सही जगह पर डालना एक प्रशिक्षित कृत्रिम गर्भाधान कर्ता के हाथ में होता है।
- ❖ इसलिए कृत्रिम गर्भाधान की जटिलताओं या समस्याओं से बचने के लिए यह सुनिश्चित करना बहुत जरूरी है कि कृत्रिम गर्भाधान केवल प्रशिक्षित व्यक्ति द्वारा ही कराया जाए।
- ❖ एक स्वस्थ संकर नस्ल की बछड़ी को 18 माह या उससे पहले ही गर्मी में आ जाना चाहिए।
- ❖ भैंस और गाय की देशी नस्ल वयस्क होने में ज्यादा समय (लगभग 24 माह) लेती है।

बांझपन का प्रबंधन करें – गर्भाधान सुनिश्चित करें

च. संतति परीक्षण (पीटी) का संक्षिप्त विवरण

संतति परीक्षण एक वैज्ञानिक विधि है जिसका इस्तेमाल चयनित प्रजनन द्वारा किसी भी नस्ल में दुग्ध उत्पादन में सुधार हेतु किया जाता है ।

प्रथम चरण: एक निर्धारित क्षेत्र में जिस नस्ल हेतु संतति परीक्षण किया जाना हो उस नस्ल की सर्वोत्तम गायों को चुनकर सर्वोत्तम सांड के वीर्य से उनका गर्भाधान कराया जाता है ।



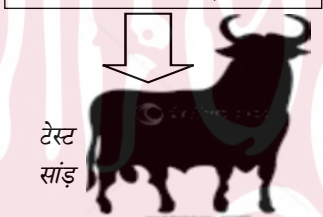
द्वितीय चरण: सर्वोत्तम गायों से उत्पन्न रोग रहित बछड़ों को किसान से खरीदा जाता है ।



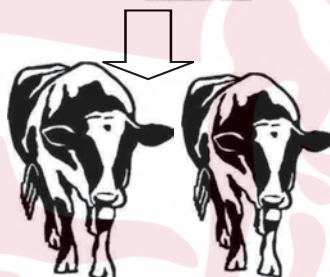
तृतीय चरण: चयनित बछड़ों को विभिन्न अवस्थाओं में विशेष बीमारियों की जांच श्रृंखला से गुजारा जाता है जैसे प्री क्वारंटाइन, क्वारंटाइन और रियरिंग अवस्था। इन अवस्थाओं से गुजरने के बाद ही इन्हे वीर्य उत्पादन केंद्र ले जाया जाता है। चयनित बछड़ों को सभी अवस्थाओं में जांच के दौरान बीमारी रहित होना चाहिए।



चतुर्थ चरण: चयनित (टेस्ट) सांड के वीर्य को तब पी टी क्षेत्र की उसी नस्ल की गायों / भैंसों में बड़ी संख्या में इस्तेमाल किया जाता है।



पंचम चरण: टेस्ट सांड के वीर्य से उत्पन्न बछड़ियों के दुग्ध उत्पादन का अभिलेखन किया जाता है। एक टेस्ट सांड से उत्पन्न कम से कम 100 बाछड़ियों का एक ब्यांत के दूध का ब्यौरा रखा जाता है।



छठा चरण: बछड़ियों के दुग्ध उत्पादन के आधार पर प्रत्येक टेस्ट सांड के प्रजनन मुल्य (ब्रीडिंग वेल्यु) का आंकलन किया जाता है। श्रेष्ठ 10% बछड़ियों का चयन उनके दुग्ध रिकॉर्डिंग के आधार पर किया जाता है ।

टेस्ट सांड की बछड़ियां

सातवां चरण: श्रेष्ठ 10% बछड़ियां जिनका चयन दूध उत्पादन के आधार पर किया गया है और 10% सांड जिनका चयन ब्रीडिंग वेल्यु के आधार पर होता है, का इस्तेमाल अगली पीढ़ी के युवा सांड के उत्पादन के लिए किया जाता है। प्रत्येक चरण को पूर्ण होने में 6 - 7 साल लगते हैं। इस प्रक्रिया में यह सुनिश्चित किया जाता है कि अंतः प्रजनन न होने पाए।



दुग्ध रिकॉर्डिंग



एचएफ टेस्ट सांड

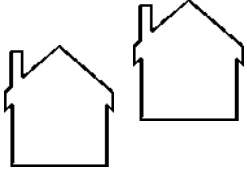


एक मुरा टेस्ट सांड

पी टी एक वैज्ञानिक विधि है जिसके द्वारा किसी नस्ल की दुग्ध उत्पादन क्षमता सुधारी जा सकती है।

छ. वंशावली चयन का संक्षिप्त विवरण

पेडिग्री सिलेक्शन (वंशावली चयन) विधि में सांड का चुनाव उसके माता एवं पिता की माँ के दूध उत्पादन के आधार पर किया जाता है। यह चयन प्रणाली उस क्षेत्र में प्रयोग की जाती है जहाँ उस नस्ल के पशु बहुतायत में पाए जाते हैं लेकिन कृत्रिम गर्भाधान करने के संसाधन या तो मौजूद नहीं होते या कम मात्रा में मौजूद हैं।



प्रथम चरण: ऐसे गांवों का चुनाव करना जहाँ चयनित देशी नस्ल के अनेक सर्वोत्तम पशु पाए जाते हैं।



द्वितीय चरण: चयनित गावों में कृत्रिम गर्भाधान की सेवा शुरू की जाती है। कृत्रिम गर्भाधान के प्रचार-प्रसार हेतु किसानों को शिक्षित किया जाता है, बांझपन निवारण शिविर और बछड़ी रैली का आयोजन किया जाता है।



तीसरा चरण: देशी नस्ल के चयनित पशुओं के दूध को मापा जाता है तथा दुग्ध उत्पादन के आधार पर सर्वोत्तम पशुओं का चयन किया जाता है।



चौथा चरण: देश में उपलब्ध उसी नस्ल के सर्वोत्तम सांड के वीर्य से उस नस्ल की सबसे अच्छी एवं अधिकतम दूध उत्पादन वाली सर्वोत्तम मादा पशुओं का कृत्रिम गर्भाधान किया जाता है। इसे नोमिनेटेड मेटिंग कहते हैं।



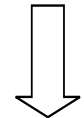
पांचवा चरण: नोमिनेटेड मेटिंग द्वारा पैदा हुए बछड़े तथा उनकी माँ की संक्रामक बीमारियों की जांच की जाती है तथा उनके बीमारी रहित होने पर ही किसानों से खरीदा जाता है।



छठा चरण: चयनित बछड़ों को तब विभिन्न अवस्थाओं जैसे प्री क्वारन्टाइन, क्वारन्टाइन और रियरिंग में विभिन्न बीमारियों की जाँच श्रृंखला से गुजारा जाता है और इन प्रक्रियाओं के बाद ही इन्हे वीर्य उत्पादन केन्द्र में ले जाया जाता है। चयनित बछड़ों को सभी अवस्थाओं में जाँच के दौरान बीमारी रहित होना चाहिए।



सातवां चरण: तेजी से अनुवांशिक विकास के लिए इस प्रक्रिया से उत्पन्न हुए सांड का वीर्य उसी नस्ल की बड़ी आबादी में कृत्रिम गर्भाधान के लिए इस्तेमाल किया जाता है।



पी एस एक विधि है जिसके द्वारा देशी नस्लों में दूध उत्पादन में सुधार किया जा सकता है।

अनुभाग - XIV

छोटी-मोटी व्याधियों के लिए परंपरागत उपचार

परंपरागत उपचार का प्रयोग किसानों के द्वारा अपने पशुओं की छोटी-मोटी व्याधियों/रोगों को ठीक करने के लिए सालों से किया जाता है। छोटी-मोटी व्याधियों के प्रबंधन के लिए वैकल्पिक दवा का ज्ञान उन किसानों के लिए अति महत्वपूर्ण है जिनके लिए आज भी पशु चिकित्सा की सहायता तत्परता से उपलब्ध नहीं हो पाती है।

इनमें से बहुत से उपचार जो विभिन्न एजेन्सियों जैसे बायफ, दक्षिण कर्नाटक के कुछ संघ, आईआईआरआर, विवेकानंद केंद्र इत्यादि के द्वारा प्रलेखित है, का जिक्र यहां किया गया है, फिर भी, यहां ध्यान देना महत्वपूर्ण है कि जिस उपचार का उल्लेख यहां किया गया है वह केवल परामर्श हेतु ही है और वह व्याधि के उपचार की गारंटी नहीं हो सकती। इन व्याधियों का मूल कारण बीमारी हो सकती है जिसके उपचार हेतु जांच पड़ताल की आवश्यकता हो सकती है। इसलिए पशु चिकित्सक की सलाह पूर्व में ही लेना जरूरी है। आसानी से पहचान हेतु पौधों का चित्रण भी किया गया है। निम्नलिखित व्याधियों के लिए कुछ उपचार और औषधि मिश्रण की सलाह दी जाती है -

- | | |
|-----------------------------|----------------------------------|
| 1. दुग्ध उत्पादन में असफलता | 12. विषावतता |
| 2. रक्त अल्पता | 13. सही तौर पर थन से दूध न उतरना |
| 3. कवक संक्रमण | 14. प्रोलैप्स (गर्भाशय भ्रंश) |
| 4. अफर्रा | 15. बार-बार गर्मी में आना |
| 5. निर्जलीकरण | 16. जेर का रूकना |
| 6. दस्त | 17. चर्म रोग |
| 7. बाह्य परजीवी | 18. आमाशय की गड़बड़ी |
| 8. कीड़ेयुक्त घाव | 19. जीभ का छाला |
| 9. दुग्ध में रक्त | 20. मस्सा |
| 10. बांझपन | 21. मक्खी विकर्षक |
| 11. थन में शोफ (इडिमा) | 22. मेन्ज (खाज) |

सामान्य औषधीय मिश्रण जो रोगों में इस्तेमाल होता है

क्रमांक	दशा	उपचार/पौधे का नाम	पौधे का भाग/मिश्रण बनाने की विधि	खुराक और मात्रा
1	दुग्ध उत्पादन में असफलता	(1) शतावरी, शाहकुल	शतावरी के 250 ग्राम जड़ को पीसें	तीन से पांच दिन तक पिलाएं
		(2) जीवन्ती	इसकी पत्तियों व तनों को आहार के साथ दें	50 ग्राम दिन में दो बार – 30 दिन तक
2	रक्त अल्पता	आंवला	50 ग्राम फल/छाल को पीसें	प्रतिदिन
3	कवक संक्रमण	(1) लहसुन	पेस्ट बनाएं	स्वास्थ्य ठीक होने तक इसे प्रभावित हिस्से में लेप लगाएं
		(2) नीम	छाल, फूल, बीज का तेल या नरम पत्तियां – लुग्दी बनाएं	स्वास्थ्य ठीक होने तक इसे प्रभावित हिस्से में लेप लगाएं
4	अफरा (मध्यम)	अदरक, लहसुन, इलायची, लौंग और गुड़	50 ग्राम अदरक, 1 लहसुन, 3 इलायची, 5-6 लौंग सभी को आधा लीटर पानी में उबालें/थोड़ा गुड़ डालकर काढ़ा तैयार करें ।	दिन में एक बार दो दिनों तक दें । प्रतिदिन ताजा बनाएं । आधी मात्रा बछड़ियों को दें ।



शतावरी पौधा



शतावरी जड़



जीवन्ती पौधा और फूल

सामान्य औषधीय मिश्रण जो रोगों में इस्तेमाल होता है

क्रमांक	दशा	उपचार/पौधे का नाम	पौधे का भाग/मिश्रण बनाने की विधि	खुराक और मात्रा
5	निर्जलीकरण	नमक, मीठा सोडा और चीनी	2 चम्मच नमक, आधा चम्मच मीठा सोडा और चार चम्मच चीनी को 1 लीटर पानी में घोलें	वयस्क पशु के लिए 2-3 ली., 2-3 बार प्रतिदिन, बछड़ियों के लिए 1/2 से 1 ली. स्वास्थ्य लाभ होने तक
6	दस्त	(1) चाय की पत्तियां, अदरक	मुट्ठी भर चाय पत्तियों को 1 ली. पानी में उबालें/पानी को निथारकर उसमें पिसी हुई आधी मुट्ठी अदरक मिलाएं ।	दिन में दो बार 4 दिन तक पिलाएं प्रतिदिन ताजा मिश्रण बनाएं ।
		(2) अमरूद	तीन गिलास पानी में आधा कि.ग्रा; अमरूद की ताजी पत्तियों को उबालें	दिन में दो बार पिलाएं
		(3) पोटेशियम परमैंगनेट	इसके 5-10 क्रिस्टल को एक लीटर पानी में मिलाएं	दिन में दो बार पिलाएं



आंवला



चाय की पत्ती



अमरूद

सामान्य औषधीय मिश्रण जो रोगों में इस्तेमाल होता है

क्रमांक	दशा	उपचार/पौधे का नाम	पौधे का भाग/मिश्रण बनाने की विधि	खुराक और मात्रा
7	बाह्य परजीवी	(1) सीताफल	बीज और पत्तियों का रस किसी भी सस्ते तेल में 50% तक मिलाकर मिश्रण बनाएं	पूरे शरीर में दिन में दो बार लेप लगाएं 5 दिन तक
		(2) नीम	पत्तियों की लुग्दी बनाएं	पूरे शरीर में लेप लगाएं
		(3) सीताफल, नीम और तंबाकू की पत्तियां	सीताफल बीज-एक भाग, नीम बीज-एक भाग, तंबाकू पत्तियां 1/5 भाग । पेस्ट बनाएं और 2 लीटर पानी में भिगोएं	पूरे शरीर में लेप लगाएं
8	कीड़े युक्त घाव	(1) गेंदे की पत्ती, लहसुन और तुलसी	मुट्ठीभर गेंदे व तुलसी की पत्तियां और एक लहसुन को चूने के साथ पीसकर लुग्दी बनाएं	लुग्दी को दिन में दो बार घाव पर लेप लगाएं ।
		(2) सीताफल, नीम	दोनों की पत्तियों को पीस कर लेप तैयार करें	दिन में एक बार, 5 दिन तक लेप लगाएं
9	दूध में रक्त	छुई मुई	1 कि.ग्रा. पौधे का लुग्दी बनाएं	लुग्दी इसी प्रकार से दिन में दो बार 3-5 दिन तक खिलाएं ।
10	बांझपन	(1) बैंगन, कुलथी चना	पका हुए बैंगन - 1 किग्रा. चना - एक पाव भिगोकर पीसें	पहले बैंगन उसके बाद चना प्रतिदिन एक सप्ताह तक दें ।
		(2) नारियल तरू (वृक्ष)	नारियल की नई नवेली पुष्पवृन्त का रस निचोड़कर उसे नारियल पानी के साथ मिलाएं	दिन में एक बार 3-4 दिन तक पिलाएं ।



सीताफल



गेंदा



नीम की पत्तियां

सामान्य औषधीय मिश्रण जो रोगों में इस्तेमाल होता है

क्रमांक	दशा	उपचार/पौधे का नाम	पौधे का भाग/मिश्रण बनाने की विधि	खुराक और मात्रा
11	थन में शोफ (इडिमा)	घृतकुमारी, चूना या छुईमुई के पत्ते	घृतकुमारी की 2-3 पत्तियां लें या उसे 50 ग्राम चूने के साथ मिलाएं या 2-3 मुट्ठी छुईमुई की पत्तियां लेकर पेस्ट बनाएं	दिन में दो बार 4-5 दिन तक लेप लगाएं (चूना को घृतकुमारी के साथ 2-3 दिन पहले मिलाएं) दूध दुहने के बाद लेप लगाएं
12	विषाक्तता	(1) पैराफिन तेल/कच्चा लिनसीड तेल/प्राकृतिक वनस्पति तेल	1 लीटर कोई भी तेल	दिन में एक बार पिलाएं ।
		(2) दूध/नारियल पानी/कठकोयला	एक लीटर दूध या नारियल पानी; 200 ग्राम काठकोयला 800 मि.ली. पानी में	दिन में एक बार पिलाएं
13	सही तौर पर थन से दूध न उतरना	(1) जटरोफा	पत्तियां	2-3 मुट्ठी पत्तियां
		(2) धतूरा	धतूरा का एक फल लेकर राख में गर्म कर उसे भूनकर चोकर के साथ मसलें	केवल एक बार पिलाएं । दवा देने के बाद पशु को बाहर न छोड़ें ।
		(3) शतावरी	इसकी जड़ें या रस	दिन में दो बार 4 दिन तक
14	प्रोलैप्स (गर्भाशय भ्रंश)	छुई मुई	दो मुट्ठी भर पत्तियों को मसलकर पशुओं को दें । पत्तियों का रस भी निकालें ।	दिन में दो बार दें और रस को गर्भाशय भ्रंश में लगाएं ।



छुई मुई का पौधा



घृतकुमारी



कुलथी (चना)

सामान्य औषधीय मिश्रण जो रोगों में इस्तेमाल होता है

क्रमांक	दशा	उपचार/पौधे का नाम	पौधे का भाग/मिश्रण बनाने की विधि	खुराक और मात्रा
15	बार-बार गर्मी में आना	(1) कड़ी पत्ता	दो मुट्ठी कड़ी के पत्ते लें	गर्भधान के बाद 10 दिन तक दें ।
		(2) छुई मुई	इसके पौधों के 200 ग्राम का काढ़ा बनाएं	2-3 दिन तक दें
16	जेर का रूकना	(1) छुई मुई	1 कि.ग्रा पत्ते	दिन में एक बार दो दिनों तक
		(2) बेल, काली मिर्च, लहसुन और प्याज	मुट्ठी भर बेल की पत्ती, 6 लहसुन की कलियां, 10 दाने काली मिर्च, प्याज-2, सभी को छांछ के साथ मिलाकर पीसकर पेस्ट बनाएं	दिन में एक बार दें ।
		(3) कपास	कपास की जड़ व छिलका 2-3 मुट्ठी लेकर काढ़ा बनाएं	दिन में एक बार दें ।
17	चर्म रोग	(1) नीम	छाल, फूल, नरम पल्लव या तेल का पेस्ट बनाएं	इसे प्रभावित हिस्से में लगाएं ।
		(2) बैंगन	इसे मसलकर ज्वार पाउडर के साथ मिलाएं	इसे प्रभावित हिस्से में लगाएं ।



जटरोफा



धतूरा



कड़ी पत्ते

सामान्य औषधीय मिश्रण जो रोगों में इस्तेमाल होता है

क्रमांक	दशा	उपचार/पौधे का नाम	पौधे का भाग/मिश्रण बनाने की विधि	खुराक और मात्रा
18	आमाशय की गड़बड़ी	(1) अदरक, सहजन, शहद	अदरक रस – 500 मि.ली. सहजन पत्तियों का रस – 500 मि.ली. और शहद – 200 मि.ली. मिलाकर एक खुराक बनाएं	दिन में दो बार दो दिन तक दें ।
19	जीभ का छाला	इमली+तिल का तेल	इमली – 100 ग्राम, तिल का तेल – 200 मि.ली. दोनों को मिलाकर पेस्ट बनाएं	पेस्ट को मुंह व जीभ में दिन में 3-4 बार लगाएं
20	मस्सा	(1) बर्की थोहर	बर्की थोहर का लैटेक्स मस्से पर लगाएं	दिन में दो बार जब तक मस्सा गिर न जाए
		(2) पपीता	पपीता का रस (लैटेक्स) मस्से पर लगाएं	दिन में दो बार जब तक मस्सा गिर न जाए



बेल



काली मिर्च



कपास

सामान्य औषधीय मिश्रण जो रोगों में इस्तेमाल होता है

क्रमांक	दशा	उपचार/पौधे का नाम	पौधे का भाग/मिश्रण बनाने की विधि	खुराक और मात्रा
21	मक्खी विकर्षक	घृतकुमारी	घृतकुमारी के पत्तों को कूटकर रस निचोड़ लें	रस को गाय के शरीर पर लगाएं और आसपास भी छिड़क दें
22	मेन्ज (खाज)	दादमुरदन	ताजा या हवा में सूखी पत्तियों को (एक मुट्ठी) कूटकर पानी या नींबू रस में पेस्ट बनाएं	ब्रश का इस्तेमाल कर प्रभावित चमड़ी पर लगाएं ।



बर्की थोहर



इमली



दादमुरदन के पौधे और फूल

भाग - II

पशु पोषण एवं प्रबंधन

पशुपालन व्यवसाय को अधिक लाभकारी और उत्पादक बनाने के लिए संतुलित पोषण नींव की तरह है। पर्याप्त पोषण के अभाव में पशु अपनी अनुवांशिक क्षमता को पूर्ण तरह से प्रकट नहीं कर पाते हैं और न ही वे उत्पादकता में कुशल होते हैं। पोषक तत्वों के असंतुलन या कमी के परिणामस्वरूप दुग्ध उत्पादन, प्रजनन क्षमता, और शारीरिक वृद्धि में कमी आने के साथ ही बीमारियां भी बढ़ सकती हैं। उचित उत्पादन, प्रजनन और स्वास्थ्य सुनिश्चित करने के लिए पशु के आहार में प्रोटीन, ऊर्जा, विटामिन और खनिज तत्वों का संतुलन होना जरूरी है।

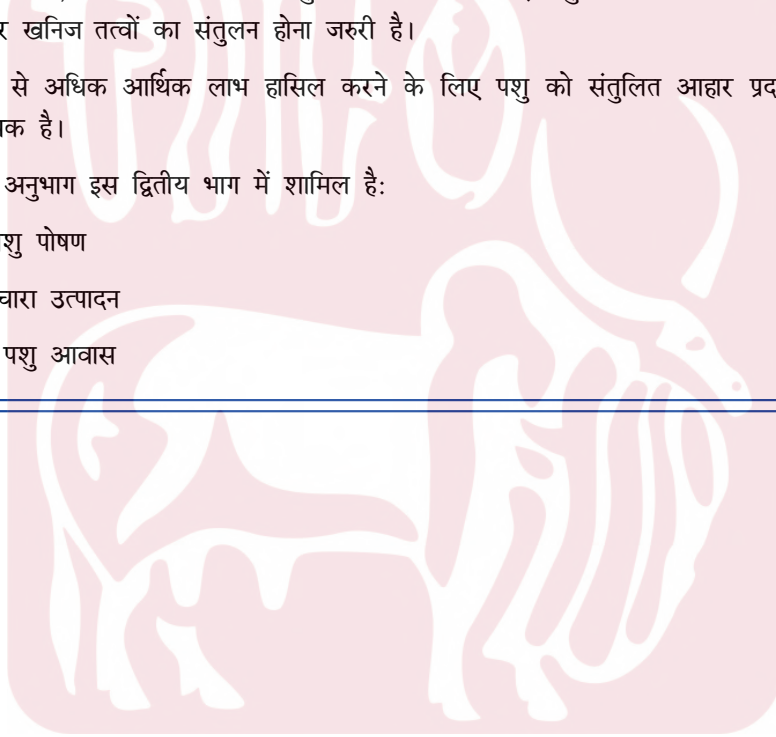
इसलिए डेरी से अधिक आर्थिक लाभ हासिल करने के लिए पशु को संतुलित आहार प्रदान करना अति आवश्यक है।

निम्नलिखित अनुभाग इस द्वितीय भाग में शामिल है:

अनुभाग I: पशु पोषण

अनुभाग II: चारा उत्पादन

अनुभाग III: पशु आवास



अनुभाग - I

पशु-पोषण

पशु आहार डेरी उद्योग का मुख्य भाग है, दुग्ध उत्पादन की कुल लागत का लगभग 70% खर्च पशु पोषण पर होता है। गायों और भैंसों के पोषण के लिए विभिन्न प्रकार के खाद्य पदार्थों का उपयोग होता है जैसे कि मिश्रित पशु आहार, खली, अनाज, अनाज के उत्पाद जैसे चोकर और चुन्नी; खेती से प्राप्त हरा चारा और घास; फसल के अवशेष के रूप में सूखा चारा इत्यादि।

निम्नलिखित अध्याय इस भाग में सम्मिलित है:

- क. दुधारू पशुओं का पोषण।
- ख. आहार संतुलन कार्यक्रम का महत्व।
- ग. दुग्ध उत्पादन में मिश्रित पशु आहार का महत्व।
- घ. बाइपास प्रोटीन पशु आहार का महत्व।
- ङ. खनिज मिश्रण खिलाने का महत्व।
- च. यूरिया मोलासिस मिनरल ब्लॉक (UMMB) - एक पशु आहार संपूरक
- छ. दुधारू पशुओं के लिए पीने के पानी का महत्व।
- ज. गाभिन पशुओं की देखभाल।
- झ. ब्याने के बाद पशुओं के पोषण की देखभाल।
- ञ. गाय के लिए पूर्ण मिश्रित आहार (TMR) बनाने के उदाहरण।
- ट. भैंस के लिए पूर्ण मिश्रित आहार (TMR) बनाने के उदाहरण।

क. पशुओं का पोषण

- ❖ एक सामान्य वयस्क पशु को प्रतिदिन 4-6 किलो सूखा और 15 – 20 किलो हरा चारा खिलाया जाना चाहिए।
- ❖ फली और गैर-फलीदार हरा चारा 1:3 के अनुपात में खिलाया जाना चाहिए।
- ❖ हरे चारे की फसल को जब आधी फसल में फूल आ जाए तब काटकर खिलाना उपयुक्त होता है ।
- ❖ अधिक उपलब्ध हरा चारा 'हे' या 'साइलेज' के रूप में संरक्षित किया जाना चाहिए।
- ❖ गर्मियों में या फिर जब हरा चारा कम उपलब्ध हो, संरक्षित चारा उपयोग में आ सकता है ।



फलीदार हरा चारा



गैर-फलीदार हरा चारा



मिश्रित पशुआहार

सामान्य सुझाव

- ❖ अधिक दुग्ध उत्पादन और पशुओं के पोषक तत्वों की आवश्यकता को पूरा करने के लिए संतुलित-आहार, एनडीडीबी द्वारा विकसित सॉफ्टवेयर का उपयोग कर बनाना चाहिए ।
- ❖ जब पशु के लिए मुख्यतः सूखा चारा उपलब्ध हो, तो उपलब्धता के आधार पर आहार में पूरक के रूप में यूरिया मोलासिस मिनरल ब्लॉक का उपयोग करना चाहिए ।
- ❖ शरीर की सामान्य जरूरतों को पूरा करने के लिए और अधिक दुग्ध उत्पादन के लिए 'मिश्रित पशु आहार' अथवा 'बाइपास प्रोटीन पशु आहार' भी खिलाना चाहिए।
- ❖ शरीर की आंतरिक क्रियाओं को सुचारु रूप से चलाने के लिए खनिज तत्व आवश्यक है, 'पशु को आहार के साथ साथ क्षेत्र विशिष्ट खनिज मिश्रण भी दिया जाना चाहिए ।
- ❖ पशुओं का आहार अचानक न बदल कर धीरे-धीरे बदलना चाहिए।
- ❖ अपव्यय से बचने और पाचनशक्ति में वृद्धि के लिए, हरा चारा कुट्टी करके खिलाना चाहिए ।
- ❖ विभिन्न पशु खाद्य पदार्थों को साथ में मिलाकर सानी या पूर्ण मिश्रित आहार (TMR) बनाना चाहिए। पशुओं को खिलाने के लिए उपयुक्त तरीका है कि दिनभर के आहार को 3-4 समान रूप से विभाजित भागों में दिया जाए, जिससे आहार की बर्बादी कम होती है और पाचनशक्ति भी बढ़ जाती है ।



चारा काटने की मशीन

ख. आहार संतुलन कार्यक्रम का महत्त्व

- ❖ सामान्यतया पशुओं को दिए जाने वाले आहार में एक या दो स्थानीय रूप से उपलब्ध कंसन्ट्रेट, पशु खाद्य पदार्थ, घास एवं सूखा चारा होता है ।
- ❖ इस कारण आहार में प्रोटीन, ऊर्जा, खनिज तत्व और विटामिनो की मात्रा या तो कम या फिर ज्यादा होती है ।
- ❖ असंतुलित आहार पशुओं के स्वास्थ्य और उत्पादकता पर कई तरह से प्रतिकूल प्रभाव डालता है, साथ ही यह दुग्ध उत्पादकों की शुद्ध दैनिक आय भी कम कर देता है, क्योंकि असंतुलित आहार से पशुओं की दुग्ध उत्पादन करने की क्षमता का उपयोग पूरी तरह से नहीं हो पाता है।
- ❖ पशुओं के आहार को संतुलित बनाने के लिए एनडीडीबी ने एक सरल और आसानी से उपयोग में आने वाला सॉफ्टवेयर विकसित किया है, जो कि उस क्षेत्र के लिए प्रशिक्षित और समर्पित स्थानीय जानकार व्यक्तियों (LRPs) द्वारा इस्तेमाल किया जा सकता है।
- ❖ या फिर “पशु पोषण” एप को गूगल प्ले स्टोर से डाउनलोड कर इस्तेमाल किया जा सकता है ।

आहार संतुलन कार्यक्रम (आर. बी. पी.) के लाभ

- ❖ स्थानीय स्तर पर उपलब्ध पशु खाद्य पदार्थों का उपयोग कर कम से कम कीमत पर पशुओं के लिए संतुलित आहार बनाना ।
- ❖ अधिक वसा और एसएनएफ के साथ दुग्ध उत्पादन में वृद्धि ।
- ❖ शुद्ध दैनिक आय में वृद्धि ।
- ❖ प्रजनन क्षमता में सुधार ।
- ❖ दो ब्यांत के बीच के अंतराल में कमी, जिससे पशुओं के उत्पादक जीवन में वृद्धि।
- ❖ पशु के स्वास्थ्य में सुधार ।
- ❖ बछड़ों/ बछड़ियों में बेहतर विकास दर, जिसकी वजह से वे शीघ्र प्रजनन योग्य होते हैं ।
- ❖ मीथेन के उत्सर्जन में कमी, जो कि एक प्रभावशाली ग्रीन हाउस गैस (जी.एच.जी.) है ।



स्थानीय जानकार व्यक्ति (LRP) आहार संतुलन कार्यक्रम कार्यान्वित करते हुए

कम से कम खर्च में दुग्ध उत्पादन को बढ़ाने और मीथेन उत्सर्जन कम करने के लिए
आरबीपी एक प्रभावशाली तरीका है ।

ग. मिश्रित पशु आहार का पशुओं के दुग्ध उत्पादन पर महत्त्व

- ❖ दुग्ध संघों/ महासंघों द्वारा उत्पादित मिश्रित पशु आहार पोषक तत्वों का एक संतुलित स्रोत है, जो कि शरीर की सामान्य जरूरतों के साथ, शारीरिक वृद्धि और दुग्ध उत्पादन के लिए भी आवश्यक है।
- ❖ यह अच्छी गुणवत्ता वाले अनाज, खली, चोकर, शीरा, नमक, खनिज तत्व और विटामिनों का उपयोग कर निर्मित किया जाता है।
- ❖ यह अपेक्षाकृत सस्ता है और पशुओं के लिए अधिक पोषक एवं स्वादिष्ट होता है।

मिश्रित पशु आहार खिलाने के सुझाव

- ❖ पशु आहार में प्रोटीन, ऊर्जा, खनिज तत्व और विटामिन होते हैं, जो कि पशु के विकास, शरीर की सामान्य जरूरतों और दुग्ध उत्पादन के लिए आवश्यक हैं। गाभिन पशुओं में इसकी अतिरिक्त मात्रा भ्रूण के समुचित विकास के लिए फायदेमंद है।
- ❖ इससे प्रजनन क्षमता, दुग्ध उत्पादन तथा दुग्ध वसा में बढ़त होती है।
- ❖ बढ़ते पशुओं को प्रतिदिन 1 से 2 किलो पशु आहार खिलाया जाना चाहिए।
- ❖ दुधारू पशुओं को 2 किलो पशु आहार शरीर के रखरखाव के लिए खिलाया जाना चाहिए और इसके अतिरिक्त उत्पादित दुग्ध के हिसाब से गायों के लिए 400 ग्राम और भैंस के लिए 500 ग्राम प्रति लीटर दूध पर दिया जाना चाहिए।
- ❖ इस मात्रा के अलावा, एक किलो पशु आहार और एक किलो अच्छी गुणवत्ता वाली खली को गर्भावस्था के अंतिम दो महीनों के दौरान गाभिन पशु को देना चाहिए।



विभिन्न अनाज, खली, चोकर, शीरा, नमक, खनिज मिश्रण तथा विटामिनों से निर्मित पशु आहार

उचित गुणवत्ता वाले मिश्रित पशु आहार को खिलाने से पशु का स्वास्थ्य अच्छा रहता है और उत्पादन बढ़ता है

घ. बाइपास-प्रोटीन पशु आहार खिलाने का महत्त्व

- ❖ प्रोटीन शारीरिक विकास और दुग्ध उत्पादन के लिए आवश्यक है।
- ❖ सामान्यतः आहार से उपलब्ध प्रोटीन का अधिकांश हिस्सा पेट के प्रथम हिस्से (रुमेन) में ही अपघटित हो जाता है।
- ❖ बाइपास प्रोटीन आहार में उपलब्ध प्रोटीन का अधिकांश भाग पेट के प्रथम हिस्से के अपघटन से बच जाता है और आगे के पेट और आंत में पहुँच जाता है जिसके परिणामस्वरूप पशु के शरीर में प्रोटीन का बेहतर उपयोग हो पाता है।
- ❖ प्रोटीन आहार/ खली का रासायनिक उपचार कर बाइपास-प्रोटीन पशु आहार बनाया जा सकता है।

बाइपास-प्रोटीन पशु आहार खिलाने के लाभ

- ❖ कम खर्च में अधिक पौष्टिक आहार मिलता है।
- ❖ आहार में उपलब्ध प्रोटीन का उपयोग बढ़ जाता है।
- ❖ इससे शारीरिक वृद्धि और दुग्ध उत्पादन बढ़ जाता है।
- ❖ यदि सामान्य बाइपास-प्रोटीन पशु आहार उपलब्ध न हो तब दुधारू पशुओं को जो 8 -10 लीटर दूध दे रहे हैं उन्हें 1 किलो उपचारित बाइपास-प्रोटीन खली पूरक के रूप में दिया जा सकता है (1/2 किलो सुबह और 1/2 किलो शाम को)।



बाइपास-प्रोटीन संयंत्र



बाइपास-प्रोटीन पशु आहार

बाइपास-प्रोटीन पशु आहार पोषक तत्वों का एक किफायती स्रोत है।

ड. खनिज मिश्रण खिलाने का महत्त्व

- ❖ खनिज तत्व चयापचय (मेटाबॉलिक) क्रियाओं के लिए महत्त्वपूर्ण है। खनिज मिश्रण में सभी महत्त्वपूर्ण खनिज लवण आवश्यक मात्रा में उपलब्ध होते हैं। क्षेत्र विशिष्ट खनिज मिश्रण को आहार में प्राथमिकता दी जानी चाहिए।

खनिज मिश्रण खिलाने से होने वाले लाभ

- ❖ बछड़े/बछड़ियों की वृद्धि में सहायक है।
- ❖ शरीर में अवशोषित पोषक तत्वों का बेहतर उपयोग होता है।
- ❖ पशुओं का दुग्ध उत्पादन बढ़ता है।
- ❖ प्रजनन क्षमता में सुधार और दो ब्यांत के बीच का अंतराल कम होता है।
- ❖ पशु के उत्पादक जीवन को बढ़ाता है।
- ❖ रोग प्रतिरोधक क्षमता को बढ़ाता है।
- ❖ ब्यांत के आसपास होने वाली चयापचय बीमारियां जैसे कि दुग्ध ज्वर, कीटोसिस, इत्यादि की रोकथाम करता है।



तांबे की कमी से शरीर के बालों के रंग पर प्रभाव



आयोडीन की कमी से थायरॉयड ग्रंथि का आकार बढ़ना और जस्ते की कमी से आँखों में आंसू आना ।



दाएं से बाएं: राजस्थान, कर्नाटक और बिहार की डेरी सहकारी समितियों द्वारा निर्मित क्षेत्र-विशिष्ट खनिज मिश्रण (ए.एस.एम.एम.) ।

आहार संबंधी सुझाव

बछड़ें / बछड़ियां	20 से 25 ग्राम प्रतिदिन प्रतिपशु
बढ़ते हुए पशु तथा वयस्क पशु जो दूध न दे रहे हो	50 ग्राम प्रतिदिन प्रतिपशु
दूध देने वाले पशु	100-200 ग्राम प्रतिदिन प्रतिपशु (दुग्ध उत्पादन के अनुसार) या फिर मिश्रित पशु आहार और कंसन्ट्रेट से उपलब्ध खनिज मिश्रण की मात्रा के आधार पर।

आहार में खनिज की कमी को पूरा करने से दुग्ध उत्पादन और प्रजनन क्षमता सुधरती है।

च. यूरिया मोलासिस मिनरल ब्लॉक (UMMB)- आहार-संपूरक

- ❖ जुगाली करने वाले पशुओं के पेट में एक विशिष्ट भाग होता है, जिसे रुमेन कहते हैं। इसके अंदर बड़ी संख्या में लाभकारी सूक्ष्मजीवाणु होते हैं, जो रेशेदार भोजन के पाचन में सहायक होते हैं।
- ❖ हरे चारे की कमी के दौरान, यूरिया मोलासिस मिनरल ब्लॉक को देने से रुमेन के सूक्ष्मजीवाणुओं की संख्या में वृद्धि होती है जिसके परिणामस्वरूप सूखे चारे का पाचन बढ़ जाता है।

यूरिया मोलासिस मिनरल ब्लॉक को खिलाने से होने वाले लाभ

- ❖ पशु सूखा चारा अधिक अच्छे से खा पाता है और चारे की बर्बादी भी कम हो जाती है।
- ❖ पशु की पाचन शक्ति में सुधार आता है।
- ❖ दुग्ध-उत्पादन तथा दुग्ध-वसा भी बढ़ता है।
- ❖ यह महत्वपूर्ण खनिजों का एक अच्छा स्रोत है।



UMMB ब्लॉक



पशु UMMB चाटते हुए

छ. डेरी पशुओं के लिए पीने के पानी का महत्व

जल निम्न क्रियाओं के लिये आवश्यक है:

- ❖ आहार और चारे को पचाने के लिए।
- ❖ अवशोषित पोषक तत्वों को विभिन्न अंगों तक पहुंचाने के लिए।
- ❖ मूत्र के माध्यम से अवांछनीय और जहरीले (Toxic) तत्वों की निकासी के लिए।
- ❖ शरीर के तापमान को नियंत्रित करने के लिए।

आम तौर पर, एक स्वस्थ वयस्क पशु को 70 से 80 लीटर प्रतिदिन पानी की आवश्यकता होती है। चूँकि दुग्ध में लगभग 85 / 87 प्रतिशत पानी होता है, इसलिए प्रत्येक लीटर दुग्ध उत्पादन के लिए पशु को अतिरिक्त ढाई लीटर पानी की जरूरत पड़ती है।

सुझाव

- ❖ पशुओं के लिये चौबीसों घंटे पीने का साफ पानी उपलब्ध होना चाहिए।
- ❖ गर्मी के दौरान, संकर गायों और भैंसों को दिन में दो बार नहलाना चाहिए और गर्मी से बचाव के लिए लगभग 100 लीटर प्रतिदिन पानी उपलब्ध करवाना चाहिए।

यूरिया मोलासिस मिनरल ब्लॉक को सूखे चारे के साथ खिलाने पर गाय और भैंसों के शरीर की सामान्य जरूरतें पूरी की जा सकती हैं।

ज. गाभिन पशु की देखभाल

- ❖ बछड़ियों के स्वास्थ्य और संतुलित पोषण का समुचित ध्यान रखने से उनके शारीरिक विकास में वृद्धि सुनिश्चित होती है साथ ही वयस्क अवस्था को जल्द प्राप्त किया जा सकता है। इस तरह के पशुओं का समय पर गर्भाधान करके उनसे दो से ढाई साल की आयु में पहली ब्यांत ली जा सकती है।
- ❖ गर्भावस्था के अंतिम तीन महीनों के दौरान भ्रूण तेजी से विकसित होता है, इस समय पशुओं की पर्याप्त देखभाल करने की जरूरत होती है।

सुझाव

- ❖ गर्भावस्था के अंतिम तिमाही में पशु को बहुत दूर तक चराई के लिए नहीं ले जाना चाहिए तथा उबड़-खाबड़ रास्तों से बचाना चाहिए।
- ❖ गर्भावस्था के दौरान दुग्ध दे रहे पशु को 7 वें महीने के बाद 15 दिन की अवधि के भीतर पूरी तरह दुहना बंद कर देना चाहिए।
- ❖ गाभिन पशु को आराम से उठने-बैठने के लिए पर्याप्त जगह होनी चाहिए।
- ❖ गाभिन पशुओं को उपयुक्त आहार देकर ब्यांत के समय होने वाली बीमारियां जैसे कि दुग्ध ज्वर और कीटोसिस की संभावनाओं को घटाया जा सकता है और साथ ही ब्यांत के बाद अच्छा दुग्ध उत्पादन प्राप्त किया जा सकता है।
- ❖ गाभिन पशुओं के लिए कम से कम प्रतिदिन 75 – 80 लीटर ताजा और स्वच्छ पीने का पानी दिनभर उपलब्ध होना चाहिए।
- ❖ गर्भ के 6 – 7 महीने के बाद वयस्क बछड़ी को दुधारू पशुओं के साथ बांधना चाहिए; और उसके शरीर, पीठ और थन की मालिश नियमित रूप से की जानी चाहिए।
- ❖ ब्यांत से 4-5 दिन पहले, पशु को एक अलग स्वच्छ और हवादार क्षेत्र में बांधना चाहिए जहां सूरज की रोशनी उपलब्ध हो। बिस्तर के रूप में धान के भूसे का फैलाव किया जाना चाहिए।

गाभिन पशुओं के दैनिक आहार की जरूरतें

हरा चारा	15 – 20 किलो	खली	1 किलो
सूखा चारा	4 – 5 किलो	खनिज मिश्रण	50 ग्राम
मिश्रित पशु आहार	2 – 3 किलो	नमक	30 ग्राम

गाभिन पशुओं की उचित देखभाल और प्रबंधन, एक स्वस्थ बछड़ा/बछड़ी और अधिक दुग्ध उत्पादन को सुनिश्चित करता है।

झ. ब्याने के बाद पोषण संबंधी देखभाल

- ❖ ब्यांत के तुरंत बाद, गाय / भैंस की भूख कम हो जाती है, जिसकी वजह से वे शरीर की आवश्यकता के अनुरूप नहीं खा पाते हैं।
- ❖ ब्यांत के दौरान गाय / भैंस के शरीर में काफी बदलाव होते हैं, इसलिए ब्यांत के बाद 2 से 3 दिनों के लिए पशु को हल्का, स्वादिष्ट, रेशेदार आहार जैसे कि गर्म चावल का दलिया, उबला हुआ चावल / गेहूं का चोकर, उबला हुआ बाजरा या गेहूं, खाद्य तेल के साथ मिश्रित कर, बाइपास-वसा, गुड़, सोया, हींग, मेथी, काला जीरा, अदरक आदि दिया जाना चाहिए। इस तरह का आहार जेर (गर्भनाल) को शीघ्र गिराने में सहायक है।
- ❖ इसके अलावा, पशु को मुलायम हरा चारा और ताजा पानी जितना पशु पीना चाहे, दिया जाना चाहिए, गर्म पानी न दें।
- ❖ सुनिश्चित करें कि दुग्ध देने वाले पशु को पीने का साफ पानी और आवश्यक मात्रा में क्षेत्र विशिष्ट खनिज मिश्रण निरंतर उपलब्ध हो।



ट्रांजिशन पीरियड (ब्यांत के तीन सप्ताह पूर्व से लेकर ब्यांत के तीन सप्ताह बाद तक) के दौरान उचित खानपान तथा प्रबंधन पशु के दुग्ध उत्पादन की अवधि तथा कुल दुग्ध उत्पादन के लिए अतिमहत्वपूर्ण है।

ज. गाय को दिए जाने वाले पूर्ण मिश्रित आहार के उदाहरण

1. गाय (जिसने दूध देना बंद कर दिया हो) के लिए

घटक	मात्रा (किलो)		
	उदाहरण 1	उदाहरण 2	उदाहरण 3
सूखा चारा	7	7	7
हरा चारा	4	10	4
पशु आहार	2	1	-
खली	-	-	1

* खनिज मिश्रण दर: 50 ग्राम प्रतिपशु प्रतिदिन दिया जाना चाहिए।

2. प्रतिदिन 5 लीटर दूध देने वाली गाय के लिए

घटक	मात्रा (किलो)		
	उदाहरण 1	उदाहरण 2	उदाहरण 3
सूखा चारा	7	7	7
हरा चारा	4	10	4
पशु आहार	4	3	-
खली	-	-	2
गेहूं का चोकर	-	-	1

* खनिज मिश्रण दर: 100 ग्राम प्रतिपशु प्रतिदिन दिया जाना चाहिए।

3. प्रतिदिन 10 लीटर दूध देने वाली गाय के लिए

घटक	मात्रा (किलो)		
	उदाहरण 1	उदाहरण 2	उदाहरण 3
सूखा चारा	7	7	7
हरा चारा	4	10	4
पशु आहार	6	5	-
खली	-	-	3
गेहूं का चोकर	-	-	2

* खनिज मिश्रण दर: 150 ग्राम प्रतिपशु प्रतिदिन दिया जाना चाहिए।

ट. भैंस को दिए जाने वाले पूर्ण मिश्रित आहार के उदाहरण

1. भैंस (जिसने दूध देना बंद कर दिया हो) के लिए

घटक	मात्रा (किलो)		
	उदाहरण 1	उदाहरण 2	उदाहरण 3
सूखा चारा	6	6	6
हरा चारा	2	4	10
पशु आहार	-	-	1
खली	2	-	-
गेहूं का चोकर	-	3	-

* खनिज मिश्रण दर: 75 ग्राम प्रतिपशु प्रतिदिन दिया जाना चाहिए।

2. प्रतिदिन 5 लीटर दूध देने वाली भैंस के लिए

घटक	मात्रा (किलो)		
	उदाहरण 1	उदाहरण 2	उदाहरण 3
सूखा चारा	7	6	7
हरा चारा	5	10	2
पशु आहार	5	5	-
खली	-	-	3
गेहूं का चोकर	-	-	1

* खनिज मिश्रण दर: 125 ग्राम प्रतिपशु प्रतिदिन दिया जाना चाहिए।

3. प्रतिदिन 10 लीटर दूध देने वाली भैंस के लिए

घटक	मात्रा (किलो)		
	उदाहरण 1	उदाहरण 2	उदाहरण 3
सूखा चारा	7	7	7
हरा चारा	10	15	5
पशु आहार	6	7	-
खली	2	-	5
गेहूं का चोकर	-	-	3

* खनिज मिश्रण दर: 175 ग्राम प्रतिपशु प्रतिदिन दिया जाना चाहिए।

अनुभाग - II

चारा उत्पादन

चारा उत्पादन डेरी व्यवसाय को लाभकारी बनाने में सहयोग करने वाली सबसे अधिक महत्वपूर्ण गतिविधियों में से एक है। यह प्रायः अत्यधिक उपेक्षित क्रियाओं में से भी एक है। चारा पोषक तत्वों का एक किफायती स्रोत है, जोकि पशुओं द्वारा अत्यधिक पसंद किया जाता है। यदि किसान मौसमी और बहुवर्षीय चारा फसलों के उचित फसल चक्रों को अपनाएं तथा अधिक मात्रा में उपलब्ध हरे चारे को अधिकता के समय पर सही ढंग से संरक्षित करके अभाव के दौरान उपयोग करें तो वर्षभर चारे की आपूर्ति सुनिश्चित की जा सकती है। बहुत सी प्रक्रियाओं द्वारा यह किया जा सकता है।

हमारे देश में अधिकतर किसान पशुपालन के लिए फसल अवशेषों पर निर्भर रहते हैं। परंतु, इन फसल अवशेषों में पोषक तत्वों की मात्रा बहुत कम होती है जिसकी वजह से फसल अवशेषों को पशुओं को खिलाने से पूर्व उपचारित करने की आवश्यकता है जिससे इनके स्वाद एवं पाचन को बढ़ाया जा सके। इस अनुभाग में निम्न अध्यायों को सम्मिलित किया गया है :

- क. दूध उत्पादन में हरे चारे का महत्व
- ख. चारा संरक्षण
- ग. फसल अवशेषों का यूरिया उपचार
- घ. चारा काटने तथा इकट्ठा करने के कृषि यंत्र
- ड. भारत में महत्वपूर्ण फसलों को उगाने की विधियां

क. दूध उत्पादन में हरे चारे का महत्व

हरा चारा दुधारु पशुओं के लिए पोषक तत्वों का एक किफायती स्रोत है। यह अत्यधिक स्वादिष्ट तथा सुपाच्य होता है। हरे चारे में उपस्थित सूक्ष्म जीव मिश्रित भोजन व्यवस्था के अंतर्गत फसल अवशेषों की पाचनशीलता को बेहतर करने में मदद करते हैं। यह पशुओं की प्रजनन क्षमता को बेहतर करने तथा अच्छे स्वास्थ्य को बनाए रखने में भी मदद करता है। पशुओं की खुराक में हरे चारे का ज्यादा इस्तेमाल दूध उत्पादन के खर्च को कम कर सकता है।

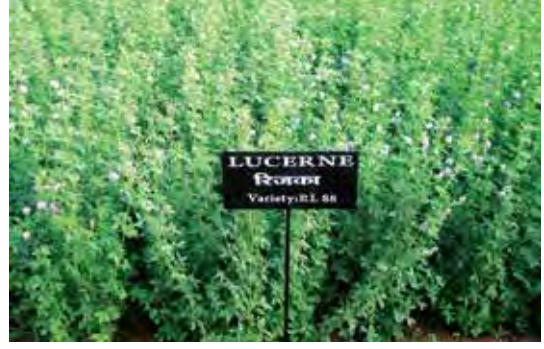
हरे चारे की मांग और उपलब्धता के बीच के अंतर को कम करने के लिए, बेहतर चारा बीजों के अधिक इस्तेमाल से हरे चारे की उत्पादकता को बढ़ाने की आवश्यकता है। वर्षभर हरा चारा उत्पादन सुनिश्चित करने के लिए, किसानों को निम्नलिखित कृषि विधियों को अपनाने की आवश्यकता है :

- ❖ हमेशा चारा फसलों की अधिक उपज देने वाली उन्नत किस्मों के प्रमाणित या सत्यापित बीज / रोपड़ सामग्री का इस्तेमाल करें
- ❖ चारा उत्पादन के लिए संस्तुति की गई कृषि विधियों जैसे कि खेत की तैयारी, समय से बुवाई, उर्वरकों का प्रयोग, सिंचाई, खरपतवार तथा कीट नियंत्रण और समयबद्ध कटाई का इस्तेमाल करें।
- ❖ दो प्रमुख मौसमी फसलों के बीच में चारा फसलों की कम समय में पकने वाली किस्में जैसे कि मक्का, सूरजमुखी, चायनीज कैबेज, शलजम, लोबिया इत्यादि को बोएं।
- ❖ अन्न चारा फसलों जैसे कि मक्का, बाजरा और ज्वार को दलहनी चारा फसलों जैसे कि लोबिया, ग्वार, वैलवेट बीन के साथ उगाएं।
- ❖ अधिक उपज देने वाली बहुवर्षीय, एक से अधिक कटाई वाली फसलें जैसे संकर नेपियर घास को खेत तथा अन्य फसलों के खेतों की मेंटों पर भी उगाएं।
- ❖ छाया से सहनशील फसल, गिनी घास को दलहनी चारा फसलों जैसे की स्टाईलो, सिराट्रो के साथ मिश्रित फसल व्यवस्था में बगीचे में पेड़ों के बीच लगाएं।
- ❖ चारे की आदर्श उत्पादकता तथा गुणवत्ता पाने के लिए एक से अधिक बार कटाई देने वाली फसलों को नियमित अंतराल (30 से 45 दिन) पर जमीन से 10 सेमी. की ऊंचाई पर काटें।
- ❖ सामुदायिक / परती / बंजर भूमि पर चराई के लिए सूखे से सहनशील बहुवर्षीय घासों जैसे कि अंजन घास, सेवन घास, रोडस घास तथा चारा वृक्ष जैसे कि देशी बबूल, नीम, शीशम, कंचन, अरडू, खेजड़ी, सुबबूल, सहजन और गिलिरीसिडीया उगाएं।
- ❖ आगे पृष्ठ पर कुछ मुख्य चारा फसलों और वृक्षों के चित्र दिए गए हैं।

मुख्य चारा फसलें



चारा मक्का किस्म अफ्रीकन टॉल



रिजका



जई



बहु-कटाई वाली संकर ज्वार सुडान घास (एस.एस.जी.)



चारा बाजरा - जी.एफ.बी.-1



जॉब टियर्स- कोक्स



बरसीम-वरदान



सूरजमुखी

हरा चारा खिलाना किफायती दुग्ध उत्पादन की कुंजी है

मुख्य चारा फसलें



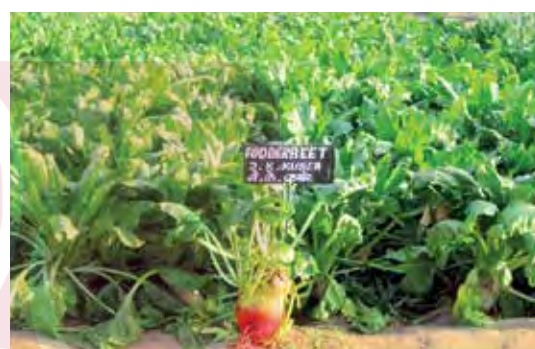
वेलवट बीन



चीकोरी



लोबिया



चारा चुकंदर



सकंर नेपियर घास किस्म को-4



मीठी सुडान घास (बहु-कटाई)



मकचरी



ज्वार का लोबिया के साथ मिश्रण

हरा चारा खिलाना किफायती दुग्ध उत्पादन की कुंजी है

मुख्य चारा फसलें



अंजन घास



क्लार्डटोरिया टरनेटिया (अपराजिता)



जौ की हरा चारा किस्म - आर.डी. 2715



कोंगो सिग्नल घास



धामन घास



गिनी घास



चारा सरसों - चाइनीज केबेज



नंदी घास

हरा चारा खिलाना किफायती दुग्ध उत्पादन की कुंजी है

मुख्य चारा फसलें



ग्रीन पेनिक घास



पैरा घास



रोडस घास



राइसबीन



शेवरी (सेसबेनिया सेसबन)



सिराट्रो



स्टाइलो हामाटा



दशरथ घास (हैज लूसर्न)

हरा चारा खिलाना किफायती दुग्ध उत्पादन की कुंजी है

मुख्य चारा फसलें



स्टाइलो स्कैब्रा



चारे के लिए चुकंदर

मुख्य चारा वृक्ष



कंचन (बहुनिया परपूरिआ)



महरुख / अरदु (एलैथस एक्सेलस)



सुबबूल (लूसिना ल्यूकोसिफाला)



गिलिरीसिडिया (गिलिरीसिडिया सेपियम)



खेजरी (प्रोसोपिस सिनेरेरिया)



अगस्ति (सेसबेनिया ग्रांडीफ्लोरा)

हरा चारा खिलाना किफायती दुग्ध उत्पादन की कुंजी है

ख. चारा संरक्षण

पशुओं की दूध उत्पादन क्षमता के दोहन के लिए दुधारू पशुओं को वर्षभर गुणवत्तायुक्त चारा खिलाना आवश्यक है। सामान्यतः सिंचाई की परिस्थिति में हरा चारा कुछ महीनों जैसे कि सितम्बर / अक्टूबर (मॉनसून मौसम) तथा फरवरी / मार्च (रबी मौसम) में प्रचुर मात्रा में उपलब्ध होता है, जबकि इसकी उपलब्धता गर्मी के महीनों में सीमित होती है। अतिरिक्त हरे चारे को हे तथा साईलेज के रूप में संरक्षित किया जा सकता है, जिससे हरे चारे की बर्बादी को कम करके, कमी के दिनों में आपूर्ति की जा सके।

हे निर्माण

हे, धूप में सुखाया हुआ हरा चारा है जिसमें 15 प्रतिशत से कम नमी होती है। यह कमी के दिनों में दुधारू पशुओं के लिए पाचनशील शुष्क पदार्थ और अपरिष्कृत प्रोटीन का अच्छा स्रोत है। सर्वश्रेष्ठ गुणवत्ता वाला हे, ऊष्ण और शुष्क, गर्मी के महीनों, मार्च से मई में पतले तने वाली चारा फसलों जैसे कि रिजका, जई तथा मीठी सुडान घास द्वारा तैयार किया जाता है। कुछ बहुवर्षीय चारा घासों जैसे कि गिनी घास, रोडस घास, अंजन / धामन घास, ब्लूपेनिक घास भी हे बनाने के लिए उपयुक्त हैं।

सर्वश्रेष्ठ गुणवत्ता वाले हे के लिए, इन फसलों को 50 प्रतिशत फूल खिलने की अवस्था में काटना चाहिए। कटाई के बाद हरे चारे को सूखी सतह पर समान रूप से 5 सेमी. मोटी परत में धूप में सूखने के लिए फैलाना चाहिए। जल्दी और समान रूप से सुखाने के लिए प्रत्येक सुबह 10 बजे के बाद चारे को हाथों / मशीन से पलटना चाहिए। 4 से 5 दिन बाद, जब चारे में नमी 15 प्रतिशत से कम पहुंच जाए, तो हे को इकट्ठा करके भंडारण के लिए गठरी बना ली जाती है। सुखाने के दौरान ध्यान रखना चाहिए कि हे हरा रंग व पत्तियों को ना खोए, यह अच्छी गुणवत्ता वाले हे का संकेत देती है।

हे के इन बंडलों को लम्बे समय तक गुणवत्ता बरकरार रखने के लिए नमी व धूल से मुक्त जगहों जैसे कि बंकर / गोदामों में भंडारण करना चाहिए। हे को 5 किलो प्रतिपशु प्रतिदिन की दर से कुट्टी करके या कुट्टी किए बिना खिलाया जा सकता है।



हरे चारे को धूप में सुखाना



हे बंडल

हे - हरे चारे की कमी के दिनों में हरे चारे का एक विकल्प।

साईलेज निर्माण

यह हरे चारे के अचार के नाम से भी जाना जाता है। यह सुपाच्य और अत्यधिक स्वादिष्ट होता है। सर्वश्रेष्ठ गुणवत्ता वाला साईलेज अन्न चारा फसलों जैसे कि मक्का, ज्वार, जई तथा जौ द्वारा बनाया जा सकता है जो कार्बोहाइड्रेट्स / शर्करा में प्रचुर होते हैं। साईलेज बनाने के लिए हरे चारे की फसल को दुग्ध अवस्था से अधपकी अवस्था पर काटा जाना चाहिए, जिसमें नमी 65-70 प्रतिशत तक हो। कटाई के बाद हरे चारे को साईलो पिट में भरने के लिए 1-2 इंच के टुकड़ों में कुट्टी करना चाहिए।

साईलेज भंडारण संरचना (साईलो पिट) को साईलेज निर्माण से पहले निर्मित कर लेना चाहिए। सतही साईलो एक आदर्श भंडारण संरचना है तथा पानी के प्रभाव को कम करने के लिए ऊंची सतह पर बनाना चाहिए। साईलो पिट का माप साईलेज की मात्रा पर निर्भर करता है। एक घन मीटर क्षेत्रफल का साईलो पिट (1 मीटर x 1मीटर x 1मीटर) 500 से 600 किलोग्राम कुट्टी किए हुए चारे का साईलेज बनाने के लिए उपयुक्त होता है।

कुट्टी किया हुआ चारा 10 सेमी. की प्रत्येक परत में कसकर दबा के भरा जाता है। छोटे साईलो में चारे को पैरों से और बड़े साईलो में ट्रैक्टर द्वारा दबाया जा सकता है। साईलो पिट के पूरी तरह भर जाने पर साईलेज के ढेर को पॉलिथीन की परत से ढक कर तथा 5 इंच मोटी मिट्टी की सतह से अच्छी तरह बंद कर देना चाहिए। बाद में, यदि मिट्टी की बंद परत में कुछ दरारें दिखाई देती हैं, तो इन्हे बंद करने के लिए सतह पर कुछ और मिट्टी डालनी चाहिए। साईलेज निर्माण में अन्य पदार्थों के इस्तेमाल से बचना चाहिए। परंतु, यदि चारा सही अवस्था पर नहीं काटा गया है तो, उपयुक्त मात्रा में शीरा / साधारण नमक / यूरिया / फार्मिक अम्ल का इस्तेमाल पिट में चारा भरने के समय किया जा सकता है।

45 दिनों के बाद साईलेज पशुओं को खिलाने के लिए तैयार हो जाता है। जब हरे चारे की कमी होती है, साईलो पिट को एक तरफ से खोल कर पशुओं की दैनिक आवश्यकता के अनुसार साईलेज निकाला जा सकता है। प्रत्येक दिन साईलेज निकालने के बाद इसको पॉलिथीन की परत से अच्छी तरह ढक सकते हैं। यद्यपि, शुरुआत के 3-4 दिन तक पशुओं को साईलेज के भोजन की खुराक के अनुकूल करने के लिए इसकी खुराक को 5-10 किलो प्रतिपशु प्रतिदिन तक सीमित रखते हैं।



कुट्टी किया हुआ चारा



साईलो पिट में चारे को भरना एवं कसकर दबाना



पूरी तरह से ढका साईलो पिट

ग. फसल अवशेषों का यूरिया उपचार

यह भली-भांति से ज्ञात है कि पशुओं के दूध उत्पादन और स्वास्थ्य को बनाए रखने के लिए हरा चारा, पशु आहार और सूखे चारे का मिश्रण आदर्श पोषण स्रोत हैं। परंतु कभी-कभी उपयुक्त मात्रा में हरे चारे की अनुपलब्धता और पशु आहार के अधिक मूल्य की वजह से किसान को दुधारू पशुओं के पोषण की आवश्यकताओं को पूरा करने में परेशानी होती है। सामान्यतः किसान के पास धान, गेहूँ, बाजरा, और ज्वार का भूसा उपयुक्त मात्रा में उपलब्ध होता है, परंतु यह भूसा पोषक तत्व रहित और कम पाचनशील होता है। भूसे में 4 प्रतिशत से कम प्रोटीन होता है। भूसे का यूरिया उपचार इसके प्रोटीन तत्व को लगभग 8 प्रतिशत तक बढ़ाकर इसकी पोषकता को बढ़ाता है। यूरिया उपचारित भूसे की खुराक पशु आहार की आवश्यकता को 30 प्रतिशत तक कम कर सकती है।

भूसा उपचारण विधि

1. एक समय में कम से कम 1 टन भूसा उपचारित करना चाहिए। हमें 1 टन भूसा उपचारण के लिए 40 किलो यूरिया और 400 लीटर पानी की आवश्यकता होती है।
2. 4 किलो यूरिया 40 लीटर पानी में घोलें।
3. 3-4 इंच मोटी सतह बनाने के लिए 100 किलो भूसा फर्श पर फैलाएं।
4. 40 लीटर तैयार यूरिया घोल को छिड़काव यंत्र की सहायता से छिड़कें, इसके बाद भूसे को पैरों द्वारा इस पर चलकर दबाएं।
5. इस दबे हुए भूसे के ऊपर दूसरा 100 किलो भूसा फैलाएं और दूसरा 40 लीटर यूरिया घोल, दोबारा 4 किलो यूरिया 40 लीटर पानी में घोलकर तैयार करें, भूसे की दूसरी परत पर तैयार यूरिया घोल का छिड़काव करें और भूसे की उपचारित परत पर चलकर दबाने की प्रक्रिया को दोहराएं, इसी तरह भूसे की 10 परतों को फैलाकर, इस पर 4 प्रतिशत यूरिया घोल का छिड़काव करके और पैरों द्वारा दबाकर 10 बार दोहराएं।
6. उपचारित भूसे के ढेर को नई प्लास्टिक की परत से ढकें और जिस जगह पर यह जमीन को छूती है वहाँ मिट्टी से ढकें जिससे अंदर बनी अमोनिया गैस बाहर न जा सके।
7. यदि प्लास्टिक की चादर उपलब्ध न हो तो, सूखे भूसे से, उपचारित भूसे के ढेर को ढकें, इसके बाद कुछ मिट्टी फैलाकर इसको गीली चिकनी मिट्टी या गोबर की परत से वायुरहित बनाने के लिए ढकें।

सावधानियां

- ❖ कभी भी पशुओं को यूरिया या यूरिया घोल सीधे न खिलाएं, यूरिया अपने आप में पशुओं के लिए जानलेवा होता है ।
- ❖ भूसा उपचारित करते समय, यूरिया घोल को बच्चों की पहुंच से दूर रखें ।
- ❖ भूसा उपचारण के लिए पक्का फर्श अधिक उपयुक्त होता है, यदि फर्श कच्चा है तो भूसे की पहली परत फैलाने से पहले एक प्लास्टिक की चादर का प्रयोग करें ।
- ❖ भूसा उपचारण बंद कमरे में या कोने वाले स्थान में करना ज्यादा सुविधाजनक होता है ।
- ❖ उपचारित भूसे को गर्मियों में 21 व सर्दियों में 28 दिनों के बाद खोलना चाहिए । अमोनिया गैस को निकालने के लिए भूसे को खिलाने से पहले खुले वातावरण में फैलाना चाहिए ।
- ❖ उपचारित भूसे को खिलाने की शुरुआत थोड़ी मात्रा के साथ करनी चाहिए । धीरे-धीरे पशुओं को इसकी आदत पड़ जाती है और वह इसका स्वाद पसंद करने लगते हैं ।

फसल अवशेषों का यूरिया उपचार



यूरिया व पानी की उचित मात्रा लें



भूसे की सही मात्रा लें

फसल अवशेषों का यूरिया उपचार



सही ढंग से दबाएं और बंद करें



सही ढंग से मिश्रण बनाएं



सील खोलने के बाद उपचारित भूसा

यूरिया उपचारण भूसे के पोषक तत्वों को बढ़ाता है

घ. चारा काटने और इकट्ठा करने के यंत्र



क

ऑटो पिक-अप बेलर



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फ्लेल मोअर, चौपर लोडर



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रीपर बाइंडर मोअर



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रैक (फैले हुए चारे को इकट्ठा करने का यंत्र)

मजदूरों की कमी के कारण कई किसान खाद्यान्न फसलों जैसे कि गेहूँ, धान, मक्का, तिलहनी फसलें, दलहनों के प्रबंधन के लिए दाना काटने की मशीन / उठाने की मशीन को अधिकता से अपना रहे हैं, जिसकी वजह से सूखे चारे के जैव भार का अत्यधिक नुकसान हो रहा है, जो कि हाथ से कटाई करने पर दुधारू पशुओं के लिए उपलब्ध होता था। चारे की बर्बादी को कम करने के लिए, किसानों को मशीन से अनाज काटने के बाद चारे और भूसे की बहाली के प्रभावशाली प्रबंधन के लिए चारा काटने और स्वतः उठाने के यंत्रों को उपयोग में लाना होगा। मोअर चारा और भूसा काटने वाले तेज गति के यंत्र हैं, जिनके अंदर गाहने / कुट्टी करने / टूट्टी में भरने / तना तोड़ने / अनुकूलन का विकल्प सन्निहित होता है। यह भूसा बहाली, साईलेज निर्माण, हे निर्माण, जमीन पर घास फैलाने के लिए, जैविक खाद बनाने के लिए सबसे अधिक किफायती यंत्र है। मोअर को चारा प्रबंधन मशीन के नाम से भी जाना जाता है, जो सही अवस्था पर कटाई से अधिक प्रोटीन और अधिक ऊर्जा बहाली, भंडारण, लेन-देन, और दीर्घकालिक भंडारण के लिए गहन चारा उत्पादन में इस्तेमाल किया जाता है।

विभिन्न फसलों के मौसम, फसल की कठोरता, कोमलता, मोटापन, लम्बाई और नमी पर निर्भर करते हुए अलग-अलग प्रकार के मोअर तैयार किए जाते हैं। निम्नलिखित तीन प्रकार के भूसा संरक्षण और चारा प्रबंधन करने वाले यंत्र निकट भविष्य में अत्यधिक उपयोगी होंगे।

क) ऑटो पिक-अप बेलर (फोटो क)

ख) फ्लेल मोअर, चौपर लोडर (फोटो ख)

ग) रीपर बाइंडर मोअर (फोटो ग)

घ) रैक (फैले हुये चारे को इकट्ठा करने का यंत्र) (फोटो घ)

चारा काटने और इकट्ठा करने वाले यंत्र

- क) **ऑटो पिक-अप बेलर 50-75 एच.पी.** ट्रैक्टर से चलता है। यह लगभग 1500 से 1800 मिमी. चौड़ी घास की पट्टी को उठाता है। यह मशीन फसल व घास की पट्टी पर निर्भर करते हुए लगभग 1-2 मीट्रिक टन भूसा या हे उठाती है। गठरी का वजन 10 से 20 किलो तक व्यवस्थित किया जा सकता है। छोटी गठरियां संचालन में आसान होती हैं तथा असानी और कम मेहनत के साथ भंडारण गृह तक ले जाई जा सकती हैं। खेत में गठरी बनाने के बाद चारे को लाना, ले जाना और भंडारण अधिक सुविधाजनक हो जाता है। गठरी बनाने के बाद आगे का परिवहन और वितरण काफी आसान हो जाता है। मशीन से कटाई के पश्चात कम ऊंचाई वाली किस्मों के बचे हुए भूसे से सीधे बंडल / गठुर बना सकते हैं। परंतु अधिक ऊंचाई वाले चारे की गठरी बनाने से पहले अतिरिक्त चक्के या ड्रम या दरांती किस्म का मोअर आवश्यक है। ज्यादा नमी वाले चारे (भूसे) का प्रबंधन करने के लिए हमें दूसरी मशीन चाहिए जो कलैक्शन इवर्जन कम लाइनर रैक (फोटो: ग) कहलाती है, ताकी गठरी बनाने से पहले चारे (भूसा) को सुखाया जा सके। गठरी बनाने की मशीन लगभग सभी तरह के चारे पर कार्य कर सकती है। 75 एच.पी. ट्रैक्टर चलित बेलर मशीन प्रयोग में लेने पर एक दिन में लगभग 20 मीट्रिक टन भूसे को इकट्ठा किया जा सकता है। वर्तमान में भूसे और हे की गठरी बनाने की मशीन के बहुत से अंतरराष्ट्रीय ब्रांड भारत में उपलब्ध हैं, क्लास, न्यू हॉलैंड, जॉन डियर, कुहन अग्रणी दावेदारों में से एक हैं।
- ख) **फ्लेल मोअर, चौपर लोडर भी 50 से 75 एच.पी.** ट्रैक्टर द्वारा चालित होता है। यह लगभग 1300 से 1900 मिमी. चौड़ाई की घास की पट्टी को उठाता है। फसल की ऊंचाई और पट्टी की चौड़ाई पर निर्भर करते हुए इस मशीन द्वारा लगभग 2 से 3 मीट्रिक टन भूसा उठाया जा सकता है। किसान की विशेष आवश्यकतानुसार मशीन के पास चारे को धूप से सुखाने के लिए वापस खेत में फैलाने या पलवार करने के विकल्प उपलब्ध हैं। अधिक नमी वाले चारे को एकत्रित करने के लिए इवर्जन कम लाइनर रैक भी चाहिए ताकि इकट्ठा करने और भंडारण करने से पहले चारे को धूप में सुखाया जा सके। मशीन लगभग सभी तरह के चारे पर कार्य कर सकती है। कुट्टी करने और चटकाने का कौशल सन्निहित होने के कारण मोअर तेज गति से साईलेज और हे बनाने का अतिरिक्त लाभ सुनिश्चित करता है। इस मोअर से एक दिन में लगभग 20 मीट्रिक टन कटा हुआ भूसा उठाया जा सकता है। फ्लेल मोअर में इस्तेमाल किया गया यंत्र साधारण परंतु अच्छा और मजबूत है। इसलिए, कम निपुणता वाले किसान और चालक भी इस तरह के भूसा बहाली मोअर को चला सकते हैं। भारत में फ्लेल मशीन के अग्रणी दावेदार फीमैक्स, जॉन डियर, न्यू हॉलैंड हैं।
- ग) **कम्बाईन प्रीवेंशन / रिवर्सल मोअर (रीपर बाइंडर) -** वर्तमान में इस वर्ग में कई तरह के छोटे फसल मोअर मौजूद हैं। 10 एच.पी. डीजल इंजन के साथ स्वतः चलने वाला रीपर बाइंडर चारे के साथ-साथ अन्न फसलों जैसे कि गेहूँ, धान, वर्षाधारित ज्वार, बाजरा, दलहनों, तिलहन इत्यादि में बहुपयोगी कार्यक्षमता की वजह से लोकप्रियता अर्जित कर रहा है। मशीन फसल को लगभग सतह के पास से सिर्फ 60 मिमी. ऊपर से काटती है, अतः 100 प्रतिशत भूसा बहाली का भरोसा दिलाती है। रीपर बाइंडर द्वारा बनायी गई गठरियां पूर्णतया स्वचलित (मजदूर मुक्त) और अधिक सुविधाजनक होती हैं। भारत में बी.सी.एस. और जशोदा, रीपर बाइंडर के लिए सर्वश्रेष्ठ आपूर्तिकार हैं। मोअर मशीन एक दिन में लगभग 8 एकड़ फसल की कटाई कर सकती है।

ड. भारत में महत्वपूर्ण चारा फसलों की कृषि विधियां
गर्मी/ खरीफ फसलें

फसल	मृदा प्रकार	उच्च उपज वाली किस्में	बुवाई का समय	बीज दर (किग्रा/ हे.)	पंक्तियों के बीच की दूरी (सेमी.)	उर्वरक दर (किग्रा/हेक्टर)	सिंचाई की संख्या	कटाई का समय (दिनों में)	प्रतिवर्ष कटाई की संख्या	चारा उपज (टन/ हे.)
ज्वार (एक-कटाई)	बलुई-दोमट से चिकनी- दोमट	एच.सी.-308 एच.जे. 513, एच.जे. 541 सी.एस.वी.21एम.एफ पंत चरी-5	जून-जुलाई (उत्तर भारत) फरवरी-नवम्बर (दक्षिण भारत)	25-30	30-40	नत्रजन-90 फास्फोरस- 30	2-3	80-90 पछेती किस्मों के लिए तथा 65-57 अगोती किस्मों के लिए	1	30-50
ज्वार (बहु-कटाई)	बलुई-दोमट से चिकनी- दोमट	एस.एस.जी.-898 सी.एस.एच.24एम.एफ. सी.एस.एच.20एम.एफ. को.एफ.एस.29, पंत चरी-6 को-31	मार्च-जुलाई (उत्तर भारत) फरवरी-नवम्बर (दक्षिण भारत)	25-30	30-40	नत्रजन-60 फास्फोरस- 30 तथा 30 किग्रा नत्रजन प्रत्येक कट के बाद	5-6	पहली कटाई 60 दिनों पर और बाकी 45 दिनों के अंतराल पर	3-4 6-7 को.एफ. एस.29 के संदर्भ में	70-90
मक्का	बलुई-दोमट से चिकनी- दोमट अच्छी जल निकासी	अप्रोकन टॉल जे.-1006 प्रताप मक्का चरी-6 विजय कम्पोजिट	मार्च-अगस्त (उत्तर भारत) फरवरी-नवम्बर (दक्षिण भारत)	60-80	30-40	नत्रजन-80 फास्फोरस-40	3-4	75-80	1	35-55

फसल	मृदा प्रकार	उच्च उपज वाली किस्में	बुवाई का समय	बीज दर (किग्रा/ है.)	पंक्तियों के बीच की दूरी (सेमी.)	उर्वरक दर (किग्रा/हैक्टर)	सिंचाई की संख्या	कटाई का समय (दिनों में)	प्रतिवर्ष कटाई की संख्या	चारा उपज (टन/ है.)
बाजरा	बलुई-दोमट	ए.वी.के.बी.-19 जी.एफ.बी.-1 एफ.बी.सी.-10 बायफ बाजरा-1	मार्च-जुलाई	8-10	30-40	नत्रजन-40 फास्फोरस-20	2-3	प्रथम कटाई 50 दिनों पर बाकी 35 दिनों के अंतराल पर	3-4	25-50
मकचरी	बलुई-दोमट से चिकनी- दोमट	टी.एल.-1	जुलाई	30-40	40-45	नत्रजन-90 फास्फोरस-30	2-3	75 दिनों की अवस्था पर	1	35-40
लोबिया	बलुई से दोमट	यू.पी.सी.-8705 यू.पी.सी.-618 यू.पी.सी.-625 यू.पी.सी.-622	मार्च-जुलाई	30-35	30-45	नत्रजन-30 फास्फोरस-40	2-3	60-80	1	25-30
राईस बीन	बलुई-दोमट से चिकनी- दोमट	बिधान-1 के.आर.बी.-4	अप्रैल से आगस्त	20-25	30-35	नत्रजन-30 फास्फोरस-40	2-3	70-90	1	20-25
ग्वार	बलुई से चिकनी- दोमट	एच.एफ.जी.-156, ग्वार-80, बुंदेल ग्वार-1,2,3	अप्रैल से आगस्त	25-30	30-35	नत्रजन-30 फास्फोरस-40	2-3	60-75	1	20-30

भारत में महत्वपूर्ण चारा फसलों की कृषि विधियां
सर्दी / रबी फसलें

फसल	मृदा प्रकार	उच्च उपज वाली किस्में	बुवाई का समय	बीज दर (किग्रा/हेक्टर)	पंक्तियों के बीच की दूरी (सेमी.)	उर्वरक दर (किग्रा/हेक्टर)	सिंचाई की संख्या	कटाई का समय (दिनों में)	प्रतिवर्ष कटाई की संख्या	चारा उपज (टन / है.)
बरसीम	दोमट से चिकनी दोमट	बुंदेल बरसीम-3 वरदान, जे.बी.-1, बी. एल.-1, 10, 42, मसकावी	अक्टूबर- नवंबर	25	20-30	नत्रजन-30 फास्फोरस- 60 पोटाश- 40	10-15	प्रथम कटाई 60 दिन पर बाकी 25 दिन के अंतराल पर	5-6	70-110
लूसर्न	बलुई-दोमट	आनंद-2 (वार्षिक) आर.एल.-88 और आनंद-लूसर्न-3 (बहुवर्षीय)	अक्टूबर- नवंबर	25	20-30	नत्रजन-30 फास्फोरस- 80 पोटाश- 40	10 (वार्षिक) 15 (बहुवर्षीय)	प्रथम कटाई 50 दिन पर बाकी 30 दिन के अंतराल पर	5-6 (वार्षिक) 8 (बहुवर्षीय)	60-80 (वार्षिक) 80-110 (बहुवर्षीय)
जई	बलुई-दोमट से दोमट	ओ.एल.-10 केंट, यू.पी.ओ.-212, हरिता, आर.ओ.-19, बुंदेल जई 2004 एन.डी.ओ.-1	अक्टूबर- नवंबर	80-100	20-25	नत्रजन-80 फास्फोरस- 40	3-4	प्रथम कटाई 60 दिन पर दूसरी कटाई 50 प्रतिशत फूल खिलने की अवस्था पर	1-2	30-45
चारा सरसों	बलुई-दोमट से दोमट	चाईनीज कैबेज	सितम्बर- नवंबर	6-8	30-40	नत्रजन-60 फास्फोरस- 30	2-3	50 प्रतिशत फूल खिलने की अवस्था पर	1	25-30
चारा चुकंदर	दोमट	जैमोन, जे.के.कुंभर	नवंबर- दिसम्बर	3	50	नत्रजन-120 फास्फोरस- 60 पोटाश- 40	8	100 दिन के बाद जड़ों की खुदाई	1	75-100

भारत में महत्वपूर्ण चारा फसलों की कृषि विधियाँ
बहुवर्षीय घासों / चारागाह के लिए दलहनी चारे / चारा वृक्ष

फसल	मृदा प्रकार	उच्च उपज वाली किस्में	बुवाई का समय	बीज दर (किग्रा/हेक्टर)	पत्तियों / पौधों के बीच की दूरी (सेमी.)	उर्वरक दर (किग्रा/हेक्टर)	सिंचाई की संख्या	कटाई का समय (दिनों में)	प्रतिवर्ष कटाई की संख्या	चारा उपज (टन / है.)
संकर नेपियर घास	बलुई-दोमट से चिकनी-दोमट	को.-3,4, पी. बी.एन.-233, बी.एन.एच.10, ए.पी.बी.एन.-1,	मार्च-अक्टूबर (उत्तर भारत) वर्षभर (दक्षिण भारत)	20000 जड़ / तने के टुकड़े	100 X 50	गोबर की खाद 15 टन नत्रजन-50 फास्फोरस- 80 पोटाश- 60 बुवाई के समय नत्रजन-50 प्रत्येक कटाई के बाद	प्रत्येक 15-20 दिन के अंतराल पर	पहली कटाई, बुआई के 90 दिन बाद बाकी कटाई 45 से 60 दिन के अंतराल पर	7-8	200-350
गिनी घास	बलुई-दोमट से चिकनी-दोमट	को.-2, पी.जी. जी.-518,616, बुंदेल गिनी- 1	मार्च-अगस्त (उत्तर भारत) वर्षभर (दक्षिण भारत)	40000 जड़ / तने के टुकड़े या 3-4 किग्रा बीज प्रति हेक्टेयर	50 X 50	गोबर की खाद 10 टन नत्रजन-50 फास्फोरस- 60 पोटाश- 40 बुवाई के समय नत्रजन-30 प्रत्येक कटाई के बाद	प्रत्येक 30-35 दिन के अंतराल पर	पहली कटाई, बुआई के 75 दिन बाद बाकी कटाई 45 दिन के अंतराल पर	7-9	100-120
अंजन घास	बलुई से बलुई-दोमट	बुंदेल अंजन-1,3 काजरी-78	मार्च-सितम्बर (दक्षिण भारत) जून-जुलाई (उत्तर भारत)	5-6 किग्रा / हेक्टेयर बीज	45 X 30	नत्रजन-40 फास्फोरस- 30 पोटाश- 30 बुवाई के समय	वर्षा-आधारित	पहली कटाई, बुआई के 60 दिन बाद बाकी कटाई 50 प्रतिशत फूल आने की अवस्था पर	3-4	10-12
पैरा घास	दोमट से चिकनी-दोमट	लोकल	जुलाई-अगस्त	5-6 किंटल तने के टुकड़े	50 X 50	गोबर की खाद 10 टन नत्रजन-25 प्रत्येक कटाई के बाद	वर्षा-आधारित	पहली कटाई, बुआई के 75 दिन बाद बाकी कटाई 30 दिन के अंतराल पर	6-8 (उत्तर भारत) 8-10 (दक्षिण भारत)	18-25

फसल	मृदा प्रकार	उच्च उपज वाली किस्में	बुवाई का समय	बीज दर (किग्रा/हेक्टर)	पत्तियों / पौधों के बीच की दूरी (सेमी.)	उर्वरक दर (किग्रा/हेक्टर)	सिंचाई की संख्या	कटाई का समय (दिनों में)	प्रतिवर्ष कटाई की संख्या	चारा उपज (टन / है.)
स्टार्डलो	दोमट से बलुई-दोमट	वेरनो, स्काब्रा, हमटा, सीब्रेना	जून-जुलाई (उत्तर भारत) मार्च-सितम्बर (दक्षिण भारत)	6-8	30 X 40	नत्रजन-25 फास्फोरस- 40	वर्षा आधारित	पहली कटाई बुवाई के 60-70 दिन बाद दूसरी कटाई 60 दिन के अंतराल पर	3-4	15-35
सिराट्टो, क्लार्डोरिया टरनेटिया	बलुई-दोमट से चिकनी-दोमट	देशी	जून-जुलाई (उत्तर भारत) मार्च-सितम्बर (दक्षिण भारत)	8-10	30 X 40	नत्रजन-25 फास्फोरस- 40	वर्षा आधारित	पहली कटाई बुवाई के 70-80 दिन बाद दूसरी कटाई 60 दिन के अंतराल पर	2-3	15-25
दशरथ घास	बलुई-दोमट से चिकनी-दोमट	देशी	जून-जुलाई (उत्तर भारत) मार्च-सितम्बर (दक्षिण भारत)	2-3	45 X 30	नत्रजन-25 फास्फोरस- 60	वर्षा आधारित	पहली कटाई बुवाई के 70-80 दिन बाद दूसरी कटाई 45 दिन के अंतराल पर	4-5	30-40
गिल्लिसीडिया	दोमट से चिकनी-दोमट	देशी	जुलाई से अगस्त बरसात के मौसम में	2000 तने के टुकड़े	500 X 100	नत्रजन-25 फास्फोरस- 60	वर्षा आधारित	बुवाई के 5-6 महीने बाद आवश्यकतानुसार पेड़ों की शाखाओं की छटाई	2-3 बार	10-15
सुबबूल, अगस्थी, शेवरी	बलुई से दोमट	देशी	जुलाई से अगस्त	4-5	500 X 100	नत्रजन-25 फास्फोरस- 60	वर्षा आधारित	बुवाई के 5-6 महीने बाद आवश्यकतानुसार पेड़ों की शाखाओं की छटाई	2-3 बार	10-15

अनुभाग - III

पशुगृह

क्षमता के अनुसार पशुओं से अधिक उत्पादन पाने के लिए अच्छे पशुगृह की व्यवस्था अत्यंत आवश्यक है। पशुओं को कठोर वातावरण से बचाना बहुत अनिवार्य होता है क्योंकि मौसमी तनाव की स्थिति में उत्पादन में गम्भीर गिरावट होती है। पशुगृह की कमियां पशुओं के खुरों में समस्याएं उत्पन्न करती हैं।

इस भाग में निम्नलिखित पाठ सम्मिलित किए गए हैं :

- अ. पशुगृह (आवास)
- ब. गर्मी का प्रभाव
- स. लक्षणों द्वारा गर्मी के प्रकोप को मापना
- द. सूचियों द्वारा गर्मी के प्रभाव को मापना
- इ. गर्मी के प्रकोप का प्रबंधन

अधिक लागत वाले पशुगृह के कुछ विकल्प



कम लागत वाले पशुगृह के कुछ विकल्प



अ. पशुगृह (आवास)

दुधारु पशुओं को उनके उचित विकास और आदर्श उत्पादन के लिए स्वच्छ और आरामदायक आवास व्यवस्था प्रदान करना महत्वपूर्ण है। दुधारु पशुओं को पशुगृह प्रदान करके उन्हें तीव्र सर्दी, गर्मी, झुलसाने वाली सूर्य की सीधी किरणों और हवाओं से बचाना चाहिए। गर्मियों के दौरान, पशु अधिक गर्मी से परेशान और बेचैन हो जाते हैं। पसीने और हाँफने की प्रक्रिया कुछ हद तक पशुओं को उनके शरीर को ठंडा रखने में मदद करती है। कम खाने की वजह से दूध उत्पादन में कमी आ जाती है। अतः हमें पशुओं के लिए उपयुक्त पशुगृह की व्यवस्था रखनी चाहिए।

- ❖ पशुओं के आवास में एक गाय / भैंस के लिए कम से कम 5.5 फुट X 10 फुट का फर्श का स्थान होना चाहिए। नाली की तरफ 1.5 प्रतिशत के ढाल के साथ कॉन्क्रीट का खुरदुरा फर्श होना चाहिए। नाली 8 इंच चौड़ी, 3 इंच गहरी 1.0 प्रतिशत ढाल के साथ खुली होनी चाहिए जिससे पशुगृह साफ रह सके।
- ❖ छत की ऊंचाई 10 फुट से कम नहीं होनी चाहिए। यह छप्पर, एस्बेत्स सीमेंट शीट, ईटों या आर.सी.सी की हो सकती है।
- ❖ पशुगृह तीन तरफ से खुला होना चाहिए। केवल पश्चिमी भाग में दीवार होनी चाहिए। प्रत्येक पशु के लिए छत के स्तर पर 3 फुट X 1 फुट का वायुद्वार (रोशनदान) होना चाहिए। सर्दियों के दौरान तीनों खुले भागों को जूट के कपड़े द्वारा ढका जा सकता है।
- ❖ 2 फुट चौड़ी और 1.5 फुट गहरी नांद शेड की पश्चिमी दीवार की तरफ बनानी चाहिए। नांद का तल फर्श से 1 फुट ऊपर हो सकता है। पीने के पानी का प्रबंध नांद के साथ करना चाहिए।
- ❖ पशुगृह का पूर्वी छोर स्वतंत्र रूप से घूमने के लिए होना चाहिए। पशु पेड़ों की छांव में अधिक आराम से रहते हैं। अतः स्वतंत्र रूप से घूमने के क्षेत्र में 2-3 छांवदार पेड़ जैसे कि नीम लगाने चाहिए।
- ❖ गर्मियों के दौरान पशुओं के शरीर पर 15-20 मिनट के अंतराल पर पानी का छिड़काव करने से गर्मी का असर कम होता है क्योंकि पानी का वाष्पीकरण (भाप बनकर उड़ना) शरीर को ठंडा करता है।



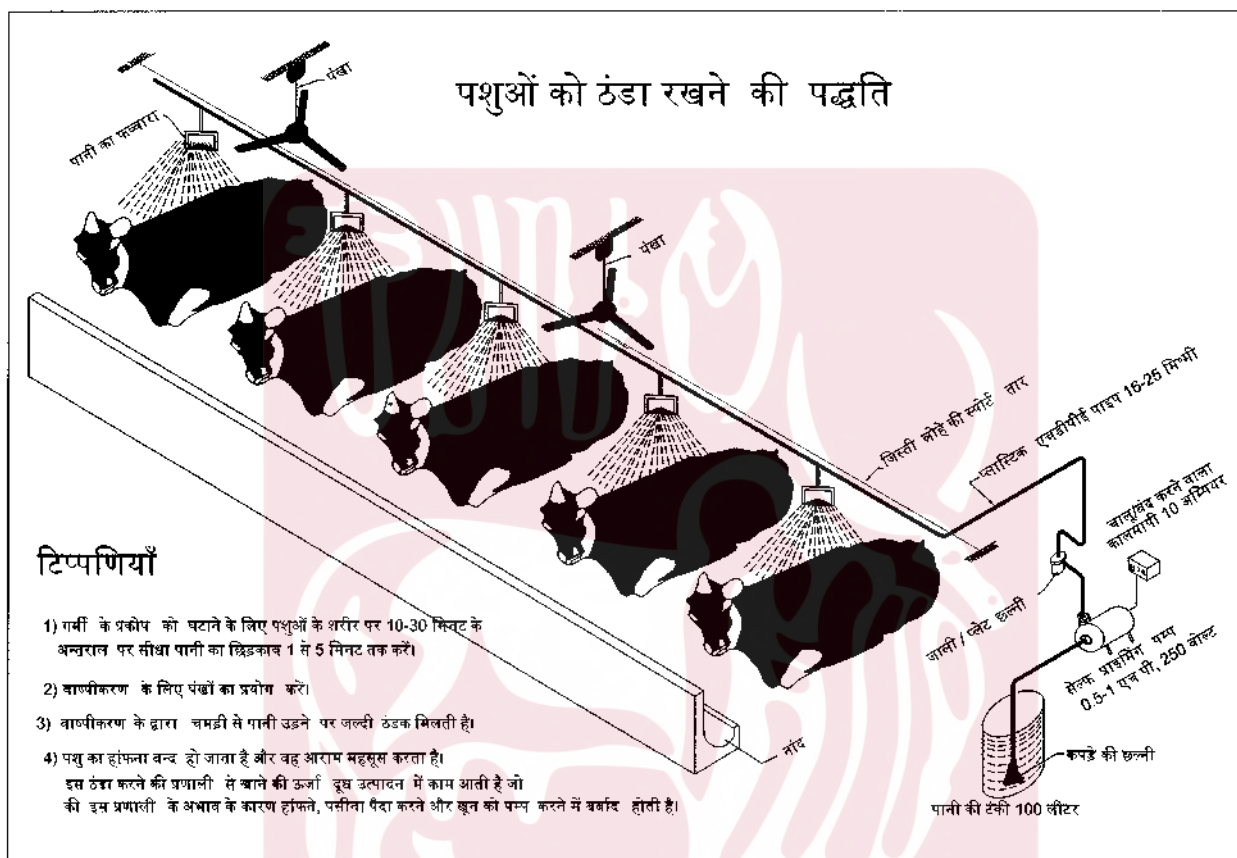
अधिक उत्पादन वाले संकर और विदेशी पशुओं के लिए ठंडा रखने के उपाय बहुत महत्वपूर्ण हैं

ठंडा रखने के उपाय गर्मी के असर को कम करते हैं और दूध उत्पादन को बरकरार रखते हैं

ब. गर्मी का प्रभाव

पशुओं पर गर्मी का प्रभाव निम्नलिखित कारणों से दूध उत्पादन को कम करता है ।

- ❖ शारीरिक तापमान में वृद्धि, कम खाना, अधिक पसीना और हांफने में वृद्धि, नब्ज दर में तेजी, चमड़ी की ओर रक्तप्रवाह का बढ़ना, वृद्धि हार्मोन में कमी, मृत्यु दर में तेजी, पानी ग्रहण में वृद्धि, दुग्ध उत्पादन और प्रजनन क्षमता में कमी ।
- ❖ गर्मी के बुरे प्रभावों का सामना करने के लिए, एन.डी.डी.बी. ने पानी के फव्वारे पर आधारित पशुओं को ठंडा रखने की पद्धति विकसित की है जिसकी लागत 6 पशुओं के लिए 11000 रु. आती है ।



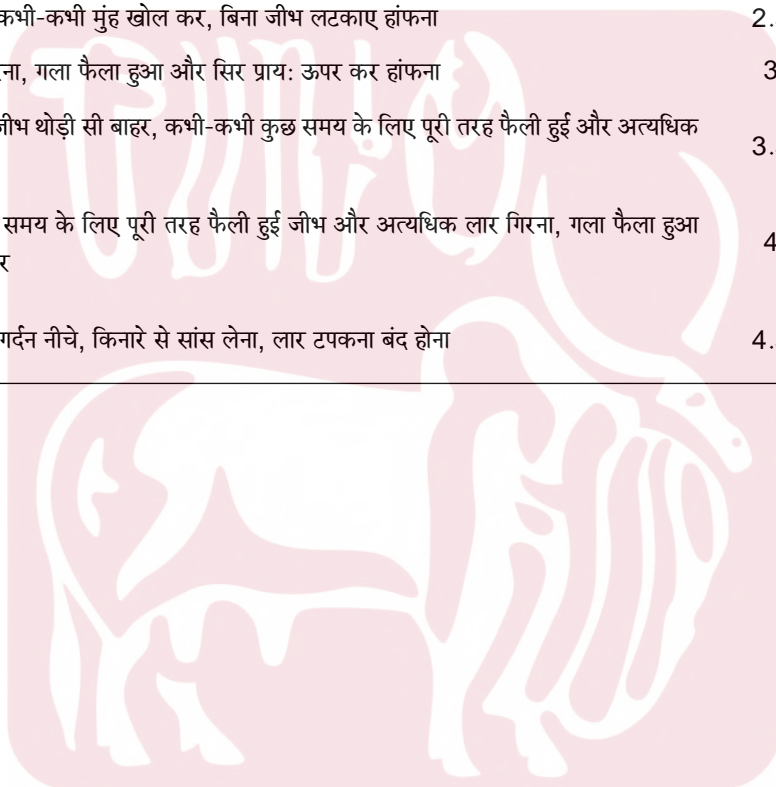
- ❖ एक ग्राम पानी वाष्पीकरण से पशुओं में उत्पन्न 540 कैलोरी ऊर्जा घट जाती है ।
- ❖ वाष्पीकरण (शून्य, ऊर्जा ठंडक) के द्वारा पशुओं के शरीर से ताप मान में नमी के आधार पर 13° सेल्सियस से अधिक कमी हो सकती है । इस प्रकार गर्मी के दिनों में पशुओं को आराम वाली दशा में वापस ला सकते हैं ।

ठंडा रखने की व्यवस्था गर्मी के प्रकोप को कम करती है और दूध उत्पादन को बरकरार रखती है

स. लक्षणों द्वारा गर्मी के प्रकोप को मापना

- ❖ गर्मी के प्रकोप से उत्पादन में होने वाली कमी को कम करने या कुछ परिस्थितियों में मृत्यु दर को रोकने के लिए गर्मी के प्रभाव का नाप-तोल करना आवश्यक है ।
- ❖ पशुओं पर गर्मी के प्रकोप को नापने के लिए तनाव के स्तर को हाँफने के नम्बरों के द्वारा दर्शाया जा सकता है :

श्वास की अवस्था	हाँफने का स्तर	श्वास / मिनट
हाँफने की कोई प्रक्रिया नहीं- साधारण, छाती में किसी संचार को देखना मुश्किल	0	<40
साधारण हाँफना, मुंह बंद, कोई लार या झाग नहीं, छाती में आसानी से देखने योग्य संचार	1	40-70
तेज हाँफना, लार या झाग दिखना, बिना मुंह खोले हाँफना	2	70-120
स्तर 2 की भाँति परंतु कभी-कभी मुंह खोल कर, बिना जीभ लटकाए हाँफना	2.5	70-120
मुंह खुला और लार गिरना, गला फैला हुआ और सिर प्रायः ऊपर कर हाँफना	3	120-160
स्तर 3 की भाँति परंतु जीभ थोड़ी सी बाहर, कभी-कभी कुछ समय के लिए पूरी तरह फैली हुई और अत्यधिक लार गिरना	3.5	> 160
खुले मुंह के साथ लम्बे समय के लिए पूरी तरह फैली हुई जीभ और अत्यधिक लार गिरना, गला फैला हुआ और गर्दन ऊपर की ओर	4	>160
स्तर 4 की तरह, परंतु गर्दन नीचे, किनारे से सांस लेना, लार टपकना बंद होना	4.5	कम हो सकता है



उत्पादन में कमी को रोकने के लिए गर्मी के तनाव को अच्छी तरह समय से पहचानें

द. सूचियों द्वारा गर्मी के प्रभाव को मापना

- ❖ सूचियों द्वारा गर्मी के प्रभाव का नाप पशुओं पर इसके प्रकोप का अनुमान दे सकता है, जिससे समय से बचाव के उपाय लागू किए जा सकें ।
- ❖ इसके लिए उष्मीय अद्रता (थर्मल ह्यूमिडिटी) इंडेक्स (टी.एच.आई.) इस्तेमाल किया जाता है ।
- ❖ टी.एच.आई का सिद्धांत यह है कि किसी स्थिर तापमान पर हवा में नमी बढ़ती है, तब सुविधाजनक वातावरण में कमी आती है ।
- ❖ 78 टी.एच.आई. से ऊपर दूध उत्पादन प्रभावित होना शुरू होता है जोकि 27° सेटी.-80 प्रतिशत नमी या 31° सेटी.-40 प्रतिशत नमी पर होता है । 89 टी.एच.आई. पर पशु गर्मी के गंभीर प्रकोप के कगार पर होता है ।
- ❖ नीचे दिया गया रेखा-चित्र टी.एच.आई. और गर्मी के प्रकोप के स्तर को दर्शाता है ।

सापेक्षिक आर्द्रता

DEG F	DEG C	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
72	22.2																						
73	22.8																						
74	23.3																						
75	23.9																						
76	24.4																						
77	25.0																						
78	25.6																						
79	26.1																						
80	26.7																						
81	27.2																						
82	27.8																						
83	28.3																						
84	28.9																						
85	29.4																						
86	30.0																						
87	30.6																						
88	31.1																						
89	31.7																						
90	32.2																						
91	32.8																						
92	33.3																						
93	33.9																						
94	34.4																						
95	35.0																						
96	35.6																						
97	36.1																						
98	36.7																						
99	37.2																						
100	37.8																						
101	38.3																						
102	38.9																						
103	39.6																						
104	40.0																						
105	40.6																						
106	41.1																						
107	41.7																						
108	42.2																						
109	42.8																						
110	43.3																						
111	43.9																						
112	44.4																						
113	45.0																						
114	45.4																						
115	46.1																						
116	46.7																						
117	47.2																						
118	47.8																						
119	48.3																						
120	48.9																						
121	49.4																						

Source: Dr Frank Wiersama (1990) Dept. of Ag Eng.
The University of Arizona, Tucson, Arizona

हवा की नमी को कैसे नापें ?

1. एक शुष्क और एक गीला बल्ब तापमापी लें
2. इसे पशुगृह में लटकाएं
3. शुष्क बल्ब में तापमान नापें
4. गीले बल्ब में तापमान नापें
5. दोनों मापों के बीच का अंतर ज्ञात करें
6. रेखाचित्र (अगले पृष्ठ पर रेखा-चित्र देखें) का प्रयोग करते हुए उल्लिखित प्रक्रिया द्वारा संबंधित नमी ज्ञात करें
7. संबंधित नमी और शुष्क बल्ब के तापमान का उपयोग करके तापमान तनाव के स्तर को नापें



विभिन्न प्रकार का शुष्क और गीला बल्ब तापमापी

गर्मी के प्रकोप संबंधी सूचकों की जानकारी समस्याओं को जल्दी पहचानने में मदद करती है

सापेक्षिक आर्द्रता - रिलेटिव ह्यूमिडिटी (आर.एच.) हवा की नमी की सूची

शुष्क घुंड़ी तापमान.. ° सेटी.	शुष्क बल्ब से, गीले बल्ब के तापमान में अंतर															
	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	
2	>>>>>>>	84	68	52	37	22	8									
4	>>>>>>>	85	70	56	42	29	26	3								
6	>>>>>>>	86	73	60	47	34	22	11								
8	>>>>>>>	87	75	63	51	39	28	18	7							
10	>>>>>>>	88	76	65	54	44	33	23	14	4						
12	>>>>>>>	89	78	67	57	47	38	29	20	11						
14	>>>>>>>	89	79	69	60	51	42	33	25	17	9					
16	>>>>>>>	90	80	71	62	54	45	37	29	22	14					
18	>>>>>>>	91	81	73	64	56	48	41	33	26	19	6				
20	>>>>>>>	91	82	74	66	58	51	44	37	30	24	11				
22	>>>>>>>	91	83	75	68	60	53	46	40	34	27	16	5			
24	>>>>>>>	92	84	76	69	62	55	49	43	37	31	20	9			
26	>>>>>>>	92	85	77	70	64	57	51	45	39	34	23	14	4		
28	>>>>>>>	92	85	78	72	65	59	53	47	42	37	26	17	8		
30	>>>>>>>	93	86	79	73	67	61	55	49	44	39	29	20	12	4	
32	>>>>>>>	93	86	80	74	68	62	56	51	46	41	32	23	15	8	1
34	>>>>>>>	93	87	81	75	69	63	58	53	48	43	34	26	18	11	5
36	>>>>>>>	93	87	81	75	70	64	59	54	50	45	36	28	21	14	8
38	>>>>>>>	94	88	82	76	71	65	60	56	51	47	38	31	23	17	11
40	>>>>>>>	94	88	82	77	72	66	62	57	52	48	40	33	26	19	13
42	>>>>>>>	94	88	83	77	72	67	63	58	54	50	42	34	28	21	16
44	>>>>>>>	94	89	82	78	73	68	64	59	55	51	43	36	29	23	18

माप लेने की विधि पिछले पृष्ठ पर अंकित है

इ. गर्मी के प्रकोप का प्रबंधन

- ❖ पशुओं के लिए पर्याप्त मात्रा में पानी का प्रबंध करें। गर्मी के प्रकोप से बचने के लिए एक सामान्य स्वस्थ गाय को लगभग 100 लीटर पानी की आवश्यकता होती है।
- ❖ वाष्पीकरण द्वारा ठंडा करने के लिए पीने का पानी छाया के नीचे उपलब्ध कराएं।
- ❖ पशुओं के लिए छाया की व्यवस्था करें। यदि पेड़ उपलब्ध न हों तो कम से कम 9 फुट ऊंची छप्पर की छत बनानी चाहिए। कृषि कार्यों में इस्तेमाल होने वाला 20 प्रतिशत छिद्रणयुक्त प्लास्टिक का बुना हुआ कपड़ा भी इस्तेमाल किया जा सकता है। रेगिस्तान जैसी परिस्थिति में सामुदायिक पशु छाया केंद्र बनाए जा सकते हैं।
- ❖ पशुओं के शरीर पर एक घंटे में कम से कम तीन बार पानी की फुहार से लाभ होता है। साइकलिक टाइमर की सहायता से स्वयंचलित छोटे पम्पों और फव्वारों को वरीयता दी जानी चाहिए।
- ❖ बंद पशुगृह में हवा के आवागमन को बढ़ाएं। प्रत्येक गाय के लिए एक 3 x 1 फुट का हवा द्वार (रोशनदान) होना चाहिए। जहां भी बिजली की व्यवस्था हो वहां पंखों का इस्तेमाल करें।
- ❖ गर्म हवा (लू) को रोकने का प्रबंध करें। छप्पर वाली दीवार को वरीयता दें। गीली जूट की बोरी का कपड़ा भी एक विकल्प हो सकता है।
- ❖ पशुओं को सुबह, शाम और रात के समय चारा खिलाएं।
- ❖ प्रातः काल जल्दी और शाम के समय चराई को वरीयता दें।
- ❖ पशुओं के शरीर से बालों को कम करें।
- ❖ पशुओं के आहार में बदलाव करें ताकि कम शुष्क पदार्थ का इस्तेमाल होने पर भी पोषक तत्वों की मात्रा समान रहे।
- ❖ पोटार्श से भरपूर खनिज मिश्रण को वरीयता दें।

गर्मी के प्रकोप का प्रबंधन आपके पशुधन को बचाता है

भाग - III

बेहतर उत्पादकता के लिए सूचना तंत्र

पिछले अनुभागों में वर्णित पशु स्वास्थ्य, प्रजनन और पोषण के महत्वपूर्ण पहलुओं को सूचना तंत्र में अभिलेख हेतु समर्थित होना चाहिए ताकि एक बहुलतापूर्ण कंप्यूटर में पर्याप्त तथ्य सामग्री (डाटाबेस) का निर्माण किया जा सके जो किसानों और नीति निर्माताओं दोनों के लिए फायदेमंद हो ।

राष्ट्रीय डेरी विकास बोर्ड इस प्रकार के तंत्र का निर्माण कर चुका है जिसे पशु उत्पादकता और स्वास्थ्य के लिए सूचना तंत्र (इनाफ) कहा जाता है । इसका प्रयोग वर्तमान में पशु स्वास्थ्य, पोषण व प्रजनन में विभिन्न हस्तक्षेप के अभिलेख हेतु किया जा रहा है । सूचना तंत्र का संक्षिप्त विवरण और उससे किसानों को होने वाले लाभ का विवरण निम्नलिखित अनुभागों में दिया जा रहा है :-

- | | |
|--------------|----------------------------------|
| अनुभाग - I | पशु पहचान |
| अनुभाग - II | पशु स्वास्थ्य |
| अनुभाग - III | पशु प्रजनन |
| अनुभाग - IV | पशु पोषण (आहार संतुलन कार्यक्रम) |

अनुभाग - I

पशु पहचान

- ❖ किसी पशु को विशेष रूप से चिह्नित करने के लिए उसके शरीर पर निशान बनाने की प्रक्रिया को पशु पहचान कहते हैं ।
- ❖ किसी विश्वसनीय एवं पर्याप्त डाटाबेस के निर्माण और पशु के ऊपर कोई भी हस्तक्षेप के अभिलेखन हेतु पशु की पहचान अति आवश्यक है ।
- ❖ भारत सरकार पहले से ही पशुओं के संक्रामक रोगों की रोकथाम व नियंत्रण कानून (PCICDA), 2009 पास कर चुकी है जो पशु पहचान को अनिवार्य बनाता है ।
- ❖ भारत सरकार ने उपरोक्त कानून को इसलिए पास किया ताकि इस मामले में अंतरराष्ट्रीय नीतियों के अनुसार पर्याप्त उचित कदम उठाए जा सकें ।
- ❖ पशु पहचान के विभिन्न तरीके जैसे – गोदना, छापा, कान का बिल्ला, RFID, Injectable, Bolus इत्यादि हैं ।
- ❖ कान का बिल्ला (ईयर टैग) इन सब में एक सर्वाधिक प्रचलित विधि है और जिसमें एक विशिष्ट संख्या का इस्तेमाल होता है, जिसके तहत संख्या की नकल की कोई संभावना नहीं होती है ।
- ❖ यदि बिल्ला ठीक लगा है तो इससे कोई समस्या नहीं होती और पशु के कान में यह सालों तक कायम रहता है ।
- ❖ प्रत्येक पशु जो कान के बिल्ले के साथ पंजीकृत हुआ है, इनाफ (INAPH) सूचना प्रणाली उसका संपूर्ण विवरण (नस्ल, आयु, गर्भावस्था, दुग्ध उत्पादन, पशुपालक का संपूर्ण ब्यौरा इत्यादि) अभिलेखित करने में समर्थ है ताकि पशु का एक स्थायी पार-पत्र बनाया जा सके ।
- ❖ पशुपालन, डेयरी और मत्स्यपालन विभाग, भारत सरकार ने राष्ट्रीय स्तर पर पशु पहचान की व्यवस्था को संचालित करने के लिए NDDB को नामित किया है ।
- ❖ NDDB देश में स्थित सभी ईयर टैग उपभोक्ता एवं उत्पादन संस्थाओं के लिए इन विशिष्ट पशुपहचान संख्याओं को उत्पन्न कर उन्हें सम्बन्धित संस्थाओं को उपलब्ध कराता है ।
- ❖ विशिष्ट पहचान संख्याओं को प्राप्त करने के लिए, उपभोक्ता एवं उत्पादन संस्थाएं आवश्यकतानुसार, क्रय आदेश (P.O.) की प्रति संलग्न कर NDDB को आवेदन कर सकती है ।



कान का बिल्ला (ईयर टैग)



कान का बिल्ला लगाने वाला यंत्र



सही ढंग से लगाया गया कान का बिल्ला

अनुभाग - II

इनाफ (INAPH) और पशु स्वास्थ्य

- ❖ यह सूचना तंत्र पशु स्वास्थ्य से संबंधित सभी गतिविधियों जैसे कृमिनाशक, टीकाकरण, उपचार, रोग की पहचान और रोगों के प्रकोप का प्रबंधन इत्यादि का अभिलेख रखने में समर्थ है ।
- ❖ यह अभिलेख पशु स्तर पर बनाया जा सकता है, जहां पर उस पशु की पहचान संख्या की आवश्यकता होती है या समूह स्तर पर (जैसे सामूहिक टीकाकरण, कृमिनाशक या पशु बांझपन शिविर) जहां गांव-स्तर पर पशुओं की संख्या का अभिलेख रखा जाता है जिसमें पशु विशेष की पहचान संख्या की आवश्यकता नहीं होती ।

किसानों को निम्नलिखित तरीके से फायदे होते हैं –

1. पशु की टैग संख्या को सूचना तंत्र में प्रविष्टि करने पर उसके बारे में सारी सूचनाएं उपलब्ध हो जाती हैं ।
2. पशुपालक अपने पशु के लिए किसी भी सेवा जैसे कृमिनाशक, टीकाकरण, रोग जांच इत्यादि की नियत तिथि की सूचना अपने पंजीकृत मोबाइल पर एसएमएस से प्राप्त कर लेता है ।
3. एक स्वास्थ्य पत्रक, जिसमें पशु से संबंधित सभी गतिविधियों का विवरण हो, निर्मित किया जा सकता है । संदर्भ हेतु, इनाफ (INAPH) सूचना तंत्र में सिर्फ पशु की टैग संख्या की प्रविष्टि से पता लगाया जा सकता है ।
4. समीप के गांव या क्षेत्र में पशु रोग का प्रकोप होने पर तुरंत बचाव के उपाय किए जा सकें इस हेतु किसान को एस.एम.एस. (SMS) के द्वारा सतर्क किया जाता है ।

अनुभाग - III

पशु प्रजनन प्रबंधन में इनाफ (INAPH) प्रणाली का उपयोग

- ❖ यह सूचना प्रणाली पशु प्रजनन से संबंधित सारी गतिविधियों जैसे कृत्रिम गर्भाधान, गर्भ जांच, प्रसव, दुग्ध रिकॉर्डिंग, टाइपिंग इत्यादि का रिकॉर्ड रखने में समर्थ है।
- ❖ इस सूचना प्रणाली में पशुवार आंकड़े एकत्रित किए जाते हैं जिसमें पशु की पहचान संख्यां (ईयर टैग संख्या) आवश्यक है। इन आंकड़ों का उपयोग कृत्रिम गर्भाधान कार्यक्रम, संतान परीक्षण, वंशावली चयन, पशुओं के क्रय/विक्रय इत्यादि कार्यक्रमों के प्रबंधन में करते हैं जैसे संतान परीक्षण में सर्वोत्तम गायों/ भैंसों की पहचान और उच्च आनुवंशिक गुणवत्ता वाले साँड़ों के उत्पादन में किया जाता है (देखें अध्याय च, भाग- I के अनुभाग- XIII में)

इस प्रणाली के उपयोग से किसानों एवं संबंधित संस्थाओं को निम्नलिखित लाभ प्राप्त होते हैं :

1. पशु के विभिन्न ब्यांत में दूध उत्पादन एवं गुणवत्ता की जानकारी इस प्रणाली में उपलब्ध है।
2. पशुओं की ईयर टैग द्वारा एक विशिष्ट पहचान होती है, जिसके द्वारा किसान को अन्य सरकारी एवं गैर सरकारी योजनाओं का लाभ मिलता है, जैसे पशुओं का बीमा, टीकाकरण, उपचार, इत्यादि।
3. किसान को अपनी गाय की प्रजनन से संबंधित जानकारी जैसे गाय/ भैंस का गर्मी में आने का दिन, गर्भ जांच का दिन, प्रसव का अनुमानित समय, इत्यादि नियमित तिथि पर उपलब्ध होती है। ये जानकारी (एस.एम.एस.) द्वारा कुछ चुनिन्दा भाषाओं (हिन्दी, मराठी गुजराती और अंग्रेज़ी) में मोबाइल पर भी उपलब्ध कराई जाती है।
4. सहायक संस्थाओं को किसानों के द्वारा अपनाई गई पशु प्रबंधन की जानकारी प्राप्त होती है।
5. इन आंकड़ों से देश की विभिन्न संस्थाएं कृत्रिम गर्भाधान कार्यक्रम का प्रबंधन करती हैं। शोध संस्थाएं इन आंकड़ों का उपयोग सर्वोत्तम पशुओं और साँड़ों के चयन में इस्तेमाल करती हैं जिससे आने वाली पीढ़ी की गायों और भैंसों के दूध उत्पादन में वृद्धि होती है।
6. सरकार नीति निर्धारण में राष्ट्रीय स्तर पर इन आंकड़ों का उपयोग करती है।

अनुभाग - IV

इनाफ (INAPH) और पशु पोषण

आहार संतुलन इनाफ सूचना प्रणाली में पशु पोषण से संबंधित एक महत्वपूर्ण अनुभाग है। आहार संतुलन कार्यक्रम में दुधारु पशुओं की विभिन्न स्तरों के लिए 'आवश्यक पोषक तत्व तालिका' तथा 'पशु खाद्य पदार्थ तालिका' (जिसमें हमारे देश के विभिन्न हिस्सों में पाए जाने वाले दानों और चारों के पोषक गुण का विवरण है) का समावेश है।

इस सूचना प्रणाली के इस्तेमाल से दुधारु पशु के लिए उसके उत्पादन और अन्य शारीरिक मापदण्डों एवं किसान के पास उपलब्ध चारा-दाना के संसाधन के आधार पर संतुलित आहार का निर्धारण कम से कम कीमत पर किया जा सकता है।

जो किसान या पशुपालक अपने पशुओं को संतुलित आहार देते हैं उन्हें निम्नलिखित फायदे होते हैं –

1. किसानों को प्रति लीटर दुग्ध उत्पादन की कीमत का पता चल जाता है
2. किसान यह समझ जाता है कि उसके पशु पोषण की वर्तमान व्यवस्था में किसी चीज की कमी है या अधिकता जैसे – प्रोटीन, कुल पाचन योग्य पोषक तत्व, कैल्सियम और फॉस्फोरस की उपलब्धता।
3. पशु के दूध उत्पादन और शारीरिक अवस्था के आधार पर जो आहार पशुओं को खिलाया जा रहा है और अपरंपरागत आहार के संसाधन जो किसान के पास या उसके गांव में उपलब्ध हैं उनको पुनः समायोजित करके किसानों को संतुलित आहार प्रदान किया जा सकता है।
4. पशु आहार की कीमत को वर्तमान उत्पादन स्तर के अनुकूल बनाया जाता है।
5. उत्पादकता, प्रजनन क्षमता और पशु के स्वास्थ्य में सुधार से पशुपालक का फायदा बढ़ता है।

अक्सर पूछे जाने वाले प्रश्न – पशु स्वास्थ्य

- प्रश्न:** टीके को बर्फ से भरे बक्से में रखकर न लाने पर क्या हम पशु को टीका लगवाने की अनुमति दे सकते हैं ?
- उत्तर :** कभी नहीं, क्योंकि हमारे परिवेश के तापक्रम पर टीका खराब हो जाता है और पशु को सुरक्षा प्रदान करने में असमर्थ होता है ।
- प्रश्न:** कौन से पशुओं को हम टीका नहीं लगवा सकते ?
- उत्तर :** बीमार पशुओं को/तुरंत ब्याये हुए पशुओं तथा ब्याने के 1 माह तक और बछड़ियों को 3-4 माह तक टीका नहीं लगवाना चाहिए ।
- प्रश्न:** क्या गाभिन गाय (पशु) को टीका लगवा सकते हैं ?
- उत्तर :** हां, गाभिन पशु को टीका लगाने में कोई नुकसान नहीं है । फिर भी, गाभिन पशु को गर्भ के अंतिम माह में टीका लगाने से बचना चाहिए क्योंकि पशु को काबू करने के दौरान उसे और गर्भवस्थ शिशु को हानि पहुंच सकती है ।
- प्रश्न:** क्या हमें खुरपका-मुंहपका रोग का गांव में प्रकोप होने पर रोग से अप्रभावित पशुओं को टीकाकरण कराना चाहिए ?
- उत्तर :** खुरपका-मुंहपका रोग से प्रभावित गांव में उन पशुओं को टीकाकरण की सलाह नहीं दी जाती जो एफएमडी के लक्षण नहीं दिखा रहे हैं क्योंकि ऐसे पशु रोग के लक्षण दिखने के पूर्व भी ऊष्मायन के विभिन्न अवस्थाओं में हो सकते हैं फिर भी, घेरा/बाड़ा या वलय टीकाकरण, जिसमें रोग प्रभावित गांव से 2-3 कि.मी. दूर से परिधि से संक्रमण बिंदु की ओर टीकाकरण की प्रक्रिया कराई जाती है, रोग के फैलाव को सीमित करने के लिए पशु प्रचलन व आवाजाही पर कठोर नियंत्रण और रोग के प्रकोप को नियंत्रित करने के लिए प्रभावित क्षेत्र से दाना, चारा और लोगों का आवागमन पर नियंत्रण समान रूप से जरूरी और महत्वपूर्ण है ।
- प्रश्न:** क्या पशु का एक ही समय में बहुत सी बीमारियों के प्रति टीकाकरण किया जा सकता है ?
- उत्तर :** हां, इंसानों और कुत्तों में लंबे समय से अनेक रोगों के लिए संयुक्त टीका का उपयोग किया जाता रहा है । इसी तरह गाय/भैंस में भी एफएमडी, एचएस व बीक्यू के लिए संयुक्त टीका अब उपलब्ध है ।
- प्रश्न:** किसी पशु को पागल कुत्ते के काटने पर हमें क्या करना चाहिए ?
- उत्तर :** तुरंत घाव को 5-10 मिनट तक साफ नल से बहते पानी से धोएं । यदि नल न हो तो घाव के ऊपर मग से पानी गिराएं । घाव को साधारण नहाने के साबुन से धीरे-धीरे धोएं । घाव के ऊपर टिक्चर आयोडीन लगाएं और पशु को पास के पशुचिकित्सालय में डॉक्टर को दिखाएं ।
- प्रश्न:** किसी पशु को सांप के काटने पर हमें क्या करना चाहिए ?
- उत्तर :** जहां पर सांप ने काटा है उससे 3-4 इंच ऊपर बैंडेज बांध दें ताकि उससे आगे रक्त की आवाजाही रूक जाए । जिस स्थान पर सांप ने काटा है वहां पर ब्लेड से एक छोटा सा चीरा लगाएं और रक्त को बहने दें । घाव को साबुन-पानी की धार से साफ करें और पशु चिकित्सक को तुरंत बुलाएं ।
- प्रश्न:** पेट फूलना/अफरा होने पर क्या उपचार करना चाहिए ?
- उत्तर :** ज्यादा मात्रा में सघन हरी पत्तीदार, हरा चारा जैसे कि बरसीम, ल्यूसिन खिलाने का परिणाम है । रूमेन (पहला पेट) में गैस भर जाता है जिसकी वजह से रूमेन फूलने लगता है । ऐसी स्थिति में पशु को बैठने न दें और पानी पीने भी न दें । पशु को 100 ग्राम सेंधा नमक, 30 ग्राम हींग, 100 मि.ली. तारपीन का तेल और 500 मि.ली. वनस्पति तेल को मिलाकर पिला दें । तत्पश्चात पशु चिकित्सक से संपर्क करें ।
- प्रश्न:** गुप्त प्रकार के थनैला (सब क्लिनिकल मस्टाइटिस) से ग्रसित गाय का दूध पीने से कोई नुकसान है ?
- उत्तर :** सब क्लिनिकल मस्टाइटिस से ग्रसित गाय के दूध में जीवाणु के कुछ विषाक्त पदार्थ मौजूद रहते हैं जो कि उबालने से भी नष्ट नहीं होते हैं । इस विषाक्त पदार्थ की वजह से मनुष्य में दस्त या गले में संक्रमण हो सकता है ।
- प्रश्न:** क्या दूध निकालने के लिए आक्सीटोसीन इंजेक्सन के इस्तेमाल से पशुओं या दूध पीनेवाले को कोई नुकसान है ?
- उत्तर :** दूध निकालने के लिए आक्सीटोसीन इंजेक्सन का इस्तेमाल करने की संस्तुति नहीं है, सिवाए तब जब किसी बीमारी के लिए पशुचिकित्सक के द्वारा पशु का उपचार करना हो ।
- प्रश्न:** नए जन्मे बछड़े के लिए खीस पिलाना जरूरी क्यों है ?
- उत्तर :** नए जन्मे बछड़े को जितनी जल्दी हो सके उचित मात्रा (कम से कम शरीर भार का 1/10 भाग) में खीस पिलाना चाहिए ।
- प्रश्न:** क्या गर्भवती पशु को कीड़े (कृमि) की दवा दे सकते हैं ?
- उत्तर :** गर्भवती पशु जो ब्याने के नजदीक (समकक्ष) हो और ब्याने के 6-7 सप्ताह बाद पशु चिकित्सक की सलाह से कृमिनाशक दे सकते हैं ।

अक्सर पूछे जाने वाले प्रश्न - पशु पोषण

- प्रश्न:** आहार संतुलन क्या है?
- उत्तर:** सभी प्रजातियों के शारीरिक विकास के लिए संतुलित आहार की जरूरत होती है। आहार संतुलन एक प्रक्रिया है जिसमें उपलब्ध आहार सामग्रियों को लेकर पशु की सामान्य शारीरिक जरूरतों और उत्पादन की जरूरतों के हिसाब से, विभिन्न पोषक तत्वों के स्तर को संतुलित किया जाता है।
- प्रश्न:** क्या हम चने की चुन्नी, गेहूँ की चोकर, केले का तना, बांस की पत्तियाँ और घर में उत्पादित उत्पादों को आहार संतुलन में शामिल कर सकते हैं?
- उत्तर:** हाँ, घर में उत्पादित उत्पाद, पेड़ों की पत्तियाँ इत्यादि जो कि सामान्य रूप से खिलाई जाती है, आहार संतुलन में इनका उपयोग किया जा सकता है। वास्तव में आहार संतुलन का उद्देश्य ही कम से कम लागत में स्थानीय स्तर पर उपलब्ध आहार सामग्रियों की मात्रा का आनुपातिक संशोधन करके दुधारू पशुओं से दुग्ध का अधिकतम उत्पादन लेने के साथ ही उनकी प्रोटीन, खनिज, विटामिन और साथ ही ऊर्जा की जरूरतों को पूरा करना है।
- प्रश्न:** ऐसे समय जब यूरिया मोलासिस ब्लॉक पशु को चाटने के लिए दिया जा रहा हो, पशु को यूरिया संवर्धित भूसा कितना दिया जाना चाहिए?
- उत्तर:** यूरिया मोलासिस ब्लॉक और यूरिया संवर्धित भूसे को एक ही समय नहीं दिया जाना चाहिए। अगर यूरिया मोलासिस ब्लॉक नहीं दिया जा रहा है तो हम पशु के खाने की क्षमता के अनुसार यूरिया संवर्धित भूसा खिला सकते हैं।
- प्रश्न:** क्या पशु आहार देना जरूरी है अगर हम पशु को यूरिया संवर्धित भूसा खिला रहे हों?
- उत्तर:** अगर पशु न तो गर्भवस्था में है और न ही दुग्ध दे रहा है तथा यदि हम उसे यूरिया संवर्धित भूसा या फिर सामान्य भूसे के साथ यूरिया मोलासिस ब्लॉक को चाटने दे रहे हों, तो पशु को अतिरिक्त पशु-आहार देने की जरूरत नहीं है। परन्तु दुग्ध देने वाले और गर्भावस्था के पशुओं को यूरिया संवर्धित भूसे के साथ ही पशु आहार/ बाइपास प्रोटीन भी निर्देशिका में दिए निर्देशों के अनुसार खिलाया जाना चाहिए।
- प्रश्न:** यदि हम पशु को मिश्रित पशु आहार खिला रहे हैं तो क्या हमें अतिरिक्त खनिज मिश्रण भी देने की जरूरत है ?
- उत्तर:** चूँकि मिश्रित पशु आहार में खनिज मिश्रण उपलब्ध होता है, इसलिए हम खनिज मिश्रण को 50% तक कम कर सकते हैं।
- प्रश्न:** यदि पशु यूरिया मोलासिस मिनरल ब्लॉक को न चाटे तो हमें क्या करना चाहिए?
- उत्तर:** पशु को यूरिया मोलासिस ब्लॉक को चाटने की आदत डालने के लिए, कुछ दिनों तक ब्लॉक पर आटा, चोकर या पशु आहार का छिड़काव करें, धीरे धीरे पशु उसे पसंद करने लगेगा।
- प्रश्न:** एक यूरिया मोलासिस मिनरल ब्लॉक कितने दिनों तक के लिए पर्याप्त होता है?
- उत्तर:** तीन किलो वजन का यूरिया मोलासिस मिनरल ब्लॉक एक पशु के लिए 5-7 दिनों तक के लिए पर्याप्त होता है।

अक्सर पूछे जाने वाले प्रश्न - पशु प्रजनन

- प्रश्न:** देशी नस्ल का सुधार महत्वपूर्ण क्यों है ? महत्वपूर्ण देशी नस्लें कौन-कौन सी हैं और वे कहाँ-कहाँ उपलब्ध हैं ?
- उत्तर:** देशी नस्लें हमारे कृषि जलवायु वातावरण के लिए अनुकूल हैं और वे यहाँ पाये जाने वाले अधिकतर रोगों के लिए प्रतिरोधक क्षमता रखते हैं। वे हमारे पास उपलब्ध सामान्य गुणवत्ता वाले पशु आहार व चारे पर भी अच्छा दूध उत्पादन कर सकती हैं। इनमें से कुछ नस्लें तो अच्छे दूध व उच्च वसा उत्पादन के लिए उपयुक्त मानी जाती हैं। फिर भी एक लंबे समय से चयनात्मक प्रजनन की कमी के कारण इन गायों/भैंसों की उत्पादन क्षमता में गिरावट आ रही है। उच्च उत्पादन क्षमता वाली विदेशी गायों में इस प्रकार के गुणों का अभाव है और भारतीय परिवेश में उनका प्रबंधन भी कठिन है। इसलिए देशी नस्लों का सुधार होना चाहिए। कृपया इनके मूल स्थान के लिए इस पुस्तिका के कवर पर देखें।
- प्रश्न:** डेरी उद्योग के लिए सब से उपयुक्त पशु कौन सा है – देशी गाय, संकर गाय या भैंस ?
- उत्तर:** नस्ल या नस्लों के मिश्रण का चुनाव मुख्यतः उपलब्ध संसाधन, जलवायु, दाने-चारे और स्वास्थ्य सुविधाओं की उपलब्धता, दूध की बिक्री के लिए बाजार की उपलब्धता और दूध की कीमत तय करने के मानकों इत्यादि पर निर्भर करता है। जहाँ संसाधन सीमित हैं वहाँ देशी नस्ल की गायों/भैंसों का चुनाव और जहाँ संसाधन मध्यम से अच्छा हो वहाँ संकर नस्ल की गायों का चुनाव किया जा सकता है। जहाँ वसा के प्रतिशत के आधार पर दूध के मूल्य का निर्धारण होता हो, वहाँ भैंसों को पाला जा सकता है।
- प्रश्न:** कौन सा पशु लाभप्रद या किफ़ायती पशु है ?
- उत्तर:** किफ़ायती पशु वह है जो एक साल में एक बछड़ी/बछड़ा पैदा करे, जो बीमारियों के लिए प्रतिरोधक क्षमता रखता हो, कम खर्च पर अधिक दूध दे, उदाहरण के लिए प्रति लीटर दुग्ध उत्पादन लागत कम से कम हो।

प्रश्न: राज्य पशु प्रजनन नीति क्या है ? उसका पालन करना क्यों आवश्यक है ?

उत्तर: भारत के सभी राज्य अपनी जलवायु व भौगोलिक परिस्थितियों तथा उस राज्य में पाई जाने वाली गायों/भैसों की विभिन्न नस्लों के आधार पर अपने राज्य की पशु प्रजनन नीति निर्धारित करते हैं। प्रजनन नीति किसी राज्य की निर्देशिका है जो यह इंगित करती है कि उस राज्य के कृषि-जलवायु में कौन-कौन सी नस्लें, जैसे देशी, संकर या विदेशी नस्ल एवं उनमें कितना विदेशी रक्तस्तर सबसे उपयुक्त है। इसका पालन इसलिए करना चाहिए ताकि उस क्षेत्र के पशुओं से उत्तम उत्पादन प्राप्त हो और उस राज्य की मूल नस्लों का संरक्षण हो।

प्रश्न: विभिन्न पशुओं के प्रजनन के लिए किस प्रकार के वीर्य का इस्तेमाल करना चाहिए ? क्या कृत्रिम गर्भाधानकर्ता के पास सभी नस्लों का वीर्य होता है जिसमें से मैं अपने पशु के लिए सबसे अच्छे विकल्प का चुनाव कर सकूँ ? सांड निर्देशिका (सायर डायरेक्ट्री) क्या है ? क्या वह कृत्रिम गर्भाधान कर्ता के पास उपलब्ध होती है ?

उत्तर: भारत सरकार द्वारा प्रमाणित 'ए' या 'बी' श्रेणी के वीर्य उत्पादन केंद्र (सीमन स्टेशन) से प्राप्त वीर्य का ही पशु प्रजनन में उपयोग करना चाहिए। वीर्य का उपयोग राज्य की प्रजनन नीति के अनुसार होना चाहिए। वीर्य को तरल नत्रजन कंटेनर में ही रखकर ले जाना चाहिए (किसी और पात्र में नहीं)। कृत्रिम गर्भाधानकर्ता, राज्य की प्रजनन नीति के अनुरूप सभी नस्लों का वीर्य नहीं रखते हैं, इसलिए एक जागरूक व उन्नत किसान को चाहिए कि वह कृत्रिम गर्भाधानकर्ता से प्रयोग किये जा रहे वीर्य के सांड के नस्ल, उस वीर्य डोज में विदेशी नस्ल का रक्त स्तर कितना है और उस सांड की वंशावली क्या है इसकी जानकारी प्राप्त करें।

सांड निर्देशिका में एक वीर्य उत्पादन केंद्र में उपलब्ध सभी सांडों की वंशावली लिखी होती है। आदर्शतः यह निर्देशिका कृत्रिम गर्भाधानकर्ता के पास उपलब्ध होनी चाहिए। यदि नहीं, तो उसे वीर्य उत्पादन केंद्र से यह निर्देशिका प्राप्त करनी चाहिए।

प्रश्न: क्या कृत्रिम गर्भाधान बांझपन या बार-बार गर्मी में आने (रिपीट ब्रीडिंग) का उपचार है ?

उत्तर: नहीं। कृत्रिम गर्भाधान बांझपन या रिपीट ब्रीडिंग का उपचार नहीं है। यह मादा पशु को एक स्वस्थ सांड के वीर्य से कृत्रिम रूप से गाभिन करने की विधि है। यदि पशु बांझपन की वजह से प्राकृतिक गर्भाधान से गाभिन नहीं हो पाता तो वह कृत्रिम विधि से भी गाभिन नहीं होगा।

प्रश्न: क्या एक गर्मी में एक से अधिक वीर्य डोज प्रयोग करने का कोई फायदा है ?

उत्तर: यदि सही समय पर सही विधि (मानक कार्यपद्धति) से कृत्रिम गर्भाधान किया जाए तो एक ही डोज गाय/भैस को गाभिन करने हेतु पर्याप्त है। फिर भी कुछ गायों में गर्मी की अवधि लंबी हो जाने से उसे दुबारा कृत्रिम गर्भाधान की जरूरत हो सकती है।

प्रश्न: क्या मुझे कृत्रिम गर्भाधान के बाद गाय/भैस को सांड के पास ले जाना चाहिए ?

उत्तर: नहीं। कभी भी नहीं।

प्रश्न: कृत्रिम गर्भाधान की आदर्श सफलता दर क्या है ?

उत्तर: 40% या उससे अधिक।

प्रश्न: क्या भैस में कृत्रिम गर्भाधान सफल होता है ?

उत्तर: हाँ, जैसा गायों में है। फिर भी, भैसों में अच्छी सफलता दर प्राप्त करने के लिए गर्मी की पहचान और समय पर कृत्रिम गर्भाधान कराने का ध्यान रखना पड़ता है क्योंकि भैसों में गर्मी की अवधि कम व गर्मी के लक्षण बहुत स्पष्ट नहीं होते हैं।

प्रश्न: क्या कृत्रिम गर्भाधान से केवल नर बच्चे या कमजोर बच्चे पैदा होते हैं तथा गाय/भैस का दूध कम हो जाता है ?

उत्तर: कृत्रिम गर्भाधान से संबंधित अनेकों अभिलेखों से पता चलता है कि इस विधि द्वारा उत्पन्न बछड़ा : बछड़ी अनुपात पर कोई प्रभाव नहीं पड़ता, न ही कमजोर बच्चे पैदा होते हैं और न ही गाय/भैस के दूध उत्पादन में कोई कमी आती है। ये सब मिथ्या विचार हैं, जिसका कोई वैज्ञानिक प्रमाण नहीं है।

प्रश्न: अवर्णित (नॉन-डेस्क्रिप्ट) देशी गायों के बच्चों से बेहतर दूध उत्पादन के लिए कौन से सांड का वीर्य उपयुक्त होगा ?

उत्तर: भारतीय नस्लें जैसे – साहीवाल, रेड सिंधी, गिर इत्यादि सर्वथा उपयुक्त होंगी जो उपलब्ध संसाधनों व राज्य विशेष की प्रजनन नीति पर निर्भर करती है। यदि राज्य की प्रजनन नीति संकर नस्ल की गायों की अनुमति देती है तो किसान शुद्ध जर्सी या शुद्ध होलस्टीन प्रीजियन वीर्य का प्रयोग भी कर सकते हैं।

प्रश्न: सामान्यतः दुग्ध-अभिलेखन (मिल्क रिकॉर्डिंग) से किसान को क्या फायदा है ?

उत्तर: इससे किसान को पता चलता है कि उसके पशु ने एक ब्यांत में कुल कितना दूध दिया है। उसे अपने घर व गांव के अन्य पशुओं की तुलना में अपने उस पशु की दूध उत्पादन क्षमता का पता लगता है। इससे वह यह निर्णय ले सकता है कि उस पशु विशेष को वह रखे और आगे की संतान उत्पत्ति करे या उसे बेच दे।

प्रश्न: पशुओं के विभिन्न गुण जैसे, शारीरिक बनावट, दुग्ध में पाए जाने वाले घटक और शारीरिक वृद्धि दर को क्यों मापा जाता है ?

उत्तर: केवल दुग्ध उत्पादन के आधार पर ही एक पशु का आंकलन नहीं किया जा सकता । दूध में उपस्थित, वसा (फैट), प्रोटीन, लैक्टोज को भी मापना चाहिए जो दूध का बाजार मूल्य तय करते हैं । शारीरिक बनावट और वजन वृद्धि दर उसके उत्पादन व प्रजनन गुणों से घनिष्ठ रूप से संबंधित है ।

प्रश्न: संतति परीक्षण (पी.टी.) व वंशावल चयन (पी.एस.) कार्यक्रम के तहत मेरे पशुओं की बीमारी की जांच क्यों की जाती है ?

उत्तर: रोग रहित वीर्य उत्पादन के लिये चुने गए सांड व उसकी मां का रोग मुक्त होना अनिवार्य है । क्योंकि कुछ रोग वीर्य के द्वारा दूसरे पशुओं में फैल सकते हैं ।

प्रश्न: सेक्सड वीर्य (लिंग निर्धारित वीर्य) क्या है ? ये कहां उपलब्ध है ? इसकी कीमत क्या है ? क्या यह सभी कृत्रिम गर्भाधानकर्ताओं के पास उपलब्ध है ? इसका पता कैसे लगाया जाए कि मेरे पशु में सेक्सड वीर्य का उपयोग हुआ है ? क्या यह सभी गायों की नस्लों तथा भैंसों में भी उपलब्ध है ? सेक्सड वीर्य उपयोग करने के क्या फायदे हैं ? उसकी सफलता दर क्या है ?

उत्तर: ऐसा वीर्य जिसमें एक ही लिंग के शुक्राणु हों और जिनसे ऐच्छिक लिंग के बच्चे (बछड़ा/बछड़ी) उत्पादित हों, वह सेक्सड वीर्य कहलाता है । इसकी शुद्धता 80-90% तक होती है यानि इस वीर्य से पैदा होने वाली 80-90% संतान एक ही लिंग की होगी, जबकी परंपरागत वीर्य द्वारा नर और मादा संतान का अनुपात 50:50 होता है ।

अबतक भारत में कोई भी वीर्य उत्पादन केंद्र सेक्सड वीर्य नहीं बना रहा था इसलिए इसे विदेशों से आयात करना पड़ता था, किन्तु अब घरेलु वीर्य उत्पादन केंद्र भी सेक्सड वीर्य का उत्पादन कर रहे हैं ।

सेक्सड वीर्य 1200-2000 रुपये प्रति डोज की दर से उपलब्ध है । हालांकि, कुछ राज्यों में यह रियायती दर पर उपलब्ध कराया जा रहा है ।

ध्यान दें कि सेक्सड वीर्य सभी कृत्रिम गर्भाधानकर्ताओं के पास उपलब्ध नहीं होता है ।

सेक्सड वीर्य के आयात हेतु राज्य के पशुपालन विभाग से अनुमति लेना जरूरी है और उससे उत्पन्न संतान का ब्योरा (रेकॉर्ड) रखना भी अनिवार्य है ।

सेक्सड वीर्य की गुणवत्ता की जांच भी की जा सकती है । पशुपालक से अनुरोध है की अगर गाय का कृत्रिम गर्भाधान सेक्सड वीर्य से हुआ है तो वह स्ट्रॉ को संभाल के रखें और उसमें लिखे हुए सांड की और अन्य जानकारी को ध्यान से पढ़ें । स्ट्रॉ पर लिखी हुई जानकारी से पशुपालक अनुमान लगा सकता है की उसकी गाय का गर्भाधान सेक्सड वीर्य से हुआ है ।

फिलहाल होलस्टीन फ्रीजियन, जर्सी, गिर, साहिवाल एवं मुर्ही नस्लों का सेक्सड वीर्य उपलब्ध है ।

सेक्सड वीर्य का उपयोग करने से अपनी इच्छा के अनुसार (मनचाहे लिंग का पशु) बछड़ा या बछड़ी प्राप्त कर सकते हैं ।

क्योंकि सेक्सड वीर्य में शुक्राणुओं की संख्या परंपरागत वीर्य की अपेक्षा कम होती है, परंपरागत वीर्य की अपेक्षा सेक्सड वीर्य का गर्भाधान दर भी 10-20% कम होता है ।

प्रश्न: भ्रूण प्रत्यारोपण (ई.टी.) क्या है ? क्या यह कृत्रिम गर्भाधान का विकल्प है ? मेरी गाय/भैंस बार-बार कृत्रिम गर्भाधान कराने पर भी गाभिन नहीं हो रही है क्या मैं उन्हें गाभिन करने के लिए ई.टी. का उपयोग कर सकता हूँ ? मुझे ई.टी. की सुविधा कौन उपलब्ध करा सकता है ? उसकी क्या कीमत है ? क्या मैं ई.टी. से नर या मादा का चुनाव कर सकता हूँ ?

उत्तर: ई.टी. तकनीक में उच्च गुणवत्ता वाले गाय/भैंस से भ्रूण पैदा कर उन्हें ग्राही (रेसीपीएंट) गाय/भैंस के गर्भाशय में प्रत्यारोपित करते हैं । ग्राही गाय/भैंस उसका पूर्ण गर्भकाल तक पालन करती है । यह एक ऐसी तकनीक है जिसके द्वारा उच्च आनुवंशिक गुणवत्ता वाले पशुओं से उनके पूरे जीवन काल में सामान्य से अधिक बच्चे पैदा किये जा सकते हैं ।

यह कृत्रिम गर्भाधान का विकल्प नहीं है ।

यह जरूरी नहीं कि कृत्रिम गर्भाधान कराने के बाद बार-बार फिरने (रिपीट होने) वाली गाय/भैंस पर ई.टी. पूर्णतया: सफल हो । यदि गर्भाशय में कोई बीमारी या खराबी है तो ई.टी. भी कारगर नहीं होगा ।

भारत में कालसी फार्म, देहारादून (उत्तराखंड): साबरमती आश्रम गौशाला (बीडज, गुजरात), : बुल मंदर फार्म, (हरीघट्ट, पश्चिम बंगाल), ई.टी. सेन्टर, (नाभा, पंजाब) और बायफ (पुणे, महाराष्ट्र) द्वारा ई.टी. का कार्य किया जा रहा है जिसमें वे वीर्य उत्पादन के लिए उच्च गुणवत्ता वाले सांडों को पैदा करते हैं । ई.टी. की सेवा व्यक्तिगत स्तर पर सामान्यतः प्रदान नहीं की जा रही है । फिर भी, इन संस्थाओं से संपर्क करके इसकी पुष्टि की जा सकती है ।

ई.टी. की कीमत भ्रूण की नस्ल, उसकी गुणवत्ता, गर्भधारण की सफलता के प्रतिशत इत्यादि पर निर्भर करती है ।

सेक्सड वीर्य द्वारा नर या मादा बच्चे में चुनाव की सुविधा का लाभ उठाया जा सकता है ।

ध्यान रहे कि भ्रूण को कृत्रिम गर्भाधान में प्रयोग होने वाली गन से प्रत्यारोपण नहीं किया जा सकता, उसके लिए विशिष्ट कौशल व उपकरणों की आवश्यकता होती है । इसलिए किसी ऐसे व्यक्ति पर भरोसा न करें जो यह कहता है कि आपके पशु में भ्रूण प्रत्यारोपण कर देगा ।

भैंस की नस्लें

सांड



भैंस



मुरा

मूल स्थान : हिसार, रोहतक, गुडगांव
और जींद जिला, हरियाणा ।



जाफराबादी

मूल स्थान : जूनागढ़, जामनगर,
राजकोट, भावनगर पोरबंदर और
अमरेली जिला, गुजरात ।



नीली रावी

मूल स्थान : पाकिस्तान । पंजाब
के सीमावर्ती जिलों : फिरोजपुर और
अमृतसर में पाई जाती है ।



पंढरपुरी

मूल स्थान : सोलापुर, सांगली और
कोल्हापुर जिला, महाराष्ट्र ।



महेसाना

मूल स्थान : महेसाणा, बनासकांठा
और साबरकांठा जिला, गुजरात ।



सूरती

मूल स्थान : आणंद, खेड़ा और
बड़ौदा जिला, गुजरात ।





राष्ट्रीय डेरी विकास बोर्ड

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2020

573063/2020/NRLPS

K-11038/02/2019-20/MKSP/Mis /367783

Government Of India
Ministry Of Rural Development
Department Of Rural Development
Rural Livelihoods Division

NDCC II Building, 7th Floor,
Jai Singh Marg, New Delhi
Dated 25th September, 2020

To,

The CEO/SMD
All States/UTs

Subject: Sharing of strategy on backyard poultry intervention.

Ma'am/Sir.

I am happy to share the strategy on backyard poultry intervention, the implementation of which will help in improving the livelihoods as well as nutritional status of the household. You are requested to direct your farm livelihoods team to go through the document and share the details of the current year planning for the implementation on backyard poultry in the attached format Annexure I. NMMU, farm livelihoods team will share a google sheet of the format for ease of collection of data from your end. In case of any queries your team may get in touch with the farm livelihoods team of NMMU.

Enclose:- As above.

Yours faithfully



(H.R. Meena)

Deputy Secretary to Govt. of India

Annexure I

Plan of poultry intervention 2020-21 (Backyard poultry)

Slno	Name of state	No. of districts	No. of blocks	No. of villages	No. of mother units planned	Planning for the entrepreneurs for Mother Unit		No of HH planned to be intervened/ mother unit	No of 28 days old Chicks planned to be supplied to each HH	No of cycles /annum planned each HHs	No of pashu sakhis currently placed	Total no of Pashu sakhi planned to be deployed by 20-21
						No of pashu sakhis planned as mother unit entrepreneur	No of Non -pashu sakhis/ Mahila kisans planned as entrepreneur					

Promotion of Backyard Poultry in clusters

Introduction: Backyard poultry is defined as small-scale rearing of poultry birds (chicken) by womenfolk in poor households for dietary improvement, cash income, investment and security against risk. Here, the poultry birds may range freely in the household compound and find much of their food, get additional amounts from the household. The birds are fed with locally available feed sources mostly household and farm by-products. Backyard poultry is rarely the sole means of livelihood for a family but is one of the numbers of integrated and complementary farming activities contributing to the overall well-being of the household. It generates income from the sale of poultry birds and eggs. Eggs can provide a regular, albeit small, income while the sale of live birds provides a more flexible source of cash. Occasional consumption of chicken meat and egg offers a valuable source of protein in the household diet. Poultry also plays an essential socio-cultural role in many societies. Backyard poultry is the smallest livestock investment a rural household can make.



Objective: The objectives of backyard poultry may be any or more of the following:

- I. Income generation only.
- II. Income and home consumption;
- III. Home consumption and cultural reasons
- IV. Home consumption only

Production Systems: Backyard poultry is kept under a wide range of conditions, which can be classified as mentioned below:

- o Free-range extensive
- o Backyard

Free-Range Extensive: Under free-range conditions, the birds are not confined and can scavenge for food over a wide area. Rudimentary night shelters may be provided, and these may or may not be used. The birds may roost outside, usually in trees, and nest in the bush. The flock contains birds of different species and varying ages. In free-range production systems, non-descript native breeds are usually reared. These birds possess genes that are well adapted to local conditions, that is well resistant to diseases and stress conditions, but their production performance is low (for example, they lay about 40-60 brown eggs per year).

Backyard Poultry: In this system, poultry is housed at night, but allowed free-range during the day in and around the house / farm. They are usually fed a handful of grains / farm by-products in the morning and evening to supplement scavenging. Apart from local breeds, indigenous pure breeds such as *Kadaknath*, *Aseel*, *naked necks*, etc. are also raised in backyard production systems and are relatively well resistant to diseases. Pure breeds are reasonably productive breeds and are raised because they fetch a higher market price than local birds (the meat is about better texture and the eggs are tastier) as well as for socio-cultural reasons like cockfights. Hybrid varieties like *Kurolier* and *Vanraja* etc are also grown as backyard poultry and are more productive in terms of egg production than pure breeds.

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Comparative analysis (commercial/ backyard; exotic / indigenous breeds)

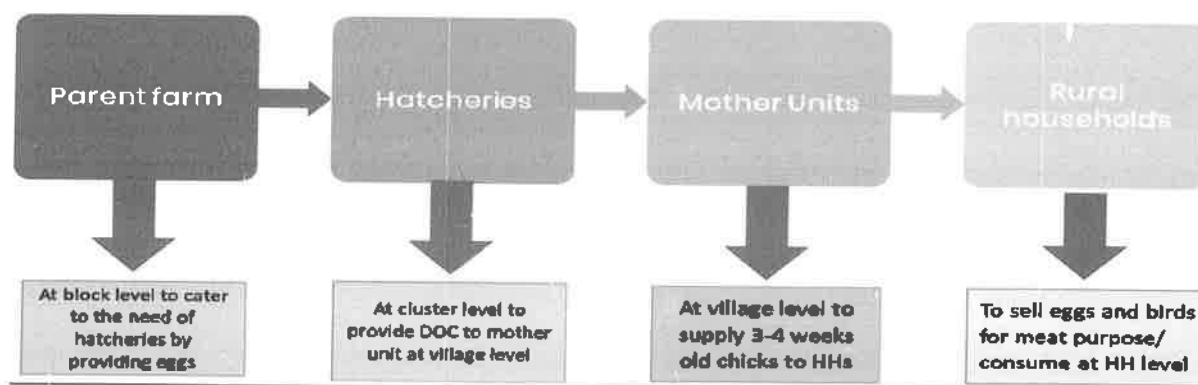
- In backyard poultry production systems, investment in non-descript and indigenous birds, such as Aseel and Kadaknath, provide a higher return than investment in exotic ones because of the high cost of feed of exotic breeds (Not excellent scavengers) and the lower market price of exotic meat and eggs.
- In case of commercial farming with exotic breed the larger the flock size, the smaller the return on investments and the profit per bird, most likely because of the growing feed and animal health costs, which are minimal if anyone is in a backyard poultry farming system. Backyard and small-scale poultry farms with indigenous birds are viable enterprises only as far as the scavenging base is efficient to feed the birds.
- Keeping a few exotic birds makes little economic sense because it is more profitable to raise a few non-descript or indigenous breeds of birds that can thrive almost on their own. At the same time, when the scavenging base is limited, it is better to keep just one or a few local birds rather than a flock of saying local hens because the cost of additional feed will be higher than the returns from the hens.

Backyard poultry intervention in Livelihood Cluster:

Backyard system: Backyard poultry is a vital livelihood intervention for poor rural households, including landless or small landholders. It is more suited for poor households as it requires a low level of investment and skill. Under this system, the pure indigenous breed/ hybrid varieties are promoted as a source of livelihood for the poor. The system consists of the following supply chain:

Supply chain system under backyard poultry: The functional smallholder supply chain can be established to supply chicks/pullets to small rural households even in the remote area through "mother units." The units which raise the birds for 3-4 weeks and sell the grown-up birds to the rural households. There are some critical element/Hybrid varieties in such a supply chain:

A typical supply chain under the backyard poultry system: The supply chain can be represented as below:



The above model can be explained in a tabular form also for better understanding:

LH services	Service area	Particulars	Ownership
Parent farm	Block	At parent farm pullet and cockerels are kept for supplying eggs to hatcheries.	An individual entrepreneur at the

573063/2020/NRLPS

			block level
Hatcheries	Cluster	At cluster level hatcheries are units for supplying day-old chicks to the mother unit	Producers Group at cluster level attached with LSC / Individual entrepreneur / Pashu Sakhi can be promoted.
Mother unit	Village	The existence of a small scale "mother unit" spread at the village level serves as a brooding unit where DOCs are kept for 3-4 weeks under good heat and light conditions and are appropriately fed and vaccinated. This is critical because after three weeks the brooded chicks weigh around 250 grams and can live and thrive in the open range, scavenging rearing system	Individual entrepreneur / Pashu Sakhi

Economics: An indicative economics has been calculated based on the experiences of Jharkhand SRLM for each of the above.

Parent farm: For a 960 birds' capacity parent farm unit for backyard poultry, an initial investment of about Rs 7.3 lac will be required. In addition to this for a 55 weeks' cycle a recurring cost of about Rs 14 lac will be required. This will generate a net income of about Rs 3.3 lac after depreciation and interest payment. The details are in annexure-1.

Economics of Mini hatchery (2080 eggs): The economics of a hatchery of 2080 eggs capacity under backyard poultry system found that an estimated Rs 6 lac initial investment will be required. In addition to this an operational cost Rs 5.6 lac per year will be required and this will generate a net income of Rs 77 thousand per annum. The details of the economics is shown in annexure-2.

Economics of a Mother unit/ Hardening centre of Chicks (Unit: 2000 birds): The economics of a mother unit of 2000 birds capacity under backyard poultry system found that an estimated Rs 2 lac initial investment will be required. In addition to this an operational cost Rs 0.94 lac per cycle (1 month) will be required. In a year 12 cycles are possible that will generate a net income of Rs 1.2 lac after deduction of depreciation. The details of the economics is shown in annexure-3

Income at HH level: A total of 50 birds can be reared per household, and per year six cycles can be completed. The economics of a backyard poultry household mother unit of 50 birds capacity under backyard poultry system found that with a nominal initial investment, the cost of production per bird will come Rs 171 (Vanaraj / Kroiler) and Rs 129 (indigenous breed) and the activity generates a net annual income of Rs 36,000 (Vanaraj / Kroiler) and Rs 55,000 (indigenous breed). The details of the economics is shown in annexure-4.

It is pertinent to emphasise here that the cost of investment can be minimised with local customization (without compromising the science behind it) and the uses of locally available materials, own contribution (labour and material).

Source of Funds: The source of funding for the setting up of Parent farm, Hatchery and mother unit can be (a) own contribution, (b) CIF loan (c) Bank linkages and (d) Convergence with DAHD schemes (state government and central government). Possible convergence opportunities has been shown below:

Purpose	Extend support through the Program / Scheme	Benefits and targeted segment
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Promotion of mother hatchery parent poultry	of unit, and farm for	Sub-Mission on rural poultry entrepreneurship program	Support the identified PGs/SHGs/Mahila Kisan /CRPs identified by SRLM for the program. Under this scheme, the beneficiary is entitled to a 50% subsidy of the project cost
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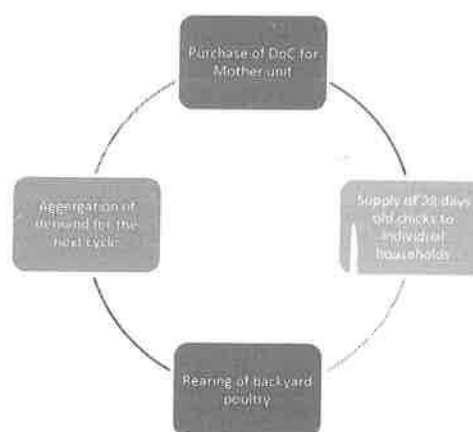
Meat Processing	Animal Husbandry Infrastructure Development Fund	Under this activity, private companies, individual private entrepreneurs, FPOs, Section 8 companies, can take 90% loan from the scheduled bank for the establishment of small, medium, large integrated mechanized meat processing plant for sheep, goat, pig and poultry for hygienic handling, establishment of value addition chain for the manufacturing of meat products, transportation of meat through cold chain establishment.
-----------------	--	---

The Central Government will provide interest subvention up to 3% (including 0.6% of the corpus handling and risk management charge by the market borrower). The beneficiary will get a two-year moratorium during which the beneficiary not to re-pay any loan amount. The entire loan amount needs to be paid within five years after the moratorium period.

Besides, under the National Livestock Program of Animal Husbandry Department there is provision of providing loan for the setting up of Parent farm, Hatchery and Mother Unit which is further subsidized by the government

Intervention strategy: Initially, the intervention can be initiated with setting up of mother unit in the village through Pashu sakhi / Entrepreneur with day old chicks out sourced from different agencies. The chicks depending upon the availability and local demand may vary from indigenous breeds to hybrid varieties (*Vanraja, Kuroiler* etc.). The supply of other inputs like medicines vaccine can also be ensured through various agencies if purchased in bulk.

Thus, the flow chart of the model will be as follows:



LH services	Service area	Particulars	Ownership
Mother unit	Village	<p>The existence of a small scale "mother unit" established at the village level serves as a brooding unit where DOCs are kept for 3-4 weeks under good heat and light conditions and are appropriately fed and vaccinated. This is critical because after three weeks the brooded chicks weigh around 250 grams which can live and thrive in the open range, scavenging rearing system.</p> <p>The mother unit owner will also provide the back end supports to the poultry rearers in terms of vaccination, general management to show-case his/her mother unit. A</p>	Individual entrepreneur / Pashu Sakhi

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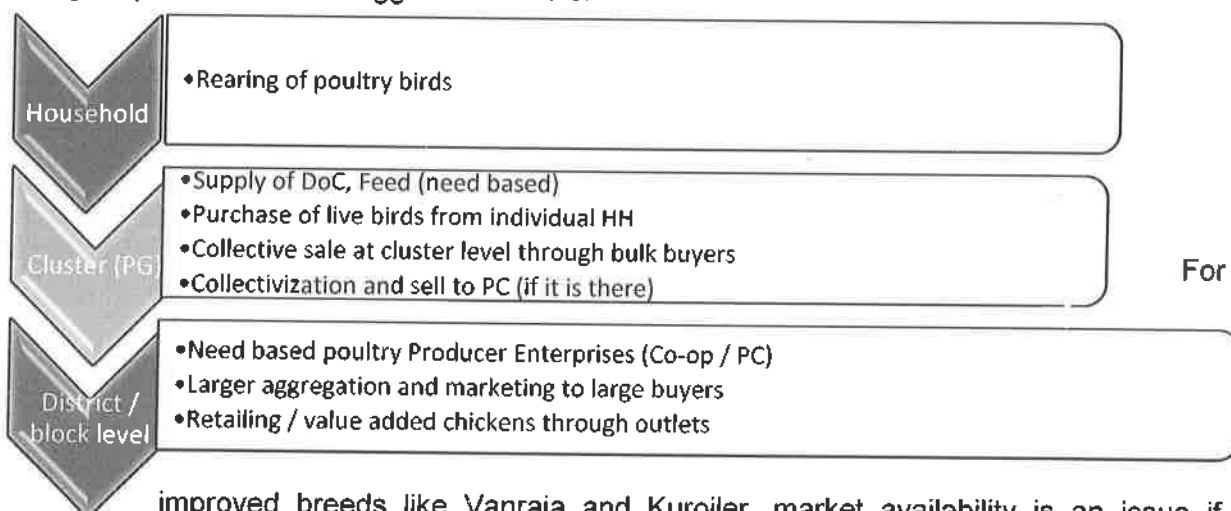
LH services	Service area	Particulars	Ownership
		number of such mother units in each village in a cluster will create healthy competition among the mother units.	

Role of Pashu Sakhi: The role of Pashu sakhi is of significant importance as they have multi-fold jobs of (a) training the farmers, (b) vaccinating and deworming the poultry and also of (c) setting up of poultry mother unit which will enable them to have sustainable means of livelihoods.

Training and Capacity Building: The training and capacity building of the mother unit owner can be done through:

- National Resource Persons
- Supplier of Day Old Chicks
- Hand holding can be done by CRP rounds by the experienced CRPs/PRPs of some pioneer states like Jharkhand, Maharashtra where they have been practicing it for quite some times.

Marketing: Marketing is not an issue for backyard poultry producers. Non-descript and indigenous birds have a ready market available locally, and both live birds and eggs receive a higher price than exotic eggs and broilers.



improved breeds like Vanraja and Kuroiler, market availability is an issue if production suddenly increases in a particular geography. Thus the following marketing channel is proposed.

Risks and its mitigation: Disease outbreak, lack of access to medication, vaccines, supply of quality chicks, lack of quality feed, transparent method of poultry bird purchase are some of the risk situations in backyard farming. Creation of strong Pashu Sakhi network, promotion of the activity in cluster, establishment of LSC, collective marketing are the risk mitigation strategies proposed. For disease control, the focus should be on timely vaccination and hygienic practices through proper training and capacity building of rearers through Pashu Sakhi network.

Annexure-1 (Economics of a Mother Unit – 960 bird capacity)

Sl	Particulars	Unit description	Unit cost (Rs)	No of units	Cost (Rs)
A.	Fixed cost				
A1.	Poultry Shed	Sq. Ft	300	2,400	720,000
A2.	Drinker, Feeder, Nest and other accessories	Lump sum	510	19.2	9,792
	Total A				729,792
B.	Recurring cost				
B1.	Cost of 16-week old pullets & Cockerel	No.	300	960	288,000
B2.	Feed cost (for 16 to 19 weeks)	Kg	30	2,419	72,576
	Feed cost (for 20 weeks to 72-week age)	Kg	25	42,739	1,068,480
B3.	Vaccination, Deworming & other Medicine	Lump sum	50	960	48,000
	Packaging & transportation	No.	0.5	148,400	74,200
	Labour cost	Month	13	10,000	130,000
	Total B				1,393,256
C.	Other costs				
C1.	Depreciation on the fixed cost	10% per annum			72,979
	Interest on Capital cost	10% per annum			109,517
	Total C				182,496
	Total recurring cost / annum (B+C)				15,75,752
D	Receipts				
D1.	Sale of eggs	No.	12	148,400	1,780,800
	Sale of culled birds	Kg	130	960	124,800
	Gross Receipts				1,905,600
	Gross profit per cycle (D-B)				512,344
	Net profit after deduction of depreciation and interest				329,848
	Return on Investment				15.54%
	Egg production in 25 days			10,000	
	Initial investment required	Per unit			10,95,168

Source: Jharkhand SRLM

Annexure-2 (Economics of a Mini Hatchery – 2080 eggs capacity)

Particulars	Unit	No. of Units	Year 1	
			Unit Cost (INR)	Value (INR)
Capital Expenditure				
Hatchery unit with other machinery & accessories (2080 eggs)	Number	1	200,000	200,000
2 KVA inverter with solar support	Number	1	150,000	150,000
Platform & Platform & another establishment	Number	1	50,000	50,000
Construction of Building for Hatchery (20X10 Sq. ft)	Number	200	1,000	200,000
Total capital expenditure				6,00,000
Output (Revenue)				
Sale of chicks	Number	23,296	30.0	6,98,880
Total Revenue				6,98,880
Expenditure				
1. HR Costs				
Hatchery Operator	Person months	12	7,000	84,000
Hatchery assistant	Person months	12	4,000	48,000
2. Recurring Costs				
Rent/ Maintenance	Months	12	2,000	24,000
Electricity	Months	12	1,000	12,000
Purchase of eggs	Number	29,120	12.0	3,49,440
Transportation	Number	23,296	1.5	34,944
Cartoon for packaging	Number	466	20.0	9,318
Total Expenditure Costs				5,61,702
Gross Profit				1,37,178
Depreciation (machinery/equipment/tools)				60,000
Net Profit				77,178

Source: Jharkhand SRLM

Annexure-3 (Economics of a Mother Unit – 2000 Chicks)

Sr. No.	Particulars	Unit description	Unit Cost	No. of Units	Total Cost
A.	Fixed cost				
A1.	New building construction	Sq. Ft	300	667	2,00,000
A2.	Drinker, Feeder and other accessories	Lump sum	180	40	7,200
	Total A				2,07,200
B.	Recurring cost				
B1.	Cost of day-old chicks	No.	30	2,000	60,000
B2.	Feed Cost	Kg	32	500	16,000
B3.	Vaccination & other medicine etc.	Lump sum	1	2,000	2,000
B4.	Cost of In-charge- Mother Unit	Per cycle/ Month	1	7,000	7,000
B5.	Incentive to APS	per bird	5	1,800	9,000
	Total B				94,000
C.	C. Other costs				
C1.	C1. Depreciation on the fixed cost	25% per annum			51,800
	Total C				51,800
	Total cost including depreciation				1,45,800
D	Receipts				
D1.	Sale of 25 days old birds	Kg	60	1,800	108,000
	Gross Receipts				108,000
	Gross profit per cycle (D-B)				14,000
	Gross profit for 1 year	12 cycle in year			168,000
	Net profit after deduction of depreciation				1,16,200

Source: Jharkhand SRLM

Anexure-4 (Economics of 50 Vanaraja / Kuroiler and 50 Kadaknath under backyard poultry system)

Sl	Particulars	Vanaraja/ kuroiler	Indigenous breed
I	Variable cost		
A	Cost of a day-old chicks @Rs. 40/- for Vanaraja and @Rs. 25/- for local chicken	2,000	1,250
II	Cost of feed up to 42 days of age		
A	For Vanaraja/Kuroiler chick 1.2 kg of broiler starter/bird i.e. 60 kg @ Rs 40 per kg	2,400	
B	For local chicks, 10 kg of broken rice @ Rs. 25/- per kg for 50 nos. chicks		1125
ii	Cost of vaccine @ Rs. 1.60/ chick	80	80
C	For Vanaraja chick cost of medicine, feed supplement @ Rs.3.75 per chick	187.5	
D	For the local chicken cost of medicine, feed supplement @ Rs. 2.40 per chicks		120
E	For both the flock (Kuroiler and local) cost of labour @ 20 hrs. / month = 2.5 Man-days x 18 months = 45 man-days x Rs. 150/- per Man-day = Rs. 6750.00	3,375	3,375
	Total variable cost	8042.5	5,950
III	Fixed cost		
A	Land	with farmer	with farmer
B	Low-cost poultry shed made with locally available material	1,000	1,000
	Depreciation	500	500
K	Drinker/ Feeder	Local made	local made
L	Total fixed cost		
M	Total cost/value of production	8,543	6450
N	Cost of production per bird	170.85	129
IV	Income		
A	105 eggs per bird @ Rs 8 each		42,000
B	120 eggs per bird @ Rs. 5 each	30,000	
C	Sale of birds @ Rs 400 per birds		20,000
D	Sale of birds@ Rs 300 per birds	15,000	
E	Total income	45,000	62,000
	Net income	36,458	55,550

Source: Jharkhand and Bihar SRLM

Reference:

- I. Jharkhand SRLM*
- II. Bihar SRLM*
- III. Maharashtra SRLM*

- IV. <https://krishijagran.com/featured/backyard-poultry-farming-a-low-input-business-with-high-economic-returns/#~:text=Backyard%20Poultry%20Farming%3B%20a%20low%20input%20business%20with%20high%20economic%20returns,-Balwinder%20Singh%20Dhillon&text=Rural%20population%20living%20in%20India.of%20rural%20families%20of%20India>
- V. <http://www.fao.org/3/a-y5169e.pdf>
- VI. <http://www.sappp.org/files-repository/smallscalepoultryfarmingandpovertyreductioninsa>

K-11060/02/2019/NRLM(Livelihoods) Part1/ (367798)
Government of India
Ministry of Rural Development
Department of Rural Development
(Rural Livelihoods Division)

7th floor, NDCC Building - II,
Jai Singh Road, New Delhi - 1
Dated 1st Feb., 2021`

To,
The SMD/CEO,
All States

Subject: Guidelines on promotion of backyard pig rearing under DAY-NRLM

Madam/Sir,

I am directed to share the guidelines on promotion of backyard pig rearing under DAY-NRLM for your perusal and guidance. You all are requested to initiate the promotion of backyard pig rearing based on the circulated guidelines in your state

Yours faithfully

Enclose:- As above.



(H.R. Meena)
Deputy Secretary to the Govt of India

Guideline for promotion of backyard piggery under DAY-NRLM

Contents

1. Background. 3
2. Introduction. 3
3. Composition of pork. 4
4. Recommended Pig breeds for different regions of India. 4
5. Different pig rearing systems in India. 4
6. The main Challenges of backyard piggery in India are. 5
7. Strategies under DAY-NRLM for backyard pig intervention. 6
8. Income potential at household level: 7
9. Funding sources: 8
10. Convergence opportunities: 8
11. Technology and its extension: 8
12. Role of SHG: 9
13. Community Insurance: 9

GUIDELINE FOR PROMOTION OF BACKYARD PIGGERY UNDER DAY-NRLM

2. Background

Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM), is a flagship programme of the Ministry of Rural Development, Government of India. It has been working towards improving social status and economic capabilities of rural women through formation of collectives, intensifying and expanding their existing livelihoods, bringing in new farm, non-farm and other economic opportunities by accesses and linkages through their collectives.

Since its inception, DAY-NRLM has made significant progress in mobilizing rural poor and vulnerable women into their institutions in various tiers. DAY-NRLM has also supported these women SHGs through provisioning of Revolving Fund (RF) and Community Investment Fund (CIF) to take up livelihood activities, additional credit need has been arranged through linking the SHGs with the banks.

Livestock based livelihoods is one of the important sources for SHG women from small, marginal, landless households and forest dwellers. Promotion of improved practices to reduce the mortality and morbidity in ruminants, non-ruminants and poultry through improved feed and breed management, preventive healthcare, ethno-veterinary practices, better housing, improved management practices are the essential livestock interventions under DAY-NRLM. Promotion of piggery with small and manageable herd size in their backyard has huge potential in the tribal pockets of central and north-eastern India. For improving this backyard piggery based livelihoods, systematic promotion and establishing linkages, a comprehensive implementation guideline is felt to be developed to help SRLMs to engage with this activity.

In this context, the following guideline has been developed in consultation with some of the SRLMs where similar intervention has been initiated.

3. Introduction

Backyard piggery has been an age-old practice among the communities in north-eastern India and socio-economically weaker sections of the society in the rest of the country as well. It has great potential to contribute to faster economic return to the rearers, due to its high fecundity, better-feed conversion efficiency, early maturity and short generation interval. Pig can convert so called wastes into a high quality edible protein in its body.

Backyard pig rearing with small herd size contributes in many ways to improve the livelihood of poor. Pork and other pig products provide for high value animal protein, the meat is easy to dress and has superior curing and storage qualities. The low costs and small investments are recovered fairly quickly as slaughter can take place at about six to eight months from farrowing (birth), depending on breed and feed availability. Additionally, pig husbandry can be easily integrated with a series of other farming activities (agriculture, fishery) within the agricultural and aquaculture sectors. All these advantages make the livelihood activity of pig production a valuable diversification option in small-scale production systems.

4. Composition of pork

A 3.5-ounce (100-gram) serving of cooked, ground pork provides the following nutrients

Food values	Value / 100 g of pork
Calories	297
Water	53 %
Protein	25.7 g
Fat	20.8 g
Carbs	0
Fibre	0
Sugar	0

5. Recommended Pig breeds for different regions of India

Instead of importing pure exotic breeds, crossbred pigs developed in different States utilizing local and exotic breeds is recommended for different regions:

States of India	Recommended breed
Northern India	<ul style="list-style-type: none"> • Large White Yorkshire • Large White Yorkshire cross • Landrace cross
North-eastern India	<ul style="list-style-type: none"> • Large white Yorkshire specifically for Mizoram and Tripura • Triple cross with Duroc as terminal sire • Large Black cross

Eastern India	<ul style="list-style-type: none"> • Hampshire cross • Tamworth cross (specifically Jharkhand)
Central India	<ul style="list-style-type: none"> • Landrace cross • Large white Yorkshire cross
Southern India	<ul style="list-style-type: none"> • Large white Yorkshire cross • Triple cross with Duroc as terminal sire
Western India	<ul style="list-style-type: none"> • Large white Yorkshire cross

Source: National Guidelines for formulation of State Pig Breeding Policy

Good quality breeding stock may be purchased from Government pig Farm, ICAR-AICRP Projects, State agricultural university farms, Progressive pig farms recommended by University, SHGs, Livestock farm co-operative Society.

6. Different pig rearing systems in India

The typical production system consists of a simple pigsty and feeding comprises of locally available grains, vegetables and agricultural by-products along with kitchen waste.

Free range/ scavenging: These traditional systems predominate in large areas, especially in the rural villages of central and northern India with local undescriptive varieties. Productivity of these village pigs is generally low. The potential of these basic production systems for wealth creation is limited, but makes a significant contribution to the livelihoods of resource of poor people.

Semi-intensive (confined within a large area): The semi-intensive system (confined within a large area) is found in suburban areas or with communities specialized in fattening local pigs. In this system, the farmer provides housing for the animals and allows them to move out to feed on natural vegetation. The farmer provides paddocks around the housing, which he has fenced. Wallow pits and shades are also provided within the farm. Moreover, the farmer allows animals to move about thereby, exercising themselves to prevent fat build-up in the body. Groups concerned about ethical standards in livestock farming would approve this model. The system needs less capital investment but the labour requirements, disease incidence and parasite infestations are high. Concentrate feeds are also provided.

Intensive (confined to a pig pen): This system is adapted by farmers with a sense for improved pig production. This system is generally adopted for commercial production. This system for pig rearing is from birth to weaning and for lactating and weaned sow can hold large number of pigs. It is generally managed in all-in all- out basis.

Integrated pig and fish farming: This system is adapted by farmers which have access to fish pond in the villa ges. Pig sty are built in the bank of the pond. The pig manure contributes to fish feed and encourages growth of algae in the pond and in turn ensures faster growth of fish. Extremely resource poor households may find it difficult to adopt the technology, as this requires the pigs to be penned up. In small scale rural farms, pigs are typically permitted to roam and scavenge for their feed as this avoids the investment and effort of penning and then providing feed.

7. The main Challenges of backyard piggery in India are

The main challenges of backyard piggery in India are summarised as follows:

- i. Lack of access to quality piglets in required number.
 - ii. High cost of quality piglets.
 - iii. In-breeding causing deteriorating breed quality.
 - iv. Lack of supply and mechanism to execute timely vaccination – Swain fever, FMD etc.
-
- ii. Lack of technical know-how on improved pig rearing among rural areas.
 - iii. Lack of access to vet-care services
 - iv. Unavailability of hygienic pork production, slaughter and processing facilities across the country.
 - v. Availability of credit for purchase of piglets.
 - vi. Socio-religio-cultural disadvantages of pork

8. Strategies under DAY-NRLM for backyard pig intervention

The broader strategy for promotion of backyard piggery among the SHG members can be presented below:

Backyard piggery intervention under DAY-NRLM consists of the following:

(a) Maintaining proper ratio (fattener, boar keeper, breeder): Under this intervention a village has been taken as a unit of intervention. The number of individual fatteners, pig breeders and breeding boar keepers to be maintained so that the ratio of 9:1:1 is attained. This ratio will help in producing required piglets for the fatteners.

(b) Boar exchange: At cluster level, in regular interval the breeding boar to be exchanged among the bre-keepers of that cluster to avoid in-breeding.

(c) Promotion of fatteners: Income from backyard pig fattening depends on the reduction in cost of feed. Thus at household level, the size of herd to be determined by the volume of agricultural / household wastes generated so that bulk of the feed for the pigs are generated at household level or within the village (herbs, forest produces etc) except need based vitamine and mineral mixture.

(d) Promotion of pig-breeders: Promotion of backyard pig breeder farmers and maintaining a proper ratio of different pig farmers and boar exchange will ensure availability of quality piglets at an affordable price to all pig fatteners. The Pashu Sakhi may be promoted to pig-breeding entrepreneurs.

(e) Promotion of breeding boar-keeper: High quality, locally adopted breeding boar rearing at household level will be promoted for breeding purpose. After one or two years such boar will be exchanged or castrated to convert into fattening pigs. This will ensure continue supply of quality piglets without in-breeding. Pashu Sakhi may be promoted as boar-keeper entrepreneur.

(f) Credit linkage: During purchase of piglet the SHG women needs credit, timely availability of such credit through MCP will ensure access to such fund for purchase of piglets.

(g) Mini Slaughter House: At cluster level, such facilities may be promoted as individual enterprise. Selection of such entrepreneur may be done through the CLF.

(i) Pig Rearers Group (Producers Group): All the pig rearers (fatteners, boar keepers and breeders) of a cluster of adjoining vilages may be organised around a Pig Rearers Group. This is an informal group for sharing of experiences, cross-learning, boar exchange, collective marketing of piglets, pigs, Mini slaughter house etc. This may act as Pashu Pathshala also.

(j) Pig Rearers Enterprise (PE): All the pig rearers group of a block / district may be federated into a Producers Enterprise (PE) primarily for aggregated supply of inputs (vaccine, vet-medicine, mineral mixture, vitamins etc), vet services (through qualified vet-doctors), slaughter house, processing of pork, packaging, branding and marketing.

(k) Training and capacity building: The training and capacity building for all the different types of pig rearers can be done through:

- National Resource Persons (NRPs) / State Resource Person (SRPs)
- In convergence with Department of Animal Husbandry
- Hand holding can be done by CRP rounds by the experienced CRPs/PRPs / entrepreneurs of some pioneer states.
- TSP and SCSP programmes of ICAR institutes and SAUs.
- ICAR-National Research centre on Pig and their units in different ICAR institutes and SAUs can also be roped in for training, capacity building and bring in new technologies.

9. Income potential at household level:

Income from pig breeding: With a herd size of 3 female piglets, a SHG women needs to invest Rs 25,600 for construction of pigsty, female piglets etc. The piglets will be purchased when they are 3 months of age and around 15 kgs of wt. This investment will bring an annual income of about Rs 23,830 in the first year (excluding incidental expenses). Similarly in the second year onwards the income will become Rs 68,364 per year. The details of the calculation / economics has been annexed in annexure-1.

Income from pig fattening: With a herd size of 3 castrated pig rearing which are 2.5 – 3 months old and weighing around 10 kgs , initial investment in the form of construction of pig-sty and other accessories comes as Rs 10,500. It will generate an annual income of Rs 32,560 in the first year after deduction of all investment and expenses. Similarly in the second year yearly income will increase to Rs 43,060. The details of calculation is presented as Annexure-2.

Income of a boar keeper: Keeping five locally adopted, high quality, cross-breed boar(male pig) for breeding purpose needs Rs investment including cost on construction of pig-sty, purchase of quality boar, transportation etc. The income from 2nd year onwards is expected around Rs. 90,000. The details of calculation is mentioned in Annexure-3

Income from Mini Slaughter House: Initial investment in a Mini Slaughter House is in the tune of Rs 4,20,000. Details of the income is presented in annexure as Annexure-4.

10. Funding sources:

The following may be the different sources of fund for backyard piggery:

Particulars	Possible sources of fund
Pig-sty	Self-contribution, SHG loan, MGNREGS
Piglet purchase	SHG loan, Self-contribution.
Promotion of entrepreneur, breeding unit and pig induction	In convergence with Department of Animal husbandry scheme on 'Sub-mission on piggery breed improvement and entrepreneurship development'
Slaughter house	In convergence with Animal husbandry department through "Animal husbandry infrastructure development fund"
Pork processing unit	In convergence with Animal husbandry department through "Animal husbandry infrastructure development fund"

11. Convergence opportunities:

There is ample scope for convergence with the department of animal husbandry for the animal vaccination, vet-medicine, and subsidies for piglets, animal feeds and support of vet-doctors. Under the Individual Beneficiary Scheme (IBS) of MGNREGA, pig shed, and under common livelihood assets of MGNREGA, infrastructure for Pig PE can be constructed. Besides, local KVK may be roped in for the training of pig rearers, pig breeding and pig fattening entrepreneurs and Pashu Sakhi. SRLM may utilize training of Pashu Mitra (entrepreneurs) / pig farming entrepreneurs through recently approved training courses of agri-preneurs.

12. Technology and its extension:

The details on improved rearing practices has been presented in **annexure-5**.

For extension services two models may be thought of, (a) training to individual farmers through trained Pashu Sakhi and CRPs in villages, (b) through pig entrepreneurs tied up with the rearers who have purchased piglets from her. Following are the topics for extension services:

<ul style="list-style-type: none"> o Awareness on improved pig rearing and hygienic pork production o Provide input in good practices of pig rearing. o Formulation of balanced pig feed with locally available materials, farm wastes and agricultural wastes. o Maintenance of hygiene o Timely Weight check up to get the weight gain or loss 	<ul style="list-style-type: none"> o Protect from ecto and endo parasites o Deworming of pigs – twice in a year(before rainy and after rainy season) o Timely Vaccination (Swine fever and FMD) of pigs. o Insurance Service o Maintain pure and true to breed boar and avoid inbreeding
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13. Role of SHG:

SHG will play a key role in channelizing all loans for the different types of pig rearers.

14. Community Insurance:

Pashu Sakhi / Pig entrepreneurs will work as facilitator in insurance of piggery initiative and would help in filling the insurance form for the insurer SHG member. It would also support in estimating the rate of the pig for the insurance purpose.

Annexure-1

Particulars	Unit cost (Rs)	No of units	Cost (Rs)
A. Fixed cost			
A1. Cost of piglets (15 KG)	4500	3	13500
A2. Transport	200	3	600
A3. Feeding manger, Waterer	500	3	1500

A4. Housing (Thatched roof, pucca floor with ventilation)	10000	1	10000
Total A			25600
B. Recurring cost (first year)			
B1. Feeding cost of piglets @ 150 kg per year at 25 Rs/Kg - concentrate (50% concentrate + 50% agri-byproducts)	3	3750	11250
B2. Health care cost	200	3	600
B3. Minerals and supplements	200	3	600
B4. Insurance	270	3	1620
B5. Consumables /Repair & maintenance	500	2	1000
Total B			15,070
C. Investment required (A+B) First year			40,670
D. Receipts (first year) Piglets	7	3	21
D1. Sale of 2.5 Month old piglets	3000	21	63,000
D2. Sale of manure	03	500	1500
Gross Receipts (first year) - total of D			64,500
Income First year (D-C)			23,830
E. Recurring cost (Second year)			
E1. Feeding cost of 3 adult pigs @ 1.25 kg per day at 25 Rs/Kg - concentrate (50% concentrate + 50% agri- byproducts)	3	11406	34,218
E2. Health care cost	300	3	900
E3. Minerals and supplements	300	3	900
E4. Insurance	600	3	1800
E5. Consumables /Repair & maintenance	1000	1	1000
Investment required (Total E)			38,818
F. Receipts (Second year onward) Piglets (2 farrowing per year)	16	3	48
F1. Sale of 2.5 Month old piglets	3000	48	1,44,000
F2. Sale of manure	03	1000	3000
Gross Receipts (second year)-Total of F			1,47,000
Net receipt (F-E)			1,08,182
Income 2nd year			69,364
Value of parent stock (available with farmer as insurance against natural disasters and hard times).	03	15000	45,000

Source: ICAR-Mega Seed Project on Pig

Note: Common Breeding Boars (05) will be maintained by Pashu Sakhi/ entrepreneur and will be rotated village wise on annual basis to prevent inbreeding.

Annexure-2

Income of a pig fattener (3 castrated piglets)

Particulars			
	Unit cost (Rs)	No of units	Cost (Rs)
A. Investment			
A1. Feeding manger, Waterer	500	1	500
A2. Housing (Thatched roof, pucca floor with ventilation)	10000	1	10000
Total A			10,500
B. Recurring cost			
B1. Cost of piglets (10 KG)	3000	3	9000
B2. Transport	100	3	300
B3. Feeding cost @ 150 kg per piglet per year at 20 Rs/Kg - concentrate (50% concentrate + 50% agri- byproducts)	3	3000	9000
B4. Health care cost	100	3	300
B5. Minerals and supplements	100	3	300
B6. Insurance	180	3	540
B7. Consumables /Repair & maintenance	500	1	500
Total B			19,940
C. Receipts			
C1. Sale of 12 Month old pigs (100 kg) @ Rs 200/kg	20,000	3	60,000
C2. Sale of manure	3	1000	3000
Total receipts (total C)			63,000
Income in the first year (C-B-A)			32,560
Income from second year (C-B)			43,060

Annexure III. Economics of keeping boar (05) for breeding purpose:

Particulars	Unit cost (Rs)	No of units	Cost (Rs)
A. Fixed cost			
A1. Cost of Boar (15 KG) 3 months age	4500	5	22500
A2. Transport	200	5	1000
A3. Feeding manger, Waterer	500	5	2500
A4. Housing (Thatched roof, pucca floor with ventilation)	10000	1	10000
Total A			36000
B. Recurring cost (first year)			
B1. Feeding cost of piglets @ 150 kg per year at 25 Rs/Kg - concentrate (50% concentrate + 50% agri-byproducts)	5	3750	18750
B2. Health care cost	200	5	1000
B3. Minerals and supplements	200	5	1000
B4. Insurance	270	5	1350
B5. Consumables /Repair & maintenance	500	2	1000
Total B			23100
C. Investment required (A+B) First year			59,100
D. Receipts (first year)	7	3	21
D1. Three month Breeding (after 12 months of age) @ two mating per boar per week ie. 120 mating @ Rs. 300 per mating	300	120	36,000
D2. Sale of manure	05	1000	5000
Gross Receipts (first year)			41,000
Net receipt first year (D-B)			17900
E. Recurring cost (Second year)			
E1. Feeding cost of 5 adult Boars @ 1.25 kg per day at 25 Rs/Kg - concentrate (50% concentrate + 50%	5	11406	57,030

agri- byproducts)			
E2. Health care cost	300	5	1500
E3. Minerals and supplements	300	5	1500
E4. Insurance	600	5	3000
E5. Consumables /Repair & maintenance	500	2	1000
Investment required (Total E)			64,030
F. Receipts (Second year onward)			
F1. Twelve month Breeding @ two mating per boar per week ie. 100 mating per boar per year @ Rs. 300 per mating	300	500	150,000
F2. Sale of manure	05	2000	10,000
Gross Receipts (second year onward)			1,60,000
Net receipt (E-F) excluding housing and equipment cost			95,970
Net Monthly income 2nd year onward			7998
Value of parent stock (available with farmer as insurance against natural disasters and hard times).	05	15000	75,000

Source: ICAR-Mega Seed Project on Pig

Note: Common Breeding Boars (05) will be maintained by Pashu Sakhi.

Annexure-4

Economics of Mini Slaughter house

Particulars			
	Unit cost (Rs)	No of units	Cost (Rs)

A. Fixed cost			
A1. Establishment cost, infra for slaughter house	4,00,000	01	4,00,000
A3. Formation of shed for pigs to keep overnight	04	5000	20,000
Total A			4,20,000
B. Recurring cost (one month)			
B1. Fattened pigs will be purchased from the cluster @ 5 pigs per day ie. 150 per month	15,000	150	22,50,000
B2. Feeding cost @ 2 kg per pig per year at 20 Rs/Kg - concentrate (50% concentrate + 50% agri- byproducts) for 2 days	300	20	6000
B3. Packaging cost			5000
A4. Electricity and Misc. cost			1000
Total B			22,62,000
C. Investment required			26,82,000
D. Receipts			
D1. Sale of slaughtered pork among consumers of nearby market (100 kg) @ Rs 200/kg, 5 pigs per day and 150 pigs per month	20,000	150	30,00,000
Gross Receipts			30,00,000
Net receipt(C-B) excluding establishment and housing cost			7,38,000
Monthly income			61,500

ANNEXURE 5

Housing and related equipment: While selecting the site for pig farm, it must be near to town/city to avoid transportation cost of feed or other requirements and to avail marketing facilities. Housing is required for the animals to protect them from rain, wind, storm, and sunlight, cold and extreme climate. The pigsty may be constructed with locally available materials like wooden plunks, jungle post, bamboo and thatch grasses or the houses may be of brick wall, RCC post and with Corrugated Galvanized Iron/asbestos sheet roofing. Floor should be cemented for easy cleaning and hygienic point of view. Pig can be kept under two systems and indoor system. A combination of both may be followed. It is easy to manage animals in indoor system compared to open air system. Each animal of different categories requires a minimum floor space for housing. Before construction of pen following assumption must be followed:

1. Construct shed on dry and properly raised ground.'
 2. Avoid water-logging, marshy and heavy rainfall areas.
 3. The side walls of the sheds should be 4-5 ft. high and remaining height should be fitted with GI pipes or wooden poles.
 4. The walls should be plastered to make them damp proof.
 5. The roof should be at least 8-10 ft. high.
 6. The pig stys should be well ventilated.
 7. The floor should be pucca/hard, even, non-slippery, impervious, well sloped (3 cm per metre) and properly drained to remain dry and clean.
 8. A feed trough space of 6-12 inches per pig should be provided.
 9. The corners of feed troughs, drains and walls should be rounded for easy cleaning.
10. Provide adequate open space for each animal i.e. double the covered area
11. Provide proper shade and cool drinking water in summer.
 12. Dispose of dung and urine properly.
 13. Individual pens for boars/lactating sows should be constructed.
 14. The dry sows / fatteners can be housed in group pens.
 15. Give adequate space for the animals.

Constructed of shed may be done through MANEREGA scheme at cheaper cost. Locally available materials like stones, bamboo, bricks, kachha house, renovation of old existing shed may be utilized for rearing of pigs.

FEED AND FEED SOURCES

The growth and mortality of pigs largely depend on their feeding regime. Pig is the most efficient animal in converting feed to meat. About 70 - 75 per cent of the total production cost of the pig farm is due to the feed cost. Generally farmers want to rear pigs with zero inputs like kitchen waste as well as vegetable waste mixed with rice polish/ wheat bran only. However, with this feed it is not possible to get desired body weight and other production norms. It is therefore, very much important to feed the animals with economical but balanced feed which will contain all the nutrient requirements for growth and to support the life. Generally two types of feeding are practiced. They are:

1. Concentrated feed computed with different feed ingredients
2. Concentrated feed mixed with other locally available agro-industrial by-products, tuber crops like sweet potato, tapioca, colocasia, vegetables and kitchen waste etc .

Feed formula for different categories of pigs

Ingredients	Weaner (18-20%) protein	Growers (15-17%) Protein	Gilt/sow/boar(14-16%)protein

		to Market age	Months	
Maize	55	58	60	15
Ground Nut Cake	17	15	8	30
Wheat Bran	20	20	25	20
Rice Polish	-	-	-	10
Fish Meal/soya Meal	6	5	5	5
Mineral Mixture	1.5	1.5	1.5	1.5
Salt	0.5	0.5	0.5	0.5
Total	100	100	100	100

The poor and marginal farmers in the villages who can not afford to provide the above feed, can feed their pigs with sweet potato (6 0%), protein source, vitamins and minerals. Besides the above the pigs can also be maintained with vegetables waste and kitchen waste consisting of cooked rice, vegetables etc. and also with brewery waste and other feed waste. A good feed ration should contain the required nutrient in right proportion as per the need of body weight along with adequate drinking water.

Flushing

It is the method of increased feeding to sows and gilts before breeding to enhance litter size. A good grower ration fed to pigs for seven to ten days before breeding to increase ovulation rate in them. After breeding animals should be fed a limited but well balanced ration until the last six weeks of pregnancy and then full feeding should be resumed to avoid pregnancy complications. Following points to be followed before feeding to pigs:

1. Feed the animals with best feeds.
2. Give adequate concentrates in the ration.
3. Provide adequate vitamins and minerals.
4. Provide adequate clean water.
5. Give adequate exercise to the animals.
6. The feeding of the piglets is more critical and high quality and more fortified diets are needed for feeding them.
7. Feeding of the sows during pregnancy is utmost important for increased litter size.
8. The feed requirements of lactating sow varies with the size of the litter, weight, size and age of sow.
9. Commercial pig farming should aim at the exploitation of nonconventional feed resources viz., waste from Kitchen/hotel/ cold

storage/warehouses, in replacing the balanced rations to minimize the cost of production.

10. The feeding regime adopted should take care of all the nutrient requirements of various categories of pigs.
11. 25-50% concentrate feed will be recommended for feeding to pigs depending on the locally available feed ingredients/byproduct.

REPRODUCTIVE MANAGEMENT:

Indigenous pigs normally reared by farmers are bred indiscriminately without much choice of male. Moreover, during the process of scavenging, there is no control over breeding. Reproduction is the main component limiting the productive efficiency of pig industry. Successful reproduction is the outcome of a series of closely linked events. The gilt must grow rapidly to attain sexual maturity, initiate estrous cycle, ovulate and be mated by a fertile boar or inseminated with fertile semen. The female pig becomes sexually mature between 8 - 10 months depending on the breed and nutrition level. But the local pig attains maturity at 5 - 6 months. The length of the estrous cycle averages approximately 21 days (18 - 24 days). Signs of heat are restlessness, loss of appetite, increased vocalization, frequent urination, red swollen vulva, riding other females, elevation of tail, arched back etc. If the female is in heat she will remain stand still when pressure is applied on the loin region with the palms of both hands (standing reflex). It is always better to leave one or two estrous cycle in case of the gilt and breeding may be done during the third cycle depending on the physical condition of the gilt. If the female does not conceive, it will repeat its heat symptoms after 21 days. Those who do not repeat are presumed to be pregnant which, however, needs to be confirmed/ diagnosed with the help of a veterinarian.

Care during pregnancy and farrowing

After breeding, the sow should be kept in dry clean and hygienic enclosure in comfortable place. It should be closely observed for estrus symptoms around 20 days after breeding to assure the non - return of estrus and expect the conception. Pregnant sow should be shifted to a clean farrowing house before 3 weeks of farrowing. Clean and dry bedding material preferably of dry paddy straw/hay has to be provided in the pen. The pregnant animal should be fed individually. In most of the cases no assistance is required during farrowing. New born piglets are active and within two minutes each piglet reaches a teat and attempt to suck milk. Sometimes respiration is delayed in newborn piglets. To stimulate the respiratory activity of the piglet the mucous should be removed from nose and mouth. The weaker piglets should be assisted to the teat so that they can suckle the first milk (colostrums). The placenta may be expelled during the phase of delivery as single mass after the birth of last piglet. Care should be taken to avoid crushing of newborn piglets during and after farrowing.

Care and management of piglets from birth to weaning:

Piglets begin to explore his environment within a few minutes after birth and soon find his way to nipple and begin to suckle. It is essential that the pen environment should be clean to minimize chance of exposure to disease and

parasite. Allow the piglets to suckle just after birth without disturbing the sow. Following points to be followed to avoid piglet mortality:

- i. Clean all the piglets and make their body dry.
- ii. Allow piglet to suckle milk from mother sow for 8-10 Times in days.
- iii. To prevent 'naval ill' the naval cord should be tied off to prevent loss of blood and it should be cut 3-5 cm distal to the legation and this portion should be dipped in a solution of 2% iodine or 70% ethyl alcohol.
- iv. The 'needle teeth' should be clipped within 24 hrs. Side cutting pliers are suitable for this purpose. It is important to avoid loosening of the base of the tooth or leaving jagged edges or causing injury to gum.
- v. The piglets should be ear-tattooed immediately after birth and the same animal ear punched/ ear notch at 6 weeks of age.
- vi. Male piglets not required for breeding are generally castrated as this operation generally facilitates easy of management and prevent indiscriminate breeding. This operation should be done after 3 – 6 weeks of birth.
- vii. Tramping of piglets by sow should be preventing during first two weeks by providing guard rail.
- viii. Creep area provide to piglets for protected from crushing, overlying by sow and separate creep ration.
- ix. Creep feeding - concentrate feeding starts at 2-3 weeks when piglets are separated from mother.

Breeding care

1. Pigs are highly prolific in nature and two farrowing's in a year should be planned by adopting optimal management conditions
2. For every 10 sows one boar must be maintained for maximum fertility.
3. Breed the animals when it is in peak heat period (i.e. 12 to 24 hours of heat).

Care during Pregnancy

Give special attention to pregnant sows one week before farrowing by providing adequate space, feed, water, etc. The sows as well as farrowing pens should be disinfected 3-4 days before the expected date of farrowing and the sows should be placed in the farrowing pen after bedding it properly.

HEALTH CARE AND PROTECTION AGAINST DISEASES

Health care measure to be followed in a pig farm is one of the most important factors and if not followed properly, farmer may incur a heavy loss. The pigs can be infected with a number of internal parasites, skin infections and other bacterial and viral diseases, which in turn will result in poor growth and even death of pig. In general, illness in pig is characterized by dullness, loss of appetite, declination to move or sluggish movement, rough body coat, constipation or diarrhoea, dull eyes, dull skin and hair, separates itself from the rest etc. The piglet should be dewormed once in three months. Worms from pigs may infect human being also. Most commonly found parasitic disease are Ascariasis, Coccidiosis and mange mite infection. Drugs like albendazole/fenbendazole @7.5 mg/kg b.wt in feed and water (Single dose) or

Ivermectin @0.3mg/kg b.wt (s/c) are useful against parasitic infection in pig. The pregnant sow should be treated before farrowing.

Another commonly occurring ailment in pig is the skin infection which may be caused by ticks, mites and lice. Mange caused by mites may occur around the head, ears, legs and tails which subsequently spread all over the body. Tick and lice feed on the skin and irritate the pigs which will scratch its body. The skin infection caused by the external parasites can be treated by spraying. Dipping or painting with Butox - 1% solution spray or dipping or painting or Deltamethrin @50 - 75ppm (two application at 10 days interval) or Ivermectin @0.3mg/kg b.wt (s/c) should be done regularly. Other diseases like piglet diarrhoea, salmonellosis, mastitis etc can be treated when it occurs in consultation with the veterinarian.

The important infectious diseases of pigs

- **Classical swine fever or Hog cholera** is one of the most important and devastating viral diseases of pigs. The disease affects both domesticated and wild pigs under natural conditions. It is characterized by fever, multiple generalized petechial and ecchymotic hemorrhages giving rise to visceral and skin lesion. Symptoms of tremor, in coordination and paralysis and occasionally peracute death without any signs may also be observed. Farmers should be advised to vaccinate the animals against swine fever about 20 - 30 days before breeding.
- **Foot and Mouth disease (FMD):** This disease can affect all pigs. The key clinical signs include lameness vesicles and blisters; salivating pigs. There is no specific treatment for FMD. In endemic countries antibiotic therapy may be used to control secondary bacterial infection of ulcers but recovery takes several weeks to months. Vaccination is best way to prevent.
- **Respiratory disorder/ Pneumonia:** it is frequently caused by Pasteurella, it is considered to be an important disease of pigs. Symptoms like affected pigs are apathetic, anorexia, high fever, coughing and sneezing, difficulty in breathing, red eyes with discharge. The treatment is more effective if appropriate antibiotic is used based on the drug sensitivity of the isolated bacteria.
- **Colibacillosis (piglet diarrhoea):** It is caused by pathogenic strains of Escherichia coli and is a disease primarily of the newborn or young pigs. The disease may be manifested by diarrhea, respiratory distress and arthritis. Thorough sanitation, adequate feeding of colostrums and milk during the first few hours after birth is important to reduce the problem. Oral rehydration therapy along with specific antibiotics is useful for the treatment of the affected piglets. Occurrence of most of the diseases can be prevented by following strict hygienic measure and by timely vaccination of pigs. A separate house should be there to keep the animals suffering from contagious diseases.
- **PRRS: Porcine Reproductive and Respiratory Syndrome (PRRS)** is a viral disease infecting sows and pigs leading to reproductive failure (abortions, weak and stillborn piglets, infertility), and causes

pneumonia and increased mortality in young animals. There is no specific treatment for PRRS. Broad-spectrum antibiotics may be useful in controlling secondary infections. Presently PRRS vaccine is not available in India. However, it may be prevented by following strict biosecurity measure.

- African Swine fever: African swine fever (ASF) is a highly contagious haemorrhagic viral disease of domestic and wild pigs, which is responsible for serious economic and production losses. Presently ASF vaccine is not available in India. However during outbreak it may be prevented by following strict biosecurity measure.
- Piglet anaemia: It is Nutritional anaemia in suckling pigs. It's a highly fatal disease of suckling pigs caused by marked decrease in Hb and fatty degeneration of liver. It is due to lack of Copper salts and Iron in sows kept in indoor, or on concrete floor and limited milk diet from sow. Piglets of 3-6 weeks age mainly affected. It may be prevented by

1) Add small amount of Fe and Cu in pigs diet at the rate of 25mg of Fe, 5mg of Cu/day/pig.

2) Paint the udder of the sow daily with following mixtures. FeSO₄ - 500gm CuSO₄ - 70gm Sugar - 500gm Water - 10 litres.

4) Allow piglets to free access runs with fresh soil.

5) Iron injection of Dextran 1 ml (Deep I/M) - 4th & 14th day of age

- Important tips to prevent keep herd free from disease:
 1. Be on the alert for signs of illness such as reduced feed intake, fever, abnormal discharge or unusual behaviour.
 2. Consult the nearest veterinary aid centre for help if illness is suspected.
 3. Protect the animals against common diseases.
 4. In case of outbreak of contagious diseases, immediately segregate the sick and the healthy animals and take necessary disease control measures.
 5. Deworm the animals regularly.
 6. Examine the faeces of adult animals to detect eggs of internal parasites and treat the animals with suitable drugs.
 7. Wash the animals from time to time to promote sanitation.
 8. Strictly follow the recommended vaccine schedule.

Vaccinate the pigs on regular basis with the following vaccine:

Name of disease	Vaccine	Dose/ route	Revaccination
Swine fever	Swine fever vaccine	1 ml, S/C	Annual
FMD	FMD vaccine	2ml, IM	Every 6 months

OTHER MANAGERMENTAL PRACTICES

- **Culling of animals:** Unproductive with very less litter size or with very high interfarrowing period, repeat breeders, aged animals, unproductive boars etc. are to be culled and sold out for meat purpose.
- **Castration of piglets:** Male piglets which are unwanted and not fit for breeding purpose are to be castrated just after weaning and may be kept in the farm as fatterer animal which later on may be sold for meat purpose.
- **Segregation of diseased animal:** A separate house should be there to keep the animals suffering from contagious diseases.
- **Record Keeping:** The ultimate profit or loss in a farm can only be found out by keeping proper records in the farm which includes data sheet of individual animal, total stock of animals, feed register, expenditure statement etc.

Source: *Central Agricultural University, Imphal*

MARKETS AND MARKET DEMAND

There is huge gap between demand and production of pigs. It reflects there is no any problem of marketing of fattening pigs and piglets either locally or in bulk. The marketable products of the pig farms include the piglets as breeding stock, piglets as fatteners, marketable fatteners and culls. Our pig entrepreneurs will be advised to sale their pigs in local market at small scale. Pig SHGs will supply the piglets to government schemes, NGOs, KVKs etc. The marketing avenues for the above products are like satellite fattening farms / breeding cum rearing farms and pork consumption centres. In order to promote the consumption of pork it should be supplied to the consumers in an attractive form. Therefore availability of slaughtering facilities has to be ensured to convert the fatteners into wholesome pork and their products. The sale of piglets at 2-3 months of age will yield quick returns and enables the pig farmer to concentrate their efforts on maximizing the productivity of breeder stock. The other marketing strategy can be rearing of piglets up to marketing age for their sale as fatteners. Based on the market demand appropriate marketing strategy must be adopted in consultation with the local animal husbandry department officials.

K-11060/02/2019/NRLM(LH) Part1/ (367798)

Government of India
Ministry of Rural Development
Department of Rural Development
Rural Livelihoods Division

7th floor, NDCC Building - II,
Jai Singh Road, New Delhi - 1
Dated 10th June, 2021

To,

The SMD/CEO,
All States

Subject: "Guidelines on promotion of backyard duck rearing under DAY-NRLM"

Madam/Sir,

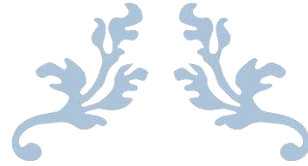
I am directed to share the guidelines on promotion of backyard pig rearing under DAY-NRLM for your perusal and guidance. You are requested to initiate the promotion of backyard duck rearing based on the circulated guidelines in your state.

Yours faithfully

Enclose:- As above.



(H.R. Meena)
Deputy Secretary to the Govt. of India



GUIDELINES ON BACKYARD DUCK REARING UNDER DAY- NRLM

[Document subtitle]



JUNE 1, 2021
FARM LIVELIHOODS TEAM
NMMU

Duck farming; an effective tool for socio economic development in rural India

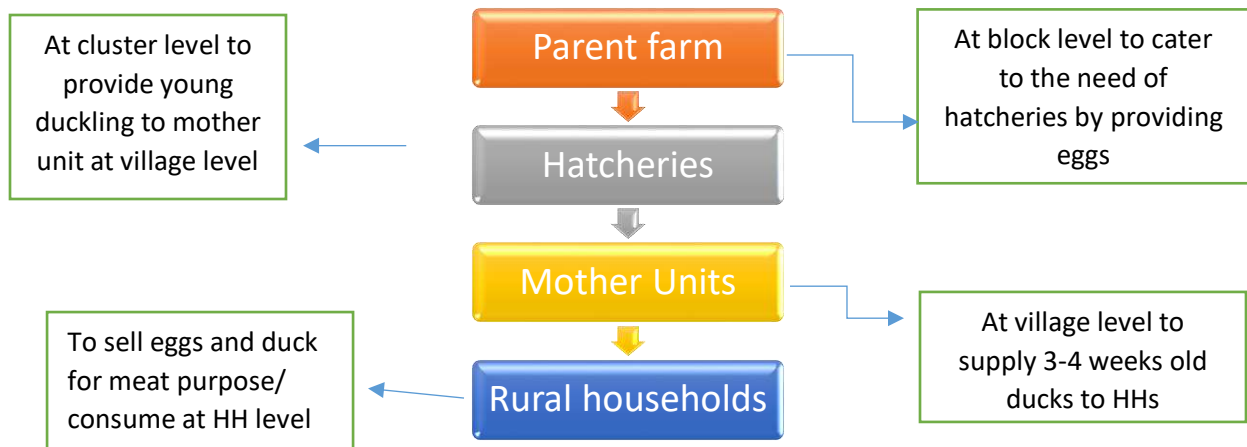
- 1. Introduction:** Duck raising is a lucrative livestock industry in the globe at the same time is an income generating occupation for the small, marginal and even for landless for its egg and meat. Duck eggs are relatively larger than chicken, weighing about 4.5% of duck's body weight. Duck has higher red muscle fiber in breast compared to chicken and is considered as red meat. It grows faster than chicken, is costly and is easy to rear. Duck farming is an important component for integrated farming system, such as:
 - **Duck keeping and paddy cultivation:** Duck feeds on insects, snails, stir soil surface benefits paddy at the same time duck gets nutritious feed from paddy field.
 - **Duck keeping combined with fish ponds:** Duck get nutritious feed from pond, it oxygenate pond water by swimming, duck drops also act as feed for the fishes.
- 2. Breeds of Ducks:** In addition to non-descriptive breeds, generally ducks available in India are of three types namely egg type (Khaki Campbell and Indian Runner); meat type (White Pekin, Muscovy and Aylesbury) and ornamental (Crested white). Among the egg laying breeds, Khaki Campbell is found to be the best (240 to 280 egg/bird/year with egg size of 65g to 75g) whereas White Pekin' is the most popular duck in the world known for table purpose (attains about 2.2 to 2.5 Kg of body weight in 42 days, with FCR of 2.3 to 2.7).
- 3. Feeding:** Duck feeds are mostly farm wastes like broken rice, rice bran, coconuts stem powder or similar products between hatching and 4 weeks of age. After that insects, snails, kitchen waste, paddy grains and weeds are the food sources for ducks in addition to foraging. Thus the cost of production is low.
- 4. Water for Ducks:** Water for swimming is not essential at any stage of duck rearing. However, water in drinkers or water channels should be sufficiently deep enough so that a duck can immerse up-to its eyes otherwise the eyes will get scaly and crusty and in some cases, blindness may follow.
- 5. Space for Rearing:** Under intensive system, a floor space of 4 ft² to 5 ft² per duck is essential, whereas in semi-intensive system, a floor space of 3 ft² in the night shelter and 10 ft² to 15 ft² as outside run bird would be adequate.
- 6. Housing:** Ducks do not require elaborate houses. The house should be well ventilated, dry and rat proof. The roof may be of shed type, gable or half round. It may have solid or wire floors. The wire floors are not popular with breeders.
- 7. Brooding of Ducklings:** Ducklings may be brooded on wire floor, litter or batteries. The brooding period of layer ducklings is 2-3 weeks. In general, in colder season, brooding period may extend up to 1-2 weeks longer than the regular period. Provide hover space of 90-100 sq.cm per duckling under the brooder. A 100 watt bulb can brood 30-40 ducklings. The temperature of 32°C is maintained during the first week. It is reduced by about 3°C per week till it reaches 24°C during the fourth week. In wire floor, space of 0.5 sq. ft per bird and in litter 1 sq. ft per bird is sufficient up to three weeks of age. Water in the drinkers should be 5.0-7.5 cm deep, just sufficient to drink and not to dip themselves. In deep litter brooding, the thickness of the litter will be 3 cm and above to absorb the excess moisture in the ducks' droppings. In extensive system, no artificial warmth is provided, but the heat of brooding shed is conserved by making "Closed tents" (Tent brooding) to provide the required warmth. The ducks are allowed to swim in water after the brooding period is over.

Grower Management Ducks may be reared in intensive and semi intensive system. Under intensive system, floor space of 3 sq. ft per bird up to 16 weeks of age is sufficient. Under semi intensive system of rearing, a floor space of 2-2.5 sq. ft per bird for night shelter and 10-12 sq. ft

per bird for outside run is necessary for free flow of birds up to 16 weeks. Water in the drinkers should be 10 -12 cm deep to allow the immersion of their heads. Partitions up to the height of 60-90 cm separating the pen and run are adequate for control of ducks. In rural duck farming, straight run ducklings (male and female) will be reared up to 10 to 15 weeks of age. For Layer Management Under intensive system, a floor space of 4 sq. ft per bird is essential. In Semi Intensive System, a floor space of 3 sq. ft per bird for night shelter and 10-12 sq. ft per bird of outside run space is required. For wet mash feeding, 10 cm of feeding space and for dry mash or pellet feeding 7.5 cm of feeding space per bird is required. For the collection of clean hatching eggs, a nest box with 30x30x45 cm dimension shall be provided at the rate of one per three ducks. A light of 14-16 hours is necessary for optimum egg production. The age at first egg and 50 percent egg production are 120, 140 days and the annual egg number is 320 eggs for Khaki Campbell ducks in intensive farming. The daily feed intake during laying period will be 120-140 g. depending on the rate of egg production and body weight. The body and egg weights at 40 weeks of age are 1.8 kg and 68 grams, respectively.

8. Breeding Management: The desirable sex ratio for good fertility and hatchability for ducks is 1:6 for intensive rearing and 1:15 to 1:-20 for extensive rearing system. In extensive system of rearing of rural ducks, farmers keep a wide sex ratio of 1:20 to 1:25, however they get a reasonable good fertility of 70-80 percent.

9. A typical supply chain under backyard duck rearing system:



The model can be explained as stated below:

LH services	Service area	Particulars	Ownership
Parent farm	Block	At parent farm Drake and Duck are kept for supplying eggs to hatcheries.	Individual entrepreneur at block level
Hatcheries	Cluster	At cluster level hatcheries are units for supplying young ducklings to the mother unit	Producers Group at cluster level attached with LCC
Mother unit	Village	The existence of small scale “mother unit” spread at village level serves as brooding unit where young ducklings are kept for 3-4 weeks under good heat and light conditions, and are appropriately fed and vaccinated. This is critical because after three weeks the ducklings weigh around 250 gms and are able to live and thrive in the open range, scavenging rearing system	Individual entrepreneur / PashuSakhi

10. Economics of raising backyard duck (Comparative statement of Khaki Campbell and desi variety):

- **Parent farm:** For a 960 birds’ capacity parent farm unit for backyard duck rearing, an initial investment of about Rs 7.3 lac will be required. In addition to this for a 55 weeks’ cycle a recurring cost of about Rs 14 lac will be required. This will generate a net income of about Rs 3.3 lac after depreciation and interest payment. The details are in annexure-IV.
- **Economics of Mini hatchery (2080 eggs):** The economics of a hatchery of 2080 eggs capacity under backyard duck rearing system found that an estimated Rs 6 lac initial investment will be required. In addition to this an operational cost Rs 6 lac per year will be required and this will generate a net income of about Rs 50 thousand per annum. The details of the economics is shown in annexure-III.
- **Economics of a Mother unit/ Hardening centre of Chicks (Unit: 2000 birds):** The economics of a mother unit of 2000 birds capacity under backyard duck rearing system require an estimated Rs 2 lac initial investment. In addition to this an operational cost of Rs 0.94 lac per cycle (1 month) will be required. In a year 9 cycles are possible that will generate a net income of Rs 40,900 after deduction of depreciation. The details of the economics is shown in annexure-II
- **Income at HH level:** At the household level per year six cycles can be completed. The economics of a backyard duck rearing household post mother unit intervention of 20 birds capacity under backyard duck rearing system found that with a nominal initial investment, the net income can be obtained up-to Rs. 8,500 (Detail in annexure-1).

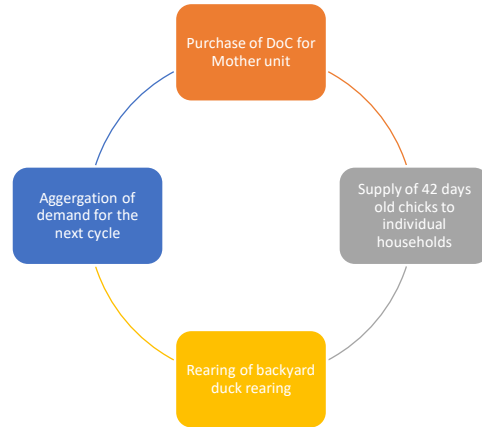
It is pertinent to emphasize here that the cost of investment can be minimised with local customization (without compromising the science behind it) and the use of locally available materials, own contribution (labour and material).

11. Source of Funds: The source of funding for the setting up of Parent farm, Hatchery and mother unit can be (a) own contribution, (b) CIF loan {the Household poultry unit mentioned in the Annexure - 4 can be financed from Community Based Organizations (CIF/SHG Bank loan/Own funds)}. For mother unit, the SHG may provide a partial loan (a very small loan amount depending on availability of funds) from CIF/Own fund/Bank loan. (c) Bank linkages and (d) Convergence with DAHD schemes (State government and central government). Possible convergence opportunities have been shown below:

Purpose	Extend support through the Program / Scheme	Benefits and targeted segment
Promotion of mother unit, hatchery and parent farm for poultry	Sub-Mission on rural poultry entrepreneurship program	Support the identified PGs/SHGs/Mahila Kisan /CRPs identified by SRLM for the program. Under this scheme, the beneficiary is entitled to a 50% subsidy of the project cost
Meat Processing	Animal Husbandry Infrastructure Development Fund	<p>Under this activity, private companies, individual private entrepreneurs, FPOs, Section 8 companies, can take 90% loan from the scheduled Bank for the establishment of small, medium, large integrated mechanized meat processing plant for sheep, goat, pig and poultry for hygienic handling, establishment of value addition chain for the manufacturing of meat products, transportation of meat through cold chain establishment.</p> <p>The Central Government will provide interest subvention up to 3% (including 0.6% of the corpus handling and risk management charge by the market borrower). The beneficiary will get a two-year moratorium during which the beneficiary not to re-pay any loan amount. The entire loan amount needs to be paid within five years after the moratorium period.</p>

Besides, under the National Livestock Program of Animal Husbandry Department there is provision of providing loan for the setting up of Parent farm, Hatchery and Mother Unit which is further subsidized by the government

12. Intervention strategy: Initially, the intervention can be initiated with setting up of mother unit in the village through Pashusakhi / Entrepreneur with day old chicks out sourced from different agencies. The supply of other inputs like medicines vaccine can also be ensured through various agencies if purchased in bulk.

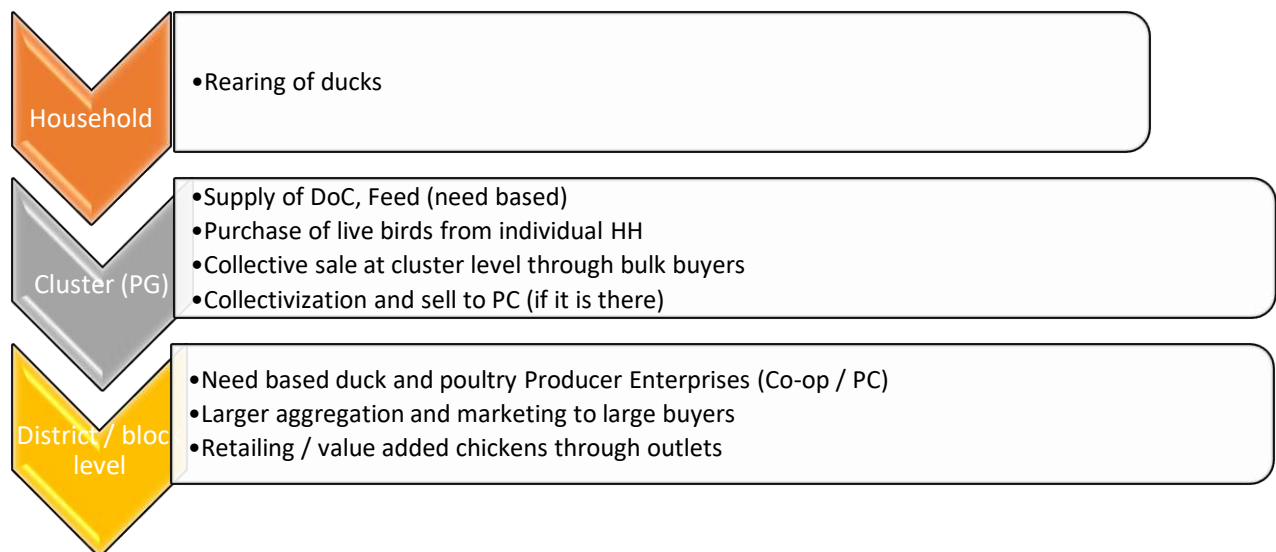


13. Role of PashuSakhi: The role of Pashusakhi is of significant importance as they have multi-fold jobs of (a) training the farmers, (b) vaccinating and deworming the poultry and also of (c) setting up of poultry/duckery mother unit which will enable them to have sustainable means of livelihoods.

14. Training and Capacity Building: The training and capacity building of the mother unit owner can be done through:

- National Resource Persons
- Supplier of Day Old Ducklings
- Hand holding can be done through CRP rounds by the experienced CRPs/PRPs of some pioneer States like Jharkhand where they have been practicing it for quite some time.

15. Marketing: Marketing is not an issue for duck rearing producers. They have a ready market available locally, and both live birds and eggs receive a higher price than poultry.



16. Risks mitigation (diseases and their control): Duck plague, Aflatoxicosis, Botulism, Aspergillosis, Colibacillosis, Ornithosis, Duck viral hepatitis, Duck cholera etc. Besides there are a number of Parasites, such as internal parasites (flukes, tape worm, and round worm) and the external parasites (lice, mite ticks etc.) which can be controlled through proper vaccination and deworming.

17. Conclusion:Duck farming in India is in an emerging sector and can serve as an important livelihood intervention if supply of quality ducklings is ensured, farmers are properly trained, and disease prevention services become accessible. Duck farming can be promoted as a rural enterprise. The need of the hour is to industrialize the production system of Duck in the same way as chicken industry has revolutionized.

Annexure A

Performance of Khaki Campbell and Desi duck under backyard system of rearing					
s no	Traits	Performance			
		Khaki Campbell		Desi	
		Male	female	Male	Female
1	Body wt in gm of				
1a	Day old chick	36	31	28	25
1b	8 weeks	380	288	330	242
1c	20 weeks	1209	1176	1122	989
2	Age at first egg (days)		172		196
3	Mortality upto 10 weeks	6%	6%	4%	4%
4	Mortality after 20 weeks	12%	12%	7%	7%
5	Mortality after 21 weeks (Laying stage)	15%	15%	9%	9%
6	Average annual egg production		193		79
7	Egg colour		Light brown		Light brown

Annexure I Business plan for household post mother unit at Household level

Economics of Duck rearing Egg Purpose (20 Duck Unit)					
S No.	Particulars	Unit description	Unit cost	No of units	Cost
A.	Fixed cost				
A1.	Poultry Shed (Night Shelter)	Sq Ft	100	20	2000
A2.	Drinker, Feeder, Nest and other accessories	Lumpsum	1000	1	1000
	Total A				3000
B.	Recurring cost				
B1.	Cost of Ducklings	21 day old, 300 gm weight	105	20	2100
B2.	Cost of supplementary Feed	40 gm feed/ day for 5 week	30	28	840
B3.	Cost of supplementary Feed (Female)	40 gm feed/ day for 70 week	30	196	5880
B4.	Deworming & other medicines etc	Rs. 30/ duck/ year	30	10	300
	Total B				9120
C.	Other costs				
C1.	Interest on fixed & recurring cost	12% yearly for 16 month			1939
	Total C				1939
D.	Receipts				
D1.	Income from sale of eggs	Sale of eggs start after 20 week and 1 duck gives 225 eggs in year	7	2250	15750
D2.	Income from sale male duck	Male ducks will be sold after 2 month of age	150	15	2250
D3.	Income from sale culled female duck	Culled ducks will be sold after 72 week of age	120	15	1800
	Gross Receipts				19800
	Net Income				8741
	Return on Investment				79.04%

Source : JSLPS

Annexure II

Business plan of Mother unit/ Hardening center of Ducklings

Unit Size		2000		Birds	
Sr. No.	Particulars	Unit description	Unit Cost	No. of Units	Total Cost
A.	Fixed cost				
1	New building construction	Sq Ft	300	667	200000
2	Drinker, Feeder and other accessories	Lumpsum	180	40	7200
	Total A				207200
B.	Recurring cost				
1	Cost of day old ducklings	No.	35	2000	70000
2	Feed Cost	Kg	32	600	19200
3	Medicine etc	Lumpsum	0.75	2000	1500
4	Cost of Incharge- Mother Unit	Per cycle/ Month	1	7000	7000
5	Incentive to APS	per bird	5	1800	9000
	Total B				106700
C.	Other costs				
1	Depreciation on fixed cost	25% per annum			51800
	Total C				51800
D	Receipts				
1	Sale of 15 days old birds	Kg	65	1800	117000
	Gross Receipts				117000
	Gross profit per cycle (D-B)				10300
	Gross profit for 1 year	9 cycle in year			92700
	Net profit after deduction of depreciation				40900

Initial Investment required per unit	Per Unit	313900
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Source : JSLPS

Annexure III

Business plan for Hatchery unit of Ducklings

Particulars	Unit	Year 1			
		No. of Units	Unit Cost	Value	
			(INR)	(INR)	
Capital Expenditure					
Hatchery unit with other machinery & accessories (2080 eggs)	Number	1	200000	200000	
2 KVA inverter with solar support	Number	1	150000	150000	
Platform & other establishment	Number	1	50000	50000	
Construction of Building for Hatchery (20X10 Sqft)	Number	200	1000	200000	
Total capital expenditure				600000	
Output (Revenue)					

	Sale of ducklings	Number	17,472	35.0	6,11,520
Total Revenue					6,11,520
Expenditure					
1. HR Costs					
	Hatchery Operator	Person months	12	7,000	84,000
	Hatchery assistant	Person months	12	4,000	48,000
2. Recurring Costs					
	Rent/ Maintenance	months	12	2,000	24,000
	Electricity	months	12	1,000	12,000
	Purchase of eggs	Number	24,960	12.0	2,99,520
	Transportation	Number	17,472	1.5	26,208
	Cartoon for packaging	Number	349	20.0	6,989
Total Expenditure Costs					5,00,717
Gross Profit					1,10,803
Depreciation (machinery/equipment/tools)					60,000
Net Profit					50,803

Source : JSLPS

Annexure IV

Estimated Economics of Parent Unit for Duck (Indian Runner)				
Particulars	Unit description	Unit cost	No of units	Cost
Fixed cost				
Poultry Shed	Sq Ft	300	2400	720000
Drinker, Feeder, Nest and other accessories	Lumpsum	510	19.2	9792
Total A				729792
Recurring cost				
Cost of 16 week old ducklings	No.	350	960	336000
Feed cost (for 16 to 19 week))	Kg	30	2419	72576
Feed cost (for 20 week to 72 week age)	Kg	25	42739	1068480
Vaccination, Deworming & other Medicine	Lumpsum	50	960	48000
Packaging & transportation	No.	0.5	148400	74200
Labour cost	Month	13	10000	130000
Total B				1393256
Other costs				
Depreciation on fixed cost	10% per annum			72979
Interest on Capital cost	10% per annum			114317
Total C				187296
Receipts				

Sale of eggs	No.	12	148400	1780800
Sale of culled birds	Kg	130	960	124800
Gross Receipts				1905600
Gross profit per cycle (D-B)				512344
Net profit after deduction of depreciation				325048
Return on Investment				15.31%

Source : JSLPS

Reference:

1. <https://www.hilarispublisher.com/open-access/duck-farming-fascinating-option-in-india-2157-7579.1000181.pdf>
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K-11038/02/2019-20/MKSP/Misc (367783)

Government of India
Ministry of Rural Development
Department of Rural Development
(Rural Livelihoods Division)

7th floor, NDCC Building - II,
Jai Singh Road, New Delhi - 1.
Dated: 4th November 2020.

To

The Chief Executive Officer/ State Mission Directors,
All States/Union Territories.

Subject: -Guidelines for promotion of backyard goat rearing by SHG women under DAY-NRLM.

Madam / Sir,

I have been directed to circulate herewith the Guidelines for promotion on backyard goat rearing by SHG women under DAY-NRLM duly approved by competent authority. You are requested to initiate goat based intervention in your state based on the attached guideline.

Enclose :-As above.

Yours sincerely,



(H. R. Meena)

Deputy Secretary to Govt. of India

Contents

Introduction:	4
Region-wise distribution of goat breeds in India:	5
Different Goat rearing systems:	5
Key challenges in household goat rearing:.....	6
Strategy under DAY-NRLM for Goat Intervention:.....	6
Promotion of Kid nursery entrepreneur:	7
Technology and its extension:.....	8
Promotion of Goat Club:	9
Promotion of Goat Resource Centre (GRC):.....	9
Income potential at the household level:	9
Convergence opportunities:.....	9
Role of SHG:.....	10
Role of VO livelihood sub-committee:	10
Insurance of Goat:.....	10
Annexure-I (Income from goat rearing)	10
Annexure- II (Improved Goat rearing practices)	13

Promotion of backyard goat rearing by the SHG members

Introduction:

Goats are known as 'poor man's cow'. Goats contribute to the livelihoods of millions of rural poor. Small and marginal farmers as well as landless, particularly women, are increasingly relying on goat keeping for their socio-economic upliftment. Goat is well integrated into the farming systems of the small and marginal farmers due to low capital requirement, secure handling and ability to adapt in versatile environmental conditions. For the small and marginal farmers, including landless agricultural labourers, the goat is an ideal animal species for farming, particularly in rainfed regions where crop production is uncertain, and rearing large ruminants is difficult because of acute feed and fodder scarcity. Goat rearing has distinct economic and managerial advantages over other livestock species because of its less initial investment requirement, low input requirement, higher prolificacy, early sexual maturity and comfortable in marketing. Goats can efficiently survive on available shrubs and trees in an unfavourable environment. Goat milk and its meat are excellent food serves to both vegetarian (milk) as well as non-vegetarians (Chevon). The nutritive values have been shown below:

Constituent of goat milk¹: Goat milk is found to be more nutritive than cow milk. A comparative analysis has been shown below:

Contents	Goat Milk	Cow Milk
Calorie	76	69
Protein gm	3.3	3.3
Fat gm	4.1	3.7
Lactose (g)	3.8	4.8
Calcium milligram per 8 ounce	330	275-300
Lactalbumin (g)	0.4	0.4
Casein (g)	2.5	2.8

The fat molecules of goat milk are of lower size which makes it easily digestible. It is naturally homogenized. One of the most common allergies in children is a dairy-allergy and it has a lot to do with a particular protein in the milk called Alpha s1 Casein. The levels of Alpha s1 Casein are about 89% less in goat milk. – which is one of the main reasons why people who have dairy sensitivities may get away with and consume goats milk as an alternative. Our bodies produce enzymes to help break down our foods, especially sugar. Goat milk contains less lactose (milk sugar) than cow milk, which makes it easier on our stomachs simply because we need less of a particular type of enzyme to break down the lactose.

Constituent of Chevon (Goat meat):

Meat type	Calories	Fat	Saturated Fat	Cholesterol	Protein
Goat	143	3.03	0.93	75	27.1

The content of vitamin B12, Calcium and protein are higher in Goat meat.

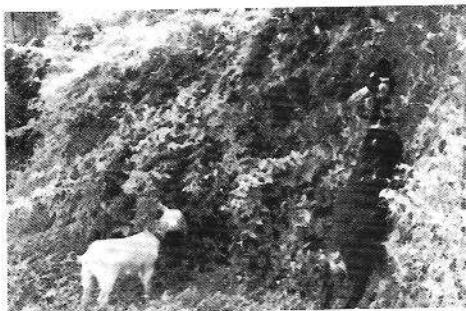
¹ <https://www.healthline.com/health/benefits-of-goat-milk#Goats-milk-vs.-cows-milk>

Region-wise distribution of goat breeds in India:

- **North Temperate Region:** This includes Jammu & Kashmir, hilly region of Uttarakhand and Uttar Pradesh. The breeds available are *Chegu*, *Changthangi* and *Gaddi*. *Changthangi* is known for the finest quality of wool famous by the name of Pashmina.
- **North-west and semi-arid region:** It comprises of Rajasthan, Haryana, Punjab, plains of Uttar Pradesh, Madhya Pradesh and Chhattisgarh. The breeds available in this region are *Sirohi*, *Jhakrana*, *Beetal*, *Barbari*, *Jamunapari*, *Surti*, *Zalawadi*, *Marwari*, and *Kutchi*.
- **Southern Peninsular region:** States include Andhra Pradesh, Karnataka, Tamil Nadu, Kerala, Maharashtra and other central parts of India. Goat breeds of this region are *Osmanabadi*, *Sangamneri*, *Malabari*, *Kannaiadu* and *Sikkim* etc.
- **Eastern and North Eastern region:** This area comprises of Bihar, Jharkhand, West Bengal, Sikkim and north eastern States. The breeds prevalent here are *Black Bengal*, *Assam hills*, and *Gunjam* etc.

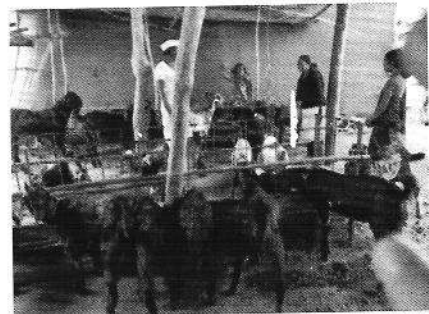
Different Goat rearing systems:

1. **Semi-intensive production:** This system is practiced to some degree in most of the situations, but the nature and extent of integration depend on the type of crops grown and their suitability to goats. The advantages of this system increase fertility of land via the return of dung and urine, control of waste herbage



growth, reduced fertilizer usage, easier crop management and better yield.

2. **Extensive production:** This involves the low carrying capacity in situations where land is marginal and is plentiful. It is characterized by low rainfall and various browse plants. The system is used by nomadic people, usually in shallow rainfall areas or during winter months, when crop residues are available.
3. **Intensive production:** The goats are fed in confinement with limited access to land. It involves high labour and cash inputs. Cultivated grasses and agro-industrial by-products are fed in situ. This system also has the advantage of allowing control over the animals.
4. **Tethering:** This is common in the sub-humid and humid zones, where probably because of intensive cropping, it is a convenient means of rearing goats from the



standpoint of control, minimum labour input and utilization of feed in situ. It is thus a sedentary system. A variation of this method is combining tethering with grazing up to 5 goats at a time, led by ropes held by women.

Key challenges in household goat rearing:

All the above practices are prevalent in different parts of the country. The following are the key challenges before promotion of goat rearing based livelihoods at household level for SHG women in rural India:

Kid mortality: This is one of the major concern. High mortality of kids reduces the rate of increase in herd size, low expansion leading to low income. The mortality rates for small, medium and large categories of goat keeping were 32.8, 32.1 and 15.8% in kids (reference 6)

Quality kid availability: In rural areas people opt for locally available kids compromising with the quality due to lack of knowledge on quality parameters, availability of good quality, locally adopted breeds and healthy kids.

Quality of Buck: The penetration of Artificial Insemination in goat in rural areas is limited, thus farmers depend on the breeding buck. Knowledge about quality parameters of a good quality buck, its availability and free ranging practices reduce the control of the rearers over breed improvement.

Supplementary feed: For proper growth and quality of meat, feed supplement even in free ranging system is equally important. Goat rearers lack knowledge on requirement of feed supplement, even if they know, the availability is another challenge.

Health Management: Lack of knowledge and awareness on goat health and its management practices come on the way to demand or access to facilities like vaccination, de-worming, castration, de-budding. Besides, vet care facilities both prophylactic and curative, access to vet-clinic, vet-practitioner are other challenges.

Instant health care: There is severe shortage of qualified vet-practitioner, vet-medicine and extension services in rural areas.

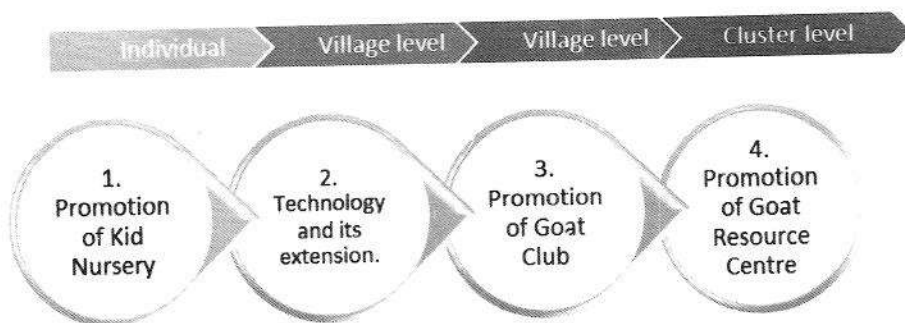
General management: Access to quality goat shed, awareness and maintenance of hygiene are other challenges leading to low productivity, loss of assets and income.

Marketing: Goat marketing in most of the rural areas is a great concern. Price of goat is still not fixed on the basis of live weight, bargaining with the traders many a times costs heavily to the rearers.

Strategy under DAY-NRLM for Goat Intervention:

The broader strategy consists of the following intervention:

1. Promotion of kid-nursery entrepreneur
2. Promotion of improved rearing practices through entrepreneurs.
3. Promotion of village level Producer Group (Goat Club / Pashu Pathshala)
4. Promotion of Producers Enterprise (Goat Resource Centre) at a larger geography



Promotion of Kid nursery entrepreneur:

Selection of kid-nursery entrepreneur: Preferably *Pashu Sakhi* or any individual related to SHG willing to take up the activity and having received any formal livestock training may be promoted to initiate kid nursery.

Training and capacity building: The training and capacity building for the kid nursery can be done through:

- National Resource Persons (NRPs) / State Resource Person (SRPs)
- In convergence with Department of Animal Husbandry
- Hand holding can be done by CRPs who may be trained by the Master CRPs/PRPs/entrepreneurs of some pioneer States like Jharkhand, Maharashtra where they have been practicing it for quite some times.
- Two ICAR institutes (a) Central Goat Research Institute (CGRI), Mathura (UP) and (b) National Research Center on Meat, Hyderabad (Telangana) can also be roped in for training, capacity building and bring in new technologies.
- **Incubation supports:** The incubation support after technical training is extremely important to promote the kid-nursery entrepreneurs. This can be provided by the entrepreneurs or *Pashu sakhis* from pioneer States like Jharkhand, Maharashtra, Rajasthan and Maharashtra who are experienced in kid nursery.
- **Economics:** The economics of rearing 10 kids in nursery popularly referred as “*Memna nursery*” is as follows:

Particulars	Kids - (2 to 3 months' old)		
	Unit cost	No of units	Cost
A. Fixed cost			
A1. Cost of kids	3500	10	35000
A2. Transport	100	10	1000
A3. Feeding manger, Water turf	250	2	500
A4. Housing (Thatched roof with ventilation)	1000	1	1000
Total A			37500
B. Recurring cost			
B1. Feeding cost of kids @ 0.3 kg per day at 24 Rs/Kg - concentrate for 120 days in a year	24	360	8640

Particulars	Kids - (2 to 3 months' old)		
	Unit cost	No of units	Cost
B4. Health care cost	100	10	1000
B5. Grazing charges@Rs 100 per month per kids or fodder cost	100	10	1000
B6. Minerals and supplements	50	10	500
B7. Insurance	200	10	2000
B9. Consumables /Repair & maintenance	500	1	500
Total B			13,640
C. Investment required			51140
D. Receipts			
D1. Sale of 4 Month old goats	7,500	10	75,000
D3. Sale of manure	20	600	12000
Gross Receipts			87000
Net profit in 4 Months			35860
Monthly income			8965

Source: Maharashtra SRLM

- **Funding sources:** The source of funding for the setting up of kid nursery can be (a) own contribution, (b) CIF loan (c) Bank linkages and (d) Convergence through Animal husbandry scheme of Sub-mission on goat and sheep development/entrepreneurship (e) The construction of shed for kid- nursery can very well be done in convergence with MGNREGA.

Technology and its extension:

Improved goat rearing practices include improved Goat-shed, Feed and feeding management, Breed and breeding management, care for new-born kids, castration of male kid, preventive health care and access to vet-healthcare facilities. The details on improved rearing practices has been presented in **Annexure-II**.

For extension services two models may be thought of, (a) through Pashu Sakhi in villages where Pashu Sakhi is already active and has not become kid nursery entrepreneur, (b) through Kid nursery entrepreneurs tied up with the rearers who have purchased kids from her. Following are the topics for extension services:

<ul style="list-style-type: none"> ○ Awareness and cattle census ○ Provide input in good practices of goat rearing, keep healthy goat and buck and remove unhealthy one. ○ Promoting green fodder ○ Promoting mineral salts (animal licking) ○ Goat yard with all facilities ○ Promote right Feed and fodder practices ○ Method of feeding pure water(Using Water Tub) ○ Timely Weight check up to get the weight 	<ul style="list-style-type: none"> ○ Protect from worms in the body ○ Timely Cutting of Hooves of cattle ○ Use right way of Milking ○ Deworming of goat – twice in a year(before rainy and after rainy season) ○ Shaving leg side hair ○ Timely Vaccination of goat. ○ Insurance Service ○ Breeding Buck service ○ Provide Goat Concentrate feed ○ Preserve and protect them from weather
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gain or loss	○ Protect from cold
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Promotion of Goat Club:

At village level, all the goat rearers will be organized into an informal group (Producers Group or a Pashu Pathshala) to be named as Goat Club. A goat club comprises of minimum of 8-10 goat rearers with minimum of 50 goats. The members of goat club should mandatorily be SHG members. These individual goat clubs conglomerate into village level goat club. The goat clubs are an informal group for training, cross-learning, sharing of experiences triggered by pashu sakhi. These goat clubs would be meeting once in a month with Bakri Palak Pathshala which would be organised by Pashu Sakhi. During the meeting and pathshala the information related to deworming, vaccination, management, new interventions, veterinary camp etc. would be discussed and reports will be collected on progress.

All the financial transaction in the village will be done through SHGs and VO only. The goat club secretary and president will be involved in VO meeting to report the goat club and pashu sakhi performance.

Promotion of Goat Resource Centre (GRC):

In a later stage, when goat clubs are well established, an aggregation of goat club around a formal FPO (Goat Resource Centre or GRC) may be thought of at cluster or group of adjoining clusters level. The following will be the activities of a GRC:

- Training of small ruminant farmers
- Supply of small ruminants' rearing Input (Feed, medicine, vaccine etc.)
- High end vet-care services
- Collective marketing

The details of promotion, institution building, capacity building, financial sustainability etc of GRC will be circulated in separate guidelines.

Income potential at the household level:

With a herd size of 10 goats (9+1) and in a cycle of 24 months, it has been found that the household can earn good amount from goat rearing. The detailed calculation is annexed as **Annexure-I**.

Convergence opportunities:

There is ample scope for convergence with the Department of Animal Husbandry for the animal vaccination, vet-medicine, subsidies for kids, animal feeds and support of vet-doctors. Under the Individual Beneficiary Scheme (IBS) of MGNREGA, goat shed, and under common livelihood assets of MGNREGA, the building for GRC can be constructed. Besides, local KVK may be roped in for the training of goat rearers, kid nursery entrepreneurs and Pashu Sakhi. RSETI may be utilized for training of Pashu Mitra (entrepreneurs) / kid-nursery entrepreneurs through recently approved training courses.

Role of SHG:

Financial transaction will be done through SHGs and VO in village to get CIF. Even the loan required by SHG members for small ruminant based intervention would be channel zed through VO through SHG.

Role of VO livelihood sub-committee:

The goat club secretary and president will be invited in VO meeting to report on the goat club and performance of Pashu Sakhi / kid-nursery entrepreneurs. In case of promotion of GRC at a later stage, VO may take lead to take membership fees of GRC to be deposited to GRC.

Insurance of Goat:

SRLM will facilitate goat insurance scheme of general insurance companies / cattle insurance companies with the goat rearers. Pashu Sakhi / kid-nursery entrepreneurs would help the goat rearers in paper works like filling up of insurance form for the goat rearers. The GRC / Goat Club / VO / CLF whatever the case may be, will do the physical verification like health status of goat. It would calculate the Premium, then after getting the premium for insurance Pashu Sakhi will do tagging of animal.

D.O. No. L-11046/2/2014/LH/CAHW
Government of India
Ministry of Rural Development
Department of Rural Development
(RL Division)

6th Floor, Hotel Samrat, Chanakyapuri
New Delhi
30th August, 2014

OFFICE MEMORANDUM

Sub: Livestock Strategy for MKSP under National Rural Livelihoods Mission

NRLM recognizes the importance of livestock especially the small ruminant and poultry in the livelihoods of the poorest and has started developing a comprehensive strategy to integrate livestock in the primary sector livelihood strategy of NRLM. The Mission has an abiding faith in the capacity of the institutions of the poor women and also has a strong belief that livelihoods promotion on scale, particularly the knowledge dissemination part can happen effectively through a community to community learning process where the prime role is given to 'Community Resource Persons' (CRP), the community best practitioners.

Based on the recommendations of various consultations and the experiences of Mahila Kisan Sashaktikaran Pariyojana (MKSP) partners, NRLM has developed a clear strategy to address the issues plaguing the livestock based livelihoods of the rural poor. NRLM livestock strategy would primarily focus on building a community owned and community managed extension architecture that can effectively make the last mile delivery of animal care services highly cost effective and sustainable. This will be accomplished by building a cadre of community animal care service providers i.e. *Pashu Sakhi*. The core NRLM strategy or strengthening livestock related activities is to place at least one Pashu Sakhi for every 50-100 households to provide animal care services at the doorsteps of the poor members. The Pashu Sakhi will be identified from amongst the SHG members and will be trained with the help of reputed agencies having proven experience on various facets of preventive animal care, nutrition, animal housing, sanitation, ethno veterinary practices and also on community insurance. Pashu Sakhi will be hired by and will report to the respective SHG federations or the village organisations. NRLM

will invest in the training and capacity building of the Pashu Sakhi in a continuous manner. A suitable revenue model will be developed for sustaining the Pashu Sakhi model.

This strategy will be universalized by NRLM in the long run. However, in the MKSP project areas, SRLMs will immediately facilitate the MKSP PIAs for identification, training and placing of the Pashu Sakhi. In addition, the CASP/Pashu Sakhi strategy will be implemented by respective SRLMs in the resource blocks and intensive blocks over a period of time as a universal intervention. All 4 states where *PoP* strategy roll out is in progress would place a CASP/ Pashu Sakhi in each village where CMSA CRP round is in progress with top priority.

All SRLMs are requested to make necessary arrangements for the roll out of Pashu Sakhi model in their respective states. An illustrative list for implementation and support structure are mentioned below:

1. Each SRLM would ensure that every CBOs/NGOs/SRLM itself implementing MKSP in the respective states prepare the plan and budget for integrating the Pashu Sakhi model in the MKSP areas and submit the same to the Ministry incorporating the following
 - a. Identification of CASP/Pashu Sakhi, at least one per village, for rendering services to a minimum of 50-100 household.
 - b. The Pashu Sakhi will be accountable to the Village Organisation (VO)
 - c. A revenue model for the sustainability for the Pashu Sakhi
 - d. Clear training and capacity building strategy for the Pashu Sakhi
2. The respective CBO/NGO/SRLM would be responsible for training and capacity building of the Pashu Sakhis in accordance with the training module vetted by NMMU in consultation with the experts of the sector. SRLM will follow the training architecture and identify the resource organisation for training/refresher training (class room and on site) and develop a referral system for them. The training pedagogy will also include audio-visual aids.
3. SRLM would build a support structure for Pashu Sakhi at the block and district level
4. To design the scaling up strategy of Pashu Sakhi over time i.e. How they can become master trainers for scaling up in other blocks and develop best exposure cum immersion sites.
5. Develop coordination mechanism with the line departments
6. The SRLMs would ensure the submission of the revised MKSP proposals by December, 2014.

It is requested that Ministry of Rural Development be informed about the progress on a monthly basis.

Yours sincerely,


(T. Vijay Kumar)

30/08/14.

Encl: i. Advisory note for livestock under MKSP
ii. Benefits from Pashu Sakhi model

Principal Secretary (RD) of all states

फाइल संख्या/ File No.:K-11060/03/2021-22/LH/IFC (e-376989)

भारत सरकार/Government of India
 ग्रामीण विकास मंत्रालय/Ministry of Rural Development
 ग्रामीण विकास विभाग/Department of Rural Development
 ग्रामीण आजीविका विभाग/ Rural Livelihoods Division
 (<https://rural.nic.in>)

सातवीं मंजिल, एन.डी.सी.सी-II भवन/7th Floor, N.D.C.C -II Building
 जय सिंह मार्ग, नई दिल्ली-01/Jai Singh Road, New Delhi-01
 दिनांक/ Dated: 28th June, 2023

To,

The State Mission Director/Chief Executive Officer,
 State Rural Livelihoods Mission
 All States/UTs.

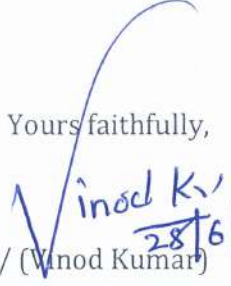
Subject: Advisory on operationalization of Integrated Farming Cluster (IFC).

Madam/Sir,

I am directed to enclose herewith an advisory on operationalization of Integrated Farming Cluster (IFC) for information and further necessary action.

Encl.: As above

Yours faithfully,


 विनोद कुमार/ (Vinod Kumar)
 अवर सचिव/Under Secretary(RL)
 28/6/2023

Copy to: ~~PPS~~ PPS to Additional Secretary-RL, GoI, MoRD, NDCC-II Building, New Delhi-01

ADVISORY ON OPERATIONALIZATION OF INTEGRATED FARMING CLUSTERS

1 Introduction

Integrated Farming Cluster (IFC) has been conceptualized to consolidate gains of farm livelihood projects implemented through MKSP and AAP for the last one decade. Farm livelihood projects have resulted in adoption of range of agro-ecological practices, improvement in soil health and water regime, crop diversification, crop production and productivity, improved livestock management in form of better housing, improvement in breed, balanced feeding, timely veterinary care and scheduled vaccination, lowering in mortality rate, and significant increase in herd size.

The household income has increased but does not commensurate with gains they have made in crop and livestock production and productivity. This is on account of high cost of livelihood services, negligible value addition of commodities and market linkage bottlenecks.

IFC is to address these issues through cluster-based programme, each cluster consisting of two to three adjoining villages benefiting 250-300 households. All the identified households would be facilitated to select three to four livelihood options (farm and non-farm) having maximum potential for growth, in terms of production and productivity enhancement, scope for value chain development, processing and marketing.

2. Strategy:

The IFC strategy is to focus on those areas of DAY-NRLM where the social mobilization and financial inclusion processes have been completed and livelihood activities initiated to enhance production and productivity. The approach will ensure each targeted household has a basket of income sources ensuring regular income stream throughout the year. The process comprises production and processing/value addition within the cluster through asset creation, skilling the producers to enhance production and productivity and, very importantly, ensuring access to credit at affordable rates. The access to market and access to improved technologies are few critical challenges that will be addressed in this approach.

It aims to create output consistency and high profitability to protect farmers from the whims of the monsoon and fluctuation in market prices. In order to ensure that the planned interventions boost productivity and profitability while maintaining the sustainability of the resource base, an integrated farming cluster with marketing, processing, and value chain development should be selected for the project design. An end-to-end strategy is the value chain approach. Wherever a sizable population exists, focus is also placed on small ruminant productivity enhancement, horticultural diversification, and climate-resilient agriculture.

The cluster will be developed by applying end-to-end value chain analysis in order to develop an integrated program of activities to be supported under the project from production to marketing. The objective is to identify and address the critical constraints in a coordinated way, thereby unlocking the potential of the value chain.

On the front end (value addition and market linkage), it will collectivize and aggregate individual produces at the village and/or cluster level through small Producers' Collectives (Producers Groups) to aggregate the individual produces, thereby reducing the transaction cost of primary value addition and market linkages. In more extensive geography, these small producers' collectives may be federated into Producers Enterprises for larger aggregate, secondary value addition/processing, packaging, labelling and market linkage/marketing directly and/or through partnership.

3. Women farmers at the forefront

In IFC **Women would be a central actor in every intervention**, as Mahila Kisans and Entrepreneurs. IFC project design and implementation has enough provisions for the active participation of women. Still, this issue is complex and present in every sphere and is an outcome of how society tends **to view and operate, the social construct**. It would need greater awareness and active engagement plan at the household and outside, and all the stakeholders' mindset change in favor of women participation.

4. Objective

- To orient and train CLF members in IFC that would ensure staff placement and timely fund utilisation as per IFC guidelines
- To identify 2-4 commodities having potential for value addition and processing
- To set up Livelihood Service Centre (LSC)
- To prepare business plan around the LSC and select commodities in surplus.
- To identify different services required for production, value addition and processing
- To identify and train youth entrepreneurs to provide farm livelihood services
- To set up processing units for surplus commodities produced in the cluster and adjoining centre
- To ensure setting up of processes and system for smooth running of LSC and other business units
- To develop suitable market linkages for value added products of IFC
- To empower women through active participation in appropriate forum, articulation and voicing issues that have bearing on their livelihoods, influence decisions that would address women livelihood concerns
- To enhance the income of rural HHs from production, value addition and marketing of produce.

5. Implementation Framework:

The grounding of Integrated Farming Cluster requires step by step intervention in order to achieve desired goal and objective of providing end to end solution with diversified livelihoods activities at the household level connected with proper value chain initiatives. The framework of implementation is described in the flowchart given below:

5.1. Pre-requisite conditionality: Integrated Farming Cluster concept refers to end to end solutions (Complete Value Chain) and thus applicable to the area/households where there is surplus of production. Hence, the suitable area for selection of integrated farming clusters are those where social mobilization and financial inclusion related activities have been completed and initial livelihood activities have been grounded. Livelihood activity refers to training & deployment of livelihood CRPs (*Pashu sakhi, Krishi sakhi, Matsya Sakhi, Madhu Sakhi* etc.) and introduction of production/Productivity related works. The aim of this intervention is to create conditionality for surplus production at the household level by enhancing the production/productivity and also to lower the cost of production through continuous training and hand-holding of households.

The Cluster Level Federations (CLFs) have received adequate orientation and training in grounding different development activities as per NRLM guidelines and have developed internal capacity to handle project finance and human resources as per prescribed norms.

5.2. Identification of geography: The identification of geographical contour of a given integrated farming cluster is important in terms of approachability, common commodities, and similar social structure. The selection of area is primarily important in terms of providing collective action, regular training and capacity building and hand holding of each household. Areas where significant livelihood assets creation has taken place through convergence with Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) or otherwise may be preferred.

5.3. Identification of Households: The project beneficiaries would be drawn from existing SHGs. And at present, some of them are included in SRLM-sponsored farm livelihood activities. The women farmers interested in being included in the IFC cluster would have agriculture/ livestock rearing as core livelihoods. They should be actively involved with the FFS and could be a part of the PG or an FPC.

5.4. Commodity Identification : A study is to be conducted in the selected cluster area to assess the preliminary situation of the farmers and the level of agriculture in the

area. The study will also help in identifying the potential products for promotion in the IFC cluster. It is to be carried out to help in generating data related to the current prevailing situation of farming and small, marginal and tenant farmers. The purpose of study is to identify 2-3 commodities which are either universal among the intervention households or which can be easily adopted with good marketing potential. It is imperative to understand that as the interventions are across 2-3 commodities across the value chain for all the intervening households, their adoptability in each and every household is mandatory.

5.5.Placement of Human resource: IFC Guidelines have provision for two dedicated human resources to support the implementation of IFC viz IFC anchor and Senior CRP. It is of utmost significance that both human resources are placed, trained and deployed for smooth running of the project. The IFC Anchor should preferably have a degree/diploma in agriculture or allied sciences with a minimum of one year of experience in agriculture or farm-based livelihoods promotion. Experience in extension and marketing would be given preference. In case there is non-availability of a candidate with a degree in agricultural or allied sciences, a person with a regular Bachelor's degree and relevant experience in agriculture of 2 years may be considered for the position. The Senior CRP can be experienced *Krishi Sakhi, Pashu Sakhi, Van Sakhi, or Udyog Sakhi* developed under DAY-NRLM. As there is a high emphasis on focusing on three to five products, having a robust best package of practices and intervention in the value chain while working in tandem with the Livelihood Service Centre (LSC), previous experience is essential. Senior CRPs should be selected among the CRPs, who should be active for more than two years and be entrepreneurial. They have demonstrated their abilities and underwent all the trainings per the CRP modules developed by the NMMU.

5.6.Baseline survey: Conduct an initial socioeconomic survey of the cluster. Baseline assessment will cover a variety of factors to identify the potential interventions, plan development and business plans and to establish the base figures based on future outcome indicators that can be measured to understand the change contribution. The assessment shall be conducted using stratified random sampling through structured household-level interviews and open-ended focus group discussions with a variety of stakeholders.

5.7.Development of training & capacity building architecture: Every Integrated Farming Cluster is unique in itself in terms of geography, climate, social and cultural norms, and intervention commodities. Hence, the training needs and approach are different. It is thus important that training material should be developed for CRPs, Mahila Kisan households and concerned staffs are developed looking at the needs and identified commodities. For this the support of associated *Krishi Vikas Kendras / RCRC* partners may be sought.

Trainees	Topics	Potential trainers/Resource agency
CLF members	IFC objective, mode of implementation, role of CLF, human resources selection, fund utilisation norms and system	IFC Anchor/RCRC partner/SRLM staff
IFC Anchor and Sr CRP	IFC components, implementation mode, role of IFC anchor and Sr CRP, Identification of livelihood services, LSC	RCRC partner / SRLM staff / KVK / Govt Dept
CRPs	IFC project components, Base line survey	IFC Anchor/Sr CRP
Mahila Kisans	Identification of key livelihood activities, production technology, value addition etc	IFC Anchor / Sr CRP / CRPs
Youth Entrepreneurs	Business/enterprise, Value addition, processing,	IFC Anchor/ RCRC partner /SRLM staff

5.8 Business plan for commodity wise intervention: Business planning is an important aspect of IFC implementation. Post identification of 2-3 commodities for 250-300 households of a cluster, the plan should be developed for activities to be undertaken for each commodity in terms of production/ productivity, processing (Primary & Secondary) and marketing. While baseline assessment figures or secondary data may provide an important input to understand the level from which products and services for farmer members should be developed, more important will be collective visualization of the marketing aspect. It is thus important to develop a proper business plan with projections on various aspects.

5.9 Livelihood Service Centre: Under Integrated Farming Cluster Livelihoods Service Centre is envisaged as hub of input, processing and output services governed by Sr CRP. In progressive agriculture belts, private players offer different services, like input shops, Agri machinery, nursery and seedlings etc. Similarly, for a livestock clinic, feed, medicines etc. These services are mandatory for cluster-based development. Hence livelihood Service Centre should be proposed at the Cluster level where some of these services could be made available to farmers at a reasonable rate. Senior CRPs with support of IFC anchor and BMMU unit would manage these centres. The farmers also find it difficult to dispose of their produce. Block and district level market at a distance of 40/60 kms increases cost and time spent selling their produce. The livelihood centre would procure and do sorting, grading and bulk selling, establishing linkages with the market. Private entrepreneurs and community enterprises in the form of Farmers Producers Organization should be proposed. The component of Livelihood Service Centre based on the value chain gap analysis are as follows:

- a. **Input:** The centre may serve as point of interaction for input activity such as seed, fertilizers, nursery, demonstration plot, deworming, vaccination etc. based on the need assessment and scoping of the concerned households.

- b. **Processing:** It has two components viz. Primary and Secondary Processing. The need of processing unit is subject to commodity wise business plan based on need and community requirement, capacity utilization of processing unit, optimum utilization of aggregated resources in the processing centre and value achieved in terms of form, place and time. For e.g, if a Livelihood Resource Centre is aggregating 100 tons of mustard and plan to set up 1 ton daily capacity oil mill, the total operation days should be 100 days. What output you expect to get for the next 265 days? Can we go for 3rd party for oil extraction? These questions need to be answered.
- c. **Output:** The planning of commodity wise output activity is again dependent on its usage. The options at this level for market side interventions are Producer Groups, Traders, and Producer Enterprises etc. The other intervention may include storage, primary value addition etc.

5.10. Marketing Side intervention: Three major categories of intervention possible in

- **Commodities with limited scope for post –harvest value addition:** The intervention would be limited to pre- production, production and post-harvest-up to grading and sorting of the commodity. May include drying wherever applicable. Investments would be required in the areas of sorting, grading and drying equipment to the drying yards.
- **Commodities with a high scope of post-harvest value addition:** The intervention will also include processing and packing in bulk and micro packing. Investments required will be higher for establishing processing facilities and packing facilities. The IFC project does not intend to promote tertiary level processing.
- **Livestock value addition:** The investment will have to be made in establishing the traceability in improving the health of the animals through vaccination and scientific rearing.
- **Forming Producer’s Groups:** If there are existing FPCs, the IFC project should collaborate with that entity. The existing Producer’s group should be promoted for backward and forward linkages. Farmer’s enrollment would follow the IFC. The PG members would attend livelihood visioning cum planning exercises with the help of CRPs, to identify a set of 2 to 5 economic activities per household. They should list existing issues and constraints, develop a strategy to address them, and provide the support required from the project. Each PG would create a theme-wise seasonal activity calendar, and the CRPs and IFC Anchor would be responsible for implementing the plan. A fortnightly review meeting should be proposed with each PG.

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3	Livelihood analysis and planning exercise (CVLP)	Number of villages	3	6000	18,000
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B	Capacity building				16,05,500
1	Cost of a block anchor for IFS implementation	no. of Block Anchor	1	315000	3,15,000
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6	Training of PG / LG members / functionaries / office bearers	No. of persons	30	5000	1,50,000
7	Exposure visit to community leaders and CRPs	No. of persons	10	2000	20,000
8	Exposure visits of best practicing MKs	no. of MKs	15	1000	15,000
9	Development of Training materials (AV, print)	Lumpsum			30,000
10	Pico Projector	No. of Pico Projector	1	30000	30,000
C	Institution building				60,000
1	Mobilisation and establishment of Producers Collectives	Lumpsum			60,000

Sr.	Budget items	Unit description	No of units	Unit cost (Rs)	Amount (Rs)
D	Community Investment Support				21,85,250
1	Establishment of Livelihoods Service Centre	Lumpsum			21,85,250
E	Knowledge Management and M&E Cost	Lumpsum			75,000
	Grand Total				40,00,000

Thus looking at the potential, State may plan for intervention of 3-4 clusters each in 3-4 blocks @ Rs 40 lakh per cluster.

Fund flow: All the expenditure of IFC to be done through respective Cluster Level Federation (CLF), the major heads are for staff remuneration/honorarium, infrastructure/assets, and working capital for LSC, business unit and other input costs for farm production.

Procurement: The procurement of inputs and machinery should be as per the Community/SRLM Procurement norms in coordination with programme and finance heads of BMMU/DMMU.

7. Monitoring & Evaluation: The ownership of Integrated Farming Cluster lies with the concerned Cluster Level federation and thus they are the primary organization to monitor the progress of IFC. Based on the business plan the CLF has to transfer the fund to the respective IFC and also to monitor the progress.

BMMU should review the functioning of respective IFC on fortnightly basis whereas District and State unit need to review it on monthly basis.

8. Knowledge & Management: The best practices and success stories on various aspects of Integrated Farming Clusters should be documented and shared.

OPERATIONAL GUIDELINES ON IMPLEMENTATION OF INTEGRATED FARMING CLUSTERS

1. Introduction

Integrated Farming Cluster has been a logical way forward for the farm livelihoods activities done through MKSP and AAP. The concept of integrated farming cluster (IFC) comprises of two to three adjoining intervention villages covering about 250-300 households. These households are to be supported with improvement in three to four livelihood options (farm and non-farm) with strong backward and forward linkages.

2. Strategy :

The IFC strategy focus is on those area of DAY-NRLM where the social mobilization and financial inclusion processes have been completed and initial livelihoods initiative related to production and productivity grounded. The approach will ensure each targeted household has a basket of income sources to provide regular income stream throughout the year. The process comprises production and processing/value addition within the cluster through asset creation, skilling the producers to enhance production and productivity and, very importantly, ensuring access to credit at affordable rates. The access to market and access to improved technologies are a few critical challenges that will be addressed in this approach.

It aims to create output consistency and high profitability to protect farmers from the whims of the monsoon and fluctuation in market prices. In order to ensure that the planned interventions boost productivity and profitability while maintaining the sustainability of the resource base, an integrated farming cluster with marketing, processing, and value chain development should be selected for the project design. An end-to-end strategy is the value chain approach. Wherever a sizable population exists, focus is also placed on small ruminant productivity enhancement, horticultural diversification, and climate-resilient agriculture.

The cluster will be developed by applying end-to-end value chain analysis in order to develop an integrated program of activities to be supported under the project from production to marketing. The objective is to identify and address the critical constraints in a coordinated way, thereby unlocking the potential of the value chain.

On the front end (value addition and market linkage), it will collectivize and aggregate individual produces at the village and/or cluster level through small Producers' Collectives (Producers Groups) to aggregate the individual produces, thereby reducing the transaction cost of primary value addition and market linkages. In more extensive geography, these small producers' collectives may be federated into Producers Enterprises

for larger aggregate, secondary value addition/processing, packaging, labelling and market linkage/marketing directly and/or through partnership.

3. Women farmers at the forefront

In IFC **Women would be a central actor in every intervention**, as Mahila Kisans and Entrepreneurs. IFC project design and implementation has enough provisions for the active participation of women. Still, this issue is complex and present in every sphere and is an outcome of how society tends **to view and operate, the social construct**. It would need greater awareness and active engagement plan at the household and outside, and all the stakeholders' mindset change in favour of women participation.

4. Objective

- 3.1 To provide end to end solution under farm intervention
- 3.2 To enhance the income of rural HHs at every level of intervention
- 3.3 To empower women through collective livelihood action

5. Implementation Framework:

The grounding of Integrated Farming Cluster requires step by step intervention in order to achieve desired goal and objective of providing end to end solution with diversified livelihoods activity at the household level connected with proper value chain initiatives. The framework of implementation is described in the flowchart given below:



1. **Pre-requisite conditionality:** Integrated Farming Cluster concept refers to end to end solutions (Complete value chain) and thus applicable to the area/households where there is surplus of production. Hence, the suitable area for selection of integrated farming clusters are those where social mobilization and financial inclusion related activities have been completed and initial livelihood activities have been grounded. Livelihood activity refers to training & deployment of livelihood CRPs (Pashu sakhi, Krishi sakhi, Matsya Sakhi, Madhu Sakhi etc) and introduction of production/Productivity related works. The aim of this intervention is create conditionality for surplus production at the household by enhancing the production/productivity and also to lower the cost of production through continuous training and handholding of households.
2. **Identification of geography:** The identification of geographical contour of a given integrated farming cluster is important in terms of approachability, common commodities, and similar social structure. The selection of area is primarily important in terms of providing collective action, regular training and capacity building and hand holding of each households. Areas where there should be a significant creation of livelihood assets through convergence with Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) or otherwise

3. **Identification of Households:** The project beneficiaries would be drawn from existing SHGs. And at present, some of them are included in SRLM-sponsored farm livelihood activities. The women farmers interested in being included in the IFC cluster would have agriculture/ livestock rearing as core livelihoods. Should be actively involved with the FFS and could be a part of the PG or an FPC.
4. **Commodity Identification :** A study is to be conducted in the selected cluster area to assess the preliminary situation of the farmers and the level of agriculture in the area. The study will also help in identifying the potential products for promotion in the IFC cluster. It is to be carried out to help in generating data related to the current prevailing situation of farming and small, marginal and tenant farmers. The purpose of study is to identify 2-3 commodities which are either universal among the intervention households or which can be easily adopted with good marketing potential. It is imperative to understand that as the interventions are across 2-3 commodities across the value chain for all the intervening households, their adoptability in each and every household is mandatory.
5. **Placement of Human resource :** IFC Guidelines has provision for two dedicated human resource to support the implementation of IFC viz IFC anchor and Senior CRP. It is of utmost significance that both human resource are placed, trained and deployed for smooth running of the project. The IFC Anchor should preferably have a degree/diploma in agriculture or allied sciences with a minimum of one year of experience in agriculture or farm-based livelihoods promotion. Experience in extension and marketing would be given preference. In case there is a non-availability of a candidate with a degree in agricultural or allied sciences, a person with a regular Bachelor's degree and relevant experience in agriculture of 2 years may be considered for the position. The Senior CRP can be experienced Krishi Sakhi, Pashu Sakhi, Van Sakhi, or Udyog Sakhi developed under DAY-NRLM. As there is a high emphasis on focusing on three to five products, having a robust best package of practices and intervention in the value chain while working in tandem with the Livelihood Service Centre (LSC), previous experience is essential. Senior CRPs should be selected among the CRPs, who should be active for more than two years and be entrepreneurial. They have demonstrated their abilities and underwent all the training per the CRP modules developed by the NMMU.
6. **Baseline survey :** Conduct an initial socioeconomic survey of the cluster. Baseline assessment will cover a variety of factors to identify the potential interventions, plan development and business plans and to establish the base figures based on future outcome indicators that can be measured to understand the change contribution. The assessment shall be conducted using stratified random sampling through structured household-level interviews and open-ended focus

- group discussions with a variety of stakeholders.
7. **Development of training & capacity architecture** : Every Integrated Farming Cluster is unique in itself in terms of geography, climate, social and cultural norms, and intervention commodities. Hence, the training needs and approach are different. It is thus important that training material should be developed for CRPs, Mahila kisan households and concerned staffs are developed looking at the needs and identified commodities. For this the support of associated Krishi Vikas Kendras / RCRC partners may be sought.
 8. **Business plan for commodity wise intervention** : Business planning is an important aspect of IFC implementation. Post identification of 2-3 commodities for 250-300 households of a cluster, the plan should be developed for activities to be undertaken for each commodities in terms of production/ productivity, processing (Primary& Secondary) and marketing. While baseline assessment figures or secondary data may provide an important input to understand the level from which products and services for farmer members should be developed more important will be collective visualization of the marketing aspect. It is thus important to develop a proper business plan with projections on various aspects.
 9. **Livelihood Service Centre** : Under Integrated farming Cluster Livelihoods Service Centre is envisaged as hub of input, processing and output services governed by Sr CRP. In progressive agriculture belts, private players offer different services, like input shops, Agri machinery, nursery and seedlings etc. Similarly, for a livestock clinic, feed, medicines etc. These services are mandatory for cluster-based development. And hence livelihood Service Centre should be proposed at the Cluster level where some of these services could be made available to farmers at a reasonable rate. Senior CRP with support of IFC anchor and BMMU unit would manage these centres. The farmers also find it difficult to dispose of their produce. Block and district level market at a distance of 40/60 kms increases cost and time spent selling their produce. The livelihood centre would procure and do sorting, grading and bulk selling, establishing linkages with the market. Private entrepreneurs and community enterprises in the form of Farmers Producers Organization should be proposed.
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 - **Commodities with limited scope for post –harvest value addition:**
The intervention would be limited to pre- production, production and

post-harvest-up to grading and sorting of the commodity. May include drying wherever applicable. Investments would be required in the areas of sorting, grading and drying equipment to the drying yards.

- **Commodities with a high scope of post-harvest value addition:** The intervention will also include processing and packing in bulk and micro packing. Investments required will be higher for establishing processing facilities and packing facilities. The IFC project does not intend promote tertiary level processing.
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D	Community Investment Support				21,87,500
1	Establishment of Livelihoods Service Centre				19,87,500*
2	Working capital for PGs (as per the producers collectives financing guideline)	No. of PGs	2	100000	2,00,000

E	Knowledge Management and M&E Cost				73,250
	Grand Total				40,00,500

Thus looking at the potential state may plan for intervention of 3-4 clusters each in 3-4 blocks @ Rs 40 lakh per cluster. The transfer of fund to respective IFC has to be done through respective Cluster level federation where fund has to transferred for infrastructure as well as working capital. The technical support for the implementation of the IFC may come from respective Krishi Vigyan kendras and Associated RCRC partners. While preparing as well as implementing the IFC proposal the support from different line departments schemes as well as their human resources should also be taken into consideration for training and capacity building.

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C	Institution building				60,000
1	Mobilisation and establishment of Producers Collectives	Lumpsum			60,000
D	Community Investment Support				21,87,500
1	Establishment of Livelihoods Service Centre				19,87,500[†]
2	Working capital for PGs (as per the	No. of PGs	2	100000	2,00,000

	producers collectives financing guideline)				
E	Knowledge Management and M&E Cost				73,250
	Grand Total				40,00,500

Thus looking at the potential state may plan for intervention of 3-4 clusters each in 3-4 blocks @ Rs 40 lakh per cluster. The transfer of fund to respective IFC has to be done through respective Cluster level federation where fund has to transferred for infrastructure as well as working capital. The technical support for the implementation of the IFC may come from respective Krishi Vigyan kendras and Associated RCRC partners. While preparing as well as implementing the IFC proposal the support from different line departments schemes as well as their human resources should also be taken into consideration for training and capacity building.

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फाइल संख्या/File No. K-11060/11/2020-21/Value Chain/DAYNRLM (Comp. No.: 373605)

भारत सरकार/Government of India
ग्रामीण विकास मंत्रालय/Ministry of Rural Development
ग्रामीण विकास विभाग/Department of Rural Development
ग्रामीण आजीविका विभाग/ Rural Livelihoods Division
(<https://rural.gov.in>)

सातवीं मंजिल, एन.डी.सी.सी-II भवन/7th Floor, N.D.C.C -II Building
जय सिंह मार्ग, नई दिल्ली-01/Jai Singh Road, New Delhi-01
दिनांक/ Dated: 11th January, 2024

To

The State Mission Director/Chief Executive Officer,
State Rural Livelihoods Mission,
All States/UTs.

Subject: Fund release protocol under Integrated Farming Clusters-reg.

Madam/Sir,

I am directed to enclose and share the fund release protocol under Integrated Farming Clusters (IFC) for information and necessary action.

Yours faithfully,

Encl.: As above.


रमन वाधवा/(Raman Wadhwa)
उप-निदेशक (प्रशासन)/Deputy Director (Admin)

Copy to:

1. PPS to Additional Secretary, Rural Livelihoods, MoRD, New Delhi.
2. PPS to Joint Secretary, Rural Livelihoods, MoRD, New Delhi.

FUND RELEASE PROTOCOL UNDER INTEGRATED FARMING CLUSTERS

1. The fund would be released under the component Integrated Farming Cluster (IFC) of MKSP as per the budget approved in the Annual Action Plan of the DAY-NRLM. Funds will be concurred in two installments of 50% of the amount approved by the EC, however, releases will be made in four tranches of 25% of the approved amount as per the directions of DoE, Ministry of Finance.
2. For the first year: Funds will be released in four tranches of 25% each. Subsequent tranches will be released upon transfer of the stipulated State share to the Single Nodal Account and utilization of at least 75% of the funds released earlier (both Central and State share) and achievement of physical targets and submission of UCs and other substantiating documents towards compliance of the conditions of previous sanction.
3. From the second year onward: In addition to the terms and conditions specified in para 2 above, it is necessary to ascertain that funds available in the bank account of SNA should not be more than 50% of the 1st tranche of the central share likely to be released to a State in a financial year including the corresponding State share.
4. All the unspent balances available with the States/UTs under MKSP, shall be tabulated and treated as opening balance.
5. The State Government will ensure that the Central Share received is transferred to the SRLM within 30 days of receipt of the Central share. Further, w.e.f 01.04.2023, it has been decided by the DoE that interest will be charged based on the number of days of delay beyond 30 days in the transfer of Central share to the SNA account at the rate of 7% per annum. PFMS division, O/o CGA will issue guidelines regarding the procedure for the deposit of penal interest by the State Government concerned in the Consolidated Fund of India.
6. **Conditions to be fulfilled before release of funds:** SNA Marking for MKSP to be completed; Opening of SNA account for MKSP; Separate budget line for MKSP at the State level etc.; Budget provision for MKSP for the financial year to be reflected in TRSY-07 Report; Interest earned in SNA account should be remitted to Consolidated Fund of India and respective State Governments.
7. Conditions and Documents required to be submitted in addition to those referred above:

UC for the years of fund disbursal; Audit Report for completed financial years, wherein funds have been disbursed under the scheme; Undertaking



from Secretary of the concerned Department of State Government regarding interest remittance for the previous financial year to be submitted, if funds have been disbursed under the scheme; Budget provision for MKSP for the current financial year to be reflected in TRSY-07 Report; For the release of second, third and fourth tranches, SRLM must have received the Central and corresponding State share pertaining to the previous releases in SNA account from Treasury and it must be reflected in SNA-01 and SNA-09 reports of PFMS; Submission of Physical target achievement through progress reports and final reports of any evaluation or studies conducted and completed.

8. The States/UTs to follow the same fund flow as followed for the NRLM and NRETP Scheme.
9. Fund release for MKSP approved by EC will be part of **Component L**
10. The above guidelines are based on the instructions of the Department of Expenditure, Ministry of Finance, and any changes/modifications made by them will automatically, form a part of these guidelines, as and when communicated by the Ministry.

Process Flow of fund transfer:


Payment to CLF:

- a. BMMU in support of CLFs propose potential cluster(s) for which they will prepare a Detailed Project Report (DPR) and submit it to SRLM through DMMU.
- b. SRLM will appraise the DPR and include it in the Annual Action Plan for approval.
- c. Post approval funds will be transferred to DMMU by SRLM.
- d. DMMU will release the total amount as per the DPR at a maximum limit of Rs 40 lakh per cluster in four equal instalments in three years (first year 50%, Second year 35% and third year 15%), subject to the annual action plan allocation of MKSP.
- e. Payment will be made to the CLFs by DMMU after applying due diligence on the performance of the CLF as per clause (h)
- f. DMMU should release the first instalment of grant assistance which is 25% of the allocated fund for the first year subject to the approval of the project's scope, placement of manpower in the field and physical target/activities planned with a timeline along with the tentative expenditure.
- g. CLF will raise the fund request to DMMU once the total expenditure is more than 75% which BMMU should appraise.



- h. DMMU should do the due diligence by field monitoring along with the respective CLFs after receiving the expenditure details within 7 working days.
- i. DMMU shall release the next instalment after receiving the utilization certificate of the previously released amount, physical and financial progress as well as the tentative expenditure plan by 15 working days of the receipt of the fund request from CLF.
- j. DMMU should release the funds in time post-requisition from CLF. Any delay in fund transfer impinges the operations of IFCs which are governed by the season and commodity they are working on. Hence, the timeline for releasing funds should be as follows:
 - i. CLF prepare and submits the annual physical and financial target to DMMU through BMMU (CLF may take support from BMMU/RCRC/other resource agencies for all documentation, physical and financial planning) by the end of March of every Financial Year.
 - ii. CLF should raise the fund request immediately along with the utilization certificate, physical progress, financial statements, tentative physical plan, and tentative expenditure for the next six months. The time taken to reach the requisition from CLF to DMMU should be at most 7 working days.
 - iii. BMMU should verify all the documents within 3 working days and submit them to DMMU for approval and further process to release the fund. CLF should receive the fund within 15 working days of the requisition letter.
 - iv. DMMU should share the physical and financial progress and the fund's availability status as per the MIS format shared by NMMU with SPM-LH/PM-LH by the 5th of every month. As per the financial report, whenever a cluster has utilized 65% of the funds transferred, DMMU should do due diligence on all the documents, and physical and financial progress in the field and submit the report to SRLMs. If the funds available in the districts reaches below 30% of the yearly approved budget, SRLM has to ensure the availability of funds in 30 days. Based on the funds availability status at districts and states, SRLM will coordinate with NMMU.
 - v. CLF should raise the fund request immediately when the total expenditure is 75% of the total released, along with the utilization certificate, physical progress, financial statements, tentative physical plan, and tentative expenditure for the next six months.
- k. The following indicative criteria/guidelines are provided for the guidance of NMMU / SMMU / DMMU for the performance assessment of CLFs.

- i. In the first six months of the project, the performance of the CLFs will be assessed based on a baseline survey, Scoping Study, and Detailed Project Report along with the Business Plan of the Livelihood Service Centre (LSC), and mobilisation of 200-300 HHs, placement of IFC anchor, Sr. CRP and CRP in project areas, training needs assessment document, setting up of Livelihood Service Centre, Obtaining required licences for LSC, procurement of assets for LSC, Identification of Entrepreneurs / Sub-Entrepreneurs and their respective business plans.
- ii. In the period from six months to one year, training of IFC members as per the required training on improved practices of farm and off-farm activities, operationalization of Livelihood Service Centre, PG / PE linkages, Forward and Backward Linkages, Processing / Value addition of agricultural and allied products.
- iii. In the second year, performance will be based on business activities performed by LSC as per business plan, number of HHs getting services of LSC, Number of training for HHs/ Staff / CLF members, Commodity processed and marketed, MoU and Vendor registration as per business plan with marketing agencies/ institutional buyer, audited statements of accounts and filling it for the first year and Value chain developed
- iv. In the third year, performance will be based on audited statements of accounts, a revenue model showing financial growth in the last two years, detailed project completion report


11/01/24

फाइल संख्या/ File No.: J-11060/33/2017 – RL(Comp. No.: 355028)

भारत सरकार/Government of India
ग्रामीण विकास मंत्रालय/Ministry of Rural Development
ग्रामीण विकास विभाग/Department of Rural Development
ग्रामीण आजीविका विभाग/ Rural Livelihoods Division
(<https://rural.nic.in>)

सातवीं मंजिल, एन.डी.सी.सी-॥ भवन/7th Floor, N.D.C.C -II Building
जय सिंह मार्ग, नई दिल्ली-01/Jai Singh Road, New Delhi-01
दिनांक/ Dated: 5th February, 2024

To,

The Chief Executive Officer/State Mission Directors,
State Rural Livelihoods Mission,
All States and UTs.

Subject: Revised MKSP guidelines - Reg

Madam / Sir,

I am directed to enclose the revised guidelines for implementation of Mahila Kisan Sashakthikaran Pariyojana (MKSP) for further necessary action.

Encl.: As above.

Yours faithfully,



रमन वाधवा/(Raman Wadhwa)

उप-निदेशक (प्रशासन)/Deputy Director (Admin)

Copy to:

1. PPS to Additional Secretary (RL), MoRD, Govt. of India, New Delhi.
2. PPS to Joint Secretary, RL-II, MoRD, Govt. of India, New Delhi.

Guidelines for Implementation of Mahila Kisan Sashaktikaran Pariyojana (MKSP) (Revision 2023)

Background:

Rural women form the most productive work force in the economy of majority of the developing nations including India. Agriculture, the single largest production endeavor in India, contribute to 18-20% of the GDP it is increasingly becoming a female activity. Agriculture sector employs about 80% of all economically active women; they comprise 33% of the agricultural labour force and 48% of them are self-employed farmers.

According to the National Sample Survey Office (NSSO), about 18% of the farm families in India are headed by women. Beyond the conventional market oriented, narrower definition of 'productive workers', almost all women in rural India can be considered as 'farmers' in some sense, working as agricultural labourers, unpaid workers in the family farm enterprises or combination of the both.

Women in agriculture are generally not able to access extension services and production assets like seed, water, credit, subsidy etc. As most of them are not recognized as farmers for want of ownership of land, therefore many times they are not considered as beneficiaries of various government programmes / services, some of the tasks performed by the women are not valued adequately and considered less important economically. Further, due to multiple roles that a woman has to perform within a family and the farm, her access to knowledge and information, is constrained and therefore her opportunities get limited.

To improve the present status of women in Agriculture, and to enhance the opportunities for her empowerment, Government of India launched "Mahila Kisan Sashaktikaran Pariyojana" (MKSP), as a sub component of the DAY - National Rural Livelihood Mission (DAY-NRLM), in year 2010-11, initially an amount of rupee one hundred crore was allotted.

MKSP is DAY - NRLM's critical project for ensuring sustainable agriculture. It envisages to address the key challenges of women in agriculture and farming community in the light of climate change and threats to food and nutritional security.

Mission statement for MKSP:

MKSP is DAY - NRLM's program for transforming rural livelihoods - farm and allied sectors by galvanizing the leadership of SHG members and deploying agro-ecological and regenerative practices, augmenting the productive capacities of land, water, forest, common resources in villages; converging government schemes and robust linkages with

markets.

MKSP brings “ Women centrality” in Indian small – holder agriculture through convergent efforts directed to her sense of identity, agency, skills, access to resources and decision making.

MKSP is designed to achieve the following

Design for Scale and Multiplier impact:

- Partnership with Government Programmes - MGNREGS / Schemes of MoA&FW and other departments
- VO/CLF led Livelihoods Planning
- Coordination Mechanism for plan implementation drawing local Panchayats, Forest and other line departments

CONVERGENCE OF RESOURCES:

- Multi-scheme/programme : Pradan Mantri Matsya Sampada Yojana (PMMSY), PM formalization of Micro Food Processing Enterprises (PMFME), Sub Mission on Agriculture Mechanisation (SMAM) etc
- Increase Inflow of Investments for Assets and Skill building
- Better Infrastructure, Increase in Entitlements Access, Augmentation of Productive Assets
- Better Processes for deployment of Revolving fund /Community Investment Fund/Cash Credit Limits for livelihood activities
- CLF-led Processes: Foundation to Livelihood Overlay

INSTITUTIONAL & SYSTEMS CHANGE

- CLF & VO Led Processes Strengthened & Streamlined: Anchoring Livelihoods
- CRP Cadre emerging as service entrepreneurs, HR for PG/FPO/PE
- Market Partnerships
- Knowledge arrangements with Krishi Viganan Kendras (KVKs) etc

Objective of MKSP:

The primary objective of the MKSP is to transform women in agriculture and allied from subsistence farmers to surplus producers by making systematic investments in the farming models, farm-based livelihoods, including livestock-based livelihoods which are sustainable and climate resilient.

Specific objectives of MKSP are as under:

- To promote improved farming models (including agriculture, horticulture, livestock, NTFP, Fisheries etc) which have potential to enhance incomes of SHG members

- To promote practices which have potential to enhance the productivity from unit land / unit livestock
- To promote agri nutrition linkages to ensure nutritional security of SHG members through promotion of agri nutri gardens, nutrients rich crops like Millets, Moringa, pulses, oil seeds, improved fruit and vegetable production technologies etc
- To establish Integrated Farming Systems (IFS) models
- To reduce drudgery of women farmers
- To promote seed systems owned by SHGs (or) their federations (Cluster Level Federations/ Producer Groups / Producer Enterprises / Cooperatives/ Farmer Producer Organisations)
- To promote natural resource based integrated and climate resilient sustainable farming systems that ensure maintenance and increase of soil fertility, natural resource conservation, on farm nutrient recycling and minimize dependence of farmers on external inputs
- To promote crops which are resilient to climate change
- To promote technologies which are climate resilient and potential to adapt to climate change
- To promote higher order value chain activities
- To create natural farming -based livelihood opportunities for women in agriculture
- To promote certified organic farming through PGS to provide access to safe food and niche markets to SHG members
- To enable women to have better access to quality inputs, credit, advisory services, market services and other and other entitlements
- To improve the capacities of women in agriculture and allied sector to access the resources of other institutions, departments and schemes
- To promote and facilitate livestock development and promotion
- Facilitate livestock clusters

Expected Outcomes:

- Net increase in the incomes of women in agriculture and allied sector on a sustainable basis
- Enhancement of income from multiple farm-based livelihoods (Agriculture, livestock and allied sectors)
- Improvement in food and nutritional security of women and their families in agriculture and allied sectors
- Increased levels of skills and productivity by women in agriculture, livestock development, NTFP, Fisheries and allied sectors
- Increased access of women in agriculture to productive land, inputs, credit, technology and information

- Drudgery reduction for women through use of gender friendly tools / technologies
- Increased visibility of women in agriculture and allied activities as an interest group – in terms of increased number of women institutions and increase in their entrepreneurship
- Creation of productive assets for women farmers

Approach:

MKSP recognizes the centrality of women in agriculture , livestock and NTFP and therefore aims to provide direct and indirect support to enable them to adopt improved farming models, Natural farming, Agro-ecological practices and sustainable livestock development. It will initiate a learning cycle by which women are enabled to learn and adopt appropriate technologies, integrated farming systems, integrated farming cluster and integrated livestock management. MKSP will transform the lives of women farmers by uplifting them from subsistence agriculture to surplus agriculture. MKSP will be implemented as a sub-component of DAY-NRLM through specially formulated projects. The project should aim for saturation of VO/CLF (minimum 80% of the Households).

Strategy:

The Project Implementing Agencies (PIAs) are the State Rural Livelihoods Missions (SRLMs). The key stakeholders of the project are SHG members formed under DAY-NRLM, SHG federations and line departments. The key investments will be on building the capacity of women farmers for adoption of agro ecological practices, Integrated Farming Systems (IFS) and other improved farming models for enhancing incomes. Main focus of the MKSP is on enhancing productivity and incomes in sustainable approach. The MKSP will strategize in a manner to target the Poorest of the Poor and most vulnerable women such as SC/ST, single women, minorities, landless and the Primitive Tribal Groups, particularly vulnerable tribal groups (PVTG) and among these sections' women headed families will be given priority. The Projects should be conceived in a manner so as to provide "end to end solutions". Following are the key strategic areas on which MKSP is expected to focus:

- Promote farming models which are potential to transform the incomes of SHG members
- Promote local resource based, resource regenerating and conserving and environment friendly technologies
- Coordinated and collective action by communities and community-based institutions such as the women self-help groups, their federations, producer

groups and producer enterprises

- Creating social capital for effective transfer of technology and sustain the initiatives
- Ensuring nutritional security at Household level by creating strengthening agri-nutrition linkages
- Addressing local specific issues which will transform the income level of the Mahila Kisan
- Facilitate livestock and fisheries promotion

Guiding principle for formulating projects:

- The projects should be formulated to ensure transformation of women farmers from subsistence agriculture to surplus agriculture
- The project should introduce high value agriculture, integration of livestock into agriculture, diversification of crops and varieties to meet the demands of various consumers
- The projects should be formulated to ensure empowering women farmers by gaining more control over production resources and managing the support systems
- Provision of a complete package of services viz quality inputs, credit, insurance, capacity building to enhance productivity and incomes
- The scaling up strategy of the interventions should be clearly mentioned in the project. Role of Community Resource Persons (CRPs) and Best Practicing Farmers (BPFs) can drive the project needs to be outlined clearly in the proposal
- Collaboration strategy for building partnerships with CBOs, NGOs, startups, research Institutes and private sector etc need to be clearly articulated in the proposal. Purpose of the partnership also needs to be emphasized in the proposal.
- Strategy for leveraging the resources from line department should be clearly indicated in the proposal. This leveraging should amplify the impact of the project.
- If any subsidy is proposed, it should always be used as an incentive and not something which is derived in the natural course. The incentive either to individuals or organizations should be based on clearly measureable indicators, such as volume of transactions of the individuals with the livelihoods collectives or SHG federation, repayment of loans, marketing premium obtained, no. of members whose skills have been enhanced, etc.
- The projects may include sustainable fish production, beekeeping, wild honey collection, livestock management, Non-Timber Forest produce (NTFP), aquaculture and subsector interventions state has proposed as part of it's approved Annual Action Plan during the year.
- The project should leverage credit for mahila kisan from financial institutions as catalytic capital to create assets, strengthen the livelihoods
- Project should lead to substantial tangible and intangible socio-economic benefits
- Project should have a well-defined strategy for higher adoption rates of the Package of Practices
- Project should have a well-defined internal monitoring systems to track the progress particularly the incomes of beneficiaries, physical and financial achievements. Appropriate Management Information Systems (MIS) should be set up by the SRLMs.

- There should be a sound information dissemination strategy using the Information Technology, Kisan Melas, Kisan Days, Festivals, Folk Media, Audio-visual aids, social media handles, Information Education Communication (IEC) material, video conferencing, and documenting the best practices.
- Focus should be on nurturing social capital for sustaining the initiatives beyond project period
- Proposed State, district, blocks where the MKSP project is to be implemented should be specified along with details of coverage
- Project period needs to be specified also key performance indicators to be specified

Components under the project:

Technological Interventions:

Technological interventions may include improved package of practices which are potential to adapt to climate change, drought mitigation in dry lands, soil and water conservation measures, sustaining continued floods in flood prone areas, promotion of nutrient rich crops like millets, moringa, vegetables, oil seeds, pulses, agri nutri gardens, multi-layer farming models, integrated farming system models, bio fortification, improved production practices of vegetables like low-cost shade net nurseries, pandal systems etc. Technological interventions should cover entire value chain including pre-production, production and post production stages.

On farm post-harvest management practices like destoning, grading, sorting etc. to realise better prices. The technological interventions proposed in the project should transform the income levels of Mahila Kisan.

Technological interventions can be focused on improving food and nutritional security at household and community level. Technological interventions should improve women friendly and reduce drudgery for women farmers. Interventions should create productive assets and sustainable livelihoods for women farmers.

The activities of the project may blend Agriculture and Allied sector activities as also the post-harvest processing activities that add value to the agricultural produce. This would include horticulture, agro-processing, food-processing, storage, value addition, preservation, seed growing etc. Likewise, management of cattle essentially considered as

women's domain should be given due weightage under the scheme. Institutional mechanisms for ensuring household and community level food security systems may be clearly mentioned. Village level procurement and distribution of commodities could be one of the components of the project. The projects should also incorporate planting of trees and fodder availability in order to derive maximum benefits out of the agricultural activities under the project through leveraging MGNREGS and other appropriate schemes. MKSP projects should focus on promoting planting of fruit and fodder trees. Fodder and feed for livestock. Innovative interventions may be considered for better management of risk associated with climate change.

Projects proposed under MKSP may work on establishment of community-based seed systems. Certified seed systems may be established to achieve seed self-sufficiency at Cluster Level Federation (CLF) / Produce Enterprise level. Projects must indicate complete support systems for establishment of seed chain.

MKSP projects can focus on improved livestock management practices like livestock breeding centers, mother units for poultry, aquaculture (or) any such animal husbandry practice.

Capacity Building:

Capacity building is the key component of MKSP. It is expected to Capacitate Women farmers by triggering their aspirations, providing them information and inputs, knowledge and skills and access to hard and soft infrastructure, credit and government support. This is best done through the institutional structures of community mobilization and extension support. Technical and managerial capacity building of women in Agriculture in order to enable them to manage and sustain their activities. Participant SHG members could be provided TOT and apprised with training methodologies. They could also be encouraged to develop their training curriculum and their own pedagogy. They could be asked to select their trainees from the nearby villages which could be put under their charge. Farmer Field Schools, result demonstrations, farmer scientist interactions, and method demonstrations can be proposed to transfer of technology.

Capacity building plan need to be clearly articulated in the project. Structured training modules have to be developed and rolled out keeping in mind the productivity challenges and knowledge and technology gaps. The training modules should be theme based and dynamic

while updating takes place periodically keeping close watch on what are the requirements on ground.

Capacity building should lead to improve the skills of women farmers and create social capital. Capacity building should lead to improved adoption rates.

Institution Building:

The organization and mobilization of women in agriculture into groups viz Producer Groups, Local Groups and federate as Producer Enterprises etc. should be a critical element in the project. Local groups should be promoted if the project is intended for promotion of organic farming. Support to Local groups for registration, establishing internal control systems and organic certification. Required books of accounts and other books/ documents should be placed with the groups.

Producer Groups can be formed for aggregation and marketing of the produce. The Producer Groups can be subsequently may emerge into Producer Enterprises. The project may follow the Group Approach for the delivery of services. These groups should able to realize better prices for their produce, quality inputs, produce etc. The groups should be well trained on managing their activities. Required books of accounts and other books/ documents should be placed with the groups.

Community Investment Support:

Community Investment Support under MKSP is to create productive assets at community level. The ownership of the assets created through Community Investment Support will be with SHGs/SHG federations /producer groups promoted under MKSP project. Community Investment Support can be a gap funding for leveraging schemes of line department. Following are the indicative list of assets which can be created through Community Investment Support:

1. Custom Hiring Centers / tool banks
2. Seed banks or nurseries for Agri nutri gardens /Millets/ fruit plants /moringa etc
3. Bio input centers, NPM shops
4. Composting, Waste management units
5. Primary Processing Centers for farmgate postharvest management (Primary processing tools like graders, destoners etc)

Convergence /partnership framework:

Convergence with line departments is critical for successful implementation of the project. Programs of various Ministries can work in a synergy, complement each other and build on each other's strength to have a multiplier effect. Over the years DAY - NRLM has built strength in outreach, strong implementation and capacity building architecture through professionals and community resource persons and has set a stage for convergence with other Ministries and create synergies at households of women farmers.

Partnership with government institutions like KVKs, research stations, state agriculture universities and private sector organisations can be included in the projects to maximize the benefits to women farmers. Following are the key departments for convergence under MKSP:

1. MGNREGS
2. Department of Agriculture and Farmer's Welfare
3. Department of Horticulture
4. Department of Animal Husbandry and Dairy development
5. Department of Irrigation
6. Department of Tribal Welfare
7. Ministry of Small and Medium Enterprises
8. KVKs / Local agriculture universities / research stations
9. National / state level technical institutions like IIMR, NIPHM, CFTRI etc
10. Department of Fisheries

Convergence/ partnership frame in the project should be aimed at the following:

- (i) Asset augmentation (individual and common)
- (ii) Access to technology
- (iii) Access to credit
- (iv) Access to specific knowledge and skill and
- (v) Access to market

Developing Social Capital:

One of the objectives of the MKSP is to develop social capital. Projects proposed under MKSP should include the plan for development of social capital (Krishi sakhi/pashu sakhi/vana sakhi / Krishi udaym sakhi, agriprenure/Matsya Sakhi etc). Proposal should clearly indicate no of Community Resource Persons (CRPs) will be generated by end of the project period. Capacity building plan and strategy to nurture CRPs should be clearly indicated in the

proposal. Strategy for skilling of Krishi sakhi/pashu sakhi/vana sakhi / matshya sakhsi etc should be clearly articulated.

Strategy for assessment, accreditation and certification of Community Resource Persons should be clearly articulated in the project. Revenue model for CRPs need to be worked out in the proposal. Complete support systems for CRPs should be articulated in the project proposal.

Knowledge Management/ Dissemination:

Trainings, front line demonstrations, result demonstrations, farmer-scientist interactions, exposure visits etc. may be included in order to impart women farmers with necessary farming skills and techniques. Establishing institutional mechanisms for knowledge building, management and dissemination could be another element of this component. Knowledge, particularly relating to markets, post-harvest practices and village level value addition should be included for the dissemination strategy.

IEC materials, video films, case studies can be disseminated through web portal for reaching larger community. e-learning modules and distance modules would also be developed and placed as learning management system for the project.

Monitoring and Evaluation:

Appropriate Monitoring and evaluation strategy to be articulated in the project. Provision should be created to monitor the incomes of beneficiaries under the project. Mahila Kisan profiling should be an integral part of M&E strategy. Monthly, quarterly, half yearly and annual reports should be submitted. Provision should be kept for baseline and end line surveys.

Human Resources:

MKSP projects are technology oriented and need well qualified technical team for successful implementation of the project. SRLMs need to deploy required number of both professional and community resource persons. SRLMs may also explore the option of positioning professional resource persons with Cluster Level Federations for extending the required technical support to SHGs for successful implementation of the project. Human resource structure (Both Community Resource Person (CRP) and professionals) should clearly be articulated in the proposal. The state may take services of Technical Support Agency (TSA) to implement MKSP.

Exit strategy:

Though the projects come to an end, the project activities are expected to be continued in the project villages. The MKSP project activities are expected to lead to value chain activities through Producer Enterprises (PE). The natural transition for the MKSP

projects is to move towards organic / Natural farming and value chain development through Producer Enterprises and Producer Companies.

The assets created under the project viz Custom Hiring Centers/tool banks, Bio Input Resource Centers (BRCs), vermi compost units etc should be handed over to the community institutions (CLFs/ PEs). The capacities and capabilities of these community institution leaders should be built during the project period, so that they can manage the assets created in the project and earn revenue.

Community Resource Persons (Krishi sakhis/ Pashu sakhi/ van Sakhi etc.) nurtured during the project period should continue the project activities in coordination with the community institutions. The services of the CRPs should be available on payment basis. Farmers should pay the CRPs to access their services.

The project activities are expected to continue through convergence mode. The project should build strong linkages for accessing various schemes to continue the project activities. The community institution leaders should be well trained during the project period so that they will access the relevant schemes for the SHG members in the project area.

Partnerships built for backward and forward linkages should continue in coordination with community institution leaders. These partnerships should transform into value chain development activities through Producer Enterprises.

The State Rural Livelihoods Missions shall ensure that sufficient training is provided to the selected CRPs, community institution leaders for managing the community assets, accessing convergence, managing the partnerships. Training resource materials shall be provided with the community institutions.

Funding:

a. General conditions:

Ministry of Rural Development (MoRD) would provide funding support of up to 60% (90% for North East and hill states) to the project submitted by the SRLMs under MKSP Value Chain. Balance is to be contributed by the respective state governments. For UTs it is 100% central share.

The SRLMs will be submitting the project proposals for a period of three (3) years and the funding will be made through a project route. The project will be approved for a three years project period.

The investment per household should not exceed INR 15000 over the period. The investment per household would be calculated as:

Investment per household = total investment proposed for the project / number of unique farmers to be covered during the project period.

The total project cost for any single project shall not exceed INR 45 crores.

b. Convergence:

In order to optimize the benefits from the project under MKSP, as well defined convergence strategy should be mentioned at central, state, district and block levels in order to leverage schemes of various Ministries /Departments such as MGNREGA, ATMA, RKVY, Watershed Development Programme, National Food Security Mission of India (NFSM) etc. and similar schemes aiming at empowerment of women and enhancement of agriculture productivity under the Ministries of Agriculture and Women and Child Development.

DAY-NRLM has issued joint advisories with Ministry of Agriculture and Department of Animal Husbandry, Dairy and Fisheries. For implementation of the value chain interventions the States may explore convergence opportunities with other schemes and departments in their respective States.

Processes under MKSP:**Identification of project areas:**

The project area would primarily be the intensive blocks under DAY-NRLM. If a project is being conceived in an intensive block, the non-intensive blocks adjacent to the intensive block may also be included with the condition that the SRLM would develop a plan to cover these non- intensive blocks under its social mobilization and financial inclusion interventions.

The other areas in the state may also be taken up under MKSP if sufficient human Resources both SRLM staff and CRPs are positioned in the area. Preference may be give to the areas where vulnerable communities are residing or the areas are more prone to climate change.

Project implementing agency:

The State Rural Livelihoods Mission of any State may pose projects under MKSP.

Proposal submission process and templates

The proposal for Agro-ecological practices, aquatic livelihoods, livestock management, NTFP and allied sector projects may be submitted under MKSP AEP in the proposal submission template provided. The proposal submission template is provided in Annexure – II.

The SRLMs will be submitting the project proposals for a period of three (3) years and the funding will be made through a project route.

Proposal approval Stages:

Desk appraisal:

The proposal submitted by the SRLMs would be appraised by a team of experts having thorough understanding of agriculture, livestock, fisheries and allied sectors interventions including certification process (if applicable). The expert team would comprise of Farm Livelihoods team of DAY-NRLM and National Resource Persons empaneled by NIRD&PR having relevant expertise. The appraisal would be taken up following the scoring template as Annexure IV.

Any proposal scoring less than 60% marks will not be considered.

The Appraisal Team would appraise the project based on the following –

- a. Non-negotiables defined in the MKSP
- b. Results Framework defined in MKSP Guidelines
- c. Project submission template and financial analysis, Interventions, Training & CB, convergence etc.

In case the SRLM has proposed a Technical Support Agency or Regional Council, the mode of procurement has to be mentioned in the proposal.

In case the proposal is not found to be suitable to be taken to the pre-EC stage, the SRLM would re-work the proposal based on the comments of the Farm Livelihoods Team.

The Farm Livelihoods Team may undertake a field appraisal of the project areas to verify the readiness of the SRLM to implement the specified interventions, suitability of other factors.

Pre-Empowered Committee meeting:

The Projects submitted would be examined and considered by the Pre-EC before it is submitted to the Empowered committee for its recommendation. The composition of the Pre-EC would be as under:

- i. Mission Director, DAY-NRLM : Chairperson
- ii. Joint Secretary (Rural Livelihoods) : Member
- iii. Farm Livelihoods Team : Member
- iv. State Mission Director – Concerned state
- v. Director / Deputy Secretary / Deputy Director : Member convener
(in-charge of farm livelihoods)

The pre-EC meeting could be held multiple times during the appraisal stage of the proposal.

Empowered Committee:

Once the projects have been examined in the Pre-EC meeting, the proposal would be put forth for approval by the Empowered committee. The composition of the Empowered Committee would be as under:

- i. Secretary, Department of Rural Development – **Chairman**
- ii. AS & FA / JS&FA Ministry of Rural Development – Member
- iii. Senior Adviser (RD), Planning Commission – Member
- iv. Senior Advisor (RD), NITI Aayog- Member
- v. Joint Secretary, Ministry of Environment & Forest - Member
- vi. Joint Secretary (MoA&FW) - Member
- vii. Joint Secretary, Ministry of Tribal Affairs – Member
- viii. Joint Secretary, Ministry of Development of North East Region (In case of Projects from North East) – Member
- ix. Special Invitee/Expert (Two) – Member
- x. Joint Secretary (Extension)/(RKVY), M/o Agriculture Member
- xi. Joint Secretary, Ministry of Women & Child Development Member
- xii. Joint Secretary (Rural Livelihoods) along with Director / Deputy Secretary / Deputy Director along with Farm Livelihoods Team Member-Convener
- xiii. Concerned SRLM Team members

Role of the State Rural Livelihoods Mission:

The State Rural Livelihoods Missions (SRLM) as Project Implementing agency (PIA) will place a dedicated spearhead team at the State level for proposal development and subsequent facilitation of the project roll-out. However, before recommending the project to MoRD, SRLM will obtain the requisite approval for commitment for state share.

Spearhead will comprise of one or two Agriculture and livestock expert, one expert in Training and capacity building (optional) and one for MIS. This team should be a separate team apart from the existing farm livelihoods team. The cost of this spearhead team could be met by the SRLM out of the provision available under DAY-NRLM for administrative expenses.

Project Period:

The Mahila Kisans need to be selected in the 1st year of the project period and they will be handhold for next two years. This is important to increase the adaption ratio. One Mahila Kisan needs to go through three seasons. Projects are to be implemented usually within three years' time.

Eligible Items of Expenditure:

Component-wise expenditure likely to be incurred for the project, like Mahila Kisan mobilization, cost of training and capacity building, input costs, monitoring fees, tracking, administrative expenditure etc. must be mentioned in the project document. Matching share of 40% (10% in case of NE and Hilly state) by the State

Government may be mentioned. The project should incorporate expenditure on various components indicated under MKSP to arrive at the project cost. The administrative expenses including the M&E for managing the project shall not exceed 6% with the condition that savings if any in the administrative component may be used for furthering the activities of the Project but not vice versa. Purchase of vehicles is not admissible in the projects. No cost escalation shall be borne by the Government of India.

At the end of the project period, the ownership and management rights of the infrastructure and assets created if any, under the project, shall remain with the participating women groups/organizations.

Reallocation of funds not exceeding to 5% of the total project cost among different project activities will be permissible to accommodate any innovation within the project. However, reallocation on account of administrative expenditure shall not be permitted.

Any Additional Information that may be relevant to the Project Proposal may be mentioned in the Project Document.

Any kind of subsidy to individual members or asset creation for individual members is not permissible under this project.

Technical Support Agency/ Experts consultants:

The SRLM may take the services of a technical support agency for providing technical and handholding support/ certification process, to be promoted under this proposal. The mode of procurement of the Technical Support Agency (TSA)/ Consultant must be specified in the proposal.

Therefore, the TSA/ consultant / Convergence agency are to be taken to provide specific support to the Project. The Cost of the TSA/consultant/ Convergence agency should not be budgeted in the capacity building segment. The cost should be defined as per clearly specified milestones and deliverables. Regional Council may be hired for organic agriculture projects.

Release of Funds:

The funds will be released directly to the concerned SRLM from the Ministry of Rural Development.

1st Instalment:

The first instalment will be released by MoRD to the SRLM on the approval of the project by the Empowered Committee and signing of the acceptance letter (i.e. 25% of the central share).

2nd Instalment:

The 2nd instalment of 50 % of central share will be released upon the following:

Conditions	Supporting documents
Release of the matching state share	Received state share should reflect in UC and Audit report.
Utilization of 60% of the total available funds	Year wise audit report and UC
achievement of corresponding physical target	Latest QPR
Submission of DPR and inception report	DPR and DPR evaluation report
Certificates from SRLM	<p>Certificate:1: it is certified that the beneficiaries under the project have not been assisted for similar activities through any other Government program.</p> <p>Certificate 2: It is certified that the project is being implemented as per the approved project proposal.</p> <p>Certificate: 3: A web based monitoring system is required to be established by the PIA at www.</p> <p>Certificate 4: No vehicle has been purchased under this MKSP project of Haryana SRLM</p>
Fulfillment of any other condition given by EC	Supporting documents/ reports
Baseline has been done	Baseline report.
If any technical partner/ support agency is hired-	copy of signed agreement, which describes the process of hiring, roles and responsibilities, fund routing etc.
Data entry at LH MIS	Screen shot of the page where the data entry is being reflected.

3rd Instalment:

3rd installment will be released in two tranches:

Installment	Conditions	Supporting documents
3rd installment 1st tranche (15% of the central share)	Release of the matching state share	Received state share should reflect in UC and Audit report.
	Utilization of 80% of the total available funds	Year wise audit report and UC
	achievement of corresponding physical target	Latest QPR
	3rd party evaluation to be done	3rd party evaluation report should be attached (NMMU)

After receiving the 1st tranche of 3rd installment, the PIA need to complete the project. This Ministry will reimburse the last 10% of the central share on the completion of the project. The PIAs need to complete the project by contributing the rest of the 10% of their own, after submission of the completion report and the financial documents, the 10% will be reimbursed. The interest earned will be counted as project fund and it will be adjusted against the last tranche of the 3rd installment.

All themes 3rd installment 2nd tranche (10% of the central share)	Release of the remaining state share	Should reflect in the UC and audit report
	utilization of total available funds	Should reflect in the UC and audit report
	Project to be completed.	Project completion report
	Fulfillment of any other condition given by PAC	Supporting documents/ reports
After releasing the last installment i.e. 2nd tranche of the 3rd installment, the PIA needs to send the final UC showing the account balance as zero.		

All financial documents (UC, Audit report etc.) and the project report submitted by the SRLMs should be scrutinized and authenticated by the SRLM before they are forwarded to the Ministry of Rural Development.

Utilization of Interest earned on central release:

The interest amount accrued on Government releases, if any, shall be adjusted against the Government share of the Project cost at the time of release of the third and final instalment.

Releasing of Matching Share:

The State Government is required to release its corresponding matching share within a month of receipt of the respective instalment of the central share.

Submission of progress reports:

The SRLM shall submit the progress report of the project by 15th of the month succeeding every quarter in the format prescribed by the Ministry. Failure to furnish the progress report would make SRLM liable to refund the Central funds released for the Project along with interest.

It shall be open to the Ministry of Rural Development to prescribe such conditions, as it deems fit, from time to time to ensure proper execution of the project.

Monitoring and review of the Project:

Monitoring and review of the Projects sanctioned and implemented will be done at two levels i.e. at the Central level by NMMU and at the State level by the RD Department or the SMMU.

State Level:

For monitoring and periodic review of the sanctioned project, a Committee at the State level, headed by the Additional Chief Secretary / Principal Secretary (RD) of the State is to be constituted who will be responsible for reviewing and monitoring the Project/s. The Mission Director, SRLM would be convenor of the committee. The State Committee shall have participation from Forest and Environment, tribal development and Women and Child Development Departments, Department of Agriculture, Department of Animal Husbandry, Dairying and Fisheries.

The spearhead Team to spearhead the value chain activities in a focused manner at the State Level would undertake regular monitoring and handholding of the AEP interventions.

Central Level:

At the Central Level, the Farm Livelihoods Team will periodically review and monitor the MKSP AEP projects sanctioned under the scheme. The team would brief the Empowered Committee about the progress of the ongoing projects periodically.

The National Resource Persons (NRP) may also be utilized for periodic review and monitoring of the project.

MIS:

The DAY-NRLM Farm Livelihoods MIS has been developed at the National level to capture household level interventions through various data points. The data pertaining to the Mahila Kisan covered & its details, CRPs developed must be entered into the Farm Livelihoods MIS. The SRLM must plan for MIS staff at the State level and block level.

Audit:

1. The Ministry of Rural Development retains the right to carry out internal audit of funds and financial implications of the project, if deemed necessary.
2. Financial audit is to be carried out by the Chartered Accountant of the SRLM or any other authority appointed by the State Government. The audit report together with action taken on the auditor's observations and physical progress under the project shall be furnished at the time of release of 2nd or 3rd instalment of the Central funds.

Necessary conditions for project approval:

- a. Recommendation by the appraisal Team
- b. Commitment of 40% (10% in case of Hilly and NE states) of the Project Cost by State Government.
- c. Professionals with relevant education and experience to be recruited by the SRLM.
- d. Exit and scaling up strategy
- e. Predominant focus on vulnerable communities (ST/SC, Minorities and women headed households)

- f. Comprehensive project design

No cost extension of the MKSP project:

In some cases, due to some reasons like the environmental conditions, administrative & financial process etc., the projects may not be completed in the approved time. In this case the SRLM may ask for the no cost time extension. Based on the performance of the SRLM the extension may be granted by the Secretary, RD in capacity of chairperson of Empowered Committee.

Project Completion:

Process Documentation from the beginning will be useful for developing audio visual for further scaling up and midway corrections. Documentation is an essential requirement of the project along with video recording for important project milestones, giving the status of the project participants before and after. It should cover the details of deliverables as indicated in the project and achievements made against these deliverables. The completion report of the project should be made available by the SRLM to MoRD within three months from the date of project completion along with final utilization certificate and audit reports and funds that remained unspent, if any.

Annexures:

Annexure-I: Matrix of outcome and measurement

Annexure-II: MKSP project template

Annexure-III: Budget template

Annexure-IV: Project appraisal

Annexure-V: Fund tracker

Annexure-VI: Project Closure

Annexure-VII: Convergence advisory with Ministry of agriculture and Farmer's welfare

Annexure-VIII: Convergence with Ministry of Animal Husbandry and Dairy Development

Annexure-IX: Women Friendly equipment

Annexure-I:

Matrix of Outcome and Measurement

Outcome	Indicators
Net increase in the income of women in agriculture on sustainable basis	Income, livelihoods diversification (having a multiple livelihood option)
Increase in total cultivated area	Cropping intensity, gross cropped area, reduction in fallow area. Access to irrigation - land in acres under Micro irrigation
Increase in the food production & Marketable surplus	Total production, productivity, farm related activities (integrated farming systems) Marketable surplus
Food and Nutrition security	Food sufficiency in months (Pre/post project) Crops grown and animals reared (Milk/meat)
Increase in benefit and reduction in cost	Monetary and non-Monetary indicators
Improved soil health	Increase usage of FYM, bio-Mulching, vermi compost, green manuring
Increased visibility of women in agriculture as an interest group	Membership in producer groups, Number of members in local groups, number of women institutions and enterprises engaged in Agriculture
Increase in the skill performance levels of women in agriculture	Training, study tour, exposure visits, demonstration, participating in action research, technology they are using, (deskilling)
Drudgery reduction for women in agriculture under the Project area through use of gender friendly tools/technologies	Tools and techniques developed to reduced drudgery
Increased access to input and services	Inputs, markets, credit, information, technology

Outcome	Indicators
Organic Certification-Registration of clusters/ local groups (LGs)	<ul style="list-style-type: none"> • No of farmers received scope certificate / Organic certificate • No of MKs registered under local groups in PGS

DAY-NATIONAL RURAL LIVELIHOODS MISSION

MKSP Project proposal

Name of the SRLM:

Project period (three years):

Summary of the project:

Project Title					
Project Coverage		No of districts	No of the blocks	Number of the villages	No. of Mahila Kisan
Budget		Rs. In lakhs			
1	Total				
2	Central share				
3	State Share				
4	Convergence				
5	Famer's contribution				
Expected income from the intervention per year per farmer (should be more than Rs.1 lakh per year per farmer)					
Social capital proposed		No. of Krishi Sakhi: No. of Pasu Sakhi: No. of Udyog Mitra: No. of Van Sakhi: No of Madhu Sakhi: Others (please specify):			
Community Infrastructure (no of					

CHCs, No of NPM shops etc)	
Climate resilient practices proposed	
No of Livelihoods created	

Contacts of Livelihood Team in SRLM:

Sl. No	Name of the Livelihood head /Anchor person in SRLM for MKSP (Mention separately, if there are more than one official for different streams like NTFP/ Sustainable agri. etc)	Contact Number	Fax No.	Email ID	Office Address

I	READINESS INDICATORS
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HR availability: Please mention the status of the dedicated qualified professionals for Farm livelihoods in the state, district and the proposed block:

#	Level	Designation	No of existing staff	Additional staff proposed	Remarks
1	State				
2	District				
3	Block				
4	CLF				
5	Village				

A. Existing livelihood intervention in the proposed area:

#	Name of the livelihood intervention	No of SHG members covered	Remarks

II LIVELIHOODS SITUATION ANALYSIS OF THE PROPOSED AREA

Key livelihoods of the poor in the proposed geography:

Describe the key livelihoods in the proposed geography viz agriculture, livestock, beekeeping/ honey value chain interventions, NTFP based livelihoods etc. primarily among the most vulnerable/poorest of poor section of community like landless, SC/STs, PVTGs, women headed HHs, single women etc. Analysis should be supported with data.

Resource Mapping:

The key resources like land, livestock, forest, floral diversity, irrigation facilities etc available in the proposed area. Details of the agro climatic zone, rainfall, types of soils, usage of inputs etc need to be articulated with data. Marketing channels, processing facilities and other infrastructure details should be narrated in the proposal.

Existing income levels from the livelihoods:

An assessment should be made on the income levels in the proposed area from the existing livelihoods (broad analysis – not at Household level – livelihood wise – secondary data).

Gap identification:

Gaps in the existing livelihood practices should be analyzed. Explain various constraints/ issues in the proposed area of livelihood options. Issues related to access and control of productive resources, production process, post production process, value addition, marketing, realization of value/profit to the producers and any other issues should be articulated.

III MISSION STATEMENT

Proposal should articulate the mission of the proposal. What is the ultimate objective / goal of the proposal?

IV APPROACH

What is approach of the project to achieve transform the income levels of SHG members. How the project enables the women farmers to access to productive resource, build their capacities, how the project leverages funds etc. (broad **approach**)

V OBJECTIVES OF THE PROPOSAL

What is the primary objective of the proposal? Broad objective of the proposal; transforming the income levels of the SHG members in the proposed area

VI SPECIFIC OBJECTIVES OF THE PROPOSAL

What are the different objectives of the proposal? This may include: achieving nutritional security, reducing drudgery for women farmers, building the capacities of women farmers to manage their livelihoods, creation of multiple livelihoods, to adapt and mitigate climate change etc

VII STRATEGY FOR IMPLEMENTATION OF PROJECT

Key stakeholders in the project. Key investment details (CB, IB, community infrastructure etc) and project implementation plan. Key issues to be addressed. Livelihood models proposed etc

VIII PROJECT COMPONENTS

1. **Technological Interventions:** Package of Practices, Livelihood models, AEP, improved package of practices etc
2. **Institution Building:** Promotion of PGs and PEs. Details of the proposed PGs and PEs.
3. **Community Investment support:** Details of the CHC, seedbanks, nurseries, bio input centers, NPM shops, composting, waste

management units, primary processing centers etc

IX CAPACITY BUILDING PLAN

Please given the detailed plan, calendar of training and the expenditure should reflect in the training schedule. A clear training delivery architecture to be elaborated.

1. Training plan for the State level staff
2. Training plan for block level staff
3. Training plan for CRPs
4. Training plan for mahila Kisan
5. Training materials planned to be developed

X TRANSFORMING INCOMES

Sl. No.	Proposed Intervention	Expected income enhancement in Rs. Per farmer per year
Total expected income enhancement in Rs. Per farmer per year		

Cost per Mahila Kisan (total cost/ total no. of mahila kisan):

Benefit to cost ratio: Additional incremental income/total cost:

XI	CONVERGENCE AND PARTNERSHIP FRAMEWORK
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Convergence with line departments, details of the converging departments and the details of leveraging elements need to be provided. Details of partnerships with local NGOs, private players etc. Clearly mention the detailed plan and the benefits to the mahila kisan in the proposed area along with numbers:

#	Name of the Department proposed for convergence	Expected Outputs
1	MGNREGA	
2	Agriculture and Farmers welfare	
3	Animal Husbandry	
4	Convergence plan with Other Departments (please specify)	

XII	SOCIAL CAPITAL
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Strategy for nurturing CRPs. Expected number of CRPs at the end of the project period.

XIII	Knowledge Management/ Dissemination
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Trainings, front line demonstrations, result demonstrations, farmer-scientist interactions, exposure visits etc. may be included in this section. Details of FFS, proposed IEC materials, video films, case studies etc can be mentioned in this section.

XIV	Monitoring and Evaluation
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Appropriate Monitoring and evaluation strategy to be articulated.

- What is the Framework of Monitoring and Evaluation system planned for the MKSP projects by the SRLM
- Please explain how the state SRLM proposes to monitor the implementation of the projects in the state, as per their existing internal systems and planned systems

XV PLAN OF ENGAGEMENT OF NSO/ CBA/RC THE PROPOSED AAP

Please give details of the plan for engagement of NSO/CBA/RC in the proposal and their roles and responsibility, Reporting, payment structure, method of Procurement and work plan

XVI PROACTIVE DISCLOSURE NORMS

Please give details of the proactive disclosure norms to be followed in this MKSP to disclose the information regarding the project at Village, gram panchayat, block and state level.

XVII RESULT FRAMEWORK

Please explain the results and means of verification details

#	Output	Indicator	Target	Means of verification

XIII BUDGET

Proposed Budget:

Components	Source	Type of Project Sustainable Agri/NTFP etc	Total Project Cost (in lakhs)	Funding outlay (Rs Lacs)		
				Yr 1 (25%)	Yr 2 (50%)	Yr 3 (25%)
60% Of total Budget Outlay for livelihood promotion plan under MKSP	MoRD /Central Share					

((90% in case of NE & Hilly states)						
40% (10% in case of NE & Hilly states)of total Budget Outlay for livelihood promotion plan under MKSP	State					

S.No	Component	Unit Description	Physical Outlay (No. of units planned)				Financial Outlay					Remarks		
			Yr1	Yr2	Yr3	Total	Unit Cost	Yr1	Yr2	Yr3	Total (Rs)		Central Share (Rs)	State/PIA Share/ Other funding agency (Rs)
	No. of mahila kisan/NTFP collectors													
	Area covered in Ha													
	No. of producer groups													
	No. of local groups													
	No. of Producer federations													
	No. of villages													
	No. of Blocks													
	No. of Districts													
	No. of Agriculture CRPs to be groomed													
	No. of Pasu Sakhis to be groomed													
	No. of NTFP CRPs to be groomed													
	No. of GIC proposed													
1	Project Cost													
	1 Project Inception	Unit Description	Yr1	Yr2	Yr3	Total	Unit Cost	Yr1	Yr2	Yr3	Total (Rs)	Central Share (Rs)	State/PIA Share/ Other funding agency (Rs)	Remarks
	1.1 Mahila Kisan profiling	No. of mahila kisan												
	1.2 DPR Preparation	lumpsum												
	1.3 convergence planning.	lumpsum												
	1.4 Convergence / partnership meetings (4-5)	lumpsum												
A	Subtotal													
2	Institution Building													
	2.1 Mobilisation of local groups (for MKSP organic)/ Producer Groups	No. of producer groups / Local groups												
	2.2 Promotion / registration of local groups	No. of local groups												
	2.3 organic certification	No. of local groups												
	2.4 Organic certification (PSS), monitoring, field inspections etc	No. of local groups												
	2.5 Promotion of producer group federation	No of local groups												
	2.6 Promotion of livestock clusters													
	2.7 Management support to livestock cluster groups													
	2.8 Monitoring and field inspection of livestock cluster for organic certification and others													
	2.9 Management support to producer federation (please break down into components)	No. of producer federations which are given management support												
	3 Other (Specify)													

Project Cost	Unit Description	Y1	Y2	Y3	Total	Unit Cost	Y1	Y2	Y3	Total (Rs)	Central Share (Rs)	State/PIA Share/ Other funding Agency (Rs)	Remarks
3	Capacity Building												
3.1	Training material: Printing	No. of training modules											
3.2	Training material development	No. of training modules											
3.3	Training equipment & material- Projectors	Nos											
3.4	Training to CRP	No. of CRP	<Needs to be backed with detailed training schedule>										
3.5	Trainings to para-professionals	No. of para-professionals	<Needs to be backed with detailed training schedule>										
3.6	Training to Community	No. of community members	<Needs to be backed with detailed training schedule>										
3.7	Training to leaders & PRI	No. of leaders	<Needs to be backed with detailed training schedule>										
3.8	Exposure visits of CRPs to immersion sites	No. of CRPs											
3.9	Exposure visit of para-professional to immersion sites	No. of para-professionals											
3.10	Exposure visit of Community to immersion sites	No. of mahila kisan											
3.11	Service charge to CRP	No. of CRPs											
3.12	Service charge to para-professionals	No. of para-professionals											
3.13	Remuneration to the block level professional												
3.14	remuneration for block level dta entry operator												
3.15	Quarterly planning												
3.16	Method demonstrations for transfer of technology												
3.17	Season long Farmer Field Schools for improving adoption rates												
3.18	Development of FFS manual												
3.19	Other (Specify)												
C	Sub total												
4	Community Investment Support												
4.1	Community Infrastructure- Custom hiring centres	No. of Infrastructure units											
4.2	Community Infrastructure - Bio Input Centres / NPM shops etc	No. of Infrastructure units											
4.3	Community Infrastructure - Seed banks or nurseries for Agri nutri gardens /Milllets/ fruit plants /moringa etc	No. of seed banks											
4.4	Community Infrastructure - primary processing tools like graders	No. of units											
4.6	Other (Specify)												
D	Sub total												
5	Knowledge Management												
5.1	Documentation of case studies and best practices_AV	Lumpsum											

Project Cost	Unit Description	Yr1	Yr2	Yr3	Total	Unit Cost	Yr1	Yr2	Yr3	Total (Rs)	Central Share (Rs)	State/PIA Share/ Other funding agency (Rs)	Remarks
Documentation of case studies and best practices _print	Lumpsum												
5.3 Wall paintings (public disclosure)													
...													
E Subtotal													
6 Monitoring & Evaluation													
6.1 Baseline survey	No. of HH to be covered												
6.2 Endline survey	No. of HH to be covered												
6.3 Annual Review projects.													
....													
F Sub total													
7 Administration Expenditure													
7.1 Staff salaries													
7.2 Travel & conveyance													
7.3 Stationary													
7.4 Communication													
7.5 Other (Specify)													
....													
G Sub total													
H Grand Total (A+B+C+D+E+F+G)													

Please Note: All the above unit costs need to be elaborated with detailed schedules

Training schedule

S.No	Theme and sub theme	Name & Description of training module (Book keeping/ food security/marketing etc.)	Location of training (Village /cluster/ Block / district/ out-station)	Type of Trainee (Community/CI /Para- professional)	Type of Trainer (External expert/project staff/Para- professional/CI/P)	No. of batches											No. of training- day/batch	No. of trainees for each batch	Unit cost for delivering the training module (Cost Per batch)	Cost of training (Rs)				Total No. of trainees	Cost per participant per day				
						YIM1	YIM2	YIM3	YIM4	YIM5	YIM6	YIM7	YIM8	YIM9	Total	Year 1				Year 2	Year 3	Total							
	1 Generic livelihoods																												
	Climate and agriculture																												
	3 Seed																												
	4 Plant and soil nutrient management																												
	5 Water management																												
	6 Plant Protection																												
	7 Agronomic and other important practices																												
8.1	Agri- Nuri Garden																												

CHC (how to																																															
8.2 manage?)																																															
training on FFS (how to																																															
8.3 conduct?)																																															

Please Note: Cost of imparting training to each batch per module should be worked out in detail

Annexure-IV: Detailed Desk Appraisal Template (Detailed scrutiny)

Name of the PIA:

Name of the project:

Name of the Expert(s):

Summary Datasheet

Past Experience:	
Year of Registration of organization	
No. of years of experience in Sustainable agriculture/ NTFP	
Major sustainable Agriculture practices/ NTFP Commodities where PIA has experience.	
No. of professionals working with the organization	
State/District/Block	
Current Livelihoods/ MKSP projects	No. of beneficiaries (MK), No. of villages
	Value of project(Rs.)
Convergence (Rs.)	
Project Area currently working (District- State)	
Proposed Project:	
Major sustainable agriculture interventions	
Project Area proposed (Block-District- State)	
No. of Mahila Kisan – proposed	
Cost of project proposed	Central share (Rs.in crore) - (60%)
	State Share (40%) (Rs. In crore)
	Total Cost(Rs. in lakhs)
Convergence (Rs.)	
Cost per Mahila kisan(Rs.)	
Benefit to each Mahila kisan(Rs.)	
Benefit to Cost Ratio(Benefit/Cost)	

I. Past Experience working on (Give qualitative comments)

1. Scale of projects handled earlier (No. of beneficiaries, Project Cost, Geography)
(Cross check/validate with the supporting documents)

2. SHGs: Group formation/ Federation/Credit linkages/Insurance etc., (In the districts proposed)

3. Livelihood Collectives: Livelihood Group formation/ Collective procurement/ Collective Marketing etc.,

Comment:

4. Assets/Infrastructure created for the CBOs

5. Technology- Agriculture/ Livestock/NTFP. Are the practices Sustainable?

6. Usage of ICT

II. **Proposed Project (Give qualitative comments)**

Institution Building

1. Community Institution Architecture proposed (Does it include Generic SHG & Livelihood collectives?)

2. Is the proposed CBO (livelihood groups) architecture based on past experience of the PIA or is it new strategy? If new, what is the vision of success?

3. Is there a vision for economic sustainability of the CBO? Is there a concrete plan on CBO's revenue?

4. Governance of proposed CBO: IS it member-based and member-controlled?

5. Is the role clarity of SRLM & CBO in implementing MKSP?

6. Is there clarity on MKSP fund arrangement between SRLM and CBO?

7. What is the vision of sustainability of the intervention by PIA?

Technology

8. What is the package of practices proposed under Sustainable Agri/ NTFP? Are they sustainable practices? Are they women centric? Are they based on local technology/ indigenous knowledge?

List of practices	Tested Practice by PIA/ New Practice?	Sustainable Technology (Y/N)? Comment

9. Are the proposed interventions for moving up in the value chain- production, processing and marketing? Are they based on value-chain analysis taken up by PIA?

10. Is there a concrete plan on backward and forward linkages proposed?

11. Is there any concrete marketing strategy of Agri produce/Livestock/ NTFP?

12. Is there an innovation/ innovative system proposed in production/technology/marketing etc.,?

13. Is there a concrete regeneration strategy in the proposal?(wherever applicable.E.g in case of NTFP)

14. What are the drudgery reduction tools proposed ?

15. Any asset creation/ infrastructure proposed? Is yes, are they individual owned /community owned?

16. Is there a concrete food security plan for each family? What is the food security model proposed? How does the strategy ensure year-long food security to a family?

17. Is there a health security strategy in the proposal?

18. Is there strategy for climate-change resilience? Mention how?

19. What are the interventions would be seen at household level?

20. What are the interventions would be seen at Village level?

Project Implementation Mechanisms & Systems

21. What will be the HR inputs to implement the project? Professionals, Para-professionals and CRPs? How many people will be deployed for each village/block/district?

22. What would be the capacity building modules? What would be the methodology for delivery?

23. Any ICT Usage proposed?

24. Is there a concrete M&E architecture proposed? Mention in terms of MIS plan; concurrent internal monitoring system, evaluation system & impact evaluation

25. Are there concrete measures proposed to ensure accountability to community? Is Panchayat involved? Is there any public disclosure system mentioned?

26. Convergence planning planned with concerned line department? Strategy for the same?

III. Outputs and outcomes of the proposed project (Give qualitative comments)

Are there concrete outputs and outcomes proposed by the PIA?

Are they achievable through the activities & inputs proposed?

Impact----Outcomes ← Outputs ← Activities ← Inputs

--

IV. Costing

1. Cost of project

		Amount (Rs. In crore)	%
Centre share	MoRD share		
Co-funding arrangement (State/PIA/donor share)	Source: State Govt.		
Total Cost			

Apart from the MKSP project cost:

- i. Mention if there is any Beneficiary contribution?
- ii. Mention if there is any investment plan from private sector.
- iii. Mention if there is plan to raise fund from convergence with other government schemes.

--

2. Cost-break up

Sl.No	Major components	Mention relevant subcomponent	Total Amount (Rs in lakh)	% amount	Comments
1	Project Inception				
2	Institution Building				
3	Capacity Building				
4	Community Investment Support				
5	Knowledge Management				
6	Monitoring & Evaluation				
7	Administration Expenditure				
	Total Budget				

The SRLM should give the detailed budget and training schedule in the prescribed format along with the budget explanatory note for each subcomponent.

3. Benefit to Cost Ratio

- i. Mention the details

Total Cost	
No.of beneficiaries	

Cost per beneficiary	
Benefit to beneficiary	
Benefit to Cost Ratio	

- ii. What components does the benefit to a beneficiary include? (Food Security/ collective procurement/increase in income / reduction in costs/ value addition etc.,)
Are the benefits justified from the activities proposed?

--

- iii. Are the benefits clearly quantified?

Benefit component	Amount

Can we take up this proposal for Pre Empowered Committee?

If yes, please give critical comments

If no, then please suggest the next step. Whether the proposal will comeback for desk scrutiny or the proposal is rejected as this proposal is not in the track of MKSP.

Annexure VI: Compliance tracker for fund release and No cost time extension proposal.

Name of the PIA:

S. No	Checklist	Yes/ No	Remarks
	Project sanction date		
1	Whether the PIA has opened and maintained a separate bank account of the project for implementing the Programme		
2	Target population identified - SC/ST/Minority		
3	Whether the QPR is submitted regularly		
4	Whether the matching share to fund released from MORD (Central share) has been received by PIA		
5	Whether the baseline survey report is submitted		
6	Whether the technical protocol is submitted		
7	Whether the inception report is submitted		
8	Whether the Detailed Project Report (DPR) is submitted		
9	Whether the POP strategy/model is submitted		
10	Whether the M&E framework has been worked out		
11	Whether the Proactive public disclosure norm worked out		
12	Whether the Utilisation certificate (UC) is submitted in original		
13	Whether the latest Audit report (AR) is submitted in original and signed by chartered accountant		
14	Whether the PIA/Coordinating agency has submitted the action taken report on auditor's observations along with audit reports		
15	If the beneficiary/Community contribution and PIA contribution are in kind, the value of such contribution is shown in the audit report		
16	Whether all the conditions laid down in the Acceptance letter and in the sanction orders releasing earlier instalments of Central share have been complied with by the PIA		
17	Whether there is any complaint pending about implementation of the project		
18	The training content/modules under the project have been shared with the Ministry		
19	Registered in the REAT module		
20	Positioned HR as approved in EC		
21	Whether the SRLM has submitted the work done report against the approved budget and in the same format.		

22	Recommendation/ Request letter from SRLM		
23	Latest Physical and financial Progress		
24	detailed work done report in the last extended period (if coming for 2nd extension)		
25	Detailed physical and financial action plan to complete the project in the approved timeline in the approved budget line		
26	Reason for non completion of project within timeline along with supporting documents		
27	Justification for extension		

Annexure- VII. Completion/ Closure advisory for projects under DAY-NRLM

1. Mahila Kisan Sashaktikaran Pariyojana (MKSP) was announced in the budget of 2010-11 as a sub-component of the National Rural Livelihoods Mission (NRLM), Ministry of Rural Development (MoRD) to meet the specific needs of women farmers and achieve socio-economic and technical empowerment of rural women farmers.

“A Mahila Kisan Sashaktikaran Pariyojana to meet the specific needs of women farmers is being launched. I have provided Rs. 100 crore for this initiative as a sub component of the National Rural Livelihood Mission”. (para 96 of Budget Speech of Finance Minister 2010-11).”

In the process of implementation of MKSP the guidelines have been developed under sustainable agriculture (agro-ecological practices), Non timber forest produce (NTFP) and Value chain intervention.

2. Completion: The project will be counted as completed when the project implementing agency will claim all three instalment and achieve all the physical targets as approved in the project approval committee/ Empowered Committee. In this case the required documents are:

- 2.1. Project completion report: The project completion report should be a comprehensive report of the MKSP project implementation and achievement of the targets. This report should be supported by photographs and data. This report should also speak about the achievement of the proposed result framework. The project completion report should also include the Target v/s achievement in the original approved budget

- 2.2. Financial documents: the PIA needs to send the year wise audit report and the audited utilization certificate along with the compliance of the auditor's observations.

- 2.3. Independent evaluation report: The PIA needs to do a third party evaluation of the MKSP project. This report must be submitted to DAY-NRLM.

- 2.4. Maintaining the data in the centralized MIS: all the achievement should reflect in the MKSP MIS (as mentioned in point no. 2.12)

- 2.5. The SRLM should send a compliance of the terms and conditions of the sanction order/ acceptance letter: at the inception of the MKSP project the SRLM has signed an acceptance letter and accept all the terms and conditions for implementation of MKSP project. Now at the completion the SRLM must send a compliance of that conditions.

3. Pre- closure of MKSP project: When the PIA is not claiming the full instalment or closing before the completion time without claiming the approved central share, this condition will be counted as pre closure or pre-completion of the MKSP project. The documents needed for this are
 - 3.1. Project completion report: The project completion report should be a comprehensive report of the MKSP project implementation and achievement of the targets. This report should be supported by photographs and data. This report should also speak about the achievement of the proposed result framework. This report should also speak about the achievement of the proposed result framework. The project completion report should also include the Target v/s achievement in the original approved budget.
 - 3.2. Financial documents: the PIA needs to send the year wise audit report and the audited utilization certificate along with the compliance of the auditor's observations.
 - 3.3. Reason for non-completing the project within the approved/ extended timeline: If the PIA has not achieved the targets approved by PAC/EC, the PIA needs to give a justification for non-completing the project target within the approved/ extended timeline.
 - 3.4. Reason for not claiming the complete central share: the PIA needs to explain the reason of not claiming the complete central share as approved by PAC/ EC. As in the approved budget line the PIA has proposed to complete the physical and financial targets within three years.
 - 3.5. Independent evaluation report: The PIA needs to do a third party evaluation of the MKSP project. This report must be submitted to DAY-NRLM.
 - 3.6. Maintaining the data in the centralized MIS: all the achievement should reflect in the MKSP MIS (as mentioned in point no. 2.12)
 - 3.7. The SRLM should send a compliance of the terms and conditions of the sanction order/ acceptance letter: at the inception of the MKSP project the SRLM has signed an acceptance letter and accept all the terms and conditions for implementation of MKSP project. Now at the completion the SRLM must send a compliance of that conditions.
 - 3.8. Refund of the Central share: If the PIA has some unspent balance regarding the MKSP project, the same may be returned to this Ministry with interest. After accepting the closing and/ completion report the amount to be refund will be communicated separately to the PIA.
4. Competent authority for closure of the MKSP projects: The MKSP projects are approved by the Empowered Committee chaired by Secretary, RD. Secretary RD has delegated the power of physical closure of the MKSP projects to Joint Secretary, RL.

Annexure VII Matrix of outcome indicators for livestock intervention

Matrix of outcome indicators for livestock intervention	
Outcome	Indicators
Net increase in the income of women in agriculture on sustainable basis	Income, livelihoods diversification (having a multiple livelihood option)
Increase in the meat, milk and other livestock related products production & Marketable surplus	Total production, productivity of livestock enhanced Marketable surplus
Food and Nutrition security	Food sufficiency in months (Pre/post project) Animals reared (Milk/meat)
Increase in benefit and reduction in cost	Monetary and non-Monetary indicators
Reduced mortality and mortality in animals	Increased yield
Increased visibility of women in livestock as an interest group	Membership in producer groups and producer enterprises number of women institutions and enterprises engaged in livestock
Increase in the skill performance levels of women in livestock	Training, study tour, exposure visits, demonstration, participating in action research, technology they are using, (deskilling)
Drudgery reduction for women in livestock under the Project area through use of gender friendly tools/technologies	Tools and techniques developed to reduced drudgery
Increased access to input and services	Inputs, markets, credit, information, technology
Increase no of organized livestock activity	Promotion of livestock cluster

No.: K-11060/02/2020-21/NRETP/FL
Government of India
Ministry of Rural Development
Department of Rural Development
(DAY-NRLM)

7th Floor, NDCC-II Building
Jai Singh Marg, New Delhi-1.
Dated: 25th Sept., 2020

To

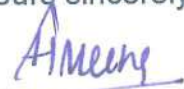
The SMD / CEO of all State / UT Rural Livelihood Missions

Subject: Copy of the implementation guideline for promotion of integrated farming Cluster (IFC) under DAY-NRLM – Reg.

Sir

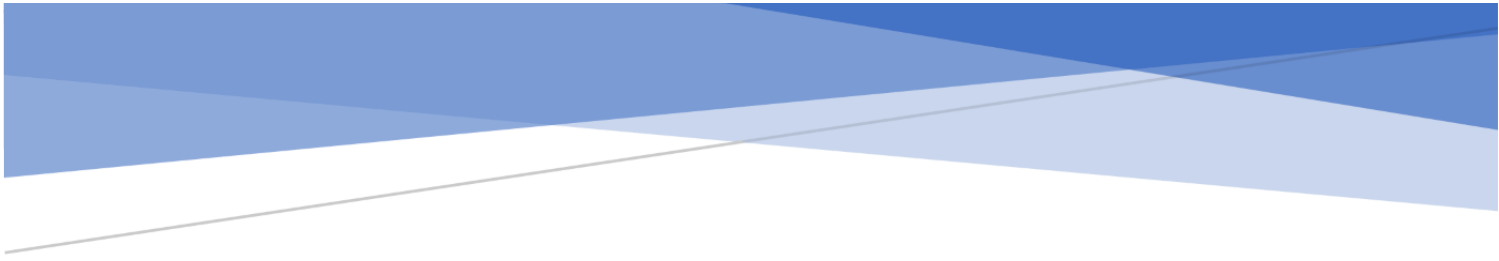
I am directed to enclosed herewith the implementation guideline for promotion of integrated farming Cluster (IFC) duly approved by the competent authority. You are requested to take further necessary action.

Yours sincerely



(H. R. Meena)

Deputy Secretary to the Govt. of India



GUIDELINE FOR PROMOTION OF INTEGRATED FARMING CLUSTERS (IFC) UNDER DAY- NRLM

An implementation guideline

Contents

1. Background:.....	2
2. DAY-NRLM Farm Livelihood promotion strategy:	2
3. The Concept of IFC in DAY-NRLM:.....	3
4. Components of IFC:	3
5. Selection of states:	4
6. Selection of Clusters:	4
7. Implementation Strategy:.....	5
7.1. Key implementation components:.....	5
7.2. Roll out strategy:.....	6
7.3. Scoping study:.....	6
7.4. Identification of cluster of villages:	7
7.5. Development of proposal:	7
7.6. Application of comprehensive Village Livelihood Appraisal Planning and Implementation (CVLAPI) tool:.....	7
7.7. Establishment of Livelihood Service Centre (LSC):	7
8. Implementation architecture:.....	8
9. Market Linkage:.....	9
10. Monitoring and Evaluation and reporting of IFC:	9
11. Documentation of Best Practices:	10
12. Communication & Outreach:.....	10
13. Budget lines and funding sources:.....	10
Annexure - 1	11
Annexure-2	12

Draft Guideline for Implementation of Integrated Farming Cluster (IFC) under DAY-NRLM

1. Background:

Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM), is a flagship programme of the Ministry of Rural Development, Government of India. It has been focusing towards improvement of social status and economic capabilities of rural women from small, marginal, landless and other vulnerable households through formation of their collectives, intensifying and expanding their existing livelihoods, bringing in new farm, non-farm and other economic opportunities by access and linkages through their collectives. Pursuing diversified and multiple livelihoods each at manageable scale has been the risk mitigation strategy for such economically challenged and vulnerable rural households.

Under DAY-NRLM, livelihoods promotion includes diversified livelihood interventions in both farm (on-farm and off-farm) as well as non-farm livelihood activities. The entire focus has been to ensure each household having multiple livelihoods to ensure income stream round the year and risk mitigation. In farm livelihoods, important intervention areas are; promotion of sustainable and climate resilient agriculture through various Agro Ecological Practices (AEP), improved livestock management practices, sustainable Non Timber Forest Produce (NTFP) collection practices along with value chain intervention with selected farm and NTFP commodities through bringing in improved technology, value addition, aggregation and market linkages for better price realization through promotion of need based informal Producers Group (PG) and formal Producers Enterprises (PE). Identification, grooming and placement of livelihood community cadres (LH CRPs) to provide 24X7 doorstep livelihood services, continuous on-field handholding supports to SHG women and promotion of entrepreneurship are the overarching strategy in promotion of farm livelihood interventions.

An independent evaluation of MKSP projects was conducted by 'Nielsen (India) Private Limited' in December 2019, also found that household supported with diversified livelihood activities has increased household income.

Therefore, DAY NRLM will continue to focus on diversification of complementary livelihoods and will endeavor to bring more livelihoods options in the livelihood baskets of the households of rural poor. This may be considered as one of the response too to increase the income levels of the poor during this difficult time of Covid-19 and enable the poor to mitigate the risks of their livelihoods.

2. DAY-NRLM Farm Livelihood promotion strategy:

Farm livelihood interventions would now further intensify its diversified livelihood interventions strategy to enhance income at household level through integration and bring in synergy between the livelihood activities by promotion of Integrated Farming Cluster (IFC) approach. This includes interventions in forward linkages with strengthened backward integration in the identified cluster of intervention villages. The strategy for IFC approach will be focused more on landless, leased in land farmers, rainfed farmers and to introduce more comprehensive approach to provide an end to end solution to livelihoods of the poorest for income enhancement. The approach will endeavor to ensure each target household having a basket of income sources to provide regular income stream throughout the year. The approach comprises of production and processing / value addition within the cluster through asset creation, skilling the producers to enhance production and productivity and very importantly ensuring access to credit at affordable rates, access to market and access to improved technologies are few of the critical challenges that will be addressed in this approach.

After consultation on this concept with the SRLMs, it is felt that for rolling out of promotion of IFC to ensure higher and year-round regular income flow at household level, it requires proper direction and guidance. In this context, this advisory has been drafted for circulation among the SRLMs and other implementing agencies / partners which will act as guiding document in promotion of IFC by the states.

3. The Concept of IFC in DAY-NRLM:

With the objective to improve, intensify, expand & integrate the existing diversified livelihood activities, an integrated farming cluster (IFC) comprising of 2 to 3 (this may change depending on the state) adjoining intervention villages covering about 250-300 households where every SHG household will be supported with improvement in 3 to 4 livelihoods (farm and non-farm) with strong backward and forward linkages. The implementing agency will be encouraged to promote minimum 4-5 such IFC per block in close proximity for better aggregation.

On production (back) end, it is an interdependent, interrelated often interlocking production systems based on defined location specific farming system interventions such as crop, dairy, small and non-ruminants (goat, pig, sheep), poultry, duckery, fishery, bee keeping, mushroom etc and related subsidiary enterprises with waste recycling through preparation of on-farm composts, vermi-composts, enriched manures etc in such a way that maximize the utilization of energy of each system and minimize the negative effects of these activities on environment to reduce cost, mitigate risk, improve production & productivity whereas the investment in capacity building on community, ensuring quality livelihood services and promotion of entrepreneurship will be strengthened.

On front end (value addition and market linkage) it will collectivize and aggregate individual produces at village and / or cluster level through small Producers' Collectives (Producers Groups) to aggregate the individual produces thereby reduce the transaction cost of primary value addition and market linkages. In a larger geography these small producers' collectives may be federated into Producers Enterprises for larger aggregate, secondary value addition / processing, packaging, labeling and market linkage / marketing directly and / or through partnership.

4. Components of IFC:

The following are the various broad components of IFC:

1. Asset creation
2. Credit access
3. Extension services leading to improved productivity and production through Community Resource Persons (CRPs), AICRP-IFS/AI-NPOF scheme, KVKs, SAUs of ICAR.
4. Market systems -PG/PE, value addition
5. Technology – Livelihoods Service Centre (LSC)
6. Convergence – for asset, technology, training, marketing

Key components on production side which might be included under IFC are as follows (suggestive):

- a. Crops: It includes mixed crop, intercrop, multi-tier crops of -
 - Field crops (cereals, pulses, oilseeds, vegetables, forage, floriculture etc.),
 - Plantation crops (coconut, arecanut, orange, lemon, fruits etc)
 - Trees (timber, fuel, fodder, fruit trees etc.)

Interventions such as crop diversification, introduction of improved and specialty varieties, quality planting materials, good agricultural practices and round the year fodder production shall be given emphasis.

- b. Livestock: It includes large ruminants (milch cows, buffalos etc), small ruminants (Goat, Sheep etc.), non-ruminants (Pig), poultry birds including duck rearing.

Interventions such as breed improvement through AI, housing and management including area specific mineral mixture needs to be given more thrust.

- c. Fish: Various fishery based livelihood activities. Interventions such as stocking, pond management, integration of fish ponds with poultry/duckery and growing of fruits and vegetables on the embankments needs to be given more thrust to get sustainable livelihood.
- d. Apiculture: Collection of honey and rearing of honey bees.
- e. Mushroom: Production using agricultural wastes
- f. Bio-gas and boundary plantations
- g. Recycling activities such as compost, vermicompost, enriched compost using available agricultural wastes in the cluster shall be integral part of the IFC.
- h. NTFPs: Sericulture, lac, medicinal plants, tamarind, leaf plates etc.
- i. Non-farm activities: Weaving, stitching, printing etc.

In addition, for selection of proper combination of various components stated above, states may refer the recent bulletin published by ICAR where Integrated Farming System (IFS) models has been recommended for different states after due research and field trial on each of these models. The bulletin is named as '[Integrated Farming System for Agricultural Diversification, Enhanced Income and Employment](#)¹' and one can access to it through the given link stated at the bottom of this page. Further State specific details can be obtained from Chief Agronomists / Agronomists / Principal Investigators of AICRP on Integrated Farming Systems and All India Network Programme on Organic Farming in various ICAR-Institutes/SAUs. List is given in the list of contributors' page in the bulletin. Besides, state may also pick up for implementation similar tried tested IFS models developed by itself or other agencies within the state.

5. Selection of states:

States can submit proposals for promotion of IFC through MKSP, SRLM-AAP, NRETP, innovation fund and other funded projects. To submit proposals states have to establish readiness to implement this in time bound manner.

- Positioning of trained dedicate farm livelihoods staff in the chosen blocks.
- Farm livelihood interventions has been initiated in the identified blocks.
- One Livelihood CRP promoted per village with multiple skill sets.
- Have done some work through convergences
- Presence of functional Producers Group in the identified cluster will be preferred.

6. Selection of Clusters:

The states may take adequate care to select each cluster comprising of 2-3 adjoining villages and undertake following:

- Conducting a quick scoping study to identify the cluster to find:
 - Preferably blocks and villages with more diversified agricultural activities preferably in rainfed area

¹ For access to the copy of the bulletin, one can visit at:

http://www.iifsr.res.in/sites/default/files/prog_files/Bulletin_IFS_July_2020.pdf

- Where there are opportunities for agriculture, horticulture, livestock, pisci-culture, bee keeping, poultry, duckery etc.
 - Having functional Producers Groups (PGs) should be preferred.
 - Having year round road connectivity
 - Proximity to SPM-RURBAN clusters may be given preference in identifying clusters.
- Identification of minimum 4 to 5 clusters per block in a compact geography for easy supervision, aggregation of produces and promotion of Producers Enterprises.
 - Promotion of IFC in adjacent blocks may be considered for higher level aggregation / processing / formation of FPOs.

7. Implementation Strategy:

Availability of dedicated farm livelihood staff at block level, quick scope study to identify clusters, opportunities for a diversified activities and surplus for market linkages along with training and capacity building, promotion of livelihood service centre, analysis and development of intervention plan through Comprehensive Village Livelihood Analysis, Planning and Implementation (CVLAPI), convergence, partnership building, entrepreneurship, formation of producers aggregation, secondary value addition and market linkages are key strategies in implementation of IFC.

7.1. Key implementation components:

7.1.1. Convergence opportunities: Drawing supports from and extending the same to relevant intra and inter-Ministerial schemes to complement each other and bring in synergy towards promotion of Integrated Farming Cluster (IFC) is one of the core strategy. Indian Council of Agricultural Research (ICAR) and its institutes / research stations, KVK, SAUs may play very active and crucial role in promotion of IFC. States may collaborate with ICAR institutions, AICRP-IFS centres in SAUs to work jointly to establish model Integrated Farming Cluster (IFC) for learning and as an immersion site to begin with. Thereafter the collaboration with ICAR research stations / institutions like Krishi Vigyan Kendras (KVK), on-station and on-farm research centres of AICRP- IFS and National Innovations in Climate Resilient Agriculture (NICRA) needs to continue and further deepen for continuous training, capacity building, exposure visits on various Integrated Farming System models and drawing continuous technical supports during expansion of IFC across the states.

In addition to ICAR, there are other various schemes / institutes of different Ministries of Government of India which would play extremely important role for expansion of IFC. A list of such schemes has been presented in [Annexure-1](#) which may act as ready reckoner for the SRLMs for convergence to take forward and for expansion of IFC.

7.1.2. Partnership: In addition to convergence, the other important component in promotion of IFC is building and nurturing partnership with an array of relevant partners for processing technology, input supply, entrepreneurship promotion, market access, packaging, branding as well as implementation. Besides, promotion of individual entrepreneurship in a systematic manner (on establishing parent unit, hatchery, mother unit, kid nursery, tasar silkworm grainage, pig breeding unit, fish hatchery, digital soil testing lab, AI centre and so on) from among the community (CRPs and other interested youths) and linking them with the Mahila Kisans (buyer of material services) for back end supports on input, on-field implementation supports and livelihood services will be the integral part of IFC. For training on entrepreneurship, RSETI, KVK may be brought in and for subsequent incubation support suitable entrepreneurship incubators may also be partnered with. SRLM may also tie up with NGOs of local capacity for implementation of IFC.

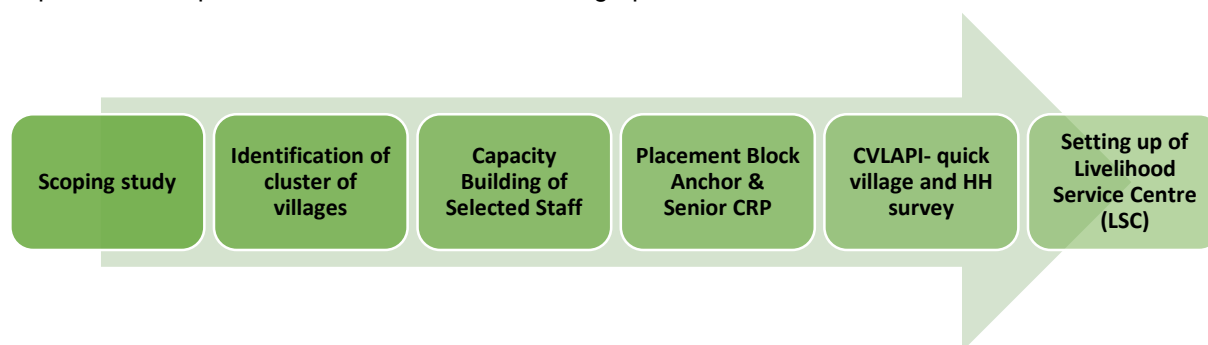
7.1.3. Training and capacity building: Capacity building of participating SHG members (Mahila Kisans) on improved production technologies, value addition and market linkages will be the focus of

training and capacity building strategy. Besides, promotion of entrepreneurship among the Mahila Kisans and / or livelihood CRPs and facilitating them in transition towards becoming entrepreneurs will be emphasized. Training of SHG members (Mahila Kisans) using the prototype IFS models established in various districts by ICAR / KVK will be taken up.

7.1.4. Formation of Producers Organization (PGs): Formation of one or two producers' organizations (PGs) per cluster for reduction of transactional cost of market linkages through small aggregation / collection, primary processing, packaging and need based branding and marketing will be the core of market access. Opportunities for secondary aggregation of PGs for promotion of larger Producers Enterprise (PE) / FPO may also be explored with adjoining clusters from a larger geography.

7.2. Roll out strategy:

The following are the steps involved in implementation of the IFC. Major steps involved in the implementation process are mentioned in the Infographic below:



7.3. Scoping study:

The objective of scoping study is to benchmark the existing production systems and finding scope for integration, new produces, processing and market. Scoping study contains two broad components – (a) field visit and (b) Farm typology analysis using primary and secondary information.

Field visit includes unstructured interaction / focused group discussion with the farmers, traders, processors, market players, entrepreneurs, NGO functionaries, government officers, SRLM staff etc.

Farm typology analysis includes primary information collected from the identified households and secondary information includes previous study reports, market research reports, survey reports, secondary data on produces, volume, seasonality, accessibility, transport system, communication etc. Farm typology analysis will result in grouping of households (Innovator, early adopter, follower etc.) for interventions.

Following are the major attributes which must be present in the Scoping Study:

- Consultation with BMMU to coordinate with the line departments to get relevant information.
- Identification 4-5 clusters per block in close proximity and giving sufficient rationale as described above.
- Assessment of staff and human resources available in the proposed clusters – CRP, Block Staff, etc.
- Presence of / potential for Producer Groups in the selected cluster for market linkages of surplus produces.
- Market Assessment and potential for integration of clusters for forward linkages.
- Identification and consultation with local KVK, NGOs, business houses and other resource institutes for future collaboration / partnership.

7.4. Identification of cluster of villages:

Based on the scoping study, identification of cluster of villages to be completed having marketable surplus production of some of the identified produces. Each cluster should consist of minimum 2-3 contiguous intervention villages with total about 250 to 300 households having three to four major produces, its potential for expanding, value addition and collective marketing. Villages under RURBAN Mission cluster may be preferred for its infrastructural and logistic advantages.

7.5. Development of proposal:

After the scoping study and identification of potential clusters in identified blocks (4-5 clusters per block), a comprehensive proposal including all the clusters to be developed stating the details of the clusters – villages, number of households, main commodities produced along with the budget to be prepared. Proposals of all the clusters may be combined together and submitted to the Ministry as a single project for approval.

7.6. Application of comprehensive Village Livelihood Appraisal Planning and Implementation (CVLAPI) tool:

It contains two major components – (a) Assessment and analysis of existing and potential livelihood opportunities focusing on the major produces and potential for IFC (b) Finding the gap on the produces / IFC components with respect to access to credit, market, schemes, knowledge/skill and technology (c) Identification of suitable and potential IFC components and its implementation plan at common as well as individual SHG members' level to address the identified gaps. The plan should contain ways and means table as shown below:

Identified gap in	Means to address the gap
Livelihood assets	Self-contribution, credit, convergence etc.
Skill, Knowledge and awareness	Establishment of Livelihood Service Centre (LSC), Demonstration, CRP network, exposure visits. Convergence (KVK, NICRA, NGO) etc.
Improved technology	Convergence, Credit
Credit	CIF, Bank linkage (suitable loan products at affordable cost), schemes convergence for subsidized credit.

7.7. Establishment of Livelihood Service Centre (LSC):

Promotion of IFC will require various types of facilities, inputs and services at the cluster level. LSC will act as one stop solution to the farmers/ NTFP collector to access to latest technology, training and capacity building, and supply of all sorts of high quality inputs, women friendly latest farm machineries on hire, animal vaccines, vet-medicines, mini hatchery, storage etc. Focus would be to promote each of these through individual entrepreneurship mode otherwise it can be hosted in LSC, may be in the shorter term. It may start with the following on enterprise mode and subsequently add on other facilities based on evolving need from the cluster:

- Village based mini-digital soil /compost testing lab
- A nursery with poly house / net house
- Compost preparation units
- Tool bank / CHC with women friendly farm machineries, solar pumps, sorter, grader etc.

- Local seed bank, NPM materials / shop
- Mini hatchery (for poultry clusters)
- Vet-first aid kit
- AI Centre (semen storage, semen carrier) – preferably through individual entrepreneurship
- Animal vaccine, medicine and its storage
- Processing unit
- Storage infrastructure

Subsequently, the following facilities can be augmented at LSC

- Establishment of a training cum demonstration centre
- Business facilitation centre etc.

In case of collaboration with KVK, the local KVK should be encouraged to establish and run the LSC within the KVK campus or they may do so in one of the village of each cluster. Otherwise, after initial investment in its establishment, a LSC may be facilitated to become financially viable with revenue flow from service charges and honorarium out of enterprises (soil testing, sale of seedlings, composts, hiring charge in CHC, sale of DoC, vet-medicine, vaccine etc.), owned by a VO / GPLF / CLF and the cluster level Senior CRP will be the paid Manager of the LSC.

8. Implementation architecture:

As mentioned earlier, each cluster will consist of 250-300 households, with minimum 2-3 adjoining villages and 4- 5 such clusters in close proximity may be promoted per block and intervention blocks to be adjacent. The implementation structure may be presented as shown below:

State level	<ul style="list-style-type: none"> • SPM / PM (Livelihoods)
Block level	<ul style="list-style-type: none"> • One dedicated block livelihood co-ordinator • One IFC anchor (Degree / Diploma holder)
Cluster level	<ul style="list-style-type: none"> • One senior CRP per cluster
Village level	<ul style="list-style-type: none"> • One livelihood CRP with multiple skill set per village.

At state level: At state level the SPM (Livelihoods) or PM (Livelihoods) will anchor and steer the initiative.

At block level: At block level there has to be one dedicated Block livelihood Co-ordinator to implement the project, assisted by a dedicated IFC anchor (diploma/degree/progressive IFS farmers in agriculture, horticulture, fishery, animal husbandry, bee keeping etc.).

At cluster level: At cluster level a senior CRP will be placed. The Senior CRP may be selected from among the existing CRPs or from among the educated youths of the cluster of villages with minimum 12th standard pass. S/he will be trained in all the interventions in her cluster and will be hosted at CLF. S/he will be primarily responsible for providing knowledge and support the implementation by the village level livelihood CRPs in her cluster. In addition to this her role will be:

- Management of LSC
- Cluster Management
- Data collection
- Maintaining updated MIS
- Reporting
- Co-ordinate with the VOs of her cluster

At village level: At village level one livelihood CRP, trained with multiple skills on agriculture, livestock, NTFP, fishery etc will be deployed.

After the approval of IFC proposal by the states, selection of staff as Block Anchor and Senior CRP should be completed in a period of four weeks. The staff selection need to be followed by rigorous 2 week orientation and training which should primarily include CRP refresher training along with Training of Trainers on concept seeding of IFC in the community.

The LSC should be used continuously for capacity building of the senior CRPs, village level CRP and Mahila Kisans.

9. Market Linkage:

Once the implementation has started, each cluster with selected three to four produces (agriculture, livestock, fishery and NTFP) and its producers will be organized into Producers Group (PG) / Business Group for small aggregation, to reduce transaction cost, primary and secondary value addition. The PG may own storage, processing unit with its own brand and marketable products. Since the participating individual Mahila Kisans may not have higher marketable surplus, thus a PG at cluster level may have low volume of business. Thus depending on the business volume, opportunities for larger aggregation, processing, branding and market linkages, minimum 4-5 PGs in close proximity per block will be promoted, then PGs with similar produces may be federated into a large PE at larger geographies. For market linkage, various options may be explored or a combination of - access directly with its own brand (B2C), marketing outlets, tie up with marketing organization (B2B) – may be tried depending on the products, volume etc.

9.1 Establishing protocols for Market Assessment & Market Integration for PG's: The local level Producer Groups shall be critical node to plan for market integration efficiency of identified clusters hence training and capacity building of the PG's around business planning, governance and operations, assessment and identification of market opportunities shall be important

To understand the dynamics of demand and supply and local market conditions, efficient linkage of all the stakeholders to improve production and tune in to market demands for better price realisation and profitability, the following intervention areas can be explored

- i. Mapping of high value surplus clusters with markets [using template]
- ii. Value Chain Analysis to locate the leverage points for a Producer-centric intervention [analysis template with intervention scope]
 - a. branding, packaging, marketing for retail /wholesale trade
 - b. local level value addition processing (both near farm for B2B and consumer focused)
 - c. linking to market including B2B, B2G, private sector partnerships and commodity sourcing procurement linkages with buyers
 - d. commodity to product transition where market opportunity exists
- iii. Intervention Design :
 - a. Coordination and identification of value chain actors (VCA's)
- iv. Potential for individual enterprise formations to provide agri extension, business services to integrate local supply chains

Strategy of B2B would be preferred. On-line marketing platform (e-NAM) will also be explored for marketing. In promotion of PE, implementation agency may take help of suitable TSA or through convergence with SFAC/NABARD/NCDC.

10. Monitoring and Evaluation and reporting of IFC:

Monitoring and evaluation will be as per review and monitoring process followed at the SRLM level.

Village level: At village level the VO livelihood sub-committee along with the Senior CRP will review the performance of the livelihood CRP on monthly basis.

Cluster Level federation: At CLF level, the IFC Anchor will review the performance of the Senior CRP on monthly basis.

Block level: At block level, the Block livelihood coordinator will review the performance of IFC Anchor as well as Senior CRPs on monthly basis and appraise the BPM. District and state level monitoring will be as per periodic review mechanism of the respective SRLM.

Reporting: The state needs to submit a quarterly physical and financial progress report (QPR) to NMMU as per prescribed format for each cluster. Assets created or funds mobilized through convergence should also be reflected along with the expenditure status in the QPR. All relevant data should be uploaded in DAY NRLM MIS regularly.

11. Documentation of Best Practices:

Best practices and success stories coming out of the clusters need to be documented and presented as narrative reports along with the Financial and Physical progress. Good quality photographs, Case Studies, Short Videos can be prepared for documenting the best practices. At least one detailed case study should be submitted from each cluster on a quarterly basis to reflect the impact of investments made with the target community. Annual award ceremony for best performing farmer, entrepreneurs, may be undertaken.

12. Communication & Outreach:

The project activities need to be highlighted with the help of media in local channels/newspapers as well the social media channels of NRLM, District Administration and SRLM. The Block Anchor must ensure at least one post on any social media channels of local administration tagging relevant stakeholders. (M/o Rural Development, World Bank, NITI Aayog, PMO, etc.).

13. Budget lines and funding sources:

Proposals for IFC may be funded either from SRLM-AAP annual action plan, MKSP, NRETP, Innovation component and other funded projects of the state. A template for the budget lines has been annexed (annexure-2) that will in preparation of budget that includes both grant as well as credit component. In case of ways and means calculation of the budget, preference has to be given on mobilization of resources through convergences, NRLM fund should be used to bridge the gap between total requirement and mobilization through convergences.

Annexure - 1

(Scope for convergence opportunities in promotion of Integrated Farming Cluster)

Convergence opportunities	Relevant schemes / Institute	Ministries
Training on IFC: Training on various Integrated Farming System Models for SRLM staff, Livelihood CRPs and Mahila Kisans.	AICRP-IFS / AI-NPOF centres of ICAR-IIFSR, SAUs, Krishi Vigyan Kendra (KVK).	Department of Agricultural Research and Extension (DARE), Ministry of Agriculture, Co-operation and Farmers Welfare (MoAC&FW).
Exposure: Exposure on various Integrated Farming System Models developed by ICAR as mentioned in its bulletin.	AICRP-IFS / AI-NPOF centres of ICAR-IIFSR, SAUs, KVK.	
Training on climate resilience: Training on climate resilient agriculture for SRLM staff, Livelihood CRPs and Mahila Kisans.	National Innovations in Climate Resilient Agriculture (NICRA).	
Exposure: Exposure on various climate resilient agricultural technologies.	NICRA	
Organic certification and market linkages:	<ul style="list-style-type: none"> o <i>Bharatiya Paramparagat Krishi Padhhati</i> (BPKP), o <i>Jaivik Krishi Protsahan Yojana</i> (JKPY), o <i>Paramparagat Krishi Vikas Yojana</i> (PKVY) o Movement for Organic value Chain Development- Northeastern Region (MoVCD-NER) – For northeast. o All India Network Programme on Organic Farming of ICAR for Technological backstopping 	Department of Agriculture, Co-operation and Farmers' Welfare (DAC&FW), under MoAC&FW
Soil testing facility at LSC	National Mission for Sustainable Agriculture (NMSA)	
Establishment of CHC	Sub-Mission on Agricultural Mechanization (SMAM)	
Processing of produces:	Financing facility under Agri-infrastructure Fund	
Promotion of FPO:	Formation and Promotion of 10,000 Farmers Producers Organization (FPO) through NCDC / SFAC/NABARD.	
Promotion of Beekeeping:	National Beekeeping and Honey Mission (NBHM)	
Livelihood asset creation/augmentation	MGNREGS	MoRD
Common asset creation	MGNREGS	
Animal / poultry bird vaccination	<ul style="list-style-type: none"> a) National Animal Disease Control Program - Livestock Health & Disease Control (LH & DC)) b) PPR Eradication Programme c) Classical Swine Fever Control Programme. 	DAHD, Ministry of Fisheries, Animal Husbandry and Dairying
Artificial Insemination of livestock	National <i>Gokul</i> Mission	
Promotion of poultry entrepreneurs:	Sub-mission on Rural Poultry Entrepreneurship programme	
Promotion of dairy	National program for dairy development	
Promotion of Fishery	PM <i>Matsya Sampada</i> Mission (PMMSY)	Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying
NTFP based livelihoods	Pradhan Mantri Van Dhan Yojana (PMVDY)	Ministry of Tribal Affairs (MoTA)
Gap funding for Tribals SHG women	Programmes / Activities under Proviso to Article 275 (1) of the Constitution of India	
Food processing	PM Formalization of Micro Food Processing Enterprises (PMFME)	Ministry of Food Processing Industries (MoFPI)

Annexure-2

Budget template for a cluster of about 300 HH				
Budget items	Unit description	No of units	Unit cost (Rs)	Amount (Rs)
1. Project inception:				
	Scoping study			
	Livelihood analysis and planning exercise			
	Project preparation and DPR preparation			
2. Capacity building:				
	Cost on IFC anchor			
	Training of IFC anchor			
	Honorarium for a senior CRP			
	Training of senior CRPs			
	Training of PG / functionaries / office bearers			
	Exposure visits			
3. Institution building:				
	Institution building of producers collectives			
4. Community Investment Support:				
	Establishment of Livelihood Service Centre (LSC)			
	Infra and Working Capital support for the producers collective			
	For credit to individual producers for livelihood promotion			
Total Budget:				
Mobilization through convergence:				
NRLM support component:				

----- XX -----

No.J-11011/01/2010/MKSP-part
Government of India
Ministry of Rural Development
Department of Rural Development
(Rural Livelihoods Division)

6th Floor, Core 5B,
India Habitat Centre,
Lodhi Road, New Delhi
Dated: 25th November, 2016

To

The Chief Executive Officer/State Mission Directors
State Rural Livelihoods Mission (MKSP implementing partner States)

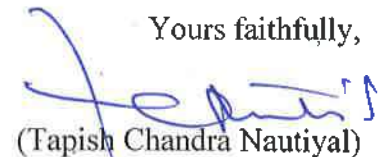
Subject: Revision of funding pattern under Mahila Kisan Sashaktikaran Pariyojana (MKSP) a sub component of NRLM

Sir/Madam,

I am directed to refer to the decision of the Government of India to revise the funding pattern for various schemes including MKSP w.e.f. 1st April, 2015. In this regard, a clarification has been obtained from the Ministry of Finance, Government of India. As per the clarifications, the revised funding pattern of 60:40 sharing of project cost between Central and State Government (90:10 for North Eastern States) will also be applied to all ongoing projects under MKSP w.e.f. 1st April, 2015. The funds already released before 1st April, 2015 will not come under the ambit of revised funding pattern. However, all installments to be released/already released after 1st April, 2015 will be adjusted according to revised distribution of balance project cost as on 1st April, 2015, in 60:40 ratio between Central and State share.

This is for your kind information and further necessary action as per the directions/clarifications from the Ministry of Finance, Government of India.

Yours faithfully,



(Tapish Chandra Nautiyal)

Dy. Secretary to the Government of India

Ph. 24122935

Copy to:

- 1 The Principal Secretary, Department of Rural Development, all existing MKSP implementing partner States
- 2 All MKSP partners
- 3 PPS to Secy (RD) and PS to JS(RL) for kind information.

No. K-11034/05/2015/MKSP/PAC
Government of India
Ministry of Rural Development
Department of Rural Development
Rural Livelihoods Division

2nd Floor, Core 5B,
India Habitat Centre,
Lodhi Road, New Delhi
Dated: 2nd November, 2015

To

The State Mission Directors/Chief Executive Officers
State Rural Livelihood Missions
All States

Subject: Submission of proposals under Mahila Kisan Sashaktikaran Pariyojana (MKSP)

Sir/Madam,

I am directed to reiterate that Mahila Kisan Sashaktikaran Pariyojana was launched in 2010-2011 as a subcomponent of National Rural Livelihood Mission (NRLM). As per the guidelines of MKSP, the proposals from various project implementing agencies have to be routed through the state. This Ministry invited and processed the proposals received from the states as recommended by the respective State Governments. With the launch of NRLM and gradual establishment of State Rural Livelihood Missions, it was envisaged that MoRD would integrate MKSP with the broader NRLM roll out plan in the States and MKSP will gradually converge with State's Livelihoods Plan.

I am further directed to refer to the decision taken by the Project Approval Committee (PAC) under MKSP in its meeting held on 12th July, 2012 (copy of minutes enclosed for kind reference) regarding gradual delinking of NRLM-PIA relations. As per the decision taken by the PAC, MKSP implementation would gradually transit into AAP mode where appropriate State level empowered committees should be created to appraise and sanction the projects at State level. Twelve States namely Andhra Pradesh, Telangana, Kerala, Bihar, Tamil Nadu, Madhya Pradesh, Rajasthan, Chhattisgarh, Jharkhand, Odisha, Haryana and Karnataka have already been approved for MKSP implementation through AAP mode by this Ministry in view of their readiness/preparedness to implement MKSP. The readiness indicators are as follows:

1. There is a livelihood team in place at the state level in the SRLM
2. There are also livelihoods teams positioned in the District Mission Management Units (DMMUs) in the intensive districts and in the Block Mission Management Unit (BMMU) of the intensive blocks.
3. The livelihood team has undergone well designed and detailed induction trainings in consultation with the NRLM.

In continuation to above, this Ministry has decided that NRLM-PIA relations should now be delinked and the proposals under MKSP will only be accepted under AAP mode subject to fulfillment of readiness criteria by the State Government. Except twelve States already approved under MKSP AAP mode, in case the State Government decides to submit AAP under MKSP, the

details of readiness indicators should also be forwarded to this Ministry alongwith the AAP. The AAP should be submitted in the AAP template attached with this letter alongwith budget template and training schedule. State Government is further advised to examine the projects in accordance with laid down criteria mentioned below to appraise the project in accordance with MKSP Guidelines, in case the State Government decide to implement the project in partnership with any Non Government Organization (as per Guidelines):-

1. Desk appraisal of the projects (draft template attached).
2. Field appraisal of the projects which are found fit for consideration after desk appraisal (draft template attached).
3. Project Screening Committee (PSC) at State level for appraisal of the projects found fit after desk and field appraisal which may be headed by State Mission Director/Chief Executive Officer of State Rural Livelihood Mission and may include Finance and program experts.
4. Project Approval Committee (PAC) at State level under the Chairmanship of Principal Secy (RD) to consider the projects found fit by PSC. PAC may include representatives from Finance, Program experts and other concerned departments of the State Government.
5. The scope of convergence with other departments of State Government and other Schemes of the State/Central Government may be explored and included in the AAP.

State Government may submit supplementary AAP under MKSP to this Ministry subject to fulfillment of readiness criteria alongwith above mentioned reports and minutes, as per the process detailed above.

Yours faithfully,



(Jagdish Kumar)

Assistant Commissioner/RL

Ph. 24657248

Enclosures:

1. Minutes of PAC meeting held on 12-07-2015
2. Draft template of AAP
3. Budget and training schedule template
4. Desk Appraisal format
5. Field Appraisal format

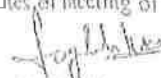
Copy to:

1. Principal Secretary (RD), Department of Rural Development, State Government, all States.
2. PPS to Secy (RD), AS(RD) and PS to JS(RL), MoRD.
3. PA to DS(RL) for information and DEO (MKSP) for records.

OFFICE MEMORANDUM

Subject: Minutes of the meeting of Project Approval Committee (PAC) held on 12th July, 2012 under the Chairmanship of Sh. S. Vijay Kumar, Secretary (RD) under Mahila Kisan Sashaktikaran Pariyojana (MKSP).

The meeting of the Project Approval Committee (PAC) to consider the projects under MKSP was held on 12th July, 2012 under the Chairmanship of Sh. S. Vijay Kumar, Secretary (RD), Ministry of Rural Development, in his Chamber (Room No. 199D) Krishi Bhawan, New Delhi. The minutes of meeting of PAC are sent herewith for information.


(Jagdish Kumar)

Research Officer/SGSY(MKSP)

Encls. As above

Distribution

1. Senior Advisor(RD), Planning Commission, New Delhi
2. Sh. M.V. Rao, Director General, NIRD, Rajendra Nagar, Hyderabad, Andhra Pradesh
3. Joint Secretary, Ministry of Environment and Forest
4. Joint Secretary, Ministry of Tribal Affairs, Shastri Bhawan, New Delhi
5. Joint Secretary(Extension), Ministry of Agriculture, Krishi Bhawan, New Delhi
6. Joint Secretary, Ministry of Women & Child Development, Shastri Bhawan, New Delhi
7. The Principal Secretary, Department of Rural Development, Government of Andhra Pradesh
8. The Principal Secretary, Department of Rural Development, Government of Rajasthan
9. The Principal Secretary, Department of Rural Development, Government of Madhya Pradesh
10. The Principal Secretary, Department of Rural Development, Government of Andhra Pradesh
11. The Principal Secretary, Department of Rural Development, Government of Jharkhand
12. The Principal Secretary, Department of Rural Development, Government of Maharashtra
13. The Principal Secretary, Department of Rural Development, Government of Karnataka
14. The Principal Secretary, Department of Rural Development, Government of West Bengal
15. The Principal Secretary, Department of Rural Development, Government of Chhattisgarh
16. The Principal Secretary, Department of Rural Development, Government of Tamil Nadu
17. Ms. Ishita Roy, Member-Secretary, Central Silk Board, Ministry of Textiles, Government of India, CSB Complex, BTM Layout, Madiwala, Bengaluru-560068 Karnataka
18. CEO, Society for elimination of rural poverty(SERP), 5-16-192, 11rd & 14th floor, Hermitage Office Complex, Huda Building, Hillfort road, Nampally, Hyderabad-500004
19. CEO, Jharkhand State Rural Livelihood Promotion Society, 3rd Floor, FFF Building, IIC, Durgam, Ranchi
20. CEO, SRIM, Co Jaiswal, 1st South Wing, 1st floor, CIDCO Bhawan, CBD Betapur, Navi Mumbai-400614
21. The Mission Director, Chhattisgarh Gramin Ajeevika Samvardhan Samiti O/o Development Commissioner, Vikas Bhawan, Civil Lines, Raipur, Chhattisgarh
22. The Managing Director, Chhattisgarh Gramin Ajeevika Samvardhan Samiti, O/o Development Commissioner, Vikas Bhawan, Civil Lines, Raipur, Chhattisgarh
23. The Managing Director, Tamil Nadu Corporation for Development of Women Ltd, Mother Teresa Women's Complex, 1st Floor, Valluvar Kottam High School Road, Nungambakkam, Chennai-600034, Tamil Nadu

Copy to.

- (i) PPS to Secretary (RD)
- (ii) PS to Special Secretary and Financial Advisor, Ministry of Rural Development
- (iii) PS to Additional Secretary (RD)
- (iv) PS to Joint Secretary (RI)
- (v) PA to Deputy Secretary (MKSP)

Minutes of Meeting of Project Approval Committee held on 12.07.2012 at 10.30 am under Mahila Kisan Sashaktikaran Pariyojana (MKSP)

A meeting of the Project Approval Committee (PAC) was held under the Chairmanship of Sh. S. Vijay Kumar, Secretary (RD), Ministry of Rural Development in his chamber on 12th July, 2012 at 11 am under Mahila Kisan Sashaktikaran Pariyojana (MKSP). The list of participants is enclosed at "Annexure-I".

At the Outset the Committee made following observations:

Role of Ministry of Rural Development (MoRD) in MKSP

1. The role of MoRD in Livelihoods promotion would be to propagate successful models which are otherwise unable to get replicated due to some technical reasons. However, developing agronomic practices etc. should be left to the respective domain ministries & resource organizations.
2. The focus of MKSP should be on value-added Human resource development. Material investments should not be encouraged under MKSP.
3. The objective of MKSP projects would address at least one of the following objectives:
 - Create and incentivize community institutions and producers' organizations
 - Sensitize women farmers to avail the services of state governments while also increasing the absorbing capacity of the community as a whole
 - Sensitize the state governments to fine-tune their agriculture-policies
4. The MKSP projects received in MoRD needs to be categorized into proposals with demand side interventions and supply-side interventions. In case of the former, the beneficiary needs to be sensitized and for the later the state governments have to be sensitized. Each project has to be analyzed accordingly. Projects should have a balanced approach to sensitize the demand side as well as the supply side.
5. MoRD would integrate MKSP with the broader NRLM roll out plan. MoRD would play the larger role of systemic thinking. The main task would be to capacitate the state SRLMs to implement the MKSP in their respective states. Besides, NRLM would provide technical support to the SRLMs to do the same.
6. SRLMs would eventually integrate MKSP in their Livelihoods Promotion Strategy as a part of their SPIP.

Role of SRLM in MKSP

7. SRLMs should be empowered to own the MKSP projects. They should be capacitated to take up all processes of MKSP projects starting from appraisal to monitoring.
8. SRLMs should engage with the prospective PIAs which can scale up successful sustainable models on livelihoods following the MKSP guidelines and processes.



9. The SRLMs should further integrate the successful MKSP models into their larger livelihoods strategy and take them to state-wide scale.

Transition from MoRD to SRLM

10. States which have adequate trained human resources for promoting the livelihoods would submit sectoral AAP/SPIP on MKSP.
11. Appropriate state level empowered committees should be created to appraise and sanction the MKSP projects.
12. MoRD would develop criteria to evaluate the state's preparedness to handle MKSP projects and work out a plan for integrating MKSP in the Livelihoods SPIP of these states.
13. Each year, whenever the SRLMs are capacitated satisfactorily and meet the benchmarks laid by NRLM, the NRLM-PIA relation has to be delinked and should be transferred to the respective SRLM.
14. It was felt that SRLMs of AP, Bihar, TN and Kerala have organizational-readiness to steer MKSP in their respective states as they have dedicated and trained human resources to promote livelihoods. This is amply demonstrated as the SRLMs of AP, Kerala and Bihar themselves are implementing large-size MKSP projects in their respective states. The states of AP, Bihar, TN, Kerala would immediately integrate the MKSP in their NRLM implementation plan and submit a separate AAP/SPIP for Livelihoods promotion.
15. To ensure that this is done uniformly and systematically, the concept of multi state projects will be discontinued forthwith. PIAs who have submitted such projects may now resubmit State wise projects, attributing indivisible resources to a common document. The common document will be a compilation of the state specific projects and will allocate indivisible resources to each state project proportionate to the state's target.

ANNEXURE-I
LIST OF PARTICIPANTS

Members of Project Approval Committee(PAC)

Sl. No.	Name	Designation and Organization
1	Sh. S. Vijaya Kumar	Secretary (RD), Ministry of Rural Development In Chair
2	Sh. T. Vijaya Kumar	Joint Secretary(RI), Ministry of Rural Development
3	Sh. Subhash Chandra	DIG, Forest Policy, Ministry of Environment and Forest
4	Sh. A.J. Banga	Director(RD), Planning Commission
5	Ms. A. Lakshmanan	Joint Director, DAC Extension, Ministry of Agriculture
6	Sh. Shailesh Sharma	Dy. Secretary, DAC Extension, Ministry of Agriculture
7	Ms. Santosh	Director, Ministry of Tribal Affairs
8	Sh. B.C. Behera	Dy. Secretary(Finance), Department of Rural Development, Ministry of Rural Development
9	Sh. K.P. Rao	Project Director-MKSP, NIRD, Hyderabad

Other Official from Ministry of Rural Development/
Representatives from State Government/ Autonomous Bodies

Sl. No.	Name	Designation and Organization
1	Sh. Sudhir Shyam	Dy. Secretary (RI-SP), Ministry of Rural Development
2	Sh. Alok De	Consultant, NMMU-NRLM, Ministry of Rural Development
3	Sh. Venkatamallu Thadaboina	Research Officer (CAPARD)
4	Ms. Swati Nayak	Consultant, NMMU-NRLM, Ministry of Rural Development
5	Ms. Swetha Kolluri	Consultant, NMMU-NRLM, Ministry of Rural Development
6	Sh. P. Roy	Joint Secretary, PR&RD Department, Govt. of West Bengal
7	Sh. K. Jagadesh	Mission Director, SRLM, Karnataka
8	Sh. D. Murali Mohan	Joint Director, INCIDW, Chennai
9	Dr. Ashok D. Kolbe	Project Director, DRDA, Beed, Maharashtra
10	Sh. Ronald Rose	Add. CEO, SERP
11	Sh. Shrawan Hardikar	CEO, MSRLM, Maharashtra
12	Dr. K. Sathya Narayana	Scientist, Central Silk Board(CSB)

Representatives from PIAs

	Name of the Officer	Designation & Name of the organization	Contact No. and Email ID
1	Dr. I.I. Hugar	HoD, Sericulture, BAIF, Pune	7798486509
2	Sh. Garje. B.K.	Bajarang Research Foundation	942295330
3	Lakhi Deuri	ED, Sahyog CCN, Vishakhapatnam	9000363779
4	V.Krishna Rao	CEO, Kovel Foundation	09440976848
5	D. Pari naidu	Executive Trustee, Jattu Trust	09440164289
6	Dr Bivekanand Sanyal	Loka Kalyan Parishad, Kolkata	09433278811
7	V.N. Salimath	Managing Trustee, IDF Bangalore	09845247219,
8	Shyamal Gan	Loka Kalyan Parishad, Kolkata	-----
9	Jürgen Putz	Palmyra-Auroville	9488082971,
10	Sanjay Sharma	Team Leader, PRADAN, SSV-CMF, Jaipur	9413317158,
11	Rashini Sharma	PD, SGSY&DS, Dept. of RD, govt of Rajasthan	9829265319
12	Jaipal Singh	CMF, Jaipur	9414049267
13	Rakesh K.H. Gupta	Development Officer, CMF, Jaipur, SRTT	9314635125
14	Satyabrat Acharya	Programme Director, satya.pradan@gmail.com	9431769358

5.

NATIONAL RURAL LIVELIHOODS MISSION

ANNUAL ACTION PLAN - LIVELIHOODS

I LIVELIHOODS SITUATION ANALYSIS OF THE STATE

- Please describe key livelihoods of the poor in the state; e.g. agriculture, NTFP based livelihoods, and any other livelihood streams, primarily among the most vulnerable/poorest of poor section of community like landless, SC/STs, PVTGs, women headed HHs, single women etc. Provide any relevant secondary data available to give clear idea.
- Explain the best practices if any, in each of the livelihoods stream available in the state.
- Please explain various constraints/ issues in the area of livelihood options (e.g. issues related to access and control of productive resources, production process, post production process, producers' organization, value addition, marketing, realization of value/profit to the producers and any other issues).

II LIVELIHOOD PROMOTION STRATEGY OF THE STATE

- In reference to the existing livelihood opportunities and the issues, what is the overall strategy of the state to promote key livelihoods? How the state aims at addressing the constraints in the field of livelihoods. Also explain state's strategy with reference to specific livelihood stream (Agriculture, NTFP etc).
- What is the strategy aimed specifically at the most vulnerable section/ community and their livelihoods.
- What is the overall strategy of livelihoods promotion in the intensive blocks / resource blocks in the state, as part of NRLM.
- How the state is planning to integrate MKSP with its' overall livelihoods promotion strategy.

Readiness Indicators

Please describe the readiness of SRLM to implement the AAP on MKSP

- Whether full time livelihoods team in place at the state level- PI give details of the team
- Whether livelihoods teams positioned in intensive districts and in intensive block- PI give details of the team
- Whether the livelihood team has undergone well designed and detailed induction training-- PI give details of the training programs organized for the LH team

MKSP Process

- PI explain the processes to be followed by SRLM in congruence with MKSP guidelines to identify partners for MKSP implementation
- What is the Framework of Monitoring and Evaluation system planned for the MKSP projects by the SRLM.
- Please explain how the state SRLM proposes to monitor the implementation of the projects in the state, as per their existing internal systems and planned systems (as per the MKSP guidelines).

1. Contacts of Livelihood Team in SRLM

Sl.No	Name of the Livelihood head /Anchor person in SRLM for MKSP (Mention separately, if there are more than one official for different streams like NTFP/ Sustainable agrl. etc)	Contact Number	Fax No.	Email ID	Office Address
	Name of the state level livelihood team members	Contact Number	Fax No.	Email ID	Office Address

IV	LIVELIHOOD IMPLEMENTATION PLAN UNDER MKSP (Mahila Kisan Sashaktikaran Pariyojana) (As a sub- component of overall livelihood strategy)
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A	SUMMARY OF ONGOING MKSP PROJECTS
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There may be some ongoing projects under MKSP already being implemented in the state. A brief description of these projects needs to be provided.

1. Summary of all MKSP projects already being executed in the state

Components	Source	Type of Project Sustainable Agri/NTFP etc	Total Project Cost (In lakhs)	Funding outlay (Rs Lacs)		
				Yr 1 (25%)	Yr 2 (50%)	Yr 3 (25%)
75% Of total Budget Outlay for livelihood promotion plan under MKSP	MoRD /Central Share					
25% (10% In case of NE & Hilly states)of total Budget Outlay for livelihood promotion plan under MKSP	State/Any Other Donor Agency (Please mention the name of the source)					

2. MKSP Project Implementing Agency details (existing)

Sl. No.	Name of the Project	Name of the PIA	State share/share of other donor of the project (Rs)	Central share of the project (Rs)	Area (Districts & blocks Names)	Total No. of beneficiaries covered
1						
2						
3						

N.B. Please mention how many of these blocks under MKSP are intensive blocks. In case 25% share had come from any other source than state govt. please mention the source

3. Contact details of Existing MKSP Project Implementing agencies

Sl. No	Name of the PIA	Contact Details
1		Contact Person's Name- Telephone & Mobile No- Email ID- Fax No. PIA's Office postal Address
2		
3		

B Livelihood Project Promotion Plan and Major Outputs (Under MKSP)

It is envisaged that the strategy to integrate MKSP with resource block would be two pronged- 1. CRPs identified from MKSP areas working in Resource Blocks to promote sustainable LH practices and 2. MKSP blocks declared as resource blocks and intensive social mobilization and financial inclusion activities taken up. Keeping this broad strategy into consideration please elaborate:

- i) How the SRLM plans to initiate livelihoods interventions in the field of sustainable agriculture/ non timber forest produce etc., partnering various organizations.
- ii) How the best practices will be identified by the state in each of the stream and the resource agencies to be identified by state to replicate and scale up those best practices and models (MKSP guidelines to be followed).
- iii) Explain why and how the organizations fit in with the Objectives of MKSP (as per the guidelines) and NRLM, in reference to their past experience in the proposed livelihoods sector (NTFP/agriculture etc.) and in women centric community institution promotion.
- iv) What are outreach/ coverage planned by the state through these interventions, e.g, How many women farmers/and their families are envisaged to be covered. What are the geography where these pilots are planned and what are the basic rationale for selection of those areas and families.

- v) How many Community Resource Persons trained in the livelihoods interventions are envisaged to emerge from the projects proposed in 3 years time period.
- vi) How many generic Institutions (SHGs) being formed or strengthened due to the proposed interventions and how many livelihood organizations (federations/cooperative/producers' company etc.) been promoted in the project areas.

C Scaling up plan for the livelihood initiatives started under MKSP

- How the state plans to scale up these initiatives/ projects across the state in the intensive blocks and resource blocks planned under NRLM. How it envisages integrating the learning from the projects to the state livelihoods plan/ strategy.
- How the state plans to integrate the livelihoods CRPs emerged and trained from the MKSP projects, into State's livelihood plan.

V. FINANCIAL PLANNING FOR LIVELIHOODS INITIATIVES

1. Proposed funding for MKSP Plan

Components	Source	Type of Project Sustainable Agrl/NTFP etc	Total Project Cost (In lakhs)	Funding outlay (Rs Lacs)		
				Yr 1 (25%)	Yr 2 (50%)	Yr 3 (25%)
75% Of total Budget Outlay for livelihood promotion plan under MKSP	MoRD /Central Share					
25% (10% in case of NE & Hilly states)of total Budget Outlay for livelihood promotion plan under MKSP	State/Any Other Donor Agency (Please mention the name of the source)					

NB. The state contribution cannot be drawn from the allocation made to SRLMs under NRLM

Budget template & Training Schedule

MKSP Standard Budget Template

		Yr1	Yr2	Yr3	Total	Financial Outlay						Remarks	
		Physical Outlay (No. of units planned)				Financial Outlay							
S.No	Component	Yr1	Yr2	Yr3	Total	Unit Cost	Yr1	Yr2	Yr3	Total (Rs)	Central Share (Rs)	State/PIA Share/ Other funding agency (Rs)	
	Project Cost	Unit Description	Yr1	Yr2	Yr3	Total	Yr1	Yr2	Yr3	Total	Yr1	Yr2	Yr3
	No. of mahila kisan/NTFP collectors												
	No. of producer groups												
	No. of villages												
	No. of Blocks												
	No. of Districts												
	1 Project Inception												
	1.1 Mahila Kisan profiling	No. of mahila kisan											
	1.2 DPR Preparation	lumpsum											
	1.3 Technical protocols documentation	lumpsum											
	1.4 Value-chain Studies	lumpsum											
	1.5 Other (Specify)												
												
A	Subtotal												
	2 Institution Building												
	2.1 Mobilisation & Promotion of producer groups	No. of producer groups											
	2.2 Promotion of producer group federation	No. of producer federations which are given management support											
	2.3 Management support to producer federation												
	2.4 Other (Specify)												
												
B	Sub total												
	3 Capacity Building												
	3.1 Training module development : Print	No. of training modules											
	3.2 Training module development : audio-visual	No. of training modules											
	3.3 Training equipment & material	Nos											
	3.4 Training to CRP	No. of para-professionals											
	3.5 Trainings to para-professionals												
	3.6 Training to Community	No. of community members											
	3.7 Training to leaders & PRI	No. of leaders											
	3.8 Exposure visits of CRPs to immersion sites	No. of CRPs											
	3.9 Exposure visit of para-professional to immersion sites	No. of para-professionals											
	3.10 Exposure visit of Community to immersion sites	No. of mahila kisan											

Project Cost	Unit Description	Yr1	Yr2	Yr3	Total	Unit Cost	Yr1	Yr2	Yr3	Total (Rs)	Central Share (Rs)	State/PIA Share/ Other funding agency (Rs)	Remarks
3.11	Service charge to CRP (Excluding the resource fee received by them as trainers)												
	No. of CRPs												
3.12	Service charge to para-professionals (Excluding the resource fee received by them as trainers)												
	No. of para-professionals												
3.13	Other (Specify)												
...													
C	Sub total												
4	Community Investment Support												
	No. of Infrastructure units												
4.1	Community Infrastructure												
	Inputs to the mahila kisan (grant/subsidy/full loan)												
4.2	Inputs to producer groups/ federation (grant/subsidy/full loan)												
4.3	Operational Fund of Producer federation												
4.4	Other (Specify)												
4.5	Other (Specify)												
...													
D	Sub total												
5	Knowledge Management												
5.1	Identification of best practices												
5.2	Documentation of best practices												
5.3	Dissemination of best practices												
5.4	Other (Specify)												
...													
E	Subtotal												
6	Monitoring & Evaluation												
6.1	Baseline survey												
	No. of HH to be covered												
6.2	Endline survey												
	No. of HH to be covered												
6.3	Independent evaluation studies												
	No. of Studies												
6.4	Public information disclosure												
	No. of information disclosure sites/ places												
6.5	Social Audit												
	No. of social audits												
6.6	Other (Specify)												
...													
F	Sub total												
7	Administration Expenditure (Maximum 5% of total project cost)												
7.1	Staff salaries												
7.2	Travel & conveyance												
7.3	Stationary												
7.4	Communication												
7.5	Other (Specify)												
...													
G	Sub total												
H	Grand Total (A+B+C+D+E+F+G)												

Please Note: All the above unit costs need to be elaborated with detailed schedules

Training schedule

S.No	Theme	Name & Description of training module (book keeping/ food security/insurance etc.)	Location of training (if village / cluster / block / district / cooperative)	Type of Trainer (External expert/Project staff/Para-professionals)	Type of Training (Community/CR/P/Para-professionals)	Type of Trainer (External expert/Project staff/Para-professionals/CDPs)	No. of batches			No. of training days/batch	No. of trainees for each batch	Unit cost for delivering the training module (Cost Per batch)	Cost of training (Rs)			Total No. of trainees	Cost per participant per day
							Year 1	Year 2	Year 3				Year 1	Year 2	Year 3			Total
A	B	C	D	E	F	G	H	I	J=(G+H+I)	K	L	M	N=(LxM)	O=(N+JxO)	P=(N/O)	Q=(OxP)	R=(Q/O)
1	Technical protocols	Ex-ante Training on SHI sub-jar 1	Cluster level	CRP	Project staff	3	11	3	17	15	15000	25000	420000	24000	18	432000	1600
		Technical on SHI Module 2	Village level	Community	Para-professionals	10	15	10	35	25	1200	42000	450000	13000	35	455000	170
2	Shelfhood institution building																
3	Valuechain & Marketing																
4	Food & Nutrition Security																
4	Health																
5	Others (Specify)																

Pixus Note: Cost of imparting training to each batch per module should be worked out in detail

Desk Appraisal format

Detailed Desk Appraisal Template (Detailed scrutiny)

Name of the PIA:

Name of the project:

Name of the Expert(s):

Summary Datasheet

Past Experience:	
Year of Registration of organization	
Average Annual turnover (Average of past 3 years through audit statements)	
No. of years of experience in Sustainable agriculture/ NTFP	
Major sustainable Agriculture practices/ NTFP Commodities where PIA has experience	
No. of professionals working with the organization	
Largest single project handled in last 2 years	No. of beneficiaries, No. of villages
	Value of project(Rs.)
Project Area currently working (District- State)	
Proposed Project:	
Major sustainable agriculture interventions/NTFP Commodities proposed	
Project Area proposed (Block-District- State)	
No. of Mahila Kisan – proposed	
Cost of project proposed	Central share (Rs.in lakhs) - (75%/90%)
	Mention clearly whether State share/ Donar Agency/ Others (Rs. in lakhs) - (25%/10%) ::
	Total Cost(Rs. In lakhs)
Cost per Mahila kisan(Rs.)	
Benefit to each Mahila kisan(Rs.)	
Benefit to Cost Ratio(Benefit/Cost)	

I. Past Experience working on (Give qualitative comments)

1. Scale of projects handled earlier (No. of beneficiaries, Project Cost, Geography)
(Cross check/validate with the supporting documents)

2. SHGs: Group formation/ Federation/Credit linkages/Insurance etc.,

3. Livelihood Collectives: Livelihood Group formation/ Collective procurement/ Collective Marketing etc.,

Comment:

4. Assets/Infrastructure created for the CBOs

5. Technology- Agriculture/ NTFP. Are the practices Sustainable?

6. Usage of ICT

II. Proposed Project (Give qualitative comments)

Institution Building

1. Community Institution Architecture proposed (Does It Include Generic SHG & Livelihood collectives?)

2. Is the proposed CBO (livelihood groups) architecture based on past experience of the PIA or Is It new strategy? If new, what is the vision of success?

3. Is there a vision for economic sustainability of the CBO? Is there a concrete plan on CBO's revenue?

4. Governance of proposed CBO: IS it member-based and member-controlled?

5. Is the role clarity of NGO & CBO in implementing MKSP?

6. Is there clarity on MKSP fund arrangement between NGO and CBO?

7. What is the vision of sustainability of the Intervention by PIA?

Technology

8. What is the package of practices proposed under Sustainable Agri/ NTFP? Are they sustainable practices? Are they women centric? Are they based on local technology/ indigenous knowledge?

List of practices	Tested Practice by PIA/ New Practice?	Sustainable Technology (Y/N)? Comment

9. Are the proposed interventions for moving up in the value chain- production, processing and marketing? Are they based on value-chain analysis taken up by PIA?

10. Is there a concrete plan on backward and forward linkages proposed?

11. Is there any concrete marketing strategy of Agri produce/ NTFP?

12. Is there an Innovation/ innovative system proposed in production/technology/marketing etc.,?

13. Is there a concrete regeneration strategy in the proposal?(wherever applicable.E.g in case of NTFP)

14. What are the drudgery reduction tools proposed ?

15. Any asset creation/ infrastructure proposed? Is yes, are they individual owned /community owned?

16. Is there a concrete food security plan for each family? What is the food security model proposed? How does the strategy ensure year-long food security to a family?

17. Is there a health security strategy in the proposal?

18. Is there strategy for climate-change resilience? Mention how?

Project Implementation Mechanisms & Systems

19. What will be the HR inputs to implement the project? Professionals, Para-professionals and CRPs? How many people will be deployed for each village/block/district?

20. What would be the capacity building modules? What would be the methodology for delivery?

21. Any ICT Usage proposed?

22. Is there a concrete M&E architecture proposed? Mention in terms of MIS plan; concurrent internal monitoring system, evaluation system & Impact evaluation

23. Are there concrete measures proposed to ensure accountability to community? Is Panchayat involved? Is there any public disclosure system mentioned?

III. Outputs and outcomes of the proposed project (Give qualitative comments)

Are there concrete outputs and outcomes proposed by the PIA?

Increase in Income per farmer by end of project will be _____ (provide details)

Are they achievable through the activities & inputs proposed?

Outcomes ← Outputs ← Activities ← Inputs

IV. Costing

1. Cost of project

		Amount	%
Centre share			
Co-funding arrangement (State/PIA/donor share)	Source:		
Total Cost			

Apart from the MKSP project cost:

- i. Mention if there is any Beneficiary contribution?
- ii. Mention if there is any investment plan from private sector.
- iii. Mention if there is plan to raise fund from convergence with other government schemes.

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2. Cost-break up

Major Components	Mention relevant subcomponent from PIAs detailed budget	Amount (Rs lakhs)	% of total project cost	Comment
IB				
CB				
Community Investment Support				
Direct Subsidy				
Admin Expenditure				

3. Benefit to Cost Ratio

- i. Mention the details

Total Cost	
No.of beneficiaries	
Cost per beneficiary	
Benefit to beneficiary	
Benefit to Cost Ratio	

- ii. What components does the benefit to a beneficiary include? (Food Security/ collective procurement/increase in income / reduction in costs/ value addition etc.,) Are the benefits justified from the activities proposed?

--

III. Are the benefits clearly quantified?

Benefit component	Amount

Can we take up this proposal for Field Scrutiny and give the PIA opportunity to recast the proposal based on field observation and desk analysis?

If yes, please give critical comments

If no, then please suggest the next step. Whether the proposal will comeback for desk scrutiny or the proposal is rejected as this proposal is not in the track of MKSP.

EVALUATION SCORE SHEET FOR ORGANIZATION :-					
Sl. No.	Parameter	Sub-heads	Scoring Range		Weightage
			(Min. Marks - 1 and Max. Marks - 5)	(Max. Marks - 1 and Min. Marks - 5)	
			REMARKS ON DATA PROMISING	Score	Total Score in each Parameter
1	PIA's Capacities	I (a) Number of SHGs formed	1 marks if less than 100 2 marks if 100-200 3 marks if 200 - 300 4 marks if 300 - 400 5 marks if > 400		20%
		I (b) No. of farmers worked with	1 marks if less than 1000 2 marks if 1000-2000 3 marks if 2000 - 3000 4 marks if 3000 - 4000 5 marks if > 4000		
		I (c) Experience in working with farmers (no. of years to be mentioned)	1 marks if less than 3 years 2 marks if 3 - 5 years 3 marks if 5 - 7 years 4 marks if 7- 9 years 5 marks if > 9 years		
		I (d) Human resource created (No. of technical professionals created per 1000 farmers)	1 marks if <= 1/1000 3 marks if between 1 - 5/1000 5 marks if > 5/1000		
		II(a) Role of the community in the management of the project (Various committees and sub-committees of the community should be mentioned clearly)	5 MARKS IF COMMUNITY HAS COMPLETE DECISION MAKING POWERS AND FULL CONTROL OF MANAGEMENT 3 MARKS IF PIA AND COMMUNITY JOINTLY SHARE DECISION MAKING AND CONTROL 1 MARK IF COMMUNITY HAS NO SAY IN MANAGEMENT OR DECISION MAKING		
	II(b) If the project is initially driven by NGO, what role has been envisaged for CBOs viz. a-viz NGO at the end of the project?	5 MARKS IF CLEARLY ARTICULATED STRATEGY OF HOW CBOs WILL BE FRONT-LINED OVER LIFE OF PROJECT 3 MARKS IF STRATEGY PRESENT BUT NOT ARTICULATIVE ENOUGH 1 MARK IF STRATEGY IS NOT ARTICULATIVE ENOUGH			

7-

	<p>5 MARKS IF CLEARLY ARTICULATED STRATEGY OF HOW CBOs WILL CONTROL 100% RECEIPTS AND EXPENDITURE AT END OF PROJECT</p> <p>4 MARKS IF CLEARLY ARTICULATED STRATEGY OF HOW CBOs WILL CONTROL 75% RECEIPTS AND EXPENDITURE AT END OF PROJECT</p> <p>3 MARKS IF CLEARLY ARTICULATED STRATEGY OF HOW CBOs WILL CONTROL 50% RECEIPTS AND EXPENDITURE AT END OF PROJECT</p> <p>2 MARKS IF CLEARLY ARTICULATED STRATEGY OF HOW CBOs WILL CONTROL 25% RECEIPTS AND EXPENDITURE AT END OF PROJECT</p> <p>1 MARK IF STRATEGY IS NOT ARTICULATIVE ENOUGH</p>	<p>5 MARKS IF INSTITUTIONALISED MECHANISM FOR INFORMATION SHARING AND COORDINATION BETWEEN NGO AND CBO IS EXPLICIT AND CLEAR</p> <p>2-4 MARKS IF MECHANISM PRESENT BUT NOT CLEAR</p> <p>1 MARK IF NO MECHANISM EXISTS</p>
	<p>11 (c) How much control CBOs and NGOs exercise over receipt and expenditure (in percentage terms) respectively at the start of the project and what control is visualized at the end of the project?</p>	<p>1 marks if ratio <= 1/100 hh</p> <p>3 marks if between 1 - 3/100 hh</p> <p>4 marks if between 3 - 6/100 hh</p> <p>5 marks if ratio is > 7/100 hh</p>
	<p>11 (d) What is the mechanism available to enforce accountability of the NGOs to the communities? (What is the information sharing mechanism between NGO and communities with regard to utilization of receipt and expenditure under the project)</p>	<p>1 marks if ratio <= 1/100 farmers</p> <p>3 marks if between 1 - 3/100 farmers</p> <p>4 marks if between 3 - 6/100 farmers</p> <p>5 marks if ratio is > 7/100 farmers</p>
	<p>11 (e) What is the proposed ratio of community resource persons (CRPs) per 100 households?</p> <p>11 (f) What is the proposed ratio of community professionals per 100 farmers?</p> <p>11 (g) Knowledge creation and dissemination for scaling up (Use of Videos, Posters, Modules for knowledge dissemination etc. should be clearly mentioned)</p>	<p>5 MARKS IF KNOWLEDGEMENT MANAGEMENT (CAPTURE, DOCUMENTATION AND DISSEMINATION) STRATEGY IS CLEARLY DEFINED/ ARTICULATED WELL</p> <p>2 - 4 IF STRATEGY PRESENT BUT NOT ARTICULATED WELL</p> <p>1 MARK IF NOT/ NO CLARITY</p>
	<p>Community Institution Architecture- Strength and sustainability</p>	
	<p>2</p>	

30%

3	Costing	<p>III (a) Capacity Building (Please give the % figure in total cost)</p>	<p>1 mark to < 10 % allocation of budget on capacity building of women farmers 2 marks to 10 - 15% allocation of budget on capacity building of women farmers 3 marks to 15 - 20% allocation of budget on capacity building of women farmers 4 marks to 20 - 25 % allocation of budget on capacity building of women farmers 5 marks to > 25% allocation of budget on capacity building of women farmers</p>	10%	
		<p>III (b) Administrative costs (Please give the % figure in total cost)</p>	NO SCORING		
		<p>III (c) Capital/Equipment Costs (Please give the % figure in total cost)</p>	<p>1 mark to > 15 % allocation of budget on equipment cost 2 mark for 12-15 % allocation of budget on equipment cost 3 marks to 10 - 12% allocation of budget on equipment cost 4 marks to 8 - 10 % allocation of budget on equipment cost 5 marks to < 8% allocation of budget on equipment cost</p>		
		<p>III (d) Incentive/ DIRECT SUBSIDY (Please give the % figure in total cost)</p>	NO SCORING		
		<p>III (e) Unit cost per beneficiaries (Please give the absolute amounts)</p>	NO SCORING		
		<p>IV (a) Resilience to climate change (Specific intervention/strategy to be mentioned)</p>	<p>5 MARKS IF THE PROPOSED INTERVENTION IMPACTS POSITIVELY TOWARDS CLIMATE CHANGE 2-4 MARKS IF STRATEGY HAS VERY LESS TO NO POSITIVE IMPACT TOWARDS CLIMATE CHANGE 1 MARKS IF PROPOSED TECHNOLOGY IS IMPACTING ADVERSELY THE CLIMATE CHANGE</p>		
		<p>IV (b) Scalability of the local technology / intervention mentioned in the project</p>	<p>5 MARKS IF LOCAL TECHNOLOGY HAS POTENTIAL TO BE SCALED UP AT NATIONAL LEVEL 2-4 MARKS IF STRATEGY PRESENT BUT NOT CLEARLY ARTICULATED 1 MARK IF INTERVENTION HAS NO POTENTIAL OF SCALING UP</p>	10%	

		<p>5 MARKS IF INNOVATIVE ELEMENT IS ARTICULATED WELL 1 MARK IF NOT/ NO CLARITY</p>	<p>5 MARKS IF BENEFIT TO COST IS GREATER THAN 3 4 MARKS IF BENEFIT TO COST IS 2 - 3 3 MARKS IF BENEFIT TO COST IS 1.25 - 2 2 MARKS IF BENEFIT TO COST IS 1 - 1.25 1 MARK IF BENEFIT TO COST IS LESS THAN 1</p>	
		<p>NO SCORING</p>		
		<p>IV (c) Innovations (Innovative element in the project which could potentially provide significant benefit to the target groups)</p>		
		<p>V (a) Additional income / family (Incremental monthly income per family may be given)</p>		
		<p>V (b) Cost benefit ratio (Benefit per beneficiary to cost per beneficiary)</p>		
		<p>V (c) Food and Nutrition Security (The direct intervention under the project to meet the food and nutrition security of the people at household and community level)</p>	<p>5 MARKS IF WORKABLE STRATEGY ARTICULATED VERY CLEARLY 2-4 MARKS IF STRATEGY PRESENT BUT NOT CLEARLY ARTICULATED 1 MARK IF NO CLARITY AND TOTAL AMBIGUITY</p>	
		<p>V (d) Drudgery reduction (The intervention to reduce drudgery should be clearly stated. If some equipment is proposed to be used, it should be mentioned specifically)</p>	<p>5 MARKS IF WORKABLE STRATEGY ARTICULATED VERY CLEARLY 2-4 MARKS IF STRATEGY PRESENT BUT NOT CLEARLY ARTICULATED 1 MARK IF NO CLARITY AND TOTAL AMBIGUITY</p>	
		<p>V (e) Evenness of the income flow to the targeted family (How even is the income flow to the targeted families? What is the strategy to address the problem of seasonality in the income flow)</p>	<p>5 MARKS IF STRATEGY PROPOSES PROMOTION OF MULTIPLE LIVELIHOODS TO NEUTRALISE EFFECTS OF SEASONALITY SUCH THAT INCOME IS SPREAD THROUGHOUT THE YEAR 2-4 MARKS IF STRATEGY PRESENT BUT NOT CLEARLY ARTICULATED 1 MARK IF NOT</p>	
			<p>30%</p>	
				<p>5 Benefits</p>

				<p>WITHOUT DOUBLE COUNTING— 5 MARKS IF MORE THAN 50% OF TARGET GROUP COMPRISE VULNERABLE SECTIONS 4 MARKS IF 70 - 90% OF TARGET GROUP COMPRISE VULNERABLE SECTIONS 3 MARKS IF 50 - 70 % OF TARGET GROUP COMPRISE VULNERABLE SECTIONS 2 MARKS IF 25 - 50% OF TARGET GROUP COMPRISE VULNERABLE SECTIONS 1 MARK IF LESS THAN 25% OF TARGET GROUP COMPRISE VULNERABLE SECTIONS</p>	<p>Maximum Score</p> <p>24.5</p>	<p>Percentage Score</p>
<p>V (f) Focus on vulnerable sections (SC/ST/handless/women headed households/SMALL AND MARGINAL FARMERS) What is the percentage of these groups in the total target group- without double counting</p>						

111

Field Appraisal format

Organization Evaluation and Field Inspection document

1. Name of PIA
2. What is the Infrastructure (Office; Computers; Vehicles etc)

Remarks of evaluator

Score on a scale of 1 to 5 -

3. Governance & Management

- I. Legal Status of PIA
- II. Board of Directors
- III. Vision & Mission
- IV. Commitment to human & sustainable development
- V. Management Structure
- VI. Interface between Board of Directors and Management (Are they same?)

Remarks of evaluator:

Score on a scale of 1 to 5-

4. Relevant Experience of PIA

- I. What is the experience of PIA working with Women SHGs
- II. What is the experience of PIA working with CBOs
- III. What is the experience of PIA in Sustainable agriculture based livelihoods
- IV. Is the PIA working with vulnerable sections: SC/ST & Poor

Remarks of evaluator

Score on a scale of 1 to 5

5. Relevant Experience in handling projects (Also refer the template)

- I. Name of Project-
- II. Funding Agency (s)
- III. Project Period
- IV. Size of the project
- V. Total No. of Beneficiaries:
 - a. No. of women Beneficiaries:
 - b. No. of SC/ST beneficiaries:
 - c. No. of Poor Beneficiaries
- VI. Geographical Spread (Districts, Blocks, Villages)
- VII. Scope of project (Assessment of implementation strategy/ Processes)

Score the relevant experience on a scale of 1 to 5

6. Human Resource

i. Technical Experts

- a. Does the PIA have dedicated staff in Program management/ Institution building/Capacity Building/ Agriculture Experts/ Finance/IT/MIS/HR/ Others?
Indicate the numbers (Also Refer template)
- b. What is the Quality of their technical expertise?

Remarks of evaluator:

Score the technical expertise on a scale of 1 to 5

ii. Intermediary staff

- a. Does the PIA have full-time intermediary staff: project coordinators at Block Level/ Taluka level?
- b. What are the capabilities of intermediary functionaries in terms of project coordination, training, monitoring, etc?

Score the quality of intermediary functionaries on a scale of 1 to 5 -

iii. Community Resource Persons / Field functionaries & Community para-professionals

- a. Does the PIA engage full-time field functionaries/ community resource persons at village or cluster level?
- b. Does the PIA engage full-time para-professionals at village or cluster (of village) level?
- c. What are the capabilities of full-field functionaries & para professionals in terms of mobilization, training, counselling, book keeping etc?

Remarks of evaluator:

Score the quality of field functionaries on a scale of 1 to 5

7. Institution building (IB) (to be captured during Field Inspection)

- i. Is the PIA involved in IB activities?
- ii. What is the model generally adopted?
- iii. Are the CBOs registered?
- iv. How does the PIA empower the community to manage their own CBO?
- v. Does the PIA act as service provider OR facilitator?
- vi. Is the focus on self-reliance of CBO? (Financial/ Administration controls/ Decision making etc)

Remarks of evaluator:

Score the IB activities of the PIA on a scale of 1 to 5 -

8. Capacity Building

i. Trainings

- a. What are the trainings conducted by PIA?
- b. What is the training plan followed by the PIA? (Is there a structured ToT approach?)
- c. What is the frequency of trainings conducted for:
 - Intermediary functionaries
 - Field Functionaries
 - Beneficiary groups (SHG/CBO)

Remarks of evaluator:

Score the CB activities on a scale of 1 to 5

ii. Training Modules

- a. Are systematic training modules developed for various stake holders?
- b. What is the quality of training modules?

Remarks of evaluator:

iii. Communication

- a. What is the media of communication within the organization: from Head Quarters-District-Block-Village level?
- b. What is the communication media used for spreading awareness and capacity building exercises? (Videos, Posters, Modules for knowledge dissemination etc)
- c. How is the quality of communication media adopted by the PIA?

Remarks of evaluator:

Score the existing communication on a scale of 1 to 5

9. Monitoring & Evaluation mechanisms

- i. What are the monitoring & evaluation mechanisms to track the performance of existing projects?
- ii. Is there dedicated MIS for Monitoring the progress of projects?
- iii. How frequently do the personnel from PIA head office conduct field inspections?
- iv. Does the PIA conduct impact evaluation studies on existing projects?

Remarks of evaluator:

Score the existing communication on a scale of 1 to 5

10. Project Performance at field level (Interaction with groups- SHGs/ CBOs)

- i. When is your group- SHG/CBO formed?
- ii. How many SC/ST members are present in your group?
- iii. Who manages the bank account of your group?
- iv. Did your group take any bank loan? How many times? Who helps you obtaining the loan from bank?
- v. Did you receive any training from the PIA? List all trainings
- vi. How frequently does the employee of PIA visit you? For what purpose?
- vii. What are the various crops you grow?
- viii. What are the various inputs: Seeds/ fertilisers/ pesticides you use? Where do you purchase them?
- ix. Do you use any machines for cultivation?
- x. Did you receive any training in sustainable agriculture or non-pesticide agriculture?
- xi. Did your income on agriculture increase due to sustainable agriculture? If so, by what percentage?
- xii. Do you sell your agriculture produce individually or collectively?
- xiii. Did the PIA improve the quality of your lives? If so, in what way?

Interacted with:

Score project performance on scale of 1 to 5

11. Geography of intervention

- i). Whether the proposed district/block is a complete new location for the PIA for starting any interventions ??
- ii). Whether the proposed district/ blocks is an area where PIA has already worked and have started something??
- iii). If in the proposed area, the PIA has already worked, then are the proposed households are new set of households ??

iv). If in the proposed area, the PIA has already worked, then are the proposed households are the already intervened households??

iv)If the proposed households are the same set of households with whom PIA has already worked, then what additional interventions are proposed under MKSP and what has been Impact so far from the earlier Interventions.

Remarks of evaluator:

CONCLUSION:

Please give brief conclusion and logic- whether the PIA should be taken into consideration under MKSP or not.

Charanjit Singh
Joint Secretary
Tel : 23438012
Email : jsnrmlmoffice@gmail.com



ग्रामीण विकास मंत्रालय
ग्रामीण विकास विभाग
7वीं मंजिल, एनडीसीसी. बिल्डिंग- II
जय सिंह रोड़ जंतर मंतर, नई दिल्ली-110001
MINISTRY OF RURAL DEVELOPMENT
Deptt. of Rural Development
Government of India
7th Floor, NDCC Building-II,
Jai Singh Road (Opp. Jantar Mantar)
New Delhi-110001

No. K-11062/04/2017/NRLM(Livelihoods) (e-358304)

April 11, 2022

To

The Additional Chief Secretary/Principal Secretary
Rural Development Department,
Assam, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Madhya Pradesh,
Maharashtra, Odisha, Rajasthan, Tamilnadu, Uttar Pradesh, West Bengal.

Subject: Farm value chain development through promotion and release of funds to Producers Enterprise.

Madam/Sir,

As you are aware, promotion of women owned Producer Enterprises under the farm value chain development component of NRETP is an important activity being implemented under project mode. A significant amount of the approved budget, a minimum of 85% of the total project cost under each farm value chain development project, is released to these women enterprises, to carry out various business activities through aggregation, value addition and marketing. Hence, it is imperative to ensure timely availability of funds to the Producers Enterprises for completion of various activities to achieve the set business targets.

Considering the approved timeline of NRETP and to facilitate timely availability of funds at Producers Enterprise (PE) level for the farm value chain projects under NRETP, from the FY year 2022-23 onwards, the flow of funds for the farm value chain projects will be through the Annual Action Plan allocation. This has also been communicated by the Ministry vide letter dated 11th Feb 2022 and 14th March 2022 (enclosed for ready reference).

In this regard, following points may be ensured for smooth and timely release of funds to the Producers Enterprises (PE);

1. The "Guidelines for release of funds to Producers Enterprises being promoted under farm value chain interventions under DAY-NRLM" issued by the Ministry on dated 3rd November 2020 will be applicable for release of fund to the Producer Enterprises.
2. A copy of the sanction order for release of funds by the SRLM to Producer Enterprises shall be submitted to the Ministry for information and record.

3. DPR for the sanctioned project shall be submitted to the Ministry in due course of time mentioned in the guidelines for consideration.
4. The booking of expenditure should be reported through IUFR heads under "B.3.7. Support to Producers Enterprise (Farm)" of NRETP.
5. Utilisation Certificate for each project shall be submitted to the Ministry on a quarterly basis.
6. The SRLM has to submit project-wise Monthly Progress Report (Physical and Financial – budget head wise) in the prescribed format given at **Annexure-I** against the approval for the project.
7. To complete the projects timely, few activities like mobilization of members to the PE and procurement at the PE level are to be completed at the earliest. For mobilization of the members to the PEs, services of the existing resources like block level staff and community institutions of NRLM may also be utilized.
8. Regular monitoring of the project will help keep the progress on track and hence meeting of the Project Management Committee should be held on regular basis and minutes shared with the Ministry.

Accordingly, you are requested to ensure compliance of the above, so that the projects achieve their targets in a time bound manner.

Yours faithfully,


(Charanjit Singh)

Encl: As above

Copy to

1. PPS to Secretary, Ministry of Rural Development
2. State Mission Director, NRLM (NRETP States)
3. Managing Director, NDDB Dairy Services
4. CEO, FDRVC

Monthly Progress Report for the Farm Producers Enterprises promoted under NRETP.

Progress till (MM/YYYY):	June 2022
Name of the SRLM:	

Section A: Basic Details

Name of the Proposal:			
Source of fund (Name of scheme):			
Name of Technical Support Agency:			
Month/Year of Engagement of TSA:			
Name of the Producers Enterprise:			
Location (address of the PE):			
Date of approval of project (date of the first sanction order)	Date of Incorporation of the Producers Enterprise	DPR prepared & submitted to the Ministry, if Yes date of submission	

Section B: Details on the fund for the project (in lakh INR)

	Total	Central Share	State Share	Leverage, if any
Approved for the project				
Fund received by SRLM				
Date of received of fund				

Section C: Physical Progress

Sr.	Key Outputs	Approved target under the project	Achievement till last FY	Target till current quarter					Current year's achievement till reporting month	Cumulative achievement till reporting month
				Q1	Q2	Q3	Q4	Total		
1	2	3	4	5	6	7	8	9	10	11

1	Number of Villages								
2	Number of members enrolled								
3	Number of procurement centres								
4	Number of processing units								
5	Any other, (please specify)								

Geographic Coverage details:			
Sr.	Name of Districts	Name of Blocks	No. of villages
1			
2			
3			
4			
5			
	Total		

Section D: Fund released to Producers Company, Expenditure and Utilisation

D.1. Fund released to Producers Company

Total Fund approved to be released to the Producers Enterprise (Lakh Rupees):		
Financial Year (YYYY-YY)	Fund demanded by the PE for the FY, as per the Annual Action Plan (Lakh Rupees)	Fund released to the Producers Company till reporting month (Lakh Rupees)

D.2. Head wise Fund expenditure (in Lakh INR)

Sr.	Particulars	Approved Budget	Expenditure till last FY ()	Expenditure during current FY (till the reporting month)	Cumulative Expenditure (Col. 4+5)	%age (Col.6/3)
1	2	3	4	5	6	7
1	Support to SRLM					

2	TSA COST					
3	Support to Producers Enterprise					
3.1	Strengthening Producers Company					
3.2	Commodity Procurement Fund (Working Capital)					
3.3	Infrastructure for value addition (Plant, Machinery, equipment)					
3.4	Management Support					
	Total					

Section E: Performance of the Producers Enterprise against the approved business plan

E.1 Business by the Producers Enterprise

Sr.		As per the approved business plan	Achievement till last FY	Current year's Plan/target (mention FY "YYYY-YY")	Achievement till MMM/YY
1	Total Volume of business (in Quintal)				
2	Total Volume of business (in lakh Rs.)				

E.2. Recruitment of Human Resources by the PE

Name of CEO	Joining Date	Contact number

Other Staff:

Sr.	Key Function (Finance Manager, Procurement Manager, Accountant etc.)	Level (HO / Field)	Name of the Staff in position (if note recruited mention vacant)	No. of positions Approved under the project	Plan for recruitment during current FY
1					
2					
3					
4					
5					

6					
...				
	Total				

E.3. Training and Capacity Building activities

Sr.	Category	Topic/ Theme	No. of trainee days for the training imparted till last year	No. of trainee days planned in current FY	No. of training completed for current FY (till reporting month)	Cumulative trainee days
1	2	3	4	5	6	7
1	Training of BoDs					
2	Training of CEO					
3	Training of HO staff					
4	Training of Field level staff					
5	Training of members					

E.3. Compliances

Sr.	Category	Due Date	Date of compliance
1	Compliance under Companies Act		
	i) Conduct of Board & General meetings		
	ii) Other statutory compliance		
2	Compliance under Income Tax		
3	Compliance under GST Act		
4	Status of Compliance under Labour Laws (if applicable)		
5	Status of Compliance under FSSAI		
6	Timely conduct of statutory and internal audits		
	<i>Convergence activities for the project during the month (with quantifiable number)</i>		

Section F: Review & Monitoring

Meeting of Project Management Committee for the reporting month:	Date	Place
<u>Key observations of the Project Management Committee</u>		

Glimpses of Interventions



भारतीय रिज़र्व बैंक

RESERVE BANK OF INDIA

www.rbi.org.in

RBI/2024-25/20

FIDD.GSSD.CO.BC.No.03/09.01.003/2024-25

April 16, 2024

The Chairman/Managing Director & CEO
Public Sector Banks,
Private Sector Banks (including Small Finance Banks)

Madam/Dear Sir,

Master Circular – Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)

Please refer to the [Master Circular FIDD.GSSD.CO.BC.No.07/09.01.003/2023-24 dated April 26, 2023](#) on Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM).

2. The enclosed [Master Circular](#) consolidates and updates all the instructions/guidelines on the subject issued till date and replaces the earlier Master Circular issued on the subject.

Yours faithfully,

(R Giridharan)
Chief General Manager

वित्तीय समावेशन और विकास विभाग, केन्द्रीय कार्यालय, 10 वी मंजिल, केन्द्रीय कार्यालय भवन, शहीद भगतसिंह मार्ग, पोस्ट बॉक्स सं. 10014, मुंबई - 400001

Financial Inclusion & Development Dept., Central Office, 10th Floor, Central Office Building, Shahid Bhagat Singh Marg, P.B.No.10014, Mumbai-1

टेली Tel:022-22601000 फैक्स: 91-22-22621011/22610943/22610948 ई-मेल: cgmincfidd@rbi.org.in

हिंदी आसान है, इसका प्रयोग बढ़ाइए।

"चेतावनी : रिज़र्व बैंक द्वारा मेल-ड्राक, एसएमएस या फोन कॉल के जरिए किसी की भी व्यक्तिगत जानकारी जैसे बैंक के खाते का ब्यौरा, पासवर्ड आदि नहीं मांगी जाती है। यह धन रखने या देने का प्रस्ताव भी नहीं करता है। ऐसे प्रस्तावों का किसी भी तरीके से जवाब मत दीजिए।"

Caution: RBI never sends mails, SMSs or makes calls asking for personal information like bank account details, passwords, etc. It never keeps or offers funds to anyone. Please do not respond in any manner to such offers.

Master Circular

Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)

1. Background

The Ministry of Rural Development (MoRD), Government of India launched the National Rural Livelihood Mission (NRLM) by restructuring Swarnajayanti Gram Swarojgar Yojana (SGSY) with effect from 01st April 2013 (RBI Circular No. RBI/2012-13/559 dated 27 June 2013). NRLM was renamed as DAY-NRLM (Deendayal Antyodaya Yojana - National Rural Livelihoods Mission) w.e.f. March 29, 2016. The DAY-NRLM is the flagship program of Government of India for promoting poverty reduction through building strong institutions of the poor, particularly women, and enabling these institutions to access a range of financial services and livelihoods. DAY-NRLM adopts a demand driven approach, enabling the States to formulate their own State specific poverty reduction action plans. The key features of DAY-NRLM have been furnished in [Annex I](#).

2. Women SHGs and their Federations

2.1 DAY-NRLM promotes affinity-based women Self Help Groups (SHGs). However, only in case of groups to be formed with persons with disabilities and other special categories like elders and transgenders, DAY-NRLM may have both men and women in the Self-Help Groups.

2.2 Women SHGs under DAY-NRLM consist of 10-20 members. In case of special SHGs i.e., groups in the difficult areas, groups with disabled persons, and groups formed in remote tribal areas, this number may be a minimum of 5 members.

2.3 Federations of Self Help Groups formed at village, gram panchayat, cluster or higher level may be registered under appropriate Acts prevailing in their respective states.

Financial Assistance to the SHGs

3. Revolving Fund

DAY-NRLM, MoRD, will provide Revolving Fund (RF) support as corpus ranging between ₹20,000 - ₹30,000 per SHG to strengthen their institutional and financial management capacity and build a good credit history within the group. SHGs in existence for a minimum period of 3/6 months and follow the norms of good SHGs known as 'Panchasutras', viz., regular meetings, regular savings, regular internal lending, regular recoveries and maintenance of proper books of accounts, and which have not received any RF earlier will be eligible for such support.

4. Capital Subsidy

No capital subsidy would be sanctioned to any SHG under DAY-NRLM.

5. Community Investment Support Fund (CIF)

CIF will be provided by MoRD to the SHGs promoted under DAY-NRLM in all blocks and will be routed through the village level/cluster level federations, to be maintained in perpetuity by the federations. The CIF may be used by the federations to advance loans to the SHGs and/or to undertake common/collective socio-economic activities.

6. Interest Subvention

DAY-NRLM has a provision for interest subvention for women SHGs. Salient features of the Scheme are enclosed in [Annex II](#).

7. Role of banks:

7.1 Opening of Savings/Current Accounts: The role of banks would commence with opening of accounts for all the SHGs including those having members with disability and for the federations of SHGs.

- (i) The SHGs engaged in promoting of savings habits among their members would be eligible to open savings bank accounts.
- (ii) For KYC verification pertaining to SHG members, instructions in the Master Direction on KYC (dated February 25, 2016, as updated from time to time) shall be adhered to. As regards submission of PAN/Form 60 by SHGs, banks shall be guided by Section 33A(b) of the Master Direction on KYC.
- (iii) Business Correspondents deployed by banks may also be authorized to open saving bank accounts of the SHGs, subject to adherence to extant BC guidelines and in accordance with the bank's Board approved policy on Business Correspondents.
- (iv) Opening of savings account of all members with the bank shall not be made a prerequisite for credit linkage of SHGs. Banks are advised to maintain separate savings and loan accounts for SHGs.
- (v) Banks are advised to open savings accounts of federations of SHGs at village, gram panchayat, cluster or higher level. These accounts may be categorized as savings account for 'Association of persons'. The 'Know Your Customer' (KYC) norms for the signatories of such accounts as specified from time to time by Reserve Bank of India would be applicable.
- (vi) Banks are advised to open current accounts for Producer Groups promoted under

DAY-NRLM at village, gram panchayat, cluster or higher level. The 'Know Your Customer' (KYC) norms for the signatories of such accounts as specified from time to time by Reserve Bank of India would be applicable.

7.2 Transaction in Savings/Cash Credit account of SHGs and Federation of SHGs

- (i) SHGs and their federations may be encouraged to transact through their respective savings/cash credit accounts.
- (ii) Banks are advised to put in place dual-authentication facility in both ON-US and OFF-US¹ environment to enable SHGs to perform transactions in jointly operated savings/cash credit accounts at retail outlets managed by Business Correspondents. Banks are also advised to extend all such services to SHGs and their federations through Business Correspondents as per their board approved policies.

7.3 Lending to SHGs and their individual members

7.3.1 Eligibility Criteria for SHGs to avail loans:

- (i) SHGs should be in active existence for at least 6 months as per their books of accounts (and not from the date of opening of S/B account).
- (ii) SHGs should be practicing '*Panchasutras*' i.e., regular meetings, regular savings, regular inter-loaning, timely repayment and up-to-date books of accounts.
- (iii) SHGs should qualify as per grading norms fixed by NABARD. As and when the federations of the SHGs come into existence, the grading exercise may be done by the federations to support the banks.
- (iv) The existing defunct SHGs are also eligible for credit if these are revived and continue to be active for a minimum period of three months.

7.3.2 Loan Application:

- (i) All banks may use the Common Loan Application Forms devised by Indian Bank's Association (IBA) for extending credit facility to SHGs.

¹ Dual authentication: Transaction authenticated by two members of the SHG through their Aadhaar and biometrics. NPCI has enabled dual authentication for both intra-bank (SHG account and BC/terminal belonging to the same bank) and inter-bank (SHG account and BC/terminal belonging to the different banks) transactions.

ON-US/ intra bank transactions: Such transactions where the instrument that is used for the transaction is issued by the same bank whose terminal is acquiring the transaction

OFF-US/ inter bank transactions: Such transactions where the instrument that is used for the transaction is issued by a bank which is different from the bank whose terminal is acquiring the transaction.

- (ii) Banks may encourage SHGs to submit loan applications online through the system developed by DAY-NRLM and the National Portal for Credit Linked Schemes.

7.3.3 Loan amount

- (i) Emphasis is laid on the multiple doses of assistance under DAY-NRLM. This would mean assisting an SHG over a period of time, through repeat doses of credit, to enable the group to access higher amounts of credit for taking up sustainable livelihoods and improving the quality of life.
- (ii) SHGs may avail either Term Loan (TL) or a Cash Credit Limit (CCL) or both based on their requirement. In case of need, additional loan may be sanctioned even though the previous loan is outstanding, based on the repayment behavior and performance of the SHG.
- (iii) In case of CCL, banks are advised to sanction a minimum loan of ₹6 lakh to each eligible SHG for a period of 3 years with a yearly drawing power (DP). The drawing power may be enhanced annually based on the repayment performance of the SHG. The drawing power may be calculated as follows:
 - a) DP for the first year: 6 times of the existing corpus or minimum of ₹1.5 lakh, whichever is higher.
 - b) DP for the second year: 8 times of the corpus at the time of review/enhancement or minimum of ₹3 lakh, whichever is higher.
 - c) DP for the third year: Minimum of ₹6 lakh based on the Micro Credit Plan (MCP) prepared by SHG and appraised by the federations/support agency and the previous credit history.
 - d) DP for the fourth year onwards: Above ₹6 lakh, based on the MCP prepared by SHG and appraised by the federations/support agency and the previous credit history.
- (iv) In case of Term Loan, banks are advised to sanction loans in doses as mentioned below:
 - a) First dose: 6 times of the existing corpus or minimum of ₹1.5 lakh, whichever is higher.
 - b) Second dose: 8 times of the existing corpus or minimum of ₹3 lakh, whichever is higher.
 - c) Third dose: Minimum of ₹6 lakh, based on the MCP prepared by the SHGs and

appraised by the federations/support agency and the previous credit history.

d) Fourth dose onwards: Above ₹6 lakh, based on the MCP prepared by the SHGs and appraised by the federations/support agency and the previous credit history.

(Corpus is inclusive of revolving funds, if any, received by the SHG, its own savings, interest earned by the SHG from on-lending to its members, income from other sources, and funds from other sources in case of promotion by other institutes/NGOs.)

(v) Banks are advised take necessary measures to ensure that eligible SHGs are provided with repeat loans.

7.3.4 Credit facilities to SHG members

(i) In order to facilitate women SHG members to graduate to entrepreneurs, banks may consider extending loans up to ₹10 lakh to individual members of select matured well performing SHGs (SHGs which are more than 2 years old and have accessed at least one dose of bank loan with timely repayment) as per their lending policy. The individual should be running a viable economic enterprise. Banks are advised to share data on individual loans to women SHGs members in a mutually agreed format and periodicity with DAY-NRLM.

(ii) One woman in every SHG under DAY-NRLM may be provided a loan up to ₹1 lakh under the MUDRA Scheme, if she is otherwise eligible.

(iii) Banks are advised to provide minimum OD facility of ₹5000 to every woman SHG member having PMJDY account in accordance with the guidelines issued by Indian Banks' Association (IBA). Banks may regularly share data on OD limit to women SHGs' members in a mutually agreed format and periodicity with DAY-NRLM.

(iv) DAY-NRLM has created 'Women Enterprise Acceleration Fund' for individual women SHGs members eligible as per clause (i) and (ii) above. Salient features of the Fund are enclosed in [Annex-III](#).

(v) Credit to Producer Groups/Producer Organisations: To facilitate women SHG members getting a better price for their produce through collectivization/aggregation/value addition, banks may consider extending loans to select well performing Producers Groups/Producers Organisations under DAY-NRLM for their commercial activities as per their lending policy.

7.3.5 Purpose of loan and repayment:

- (i) The loan amount would be distributed among members based on the MCP prepared by the SHGs. The loans may be used by members for meeting social needs, high cost debt swapping, construction or repair of house, construction of toilets and taking up sustainable livelihoods or to finance any viable common activity started by the SHGs.
- (ii) In order to facilitate use of loans for augmenting livelihoods of SHG members, at least 50% of loans above ₹1 lakh, 75% of loans above ₹4 lakh and at least 85% of loans above ₹6 lakh should be used primarily for income generating productive purposes. MCPs prepared by SHGs would form the basis for determining the purpose and usage of loans.
- (iii) Repayment schedule for Term Loans may be as follows:
 - a) The first dose of loan may be repaid in 24-36 months in monthly/quarterly instalments.
 - b) The second dose of loan may be repaid in 36-48 months in monthly/quarterly instalments.
 - c) The third dose of loan may be repaid in 48-60 months based on the cash flow in monthly/quarterly instalments.
 - d) From the fourth dose onwards loans may be repaid between 60-84 months based on the cash flow in monthly/quarterly installments.
- (iv) All credit facilities sanctioned under DAY-NRLM would be governed by the asset classification norms issued by Reserve Bank of India from time to time.

7.3.6 Security and Margin:

- (i) For loans to SHGs up to ₹10.00 lakh, no collateral and no margin will be obtained. No lien should be marked against savings bank accounts of SHGs and no deposits should be insisted upon while sanctioning loans.
- (ii) For loans to SHGs above ₹10 lakh and up to ₹20 lakh, no collateral should be obtained, and no lien should be marked against savings bank account of SHGs. However, the entire loan (irrespective of the loan outstanding, even if it subsequently goes below ₹10 lakh) would be eligible for coverage under Credit Guarantee Fund for Micro Units (CGFMU).

- (iii) For loan to SHGs above ₹10 lakh and up to ₹20 lakh, a margin not exceeding 10% of the loan amount exceeding ₹10 lakh may be obtained as per the bank's approved loan policy.

7.3.7 Dealing with Defaulters²:

Willful defaulters should not be financed under DAY-NRLM. In case willful defaulters are members of a group, they may be allowed to benefit from the thrift and credit activities of the group including the corpus built up with the assistance of Revolving Fund. However, as regards credit facilities, the group may be financed excluding such defaulters while documenting the loan. Banks should not deny loans to SHGs on the grounds of family members of individual members of SHG being defaulters with the bank. Further, non-willful defaulters should not be debarred from receiving loans. In case default is due to genuine reasons, banks may follow the norms prescribed for restructuring the credit facilities.

7.3.8 Documentation and follow- up

- (i) Loan pass books or statement of accounts in regional languages may be issued to the SHGs which may contain all the details of the loans disbursed to them and the terms and conditions applicable to the loan sanctioned. The passbook should be updated with every transaction made by the SHGs. At the time of documentation and disbursement of loan, banks may clearly explain the terms and conditions as part of financial literacy.
- (ii) Bank branches may designate one fixed day in a fortnight to enable the staff to go to the field and attend the meetings of the SHGs and Federations to observe the operations of the SHGs, keep a track of the regularity of the SHGs' meetings and monitor their performance.

8 Recovery:

Prompt repayment of the loans is necessary to ensure the success of the programme. Banks shall take all possible measures, such as personal contact and organization of joint recovery camps with District Mission Management Units (DMMUs)/District Rural Development Agency (DRDAs) to ensure the recovery of loans. Keeping in view the importance of loan recovery, banks should prepare a list of defaulting SHGs under DAY-

² As defined in the RBI Master Circular on Wilful Defaulters dated July 01, 2015, updated from time to time.

NRLM every month and furnish the list in the Block Level Bankers Committee (BLBC) and District Consultative Committee (DCC) meetings. This would enable the DAY-NRLM staff at the block/district level to assist the bankers in initiating recovery.

9 Credit Target Planning and Monitoring of the Scheme

- (i) Banks may set up cells for Self Help Groups in their respective Regional/Zonal Offices. These cells should periodically monitor and review the flow of credit to the SHGs, ensure the implementation of the Scheme, collect data from the branches and make available consolidated data to the Head Office and the DAY-NRLM units at the districts/blocks. The consolidated data may also be discussed in the State Level Bankers' Committee (SLBC), BLBC and DCC meetings regularly to maintain effective communication with the state staff and all banks.
- (ii) State Level Bankers' Committee: SLBCs shall constitute a sub-committee on SHG Bank Linkage. The sub-committee should consist of members from all banks operating in the State, RBI, NABARD, CEO of SRLM, representatives of State Rural Development Department, Secretary-Institutional Finance and representatives of Development Departments etc. Based on the Potential Linked Plan/State Focus Paper prepared by NABARD, the SLBC sub-committee on SHG Bank Linkage may arrive at the district-wise, block-wise and branch-wise credit plan. The sub-committee should consider the existing SHGs, new SHGs proposed, and number of SHGs eligible for fresh and repeat loans as suggested by the SRLMs to arrive at the credit targets for the states. The targets so decided should be approved in the SLBC and reviewed and monitored periodically for effective implementation. The sub-committee shall discuss a specific agenda of review, implementation and monitoring of the SHG-Bank linkage and the issues/constraints in achievement of the credit target. The decisions of the SLBC should be derived from the analysis of the reports of the sub-committee.
- (iii) The district-wise credit plans should be communicated to the District Consultative Committee (DCC). The block-wise/cluster-wise targets are to be communicated to the bank branches through the Controllers.
- (iv) District Consultative Committee: The DCC shall regularly monitor the flow of credit to SHGs at the district level and resolve issues that constrain such flow of credit. This committee should include DMMU staff representing DAY-NRLM and office bearers of SHG federations in addition to other members.

- (v) Block Level Bankers Committee: The BLBC shall take up issues of SHG Bank linkage at the block level. In this Committee, the SHGs/Federations of the SHGs should be included as members to raise their voice in the forum. Branch-wise status of SHG credit shall be monitored at the BLBC.
- (vi) Reporting to Lead District Managers: The branches may furnish the progress report and the delinquency report under various activities of DAY-NRLM in the format at [Annex-IV](#) and [V](#) to the LDM every month for onward submission to Special Sub-Committee constituted by SLBC.
- (vii) Reporting to RBI: Banks may furnish a state-wise consolidated report on the progress made under DAY-NRLM to RBI on quarterly basis within a month from the end of the concerned quarter.
- (viii) Lead Bank Return (LBR): Existing procedure of submitting LBR is to be continued.

10 Financial Literacy:

Financial Literacy is one of the important strategies to spread awareness on financial behavior and keep households informed about various financial products and services. DAY-NRLM has trained and deployed a large number of cadre called 'Financial Literacy Community Resource Persons (FL-CRPs)' to carry out financial literacy camps at village level. Financial Literacy Centers (FLC) established by various banks may coordinate with respective SRLMs and utilize the services of FL-CRPs to conduct village camps on Financial Literacy.

11 Data Sharing:

Banks may share the following data in mutually agreed formats/intervals with DAY-NRLM or State Rural Livelihood Missions (SRLMs). While sharing such data, banks may ensure conformity with the provisions of paragraph 25 of the Master Circular on Customer Service in Banks dated July 01, 2015. As regards consent of customers, as mentioned in para 25 (iv) of the above Master Circular, banks may ensure that consent may be obtained specially and separately from the customers and not as a consent in the form of a general clause either in the applications for opening the account or for the loan.

- (i) Data for initiating various strategies including recovery etc. Such data may be drawn directly from the CBS platform.
- (ii) Data of Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) and Pradhan Mantri

Suraksha Bima Yojana (PMSBY) to facilitate higher enrollment and claim settlement under the mentioned schemes.

- (iii) Data of all SHG transactions being done at Business Correspondent points using dual authentication technology.

12 DAY-NRLM support to Banks:

- (i) SRLM would develop strategic partnerships with major banks at various levels. It would invest in creating enabling conditions for both the banks and the poor for a mutually rewarding relationship.
- (ii) SRLM would assist the SHGs through imparting financial literacy, extending counselling services on savings, credit, insurance, pension and training on micro-investment planning embedded in capacity building.
- (iii) SRLMs would extend support to banks for improving quality of banking services to poor clients including follow-up for recovery of over dues if any, by positioning customer relationship managers (Bank Mitra/Sakhi) with every bank branch involved in financing of SHGs.
- (iv) Leveraging IT mobile technologies and institutions of the poor, youth or SHG members as business facilitators and business correspondents.
- (v) Community Based Repayment Mechanism (CBRM): One exclusive sub-committee for SHG Bank Linkage may be formed at village/cluster/block level which would provide support to the banks in ensuring proper utilization of loan amount, recovery etc. The bank linkage sub-committee members from each village level federation along with project staff would meet once in a month under the chairmanship of the Branch Manager in the branch premises with the agenda items relating to bank linkage.

Key Features of DAY-NRLM

1. Universal Social Mobilization: To begin with, DAY-NRLM would ensure that at least one member from each identified rural poor household, preferably a woman, is brought under the SHG network in a time bound manner. Subsequently, both women and men would be organized for addressing livelihood issues i.e., farmers organizations, milk producers' cooperatives, weavers' associations, etc. All these institutions are inclusive and no poor would be left out of them. DAY-NRLM would ensure adequate coverage of vulnerable sections of the society such that 50% of the beneficiaries are SC/STs, 15% are minorities and 3% are persons with disability, while keeping in view the ultimate target of 100% coverage of all households under the automatically included criteria and households with at least one deprivation criterion as per Socio-Economic and Caste Census (SECC).

2. Participatory Identification of poor (PIP): DAY-NRLM would undertake a community based process for covering the target beneficiaries i.e., participation of the poor in the process of identifying the target group. Participatory process based on sound methodology and tools (*social mapping and well-being categorization, deprivation indicators*) and also locally understood and accepted criteria ensures local consensus that inadvertently reduces the inclusion and exclusion errors and enables formation of the groups on the basis of mutual affinity.

The households identified with at least one deprivation criteria as per Socio-Economic and Caste Census (SECC) along with households identified through the P.I.P process would be accepted as DAY-NRLM target group and would be eligible for all the benefits under the programme. The list finalized after P.I.P process would be vetted by the Gram Sabha and approved by the Gram Panchayat.

Till the P.I.P process is undertaken by the State in a particular district/block, the rural households with at least one deprivation criteria as per SECC list would be targeted under DAY-NRLM. As already provided in the Framework for implementation of DAY-NRLM, up to 30% of the total membership of the SHGs may be from among the population marginally above the poverty line, subject to the approval of other members of the group. This 30% also includes the poor households whose name does not figure in the SECC list but are as poor as those included in SECC list.

3. Promotion of Institutions of the poor: Strong institutions of the poor such as SHGs and their village level and higher-level federations are necessary to provide space, voice and resources for the poor and for reducing their dependence on external agencies. They empower them and also act as instruments of knowledge and technology dissemination, and hubs of production, collectivization and commerce. DAY-NRLM, therefore, would focus on setting up these institutions at various levels. In addition, DAY-NRLM would promote specialized institutions like Livelihoods collectives, producers' cooperative/companies for livelihoods promotion through deriving economies of scale, backward and forward linkages, and access to information, credit, technology, markets etc. The Livelihoods collectives would enable the poor to optimize their limited resource.

4. Strengthening all existing SHGs and federations of the poor. There are existing institutions of the poor women formed by Government efforts and efforts of NGOs. DAY-NRLM would strengthen all existing institutions of the poor in a partnership mode. The self-help promoting institutions both in the Government and in the NGO sector would promote social accountability practices to introduce greater transparency. This would be in addition to the mechanisms that would be evolved by SRLMs and state governments. The learning from one another underpins the key processes of learning in DAY-NRLM.

5. Emphasis on Training, Capacity Building and Skill Building: DAY-NRLM would ensure that the poor are provided with the requisite skills for managing their institutions, linking up with markets, managing their existing livelihoods, enhancing their credit absorption capacity and credit worthiness, etc. A multi-pronged approach is envisaged for continuous capacity building of the targeted families, SHGs, their federations, government functionaries, bankers, NGOs and other key stakeholders. Particular focus would be on developing and engaging community professionals and community resource persons for capacity building of SHGs and their federations and other collectives. DAY-NRLM would make extensive use of Information, Communication & Technology (ICT) to make knowledge dissemination and capacity building more effective.

6. Revolving Fund and Community Investment Support Fund (C.I.F): A Revolving Fund would be provided to eligible SHGs as an incentive to inculcate the habit of thrift and accumulate their own funds towards meeting their credit needs in the long-run and immediate consumption needs in the short-run. The C.I.F would be a corpus and used for meeting the members' credit needs directly and as catalytic capital for leveraging repeat bank finance. The C.I.F would be routed to the SHGs through the Federations.

The key to coming out of poverty is continuous and easy access to finance, at reasonable rates, till they accumulate their own funds in large measure.

7. Universal Financial Inclusion: DAY-NRLM would work towards achieving universal financial inclusion, beyond basic banking services to all the poor households, SHGs and their federations. DAY-NRLM would work on both demand and supply side of Financial Inclusion. On the demand side, it would promote financial literacy among the poor and provide catalytic capital to the SHGs and their federations. On the supply side, it would coordinate with the financial sector and encourage use of ICT based financial technologies, business correspondents and community facilitators like 'Bank Mitras'. It would also work towards universal coverage of rural poor against loss of life, health and assets. Further, it would work on remittances, especially in areas where migration is endemic.

8. Provision of Interest Subvention: The rural poor need credit at low rate of interest and in multiple doses to make their ventures economically viable. In order to ensure affordable credit, DAY-NRLM has a provision for subvention on interest rates.

9. Funding Pattern: DAY-NRLM is a Centrally Sponsored Scheme and the financing of the programme would be shared between the Centre and the States in the ratio of 60:40 (90:10 in case of North Eastern States including Sikkim; completely from the Centre in case of UTs). The Central allocation earmarked for the states would broadly be distributed in relation to the incidence of poverty in the states.

10. Implementation in Blocks: The blocks that are taken up for implementation of DAY-NRLM would have a full complement of trained professional staff and cover a whole range of activities of universal and intense social and financial inclusion, livelihoods, partnerships etc.

11. Rural Self Employment Training Institutes (RSETIs). RSETI concept is built on the model pioneered by Rural Development Self Employment Institute (RUDSETI) – a collaborative partnership between SDME Trust and Canara Bank. The model envisages transforming unemployed youth into confident self-employed entrepreneurs through a short duration experiential learning programme followed by systematic long duration hand holding support. The need-based training builds entrepreneurship qualities, improves self-confidence, reduces risk of failure and develops the trainees into change agents. Banks are fully involved in selection, training and post training follow up stages.

The needs of the poor articulated through the institutions of the poor would guide RSETIs in preparing the participants/trainees in their pursuits of self-employment and enterprises. DAY-NRLM would encourage public sector banks to set up RSETIs in all districts of the country.



Interest Subvention Scheme for Women SHGs

I. Interest subvention scheme on Credit to Women SHG during the year 2024-25 for all Public Sector Banks, Private Sector Banks and Small Finance Banks in all districts

- i. The scheme is limited to Women Self Help Groups under DAY-NRLM in rural areas only.
- ii. For loans up to ₹3 lakh under the scheme, banks will extend credit at a concessional interest rate of 7% per annum. For outstanding credit balance upto ₹3 lakh, banks will be subvented at a uniform rate of 4.5% per annum during FY 2024-25.
- iii. For loans above ₹3 lakh and up to ₹5 lakh under the scheme, banks will extend credit at interest rate equivalent to their 1 year-MCLR or any other external benchmark based lending rate or 10% per annum, whichever is lower. For outstanding credit balance above ₹3 lakh and upto ₹5 lakh, banks will be subvented at a uniform rate of 5% per annum during FY 2024-25.
- iv. Interest Subvention will be payable only for the period during which an account remains in standard category.
- v. Women SHGs promoted by other agencies and following the DAY-NRLM protocols will also be eligible for benefit of subvented loans subject to prior submission of the details of such SHGs on the DAY-NRLM SHG database.
- vi. The interest subvention scheme shall be implemented for banks through a Nodal Bank selected by the Ministry of Rural Development (MoRD). The Nodal Bank will operationalize the scheme through a web based platform, as advised by MoRD. For the year 2024-25, Indian Bank has been nominated as the Nodal Bank by MoRD.
- vii. In order to avail the interest subvention on credit extended to the women SHGs, banks may ensure that the accounts of SHGs (both savings and loans) under DAY-NRLM are appropriately identified in their CBS with unique codes assigned by DAY-NRLM/SRLMs.

viii. All banks participating in the interest subvention scheme are required to upload information on the SHG savings and loan account, etc. on the respective Nodal Bank/ Nodal Agency Portal as per the required technical specifications provided.

ix. In order to avail the interest subvention on credit upto ₹3 lakh extended to women SHGs under DAY-NRLM @7% as well as on credit above ₹3 lakh and upto ₹5 lakh extended to SHGs, all banks are required to submit claim certificates on quarterly basis (i.e., as on June 30, 2024; September 30, 2024; December 31, 2024 and March 31, 2025) to the Nodal Bank. The claims submitted by any bank should be accompanied by claim certificate (in original) certifying the claims for subvention as true and correct. The claims of any bank for the quarter ending March 2025 will be settled by MoRD only on receipt of the Statutory Auditor's certificate for the entire financial year i.e., FY 2024-25, from the bank.

x. The format of the claims certificates shall be as per [Annex VI](#) & [VII](#). All claims pertaining to FY 2024-25 should be submitted by banks latest by September 30, 2025 duly certified by Statutory Auditor.

xi. Any remaining claims pertaining to the disbursements made during the year 2024-25 and not included during the year, may be consolidated separately and marked as an 'Additional Claim' and submitted to the Nodal Bank latest by September 30, 2025, duly certified by Statutory Auditors.

xii. Any corrections in claims by banks shall be adjusted from later claims based on the Statutory Auditor's certificate. All banks will be required to carry out necessary correction on the Nodal Bank's/Agency's portal accordingly.

Women Enterprise Acceleration Fund

A dedicated 'Women Enterprise Acceleration Fund' has been set up to catalyse and make available medium term to long term debt financing to women entrepreneurs to enable them to invest in viable enterprises. This fund will also incentivize first-time women entrepreneurs to start their enterprises and also support existing women-owned enterprises to grow and scale-up.

Schemes for enterprises under Women Enterprise Acceleration Fund

Individual Women-led enterprises would be provided the following benefits under Women Enterprise Acceleration Fund:

1) Reimbursement of Credit Guarantee fees to lending institutions

The fund will extend support in form of reimbursement of actual credit guarantee fees incurred by banks/financial institutions for taking credit guarantee cover under Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) or Credit Guarantee Fund for Micro Units (CGFMU) under NCGTC. Actual credit guarantee fees will be reimbursed to banks/ lending institutions for providing loans to individual women SHG members under DAY-NRLM for loans up to ₹ 5 Lakh for a maximum period of 5 years. In case of loan amount exceeding ₹ 5 lakh, reimbursement of credit guarantee fees will be done in proportion to the loan amount.

2) Interest Subvention on Prompt Repayment

Women entrepreneurs making prompt repayment of credit to financial institutions will be provided 2% interest subvention to incentivize good repayment behaviour. This will also make credit affordable to women borrowers and enhance the viability of the enterprises. Under the Women Enterprise Acceleration Fund, interest subvention will be provided to SHGs on loan outstanding up to ₹1.5 lakh per borrower. In case of loan outstanding amount exceeding ₹1.5 lakh, interest subvention will be limited to the ceiling of ₹1.5 lakh only. Interest subvention will be provided to individual women entrepreneur up to a maximum duration of 3 years.

The above benefits will be provided to an Individual only once.

Implementation of schemes under Women Enterprise Acceleration Fund

The implementation of schemes under Women Enterprise Acceleration Fund will be managed by the same Nodal Bank implementing the Interest Subvention Scheme for Women Self Help Groups under DAY-NRLM. The Nodal Bank will operationalize the schemes through a web-based platform, as advised by DoRD. The detailed implementation process are as follows:

1. Reimbursement of credit guarantee fees to lending institutions:

- (i) All banks extending credit for enterprises fully or partially owned by women Self Help Group members under DAY-NRLM will be eligible to seek reimbursement of actual credit guarantee fees charged by CGTMSE or CGFMU under NCGTC.
- (ii) Banks/Lending Institutions seeking reimbursement of credit guarantee fees should be registered Member Lending Institution (MLI) under CGTMSE or CGFMU under NCGTC.
- (iii) Credit Guarantee fees charged (on actual basis) by CGTMSE or CGFMU under NCGTC for loans extended to individual women Self Help Group members under DAY-NRLM only will be considered for reimbursement.
- (iv) Reimbursement of credit guarantee fees will be considered for maximum loan outstanding of ₹5 lakh per borrower for a maximum tenure of 5 years.
- (v) In case of loan amount exceeding ₹5 lakh, reimbursement of credit guarantee fees will be done on proportionate basis.
- (vi) Reimbursement of credit guarantee fees will be considered for a borrower only once.
- (vii) Banks participating in the scheme will be required to upload the details of individual borrowers along with other relevant information on the Nodal Bank's portal.
- (viii) Details of individual borrowers uploaded on the portal by banks will be verified by respective SRLMs. For verification, SRLMs are required to enter '**Unique codes**' assigned by DAY-NRLM to individual SHG members.
- (ix) Banks should also flag the loan accounts as '**SHG Member under DAY-NRLM**' on their CBS. For identification of SHG Members under DAY-NRLM, banks are

required to embed '**Unique codes**' in banks' CBS against respective CIF/ loan accounts.

- (x) All participating banks are required to submit their claims for reimbursement of credit guarantee fees only for the verified accounts.
- (xi) Banks are required to submit claim certificate on quarterly basis (*i.e., as on June 30; September 30; December 31 and March 31*) to the Nodal Bank. The claims submitted by any lending institution should be accompanied by claim certificate given as [Annexure-VIII](#) certifying the claims as true and correct. The claims of any bank for the quarter ending March 31 will be settled by DoRD only on receipt of the Statutory Auditor's certificate for the complete Financial Year.
- (xii) Any remaining claims pertaining to the disbursements made during the previous year but not included in the claims, may be consolidated separately, and marked as an '*Additional Claim*' and submitted to Nodal Bank latest by September 30 of the subsequent Financial Year duly certified by Statutory Auditors as correct.
- (xiii) Any corrections in claims by banks shall be adjusted from later claims based on auditor's certificate. All banks will be required to carry out necessary correction on the Nodal Bank's portal accordingly.
- (xiv) Claims from bank will be settled through the Nodal Bank after due scrutiny by Department of Rural Development (DoRD).
- (xv) Banks participating in the scheme will be required to make available all relevant records pertaining to the claims made to auditors/ representatives of DoRD for verification.
- (xvi) Banks shall promptly intimate DoRD in case of any change in status as "MLI" with CGTMSE or CGFMU under NCGTC.

2. Interest Subvention on Bank loan to individual SHG members for enterprises

- (i) The scheme is limited to Women Self Help Group members being supported under DAY - NRLM in rural areas only.
- (ii) Interest subvention will be provided to an individual women entrepreneur only once.
- (iii) All banks extending credit for enterprises fully or partially owned by women Self Help Group members under DAY-NRLM at interest rate equivalent to (1-year

MCLR + max 3% spread) or maximum of 14% per annum will be eligible to claim interest subvention under this scheme.

- (iv) Banks participating in the scheme will be required to upload the details of individual borrowers along with other relevant information on the Nodal Bank's portal.
- (v) Details of individual borrowers uploaded on the portal by banks will be verified by respective SRLMs. For verification, SRLMs are required to enter '**Unique codes**' assigned by DAY-NRLM to individual SHG members.
- (vi) Banks should also flag the loan accounts as '**SHG Member under DAY-NRLM**' on their CBS. For identification of SHG Members under DAY-NRLM, banks are required to embed '**Unique codes**' in banks' CBS against respective CIF/ loan accounts.
- (vii) All participating banks are required to submit their claims for interest subvention only for the verified accounts on quarterly basis.
- (viii) Lending Institutions can claim interest subvention of 2% per annum on maximum outstanding loan of ₹1.5 lakh per borrower for a maximum tenure of 3 years. In case of loan outstanding amount exceeding ₹1.5 lakh, interest subvention will be limited to the ceiling of ₹1.5 lakh only. The tenure of the loan will be calculated from the original date of sanction of the loan.
- (ix) Lending Institutions should ensure that overlapping interest subvention schemes from multiple sources should not be combined for a single borrower.
- (x) Interest subvention can be claimed only for the period the account remained standard. No interest subvention will be payable for the period the account remained classified as "NPA". In case account classified as "NPA" subsequently turns as standard asset on account of recovery of overdues, no subvention amount will be payable for the period the account remained classified as "NPA".
- (xi) Lending Institutions are required to submit claim certificate on quarterly basis (*i.e., as on June 30; September 30; December 31 and March 31*) to the Nodal Bank. The claims submitted by any lending institution should be accompanied by claim certificate given as [Annexure-IX](#) certifying the claims as true and correct. The claims of any bank for the quarter ending March 31 will be settled by DoRD only on receipt of the Statutory Auditors' certificate for the complete Financial Year.

- (xii) Any remaining claims pertaining to the disbursements made during the previous year but not included in the claims, may be consolidated separately and marked as an '*Additional Claim*' and submitted to Nodal Bank latest by September 30 of the subsequent Financial Year duly certified by Statutory Auditors certifying the correctness.
 - (xiii) Claims from bank will be settled through the Nodal Bank after due scrutiny by Department of Rural Development (DoRD).
 - (xiv) Participating banks should credit the interest subvention amount in respective loan account within 3 days of the receipt of funds from Nodal Bank. In case the loan account is closed prior to credit of the interest subvention account, credit of the amount should be done in the savings account (if any) of the same customers. In case any amount could not be credited to respective beneficiary account, the same should be returned to DoRD.
 - (xv) Any corrections in claims by banks shall be adjusted from later claims based on auditor's certificate. All banks will be required to carry out necessary correction on the Nodal Bank's portal accordingly.
 - (xvi) Banks participating in the scheme will be required to make available all relevant records pertaining to the claims made to auditors/ representatives of DoRD for verification.
-

Branch Name:

Bank Name:

Block Name:

Progress report for
the month of -----,
20--

District:

State:

No. of loans – Actual * ₹lakh

S. No	No of SHGs with SB account			Credit Linked SHGs in the month						Credit outstanding	
	Total S/B accounts till last month	New a/c opened this month	Cumulative	New Loans		Repeat Loans		Cumulative		No of loans	Amount Outstanding*
				No of loans	Amount Disbursed*	No of loans	Amount Disbursed*	No of loans	Amount Disbursed*		
	1(a)	1(b)	1(c) = 1(a)+1(b)	2(a)	2(b)	3(a)	3(b)	4(a) = 2(a)+3(a)	4(b)=2(b)+3(b)	5(a)	5(b)

*New loans: First linkage loans to be considered as the new loans

*Second and third linkage to be counted under repeat finance

* Credit Outstanding 5(a) and 5(b) should be inclusive of the cumulative credit disbursed in the month i.e. 5(b) = 4(b) + credit outstanding till last month

Delinquency Report for the month of

Branch Name:

Bank Name:

Block Name:

District:

State:

(No. of loans – Actual * ₹ lakh)

SL No	No of loan accounts	Amount outstanding*	Irregular accounts (4)		Details of the NPA accounts (5)	
			No of accounts	Overdue Amount*	No of accounts	Amount*
1	2	3	4(a)	4(b)	5(a)	5(b)

Claim for Interest Subvention on credit upto Rs 3 lakh to women SHGs at 7% per annum, for the for the year 2024-25

Name of Bank:

Statement for claims for the period to: credit disbursed/outstanding up-to ₹ 3 lakh

New loan accounts opened during the period .....to		Outstanding as at (end of previous period)		Total outstanding as at		Amount of interest Subvention @4.5%
No of Accounts	Amount	No of Accounts	Amount	No of Accounts	Amount	Amount

No of unique SHGs availed interest subvention	Amount of Interest subvention

NB: Number (No.) and Amount in actual figures

We hereby certify that credit to women SHGs upto ₹ 3 lakh were charged Interest @ 7% per annum on the above disbursement/outstanding in the year 2024-25. We certify that the accounts are eligible for interest subvention as per RBI guidelines and bank has verified and flagged all these accounts as 'SHGs under DAY-NRLM' on CBS. We also certify that there is no duplication in the claims and minimal human intervention while submitting the interest subvention claim from the branch level onwards

Dated

Authorized Signatory & seal

(This claim format, consolidated for the year, needs to be duly certified by Statutory Auditors and submitted along with the claims for the quarter ending March 31, 2025 within September 30, 2025)

Claim for Interest Subvention on credit above ₹ 3 lakh and upto ₹ 5 lakh to women SHGs, for the for the year 2024-25

Name of Bank:

Statement for claims for the periodto: credit disbursed/outstanding above ₹ 3 lakh and upto ₹ 5 lakh

New loan accounts opened during the period .....to			Outstanding as at (end of previous period)			Total outstanding as at			Amount of interest subvention @ 5%
No of Accounts	Applicable Interest rate (1 yr MCLR/ Benchmark rate)	Amount	No of Accounts	Applicable Interest rate (1 yr MCLR/ Benchmark rate)	Amount	No of Accounts	Applicable Interest rate (1 yr MCLR/ Benchmark rate)	Amount	Amount

No of unique SHGs availed interest subvention	Amount of Interest subvention

NB: Number (No.) and Amount in actual figures

We hereby certify that credit to women SHGs above ₹3 lakh and upto ₹5 lakh were charged Interest as per Banks disclosed 1 year MCLR/ Benchmark rate on the above disbursement/outstanding in the year 2024-25. We certify that the accounts are eligible for interest subvention as per RBI guidelines and bank has verified and flagged all these accounts as 'SHGs under DAY-NRLM' on CBS. We also certify that there is no duplication in the claims and minimal human intervention while submitting the interest subvention claim from the branch level onwards

Dated

Authorized Signatory & Seal

(This claim format, consolidated for the year, needs to be duly certified by Statutory Auditors and submitted along with the claims for the quarter ending March 31, 2025 within September 30, 2025)

Claim for Credit Guarantee Fees charged on credit up to Rs 5 lakh to enterprises owned by women SHG members

Name of Bank/ lending institution:

Statement for claims for the period to: credit disbursed up-to Rs 5 lakh

New loan accounts opened during the period .....to		Amount of Credit Guarantee Fees
No of Accounts	Amount	

NB: Number (No.) and Amount in actual figures

We certify that the accounts are eligible for claim of credit guarantee fess as per DoRD guidelines and bank/ lending institution has verified and flagged all these accounts as 'SHGs under DAY-NRLM' on CBS. We also certify that there is no duplication in the claims and credit guarantee fees has not been charged to the customer

Dated

Authorized Signatory & seal

Statutory Auditor's Signature & seal

(This claim format, consolidated for the year, needs to be duly certified by Statutory Auditors and submitted along with the claims for the quarter ending March 31,2025 within September 30,2025)

Claim for Interest Subvention on credit up to Rs 1.5 lakh to enterprises owned by women SHG members

Name of Bank/ lending institution:

Statement for claims for the period to: credit disbursed/outstanding up-to Rs 1.5 lakh

New loan accounts opened during the period .....to		Outstanding as at (end of previous period)		Total outstanding as at		Amount of interest Subvention @2%
No of Accounts	Amount	No of Accounts	Amount	No of Accounts	Amount	Amount

No of women SHG members availed interest subvention	Amount of Interest subvention

NB: Number (No.) and Amount in actual figures

We certify that the accounts are eligible for interest subvention as per DoRD guidelines and bank/ lending institution has verified and flagged all these accounts as ‘SHGs under DAY-NRLM’ on CBS. We also certify that there is no duplication in the claims and minimal human intervention while submitting the interest subvention claim from the branch level onwards. It is also certified that all previous claims received has been credited to respective beneficiary accounts and there is no balance fund with the bank.

Dated

Authorized Signatory & seal

Statutory Auditor’s Signature & seal

(This claim format, consolidated for the year, needs to be duly certified by Statutory Auditors and submitted along with the claims for the quarter ending March 31,2025 within September 30, 2025)

Appendix

No.	Circular No.	Date	Subject
1.	RPCD.GSSD.CO. NO. 81/09.01.03/2012-13	27.06.2013	Priority Sector Lending – Restructuring of SGSY as National Rural Livelihoods Mission(DAY-NRLM)- Aajeevika
2.	RPCD.GSSD.CO.BC.No.38/09.01.03/2013-14	20.09.2013	Credit Facility under National Rural Livelihoods Mission(NRLM)- Aajeevika- Reporting to RBI
3.	RPCD.GSSD.CO.BC.No.57/09.01.03/2013-14	19.11.2013	Restructuring of SGSY as National Rural Livelihoods Mission (NRLM)-Aajeevika- Interest Subvention Scheme
4.	FIDD.GSSD.CO.BC.NO.45/09.01.03/2014- 15	09.12.2014	National Rural Livelihoods Mission(NRLM)- Aajeevika- Interest Subvention Scheme
5.	FIDD.GSSD.CO.BC.NO.19/09.01.03/2015- 16	21.01.2016	National Rural Livelihoods Mission(NRLM)- Aajeevika- Interest Subvention Scheme 2015-16
6.	FIDD.GSSD.CO.BC.NO.26/09.01.03/2015- 16	09.06.2016	National Rural Livelihoods Mission(NRLM)- Aajeevika- Interest Subvention Scheme 2015-16 – Modification.
7.	FIDD.GSSD.CO.BC.NO.13/09.01.03/2016- 17	25.08.2016	National Rural Livelihoods Mission(NRLM)- Aajeevika- Interest Subvention Scheme 2016-17
8.	FIDD.GSSD.CO.BC.NO.17/09.01.03/2017- 18	18.10.2017	National Rural Livelihoods Mission(NRLM)- Aajeevika- Interest Subvention Scheme 2017-18
9.	FIDD.GSSD.CO.BC.NO.05/09.01.03/2018- 19	03.07.2018	National Rural Livelihoods Mission(NRLM)- Aajeevika- Interest Subvention Scheme 2018-19
10.	FIDD.GSSD.CO.BC.No.02/09.01.01/2019-20	01.07.2019	Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)
11.	FIDD.GSSD.CO.BC.No.15/09.01.01/2019-20	26.11.2019	Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)
12.	FIDD.GSSD.CO.BC.No.06/09.01.01/2020-21	18.09.2020	Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)
13.	FIDD.GSSD.CO.BC.No.09/09.01.003/2021-22	09.08.2021	Enhancement of collateral free loans to Self Help Groups (SHGs) under DAY-NRLM from ₹10 lakh to ₹20 Lakh
14.	FIDD.GSSD.CO.BC.No.09/09.01.003/2022-23	20.07.2022	Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)
15.	FIDD.GSSD.CO.BC.No.07/09.01.003/2023-24	26.04.2023	Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)

K-11062/04/2017/NRLM(Livelihoods) (e- 358304)

Government of India
Ministry of Rural Development
Rural Livelihoods Division
DAY – National Rural Livelihoods Mission

7th Floor, NDCC II Building,
Jai Singh Road, New Delhi 1,
15th October 2020.

To

The State Mission Directors / Chief Executive Officers of SRLM,
All States/ UTs

Subject: RBI Circular on opening of account for Producer Groups (PGs) promoted under DAY-NRLM

Madam / Sir,

I am directed to say that promotion of Producer Group is one of the key value chain development interventions under DAY-NRLM which provides support to Mahila Kisan households for better market access. Now, Reserve Bank India has recognized Producers Groups being promoted under DAY-NRLM as collectives to facilitate collective production and marketing for the produce of the members. In the Master Circular dated 18th September 2020, point no.7.1.3 banks are advised to open current account for Producer Groups promoted under DAY-NRLM at village, Gram Panchayat, Cluster or higher level.

A Copy of the Master Circular is enclosed herewith for further reference and necessary action.

Yours faithfully,

Encl:- As above.



(H.R. Meena)

Deputy Secretary to Govt. of India

1. Shri Sourav Roy NMM (FI)



भारतीय रिज़र्व बैंक

RESERVE BANK OF INDIA

www.rbi.org.in

RBI/2020-2021/39

FIDD.GSSD.CO.BC. No.06/09.01.01/2020-21

September 18, 2020

The Chairman/ Managing Director & CEO
Public Sector Banks,
Private Sector Banks (including Small Finance Banks).

Madam/Dear Sir

Master Circular – Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)

Please refer to the [Master Circular FIDD.GSSD.CO.BC.No.15/09.01.01/2019-20 dated November 26, 2019](#) on Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM).

The Master Circular has been suitably updated by incorporating the modifications in DAY-NRLM scheme issued up to September 18, 2020, which are listed in the [appendix](#) and also been placed on website (<https://www.rbi.org.in>).

Yours faithfully

(Sonali Sen Gupta)
Chief General Manager

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"चेतावनी : द्वारा बैंक रिज़र्व भेल-डाक, एसएमएस या फोन कॉल के जरिए किसी की भी व्यक्तिगत जानकारी जैसे बैंक के खाते का ब्यौरा, पासवर्ड आदि नहीं मांगी जाती है। यह धन रखने या देने का प्रस्ताव भी नहीं करता है। ऐसे प्रस्तावों का किसी भी तरीके से जवाब मत दीजिए।"

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Master Circular

Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)

1. Background

The Ministry of Rural Development (MoRD), Government of India launched the National Rural Livelihood Mission (NRLM) by restructuring Swarnajayanti Gram Swarajgar Yojana (SGSY) with effect from 01st April 2013 ([RBI Circular No. RBI/2012-13/559 dated 27 June 2013](#)). NRLM was renamed as DAY-NRLM (Deendayal Antyodaya Yojana - National Rural Livelihoods Mission) w.e.f. March 29, 2016. The DAY-NRLM is the flagship program of Govt. of India for promoting poverty reduction through building strong institutions of the poor, particularly women, and enabling these institutions to access a range of financial services and livelihoods. DAY-NRLM adopts a demand driven approach, enabling the States to formulate their own State specific poverty reduction action plans. The blocks and districts in which all the components of DAY-NRLM would be implemented, either through the SRLMs or partner institutions or NGOs, would be the intensive blocks and districts, whereas remaining would be non-intensive blocks and districts. The key features of DAY-NRLM have been furnished in [Annex I](#).

2. Women SHGs and their Federations

2.1 Women SHGs under DAY-NRLM consist of 10-20 persons. In case of special SHGs i.e. groups in the difficult areas, groups with disabled persons, and groups formed in remote tribal areas, this number may be a minimum of 5 persons.

2.2 DAY-NRLM promotes affinity-based women Self Help Groups (SHGs).

2.3 Only for groups to be formed with Persons with disabilities, and other special categories like elder, transgender, DAY-NRLM will have both men and women in the Self-Help Groups.

2.4 SHG is an informal group and registration under any Societies Act, State cooperative Act or a partnership firm is not mandatory vide Circular RPCD.No. Plan BC.13/PL-09.22/90-91 dated July 24th, 1991. However, Federations of Self Help Groups formed at Village, Gram Panchayat, Cluster or higher level may be registered under appropriate acts prevailing in their respective states.

Financial Assistance to the SHGs

3. Revolving Fund: DAY-NRLM, MoRD, would provide Revolving Fund (RF) support to SHGs in existence for a minimum period of 3/6 months and follow the norms of good SHGs, i.e. they follow 'Panchasutra' – regular meetings, regular savings, regular internal lending, regular recoveries and maintenance of proper books of accounts. Only such SHGs that have not received any RF earlier would be provided with RF, as corpus, with a

minimum of ₹10,000 and up to a maximum of ₹15,000 per SHG. The purpose of RF is to strengthen their institutional and financial management capacity and build a good credit history within the group.

4. Capital Subsidy has been discontinued under DAY-NRLM:

No Capital Subsidy would be sanctioned to any SHG from the date of implementation of DAY-NRLM.

5. Community Investment Support Fund (CIF)

CIF would be provided by MoRD to the SHGs promoted under DAY – NRLM in all blocks (intensive and non-intensive) and would be routed through the Village level/ Cluster level Federations, to be maintained in perpetuity by the Federations. The CIF would be used, by the Federations, to advance loans to the SHGs and/or to undertake the common/collective socio-economic activities.

6. Introduction of Interest subvention:

DAY-NRLM has a provision for interest subvention, to cover the difference between the Lending Rate of the banks and 7%, on all credit from the banks/ financial institutions availed by women SHGs, for a maximum of ₹ 300,000/- per SHG. This would be available across the country in two ways:

(i) In 250 identified districts, banks may lend to the women SHGs @7% up to an aggregated loan amount of ₹300,000/-. The banks would be subvented to the extent of difference between the Weighted Average Interest Charged and 7%, subject to the maximum limit of 5.5%. An additional interest subvention of 3% is also available on prompt repayment by the SHGs, reducing the effective rate of interest to 4%.

(ii) In the remaining districts, the banks may lend at their respective lending rates, applicable to SHGs. In these districts, all women SHGs under DAY– NRLM would be eligible for interest subvention on prompt repayment. The difference between the bank lending rates and 7% for loans up to ₹300,000/- subject to a maximum limit of 5.5%, would be subvented directly in the loan accounts of the SHGs by the SRLMs. This part of the scheme would be operationalized by the SRLMs.

- Salient features of the Scheme are enclosed in [Annex II](#).
- The list of 250 identified districts is as per [Annex III](#).
- Subvented interest rate would be communicated separately to the banks by GoI/RBI.

7. Role of banks:

7.1 Opening of Savings account:

7.1.1 Opening of Savings account of SHGs: The role of banks would commence with opening of accounts for all the Women SHGs including members with disability and the Federations of the SHGs. The SHGs engaged in promoting of savings habits among their members would be eligible to open savings bank accounts.

- (i) Know Your Customer (KYC) verification of only the office bearers shall suffice for opening of savings bank account.
- (ii) Banks may not insist on Permanent Account Number (PAN) of SHGs at the time of opening of account or transactions and may accept declaration in Form No 60 as may be required.
- (iii) For KYC verification pertaining to SHG members during opening of accounts, instructions of Department of Banking Regulation in [Master Direction on KYC \(dated February 25, 2016\)](#), updated as on April 20, 2020) (Part VI – Paragraph 43) shall be adhered to while completing Customer Due Diligence (CDD) process. CDD means identifying and verifying the customer and the beneficial owner. Accordingly, the current instructions under Simplified norms for Self Help Groups (SHGs) mention that while opening of accounts Customer Due Diligence (CDD) of all the members of SHG shall not be required and CDD of only the office bearers shall suffice. At the time of credit linking of SHGs, banks may undertake KYC verification of all the members in the SHG. However, opening of savings account of all members with the bank shall not be made a prerequisite for credit linkage of SHGs. Banks are advised to maintain separate Savings and loan account for Self Help Groups.
- (iv) Business Correspondents deployed by banks may also be authorized to open Saving Bank Accounts of the SHGs after verification/approval of the base branch, subject to adherence to extant BC guidelines and in accordance with the bank's Board approved policy on Business Correspondents. However, ensuring compliance with KYC and AML norms under the BC model continues to be the responsibility of the banks.

7.1.2 Opening of Savings account of Federation of SHGs: Banks are advised to open savings account of Federations of SHGs at village, Gram Panchayat, Cluster or higher level. These accounts may be categorized as savings account for 'Association of persons'. The 'Know Your Customer' (KYC) norms for the signatories of such accounts as specified from time to time by Reserve Bank of India would be applicable.

7.1.3 Opening of Current Account of Producer Groups (PGs): In order to facilitate collective production and marketing for their produce, banks are advised to open current account for Producer Groups promoted under DAY-NRLM at village, Gram Panchayat, Cluster or higher level. The 'Know Your Customer' (KYC) norms for the signatories of such accounts as specified from time to time by Reserve Bank of India would be applicable.

7.1.4 Transaction in Savings/Cash Credit account of SHGs and Federation of SHGs: SHGs and their federations may be encouraged to transact through their respective saving accounts and Cash Credit Loan accounts on regular basis. To facilitate this, banks are advised to enable transactions in jointly operated savings/Cash Credit account of SHGs and their federations with interoperable facility at retail outlets managed by Business Correspondents. Banks are also advised to extend all such services to SHGs and their federations through Business Correspondents as per their board approved policies.

7.2 Lending Norms to individual SHG members and SHGs

7.2.1 The eligibility criteria for the SHGs to avail loans:

- SHGs should be in active existence at least since the last 6 months as per the books of account of SHGs and not from the date of opening of S/B account.
- SHGs should be practicing '*Panchasutras*' i.e. Regular meetings; Regular savings; Regular inter-lending; Timely repayment; and Up-to-date books of accounts;
- Qualified as per grading norms fixed by NABARD. As and when the federations of the SHGs come to existence, the grading exercise may be done by the Federations to support the banks.
- The existing defunct SHGs are also eligible for credit if they are revived and continue to be active for a minimum period of 3 months.

7.2.2 Loan Application: It is advised that all banks may use the Common Loan Application Forms recommended by Indian Bank's Association (IBA) for extending credit facility to SHGs.

7.2.3 Loan amount: Emphasis is laid on the multiple doses of assistance under DAY-NRLM. This would mean assisting an SHG over a period of time, through repeat doses of credit, to enable them to access higher amounts of credit for taking up sustainable livelihoods and improve on the quality of life.

SHGs may avail either Term Loan (TL) or a Cash Credit Limit (CCL) loan or both based on the need. In case of need, additional loan may be sanctioned even though the previous loan is outstanding, based on the repayment behavior and performance of the SHG.

The amount of credit under different facilities are as follows:

Cash Credit Limit (CCL): In case of CCL, banks are advised to sanction minimum loan of ₹ 6 lakh to each eligible SHGs for a period of 3 years with a yearly drawing power (DP). The drawing power may be enhanced annually based on the repayment performance of

the SHG. The drawing power may be calculated as follows:

- DP for First Year: 6 times of the existing corpus or minimum of ₹1 lakh, whichever is higher
- DP for Second Year: 8 times of the corpus at the time review/ enhancement or minimum of ₹2 lakh, whichever is higher
- DP for Third Year: Minimum of ₹6 lakh based on the Micro credit plan prepared by SHG and appraised by the Federations /Support agency and the previous credit history.
- DP for Fourth Year onwards: Above ₹6 lakh, based on the Micro credit plan prepared by SHG and appraised by the Federations /Support agency and the previous credit History.

Term Loan: In case of Term Loan, banks are advised to sanction loan amount in doses as mentioned below:

- First Dose: 6 times of the existing corpus or minimum of ₹1 lakh, whichever is higher
- Second Dose: 8 times of the existing corpus or minimum of ₹2 lakh, whichever is higher
- Third Dose: Minimum of ₹6 lakh, based on the Micro credit plan prepared by the SHGs and appraised by the Federations /Support agency and the previous credit history.
- Fourth Dose onwards: Above ₹6 lakh, based on the Micro credit plan prepared by the SHGs and appraised by the Federations /Support agency and the previous credit History.

Banks are advised take necessary measures to ensure that eligible SHGs are provided with repeat loans. Banks are advised to coordinate with DAY-NRLM to institutionalize a mechanism for online submission of loan application from SHGs for tracking and timely disposal of application.

(Corpus is inclusive of revolving funds, if any, received by that SHG, its own savings, interest earning by SHG from on-lending to its members, income from other sources, and funds from other sources in case of promotion by other institutes/NGOs.)

7.3 Purpose of loan and repayment:

7.3.1 The loan amount would be distributed among members based on the Micro Credit Plan (MCP) prepared by the SHGs. The loans may be used by members for meeting social needs, high cost debt swapping, construction or repair of house, construction of toilets and taking up sustainable livelihoods by the individual members within the SHGs or to finance any viable common activity started by the SHGs.

7.3.2 In order to facilitate use of loans for augmenting livelihoods of SHG members, it is advised that at least 50% of loans above ₹2 lakh, 75% of loans above ₹4 lakh and at

least 85% of loans above ₹6 lakh be used primarily for income generating productive purposes. Micro Credit Plan (MCP) prepared by SHGs would form the basis for determining the purpose and usage of loans.

7.3.3 Repayment schedule for Term Loans may be as follows:

- The First dose of loan may be repaid in 24-36 months in monthly/Quarterly Instalments.
- The Second dose of loan may be repaid in 36-48 months in monthly/Quarterly instalments.
- The Third dose of loan may be repaid in 48-60 months based on the cash flow in monthly/Quarterly instalments.
- The loan from Fourth dose onwards may be repaid between 60-84 months based on the cash flow in monthly/ quarterly installments.

7.3.4 All facilities sanctioned under DAY- NRLM would be governed by the Asset Classification norms issued by Reserve Bank of India from time to time.

7.4. Security and Margin:

No collateral and no margin would be charged up to ₹10.00 lakh limit to the SHGs. No lien should be marked against savings bank account of SHGs and no deposits should be insisted upon while sanctioning loans

7.5. Dealing with Defaulters:

It is desirable that willful defaulters should not be financed under DAY-NRLM. In case willful defaulters are members of a group, they might be allowed to benefit from the thrift and credit activities of the group including the corpus built up with the assistance of Revolving Fund. But at the stage of accessing bank loan by SHG for financing economic activities by its members, the willful defaulters should not have the benefit of such bank loan until the outstanding loans are repaid. Willful defaulters of the group should not get benefits under the DAY-NRLM Scheme and the group may be financed excluding such defaulters while documenting the loan. However, banks should not deny loan to entire SHG on the pretext that spouse or other family members of individual members of SHG being a defaulter with the bank. Further, non-willful defaulters should not be debarred from receiving the loan. In case default is due to genuine reasons, banks may follow the norms suggested for restructuring the account with revised repayment schedule.

8 Credit Target Planning

8.1 Based on the Potential Linked Plan/State Focus Paper prepared by NABARD, SLBC sub-committee on SHG Bank Linkage may arrive at the district-wise, block-wise and branch-wise credit plan. The sub- committee should consider the existing SHGs, New SHGs proposed, and number of SHGs eligible for fresh and repeat loans as suggested

by the SRLMs to arrive at the credit targets for the states. The targets so decided should be approved in the SLBC and reviewed and monitored periodically for effective implementation.

8.2 The district-wise credit plans should be communicated to the DCC. The Block-wise/Cluster-wise targets are to be communicated to the bank branches through the Controllers.

9 Post credit follow-up

9.1 Loan pass books or statement of accounts in regional languages may be issued to the SHGs which may contain all the details of the loans disbursed to them and the terms and conditions applicable to the loan sanctioned. The passbook should be updated with every transaction made by the SHGs. At the time of documentation and disbursement of loan, it is advisable to clearly explain the terms and conditions as part of financial literacy.

9.2 Bank branches may observe one fixed day in a fortnight to enable the staff to go to the field and attend the meetings of the SHGs and Federations to observe the operations of the SHGs and keep a track of the regularity in the SHGs meetings and performance.

10 Repayment:

Prompt repayment of the loans is necessary to ensure the success of the programme. Banks shall take all possible measures, i.e. personal contact, organization of joint recovery camps with District Mission Management Units (DPMUs) /District Rural Development Agency(DRDAs) to ensure the recovery of loans. Keeping in view, the importance of loan recovery, banks should prepare a list of defaulting SHGs under DAY-NRLM every month and furnish the list in the BLBC, DCC meetings. This would ensure that DAY-NRLM staff at the district/ block level would assist the bankers in initiating the repayment

11 Supervision and monitoring of the Scheme

Banks may set up cells for Self Help Groups at respective Regional/Zonal offices of banks. These cells should periodically monitor and review the flow of credit to the SHGs, ensure the implementation of the guidelines to the scheme, collect data from the branches and make available consolidated data to the Head office and the DAY-NRLM units at the districts/ blocks. The cell should also discuss this consolidated data in the SLBC, BLBC and DCC meetings regularly to maintain the effective communication with the state staff and all banks.

11.1 State Level Bankers' Committee: SLBCs shall constitute a sub-committee on SHG bank linkage. The sub-committee should consist of members from all banks operating in the State, RBI, NABARD, CEO of SRLM, representatives of State Rural Development Department, Secretary-Institutional Finance and Representatives of Development Departments etc. The sub- committee shall discuss a specific agenda of review, implementation and monitoring of the SHG-Bank linkage and the issues/ constraints in achievement of the credit target. The decisions of SLBCs should be derived from the analysis of the reports of the sub-committee.

11.2 District Coordination Committee: The DCC shall regularly monitor the flow of credit to SHGs at the district level and resolve issues that constrain the flow of credit to the SHGs at district level. This committee should have participation of LDMs, AGM of NABARD, district coordinators of the banks and DPMU staff representing DAY-NRLM and office bearers of SHG federations

11.3 Block level Bankers Committee: The BLBC shall take up issues of SHG bank linkage at the block level. In this Committee, the SHGs/ Federations of the SHGs should be included as members to raise their voice in the forum. Branch wise status of SHG credit shall be monitored at the BLBC.

11.4 Reporting to Lead District Managers: The branches may furnish the progress report and the delinquency report achieved under various activities of DAY-NRLM in the format at [Annex-IV](#) and [Annex -V](#) to the LDM every month for onward submission to Special Steering Committee/sub-committee constituted by SLBC.

11.5 Reporting to RBI: Banks may give a state-wise consolidated report on the progress made on DAY-NRLM to RBI/NABARD at quarterly intervals. The data may be submitted within a month from the end of the concerned quarter.

11.6 LBR returns: Existing procedure of submitting LBR returns to be continued duly furnishing the correct code

12 Financial Literacy: Financial Literacy is one of the important strategies to spread awareness on financial behavior and keep households informed about various financial products and services. DAY-NRLM has trained and deployed a large number of cadre called 'Financial Literacy Community Resource Persons (FL-CRPs)' to carry out financial literacy camps at village level. Financial Literacy Centers (FLC) established by various banks may coordinate with respective SRLMs and utilize the services of FL-CRPs to conduct village camps on Financial Literacy.

13 Data Sharing:

13.1 Data sharing on a mutually agreed format / interval may be provided to DAY-NRLM or State Rural Livelihood Missions (SRLMs) for initiating various strategies including recovery etc.

The financing banks are advised to regularly share data on loans to SHGs with the DAY-NRLM or SRLMs, directly from the CBS platform.

13.2 Banks should share data of Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) and Pradhan Mantri Suraksha Bima Yojana (PMSBY) with DAY-NRLM on agreed formats to facilitate higher enrollment and claim settlement under the mentioned schemes.

13.3 Banks to share data of all SHG transactions being done at Business Correspondents points using Dual Authentication technology introduced by banks on a mutually agreed format/interval only after obtaining consent of the customer. However, the banks should ensure preservation and protection of the security and confidentiality of customer information in the custody or possession of BC.

14 DAY-NRLM support to the bankers:

14.1 SRLM would develop strategic partnerships with major banks at various levels. It would invest in creating enabling conditions for both the banks and the poor for a mutually rewarding relationship.

14.2 SRLM would assist the SHGs through imparting financial Literacy, extending counselling services on savings, credit, insurance, pension and training on Micro-investment Planning embedded in capacity building.

14.3 SRLMs would extend support to banks for improving quality of banking services to poor clients including follow-up for recovery of over dues if any, by positioning customer relationship managers (Bank Mitra/ Sakhi) with every bank branch involved in financing of SHGs.

14.4 Leveraging IT mobile technologies and institutions of poor, youth or SHG member as business facilitators and business correspondents.

14.5 Community Based Repayment mechanism (CBRM): One exclusive sub - committee for SHG Bank Linkage may be formed at village/cluster/ block level which would provide support to the banks in ensuring proper utilization of loan amount, recovery etc. The bank linkage sub - committee members from each village level federation along with project staff would meet once in a month under the chairmanship of the Branch Manager in the branch premises with the agenda items relating to bank linkage.

Key Features of DAY-NRLM

1. Universal Social Mobilization: To begin with, DAY-NRLM would ensure that at least one member from each identified rural poor household, preferably a woman, is brought under the Self Help Group (SHG) network in a time bound manner. Subsequently, both women and men would be organized for addressing livelihood issues i.e. farmers organizations, milk producers' cooperatives, weavers associations, etc. All these institutions are inclusive and no poor would be left out of them. DAY-NRLM would ensure adequate coverage of vulnerable sections of the society such that 50% of the beneficiaries are SC/STs, 15% are minorities and 3% are persons with disability, while keeping in view the ultimate target of 100% coverage of all households under the automatically included criteria and households with at least one deprivation criteria as per Socio-Economic and Caste Census (SECC).

2. Participatory Identification of poor (PIP): The experience from SGSY suggests that the current BPL list has large inclusion and exclusion errors. To widen the target groups beyond the BPL list and to include all the needy poor identified as households with at least one deprivation criteria as per Socio-Economic and Caste Census (SECC). DAY-NRLM would also undertake community-based process i.e. participation of the poor in the process of identifying the target group. Participatory process based on sound methodology and tools (*social mapping and well-being categorization, deprivation indicators*) and also locally understood and accepted criterion ensures local consensus that inadvertently reduces the inclusion and exclusion errors and enables formation of the groups on the basis of mutual affinity. Over the years, the participatory method of identifying the poor have been developed and applied successfully in the states like AP, Kerala, Tamil Nadu and Odisha.

The households identified with at least one deprivation criteria as per SECC along with households identified through the P.I.P process would be accepted as DAY-NRLM target group and would be eligible for all the benefits under the programme. The list finalized after PIP process would be vetted by the Gram Sabha and approved by the Gram Panchayat.

Till the PIP process is undertaken by the State in a particular district/Block, the rural households with at least one deprivation criteria as per SECC list would be targeted under DAY-NRLM. As already provided in the Framework for implementation of DAY-NRLM, up to 30% of the total membership of the SHGs may be from among the population marginally above the poverty line, subject to the approval of other members

of the group. This 30% also includes the poor households whose name does not figure in the SECC list but are as poor as those included in SECC list.

3. Promotion of Institutions of the poor: Strong institutions of the poor such as SHGs and their village level and higher-level federations are necessary to provide space, voice and resources for the poor and for reducing their dependence on external agencies. They empower them and also act as instruments of knowledge and technology dissemination, and hubs of production, collectivization and commerce. DAY-NRLM, therefore, would focus on setting up these institutions at various levels. In addition, DAY- NRLM would promote specialized institutions like Livelihoods collectives, producers' cooperative/companies for livelihoods promotion through deriving economies of scale, backward and forward linkages, and access to information, credit, technology, markets etc.

The Livelihoods collectives would enable the poor to optimize their limited resource.

4. Strengthening all existing SHGs and federations of the poor. There are existing institutions of the poor women formed by Government efforts and efforts of NGOs. DAY-NRLM would strengthen all existing institutions of the poor in a partnership mode. The self-help promoting institutions both in the Government and in the NGO sector would promote social accountability practices to introduce greater transparency. This would be in addition to the mechanisms that would be evolved by SRLMs and state governments. The learning from one another underpins the key processes of learning in DAY-NRLM.

5. Emphasis on Training, Capacity building and skill building: DAY-NRLM would ensure that the poor are provided with the requisite skills for managing their institutions, linking up with markets, managing their existing livelihoods, enhancing their credit absorption capacity and credit worthiness, etc. A multi-pronged approach is envisaged for continuous capacity building of the targeted families, SHGs, their federations, government functionaries, bankers, NGOs and other key stakeholders. Particular focus would be on developing and engaging community professionals and community resource persons for capacity building of SHGs and their federations and other collectives. DAY-NRLM would make extensive use of ICT to make knowledge dissemination and capacity building more effective.

6. Revolving Fund and Community investment support Fund (C.I.F): A Revolving Fund would be provided to eligible SHGs as an incentive to inculcate the habit of thrift and accumulate their own funds towards meeting their credit needs in the long-run and immediate consumption needs in the short-run. The C.I.F would be a corpus and used for meeting the members' credit needs directly and as catalytic capital for leveraging repeat bank finance. The C.I.F would be routed to the SHGs through the Federations. The key to coming out of poverty is continuous and easy access to finance, at reasonable rates, till they accumulate their own funds in large measure.

7. Universal Financial Inclusion: DAY-NRLM would work towards achieving universal financial inclusion, beyond basic banking services to all the poor households, SHGs and their federations. DAY-NRLM would work on both demand and supply side of Financial Inclusion. On the demand side, it would promote financial literacy among the poor and provides catalytic capital to the SHGs and their federations. On the supply side, it would coordinate with the financial sector and encourage use of Information, Communication & Technology (ICT) based financial technologies, business correspondents and community facilitators like 'Bank Mitras'. It would also work towards universal coverage of rural poor against loss of life, health and assets. Further, it would work on remittances, especially in areas where migration is endemic.

8. Provision of Interest Subvention: The rural poor need credit at low rate of interest and in multiple doses to make their ventures economically viable. In order to ensure affordable credit, DAY-NRLM has a provision for subvention on interest rate above 7% per annum for all eligible SHGs, who have availed loans from mainstream financial institutions.

9. Funding Pattern: DAY-NRLM is a Centrally Sponsored Scheme and the financing of the programme would be shared between the Centre and the States in the ratio of 60:40 (90:10 in case of North Eastern States including Sikkim; completely from the Centre in case of UTs). The Central allocation earmarked for the States would broadly be distributed in relation to the incidence of poverty in the States.

10. Phased Implementation: Social capital of the poor consists of the institutions of the poor, their leaders, community professionals and more importantly community resource persons (poor women whose lives have been transformed through the support of their institutions). Building up social capital takes some time in the initial years, but it multiplies rapidly after some time. If the social capital of the poor does not play the lead role in DAY-NRLM, then it would not be a people's programme. Further, it is important to ensure that the quality and effectiveness of the interventions is not diluted. Therefore, a phased implementation approach is adopted in DAY-NRLM. DAY-NRLM would reach all districts by the end of 12th Five-year Plan.

11. Intensive blocks. The blocks that are taken up for implementation of DAY-NRLM, 'intensive blocks', would have access to a full complement of trained professional staff and cover a whole range of activities of universal and intense social and financial inclusion, livelihoods, partnerships etc. However, in the remaining blocks or non-intensive blocks, the activities may be limited in scope and intensity.

12. Rural Self Employment Training Institutes (RSETIs). RSETI concept is built on the model pioneered by Rural Development Self Employment Institute (RUDSETI) – a

collaborative partnership between SDME Trust and Canara Bank. The model envisages transforming unemployed youth into confident self- employed entrepreneurs through a short duration experiential learning programme followed by systematic long duration hand holding support. The need-based training builds entrepreneurship qualities, improves self-confidence, reduces risk of failure and develops the trainees into change agents. Banks are fully involved in selection, training and post training follow up stages. The needs of the poor articulated through the institutions of the poor would guide RSETIs in preparing the participants/trainees in their pursuits of self- employment and enterprises. DAY-NRLM would encourage public sector banks to set up RSETIs in all districts of the country.

Interest Subvention Scheme for Women SHGs

Interest subvention scheme on Credit to Women SHGs in rural areas would be available in following two ways:

I. Interest subvention scheme on credit to women SHGs in 250 districts:

i. All women SHGs would be eligible for Interest subvention on credit up to ₹3 lakh at subvented rate of 7% per annum. SHGs availing capital subsidy under SGSY in their existing credit outstanding would not be eligible for benefit under this scheme.

ii. The commercial banks (Public Sector, Private Sector and Small Finance Banks) would lend to all the women SHGs in rural areas at the rate of 7% up to an aggregated loan amount of ₹300,000/- in the 250 districts as provided in [Annexure III](#). For the women SHGs in these districts an additional interest subvention of 3% is also available on prompt repayment, reducing the effective rate of interest to 4%.

iii. All commercial banks (Public Sector, Private Sector and Small Finance Banks) would be subvented to the extent of difference between the Weighted Average Interest Charged (WAIC as specified by Department of Financial Services, Ministry of Finance) and 7% subject to the maximum limit of 5.5%. This subvention would be available to all the banks on the condition that they make SHG credit available at 7% p.a. in the 250 districts.

iv. Further, the SHGs would be provided with an additional 3% subvention on the prompt repayment of loans. For the purpose of Interest Subvention of additional 3% on prompt repayment, an SHG account would be considered prompt payee if it satisfies the following criterion.

a. For Cash Credit Limit:

- i. Outstanding balance shall not have remained in excess of the limit/drawing power continuously for more than 30 days.
- ii. There should be regular credit and debits in the accounts. In any case there shall be at least one customer induced credit during a month.
- iii. Customer induced credit should be sufficient to cover the interest debited during the month.

b. For the Term loans: A term loan account where all of the interest payments and/or instalments of principal were paid within 30 days of the due date during the tenure of the loan, would be considered as an account having prompt payment.

- v. The banks should credit the amount of 3% interest subvention to the eligible prompt payee SHG loan accounts and seek the reimbursement after the end of reporting quarter.
- vi. The funding for the scheme would be met out of Central Allocation under DAY- NRLM
- vii. The interest subvention scheme shall be implemented through a Nodal Bank selected by the Ministry of Rural Development (MoRD). The Nodal Bank would operationalize the scheme through a web based platform, as advised by MoRD. The nodal bank would be notified by MoRD.
- viii. In order to avail the Interest Subvention on credit extended to the SHGs @ 7% (regular subvention), all Public Sector Banks, Private Sector Banks and Small Finance Banks are required to upload the SHG loan account information on the Nodal Bank's portal as per the required technical specification. The banks should also submit the claims for 3% additional subvention on the same portal.
- ix. Public Sector Banks, Private Sector Banks and Small Finance Banks must submit the regular claims (difference between WAIC or lending rate and 7%) and additional claims (@ 3% on prompt repayment) on a quarterly basis as on June 30, September 30, December 31, and March 31 by last week of the subsequent month.
- x. The banks are required to submit claim certificate on quarterly basis to the nodal bank. The claims submitted by any bank should be accompanied by claim certificate (in original) certifying the claims for subvention as true and correct ([Annexure-VI](#) & [VII](#)). The claims of any bank for the quarter ending March would be settled by MoRD only on receipt of the Statutory Auditor's certificate for the complete Financial Year from the bank.
- xi. Any remaining claim pertaining to the disbursements made during the year and not included during the year, may be consolidated separately and marked as an 'Additional Claim' and submitted to Nodal Bank by banks latest by June every year, duly audited by Statutory Auditor's certifying the correctness. No claims from banks pertaining to interest subvention for Financial Year are admissible after June 30.
- xii. Any corrections in claims by banks shall be adjusted from later claims based on auditor's certificate. The corrections must be made on the Nodal Bank's portal accordingly.

II. Interest subvention scheme for Category II Districts (Other than 250 districts).

In the Category II districts, banks may charge the SHGs as per their respective lending norms and the difference between the lending rates and 7% subject to a maximum limit of 5.5% would be subvented directly in the loan accounts of the SHGs by the SRLMs. The funding for this subvention would be provided to the State Rural Livelihoods Missions (SRLMs) from the allocation for DAY- NRLM. In pursuance of the above, the salient features and the operational guidelines in respect of the interest subvention for the category II districts, are as follows:

(A) Role of the Banks:

All banks are required to furnish the details of the credit disbursement and credit outstanding of the SHGs across all districts in the desired format as suggested by the MoRD, directly from the CBS platform, to the Ministry of Rural Development (through FTP or interface) and to the SRLMs. The information should be provided on a monthly basis to facilitate the calculation and disbursement of the Interest Subvention amount to SHGs.

(B) Role of the State Governments:

i. All women SHGs from rural areas under DAY- NRLM would be eligible for interest subvention on credit upto ₹3 lakh at the rate of 7% per annum on prompt repayment.

ii. This scheme would be implemented by the State Rural Livelihood Missions (SRLMs). SRLMs would provide interest subvention to the eligible SHGs who have accessed loan from commercial and cooperative banks. The funding for this subvention would be met out of the Central Allocation and State Contribution as per the norms of Government of India.

iii. The SHGs would be subvented to the extent of difference between the lending rate of the banks and 7% subject to a maximum limit of 5.5% by the SRLMs, directly on a monthly/quarterly basis. An e-transfer of the subvention amount would be made by the SRLM to the loan accounts of the SHGs who have repaid promptly. In case the loan account is already closed, or e-transfer to the loan account is not successful due to any reason, the subvention amount may be transferred to the corresponding savings account of the concerned SHGs.

iv. For the purpose of the Interest Subvention, an account would be considered as prompt payee if it satisfies the following criterion:

a. For Cash Credit Limit:

1. Outstanding balance shall not have remained in excess of the limit/drawing power continuously for more than 30 days
2. There should be regular credit and debits in the accounts. In any case there shall be at least one customer induced credit during a month
3. Customer induced credit should be sufficient to cover the interest debited during the month.

b. For the Term loans: A term loan account where all of the interest payments and/or instalments of principal were paid within 30 days of the due date during the tenure of the loan, would be considered as an account having prompt payment

v. Women SHGs who have availed capital subsidy under SGSY in their existing loans, would not be eligible for benefit of Interest Subvention for their subsisting loan under this scheme.

vi. SRLMs should submit Quarterly Utilization Certificate indicating subvention amounts transferred to the Loan accounts of the eligible SHGs.

III. The States with state specific interest subvention schemes are advised to harmonize their guidelines with the Central scheme.

List of 250 eligible Districts for the Interest Subvention on the loan at 7% and additional interest Subvention of 3% on the prompt repayment

SI No	States	SI No	Name of districts
1	ANDHRA PRADESH	1	Guntur
		2	Krishna
		3	Srikakulam
		4	East Godavari
		5	Vijaynagram
		6	Visakhapatnam
2	ARUNACHAL PRADESH	1	East Siang
		2	East Kameng
		3	Papumpare
		4	Lohit
3	ASSAM	1	Chirang
		2	Karbi Anglong
		3	Sonitpur
		4	Tinsukiya
		5	Hailakandi
		6	Dhemeji
		7	Jorhat
		8	Nagaon
4	BIHAR	1	Saharsa
		2	Supaul
		3	Madhepura
		4	Nalanda
		5	Khagria
		6	East Champaran (Motihari)
		7	Arwal
		8	Aurangabad
		9	Gaya
		10	Jamui
		11	Jehanabad
		12	Kaimur
		13	Munger
		14	Nawada
		15	Rohtas
		16	Paschim Champaran
		17	Sitamarhi
5	CHATTISGARH	1	Balarampur

SI No	States	SI No	Name of districts
		2	Surajpur
		3	Sukama
		4	Kondagaon
		5	Gariyaband
		6	Baloda Bazar
		7	Dhamtari
		8	Raigarh
		9	Bastar
		10	Bijapur
		11	Dantewada
		12	Jashpur
		13	Kanker
		14	Kawardha
		15	Koriya
		16	Narayanpur
		17	Rajnandgaon
		18	Sarguja
6	GUJARAT	1	Chhotaudepur
		2	Mahisagar
		3	Mehsana
		4	Junagadh
		5	Vadodara
		6	Banaskantha
		7	Panchmahal
7	JHARKHAND	1	Pakur
		2	Dumka
		3	Godda
		4	Bokarao
		5	Chatra
		6	Garhwa
		7	Giridh
		8	Gumla
		9	Hazaribagh
		10	Khunti
		11	Kodarma
		12	Latehar(N)
		13	Lohardaga
		14	Paschim Singhbhum
		15	Palamu
		16	Purbi Singhbhum
		17	Ramgarh
		18	Ranchi(Rural)
		19	Saraikela(N)
		20	Simdega(N)

SI No	States	SI No	Name of districts
8	KARNATAKA	1	Bijapur
		2	Chamrajnagar
		3	Chitradurga
		4	Gulbarga
		5	Mysore
		6	Tumkur
		7	Gadag
		8	Koppal
9	MADHYA PRADESH	1	Sager
		2	Damoh
		3	Tikamgarh
		4	Panna
		5	Chahatapur
		6	Jhabua
		7	Dhar
		8	Annupur
		9	Balaghat
		10	Dindori
		11	Mandala
		12	Seoni
		13	Shahdol
		14	Sidhi
		15	Umaria
		16	Chhindwara
		17	Singrauli
		18	Badwani
		19	Sheopur
		20	Alirajpur
10	MAHARASHTRA	1	Solapur
		2	Ratnagiri
		3	Thane
		4	Wardha
		5	Beed
		6	Sindhurdurg
		7	Chandrapur
		8	Gadchiroli
		9	Gondia
		10	Jalna
		11	Osmanabad
		12	Nandurbar
		13	Yavatmal
11	ODISHA	1	Angul
		2	Bhadrak
		3	Balasore

SI No	States	SI No	Name of districts
		4	Cuttack
		5	Balangir
		6	Devagarh
		7	Gajapati
		8	Ganjam
		9	Jaipur
		10	Kalahandi
		11	Kandhamal
		12	Kendujhar
		13	Koraput
		14	Malkangiri
		15	Mayurbhanj
		16	Nabarangpur
		17	Nayagarh
		18	Nuapada
		19	Rayagada
		20	Sambalpur
		21	Sonapur
		22	Sundargarh
12	RAJASTHAN	1	Dungarpur
		2	Banswara
		3	Dholpur
		4	Jhalawar
		5	Baran
		6	Ajmer
		7	Alwar
		8	Dausa
		9	Udaipur
13	TAMIL NADU	1	Cuddalore
		2	Nagapattinam
		3	Thanjaore
		4	Trichy
		5	Dindugal
		6	Vilupuram
		7	Vellore
		8	Thiruvannamalai
		9	Dharmapuri
14	UTTAR PRADESH	1	Agra
		2	Aligarh
		3	Auraiya
		4	Basti
		5	Bijnor
		6	Lakhimpur Kheri
		7	Unnao

SI No	States	SI No	Name of districts
		8	Varanasi
		9	Bara banki
		10	Gorakhpur
		11	Lucknow
		12	Chandauli
		13	Mirzapur
		14	Sonbhadra
		15	Badaun
		16	Hardoi
		17	Etwah
		18	Azamgarh
		19	Allahabad
		20	Ambedkarnagar
		21	Bahraich
		22	Deoria
		23	Jalaun
		24	Hamirpur
		25	Banda
15	WEST BENGAL	1	Alipurduar
		2	Purba Medinipur
		3	South 24 Parganas
		4	Bankura
		5	Medinipur West
		6	Coochbehar
		7	Birbhum
		8	Puruliya
16	TELANGANA	1	Mahabubnagar
		2	Adilabad
		3	Warangal
		4	Khammam
		5	Karimnagar
17	KERALA	1	Idukki
		2	Vayanadu
		3	Pallakkad
		4	Mallapuram
18	HARYANA	1	Mahendergarh
		2	Karnal
		3	Jind
		4	Mewat
		5	Bhiwani
		6	Jhajjar
19	HIMACHAL PRADESH	1	Kangra
		2	Una
		3	Shimla

SI No	States	SI No	Name of districts
		4	Mandi
20	JAMMU & KASHMIR	1	Kupwara
		2	Poonch
		3	Kistwar
		4	Ganderbal
		5	Budgam
		6	Udhampur
21	PUNJAB	1	Patiala
		2	Sangrur
		3	Bathinda
		4	Tarn Taran
		5	Gurdaspur
		6	Ferozepur
22	UTTRAKHAND	1	Pithoragarh
		2	Pohri Garwal
		3	Chamoli
		4	Bageshwar
23	MANIPUR	1	Chandel
		2	Imphal East
24	MEGHALAYA	1	West Garo Hills
		2	South West Khasi Hills
		3	West Khasi Hill
25	MIZORAM	1	Serchhip
		2	Aizwal
		3	Lunglei
26	NAGALAND	1	Kiphere
		2	Longleng
		3	Peren
		4	Tuensang
		5	Mon
27	TRIPURA	1	Dhalai
		2	West Tripura
		3	North Tripura
28	PUDUCHERRY	1	Puducherry
29	ANDAMAN & NICOBAR ISLANDS	1	North & Middle Andhman Dist
30	SIKKIM	1	South Sikkim
		2	East Sikkim
31	GOA	1	North Goa

Progress report for
the month of -----,
20--

Branch Name:

Bank Name:

Block Name:

District:

State:

No. of loans – Actual * ₹lakhs

S. No	No of SHGs with SB account			Credit Linked SHGs in the month						Credit outstanding	
	Total S/B accounts till last month	New a/c opened this month	Cumulative	New Loans		Repeat Loans		Cumulative		No of loans	Amount Outstanding*
				No of loans	Amount Disbursed*	No of loans	Amount Disbursed*	No of loans	Amount Disbursed*		
	1(a)	1(b)	1(c) = 1(a)+1(b)	2(a)	2(b)	3(a)	3(b)	4(a) = 2(a)+3(a)	4(b)=2(b)+3(b)	5(a)	5(b)

*New loans: First linkage loans to be considered as the new loans

*Second and third linkage to be counted under repeat finance

* Credit Outstanding 5(a) and 5(b) should be inclusive of the cumulative credit disbursed in the month i.e. 5(b) = 4(b) + credit outstanding till last month

Delinquency Report for the month of

Branch Name:

Bank Name:

Block Name:

District:

State:

(No. of loans – Actual * ₹ lakhs)

SL No	No of loan accounts	Amount outstanding*	Irregular accounts (4)		Details of the NPA accounts (5)	
			No of accounts	Overdue Amount*	No of accounts	Amount*
1	2	3	4(a)	4(b)	5(a)	5(b)

Claim for Interest Subvention on loans to women SHGs at 7% per annum, for credit up-to Rs 3 Lakhs for the year ____

Name of Bank:

Applicable WAIC for FY____:

Statement for claims for the period to: Loans disbursed/outstanding up-to Rs 3 lakhs

New loan accounts opened during the period .....to		Outstanding as at (end of previous period)		Total outstanding as at		Amount of interest subvention
No of Accounts	Amount	No of Accounts	Amount	No of Accounts	Amount	Amount

We hereby certify that loans to women SHGs up-to Rs 3 lakhs were charged Interest @ 7% per annum on the above disbursement/outstanding in the year _____. We certify that the above claimed amount and the accounts are from the Category-I districts only and all the accounts claimed are eligible for interest subvention as per RBI guidelines. We also certify that there is no duplication in the claims and minimal human intervention while submitting the regular claim or additional interest subvention claim from the branch level onwards

Dated

Bank's Authorized Signatory
(Seal)

Statutory Auditors
(Seal & FRN no)

(This claim format, consolidated for the entire year, needs to be duly certified by Statutory Auditors and submitted along with the claims for the quarter ending March 31st, _____, within June 30th of the next financial year)

Claim for additional Interest Subvention @ 3% on the prompt repayment, for the credit up-to Rs 3 Lakhs, Year ____

Name of Bank:

Statement for claims for the period to: Loans disbursed/outstanding up to Rs 3 lakhs

New loan accounts opened during the period .....to		Outstanding as at (end of previous period)		Total outstanding as at		Regular / eligible women SHGs		Amount of interest subvention
No of Accounts	Amount	No of Accounts	Amount	No of Accounts	Amount	No of Accounts	Amount	Amount

We certify that the above loans were repaid on time and the benefit of additional 3% interest subvention has been passed on to the women SHG's account, reducing the effective rate of interest to 4% for the prompt payee women SHGs. We also certify that there is no duplication in the claims and minimal human intervention while submitting the regular claim or additional interest subvention claim from the branch level onwards.

Dated

Bank's Authorized Signatory
(Seal)

Statutory Auditors
(Seal & FRN no)

(This claim format, consolidated for the entire year, needs to be duly certified by Statutory Auditors and submitted along with the claims for the quarter ending March 31st, _____, within June 30th of the next financial year)

Appendix

No.	Circular No.	Date	Subject
1.	RPCD.GSSD.CO.NO. 81/09.01.03/2012-13	27.06.2013	Priority Sector Lending – Restructuring of SGSY as National Rural Livelihoods Mission (DAY-NRLM)-Aajeevika
2.	RPCD.GSSD.CO.BC.No.38/09.01.03/2013-14	20.09.2013	Credit Facility under National Rural Livelihoods Mission (NRLM)- Aajeevika- Reporting to RBI
3.	RPCD.GSSD.CO.BC.No.57/09.01.03/2013-14	19.11.2013	Restructuring of SGSY as National Rural Livelihoods Mission (NRLM)-Aajeevika- Interest Subvention Scheme
4.	FIDD.GSSD.CO.BC.NO.45/09.01.03/2014- 15	09.12.2014	National Rural Livelihoods Mission (NRLM)-Aajeevika- Interest Subvention Scheme
5.	FIDD.GSSD.CO.BC.NO.19/09.01.03/2015- 16	21.01.2016	National Rural Livelihoods Mission (NRLM)-Aajeevika- Interest Subvention Scheme 2015-16
6	FIDD.GSSD.CO.BC.NO.26/09.01.03/2015- 16	09.06.2016	National Rural Livelihoods Mission (NRLM)-Aajeevika- Interest Subvention Scheme 2015-16 – Modification.
7	FIDD.GSSD.CO.BC.NO.13/09.01.03/2016- 17	25.08.2016	National Rural Livelihoods Mission (NRLM)-Aajeevika- Interest Subvention Scheme 2016-17
8	FIDD.GSSD.CO.BC.NO.17/09.01.03/2017- 18	18.10.2017	National Rural Livelihoods Mission (NRLM)-Aajeevika- Interest Subvention Scheme 2017-18
9	FIDD.GSSD.CO.BC.NO.05/09.01.03/2018-19	03.07.2018	National Rural Livelihoods Mission (NRLM)-Aajeevika- Interest Subvention Scheme 2018-19
10	FIDD.GSSD.CO.BC.No.02/09.01.01/2019-20	01.07.2019	Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)
11	FIDD.GSSD.CO.BC.No.15/09.01.01/2019-20	26.11.2019	Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)

K-11062/04/2017/NRLM(LH)-Part(1) (e- 372194)
Government of India
Ministry of Rural Development
Department of Rural Development
RL Division

NDCC-II Building, 7th Floor,
Jai Singh Road, New Delhi-1,
Dated 3rd Nov., 2020.

To

The Principal Secretaries
All States / UTs

Subject: Guidelines for release of funds to Producer Enterprises being promoted under the farm value chain interventions under DAY-NRLM.

Madam / Sir,

I am directed to say that Value chain development through promotion of Producers' Enterprise is one of the important and current thrust area under DAY-NRLM. Guidelines to support States on promotion and financing producers' enterprises have already been issued earlier. These guidelines issued have clearly articulated the process for promotion of Producers Enterprise and directed that the funding support to Producer Enterprises should be released by SRLMs directly to the Producer Enterprises in their Bank accounts. Success of the women owned Producers' Enterprises will largely depend on the timely completion of planned activities and fund availability at Producers' Enterprise level, hence avoidance of delay in fund release is one of the most important conditions.

To ensure timely fund release to the PEs and smooth implementation of the value chain projects, a "Guidelines for release of funds to Producer Enterprises being promoted under the farm value chain interventions under DAY-NRLM" has been approved under DAY-NRLM. The guideline for release of funds to Producers Enterprises being promoted under the farm value chain interventions under DAY-NRLM is attached herewith for kind information.

Yours faithfully,

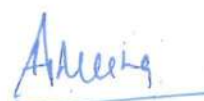
Encl: As above


(H. R. Meena)

Deputy Secretary to Govt. of India

Copy to :-

1. CEOs/SMDs of all Stats / UTs.
2. PPS to Additional Secretary, Rural Development, MoRD.
3. PPS to Secretary, MoRD



Guidelines for release of funds to Producer Enterprises being promoted on the farm value chain interventions under DAY-NRLM.

A. Background:

Higher order economic activities through value chain development by promoting large sized women owned Producers Enterprises (PE) has been taken up under DAY-NRLM through project mode under different sub-components namely, NRLM - Innovation component, NRETP & MKSP – Value Chain. DAY-NRLM has issued the following two guidelines to facilitate SRLMs to promote Producer Enterprises (PE), i) Guidelines for promoting Producers Enterprise under NRLM and ii) Guidelines for financing Producers Collectives under DAY-NRLM.

These guidelines have clearly outlined the process of various activities to be taken up including training of BoD members, members and PE staff while initiating a Producer Enterprise.

i) Guidelines for promoting Producers Enterprises (PE) under DAY-NRLM:

The guideline intends to build a common understanding on the purpose & benefit of promoting PEs, help formulating value chain development strategy and provide comprehensive guidance for promoting PEs that are sustainable, member-owned and member-controlled organizations.

The guideline elaborates the role of implementing agencies, i.e., SRLMs, identification of areas of intervention, formation of Producer Enterprise, business models/ operation/ risk/ principles/ structure of PEs. The guideline also clearly outlines the i) Organization structure with HR processes of the PE, ii) Governance of the PE mentioning the board structure (draft MoA annexed), sub-committees to handle the commodities and PE management, iii) Training and Capacity building activities mentioning the specific areas of training for the PE staff, Board of Director and members.

ii) Guidelines on financing producers' collectives:

It outlines the structure of funding support to the PEs with specific components as well as the permissible activities, fund flow mechanism from SRLM to PEs, criteria to release fund to PE, procedure for procurement of equipment/machinery and services for value addition. The components for funding support to PE include i) Infrastructure for value addition, ii) Strengthening Producers Enterprise (IB/ CB cost), iii) Working Capital, iv) Human Resource and administrative costs and v) Support for transportation of goods procured from the members. This guideline also outlines the funding mechanism for Producer Group promotion and the important budget components for the same like working capital and infrastructure for PG.

The above guidelines issued have clearly articulated the process for promotion or Producers Enterprise and directed that the funding support to Producer Enterprises should be released by SRLMs directly to the Producer Enterprises in their Bank accounts without any delay. As success of these women owned enterprises will largely depend on the timely completion of planned activities and fund availability at Producers' Enterprise level, avoidance of delay in fund release is one of the most important conditions.

To ensure timely fund release to the PEs and smooth implementation of the project, this '**Guidelines for release of funds to Producer Enterprises being promoted on the farm value chain interventions under DAY-NRLM**' are being issued.

B. Project Sanction Procedure

SRLM as Project Implementing Agency will submit value chain development project proposals to the Ministry for promotion of producers' enterprises in specific business plan template prescribed under different components guidelines of DAY-NRLM such as NRLM – Innovation Fund, NRETP and MKSP – Value Chain. The State Rural Livelihoods Missions (SRLM) as Project Implementing agency (PIA) will undertake proposal development and subsequent facilitation of the project roll-out.

Desk Appraisal: The proposal submitted by the SRLMs would be appraised by a team of experts having thorough understanding of value chain interventions including business models and commodity markets. The expert team comprises of Farm Livelihoods team of DAY-NRLM handling value chain development interventions and National Resource Persons empanelled by NIRD&PR having expertise on value chain development. The proposals are evaluated against prescribed appraisal criteria and scored accordingly. In case the proposal is not found to be suitable to be taken to the pre-EC stage, the SRLM would re-work the proposal based on the comments.

Pre-Empowered Committee: The proposals found suitable under desk appraisal process are then subject to evaluation by the Pre-Empowered Committee (pre-EC) chaired by the Mission Director, NRLM. The Projects submitted would be examined and considered by the Pre-EC before it is submitted to the Empowered committee for its recommendation.

Empowered Committee (EC): Once the project proposal and the budget have been examined in the Pre-EC meeting and found suitable, the proposals are put forth for consideration and approval by the Empowered Committee chaired by Secretary, RD. If the project is approved by EC, fund will be released to SRLM.

C. Preparedness

The SRLMs have to ensure the followings after the project proposal is approved by the Empowered Committee (EC):

1. The Technical Support Agency (TSA) for the project implementation needs to be onboarded within two months of the approval of the project.
2. The DPR of the Producers Enterprise shall include the scheduling of fund requirement on six-monthly basis and the procurement plan for goods/services with timeline.
3. State has to ensure timely release of matching State share for the sanctioned project.
4. The accounts of producers' enterprise shall be maintained in any Accounting Software Package suitable for this purpose.
5. The PE shall ensure proper maintenance of accounting books, records, documents and other evidence relating to the project, adequate to show, without limitation, all costs incurred from the grant for the project and the overall progress of the project.
6. The PE shall have separate Bank account specifically assigned for receipt of Grant from SRLM.
7. A Producers' Enterprise is promoted as an independent producer owned organization and SRLM shall not issue any such directives/orders which violates the autonomy of the Producers' Enterprise.

8. State to extend all necessary support and guidance for timely completion of the procurement of goods/services by the Producers' Enterprise and recruitment of human resources as per the approved DPR. SRLM and/or project-based TSA, if engaged may support the PE, in case of requirement. The primary responsibility of procurement of goods and services as well as recruitment of staff will be with the PE under direct oversight of TSA.
9. CEO, ZP and DMMU, SRLM, shall play a strong role in creating a conducive environment for implementation of project by supporting the Producers Enterprise in the following areas:
 - a. Mobilization of small and marginal farmers in the fold of PE.
 - b. Form more SHGs to include eligible non-SHG households, who are members of Producers Enterprise.
 - c. Arrange for financial support through CIF/Govt schemes and/or Bank linkages to SHG members for milch animal induction or any such asset acquisition activity.
 - d. Coordinate with line departments for convergence.

D. Fund Release Mechanism

1. A grant letter needs to be issued to the Producers Enterprise (PE) clearly mentioning all funding conditions applicable under DAY-NRLM. A draft grant letter is at **Annexure – I**
2. The first two tranches of the first instalment should be released to PE along with the State share as soon as the fund is received from NRLM, so that field level work can start without delay.
3. Subsequently, based on the six-monthly fund requirement, the State shall prepare a PE wise fund allocation plan and release fund directly to the PE's account against the request after the recommendation the Project management committee. Fund should be released to PE based on the annual action plan prepared by the PE and approved by Project management Committee (PMC) set up to oversee the project implementation chaired by State Mission Director.
4. The PE should submit request for fund requirement to the SRLM bi-annually based on approved annual plan. The request for release of funds by the Producers Enterprise shall be sought with fund utilization certificate for the previous advance(s) & the physical progress report thereof. The PE can submit their fund requirement request to SRLM after utilizing 60% of the previous installment(s), even before six months. The fund should be released to PE within one month of the receipt of the request from PE.
5. In case of delay/shortfall, SRLM should ensure release of an advance payment to PE immediately which is equivalent to the fund requirements for activities to be performed in coming 2 months by the PE.
6. State should ensure that the PE's accounts are audited as per regulatory provisions of the appropriate laws and completed in time.
7. Internal Auditors shall be appointed by the PE's which is mandatory as per Company Act for a registered company, who will conduct the audit on a monthly basis and submit the audit report regularly. An indicative note on the Terms of Reference and scope is at **Annexure II**.
8. PE should have a purchase manual as a SoP to take up purchase of goods and services in the PE. While preparing the purchase manual, the PE may

- refer NRETP procurement manual for guidance, though necessary care should be taken to ensure that purchase manual thus prepared is duly approved by the BoD of the PE.
9. Submission of Audited fund Utilization certificate (FUC)/report will be Quarterly. If the audited FUC submission is not obtained at the time of seeking advance by the PE, then unaudited FUC shall be submitted till the previous month along with necessary recommendation from TSA while seeking subsequent fund advances. The producers' company should submit the audited FUC for each Quarter that shall be submitted within 20 days after completion of Quarter whereas for the Year ending March, the audited FUC shall be submitted within 60 days after completion.
 10. It should be the endeavor of the State to ensure Producer Enterprise shall continue their operations seamlessly, thus observations by the auditors should be complied with, at the earliest with the support of Technical Support Agency. The funds will be withheld only if material observations have not been complied with, in support of which a revised audited report would be given not later than six months (Except for force majeure) from the date of the previous audit report.
 11. SRLM shall be entitled to conduct an audit of project, within a month of the SRLMs' audit notification as mutually agreed with PEs. The Terms of Reference of the audit will be shared with PEs at least one month before the Audit.

E. E. Training and Capacity Building for Producers Enterprise:

Training and capacity building is a critical aspect in promotion of the Producers' Enterprise. A robust training plan should be prepared by the SRLM to ensure that the all levels of staff are prepared for the implementation. The trainings to the Producers' Enterprises' staff, board of directors and the spearhead team are the responsibility of the SRLM.

1. **Training of Producers Enterprise staff:** The Staff of the Producer Enterprise must be taken through various training programs as and when required. The trainings may cover the following topics –
 - a. Empowering Grassroots Members
 - b. Strengthening Governance and Leadership
 - c. Supporting Effective Market Research
 - d. Strengthening Business Management
 - e. Supporting Improved Production
 - f. Supporting Appropriate PE Structures
 - g. Facilitating Trade Linkages
 - h. Facilitating Access to Market Services
 - i. Business understanding and judgement
 - j. Negotiation skills and confidence
 - k. Market information
 - l. Legal/ statutory compliance
 - m. Leadership and Management skills
 - n. Business understanding
 - o. Motivation, integrity and dedication
 - p. Participatory governance processes
 - q. Technical Capacity (value addition, quality, post-harvest, pre and post production)
 - r. Business and market literacy
 - s. Basic management and accounting

- t. Formal structures and rules - These define members' rights and the formal systems of decision- making and control, such as voting rights.
- u. Motivation and trust - If individual members do not trust the PO's decision-making process or they are not satisfied with the benefits they receive from the PE they may become disillusioned and withdraw from active involvement in the PE.

2. Training of Board of Directors of the Enterprise. The Board of Directors have to be taken through trainings at regular intervals to build their capacity for good governance and decision making. Following are the main areas of leadership capacity building that needs to be conducted:

- a. Leadership and Management skills
- b. Business understanding
- c. Motivation, integrity and dedication
- d. Participatory governance processes
- e. Business and market literacy and strategy

3. Training to members: The following trainings should be conducted for the members of the PE. The responsibility of the training of the members lies with the PE.

- a. Technical Capacity (value addition, quality, post-harvest, pre and post production)
- b. Business and market literacy
- c. Basic management and accounting
- d. Formal structures and rules - These define members' rights and the formal systems of decision- making and control, such as voting rights.
- e. Motivation and trust - If individual members do not trust the PE's decision-making process or they are not satisfied with the benefits they receive from the PE they may become disillusioned and withdraw from active involvement in the PE.

F. Monitoring:

1. A Project Management Committee (PMC) set up at the State level shall have overall responsibility of review, monitoring and evaluation of the project and support the producer companies in effective implementation of the project. The PMC should meet at least once in a month.
2. The committee shall comprise the following members
 - a. State Mission Director, SRLM- Chair
 - b. Nominated Member of NRLM
 - c. Nominated Member of TSA
 - d. Chief Executive of supported Producer Company
 - e. SPM – Livelihood/Livestock – Convener
 - f. Head – Finance, SRLM
3. The responsibility of the Project Management Committee (PMC) should not be delegated/sub delegated in whatsoever manner to district administration.
4. The Project Management Committee should review the progress on financial, physical & procurement of goods/services of each Producer Enterprise

Annexure – I Grant Letter Template

To

Chief Executive,

..... (name of PE).

Address.....

Subject: Sanction for an amount of Rs..... lakhs to fund the producer enterprise under a project named “.....” to be implemented from to

Dear Madam / Sir,

We are pleased to inform you that SRLM has approved a grant of Rs..... (Rupees Only) to Producer Company Limited, (*address*) as per the proposals & budget approved for the project titled “.....” by the Ministry of Rural Development, Government of India for a period from (*date*) to (*date*) against the DPR submitted. The grant is made subject to the following conditions:

1. Head wise amount of fund approved:

Sr.	Head	Amount (in lakh Rupees)
1.	Infrastructure support for value addition	
2.	Cost towards Strengthening Producer Enterprise	
3.	Working Capital	
4.	Management Support	
	Total	

2. Support from TSA PC should take support from the TSA appointed. SRLM may list down the support to be taken by PC from TSA.

3. Disbursement of Grant

- a) Fund will be released directly to the bank account of the PE based on the approved project budget with an intimation to the Technical Support Agency.
- b) The PE may request for fund requirement to the SRLM on a six-monthly basis and on the Annual Plan approved by the PMC. The request by the Producer Enterprise shall be submitted along with **fund utilization certificate (FUC)** for the previous advance & the physical progress report thereof.
- c) The PE may submit their fund requirement request before six months after utilizing 60% of the previous instalment. The fund would be released to PE within one month of the receipt of the request from the PE.
- d) If the audited FUC submission is not due at the time of seeking advance, then unaudited FUC shall be submitted till the previous month along with necessary recommendation from Technical Support Agency (TSA) while seeking subsequent advance.

4. Utilization of Funds

- a) Fund will be released subject to a satisfactory review of the performance by PMC (Project Management Committee) as envisaged in the DPR and utilisation of funds. Every Fund release to the Producer Enterprise would be based on the recommendations from TSA.
- b) Funds from Other sources should not be used for the specific line items specified in the Project Budget unless prior approval is taken from the SRLM.
- c) Neither SRLM nor any of its office bearers will be made a party to any adversities caused to Producer Company or its employees/ representatives in any form or manner, financial or otherwise, as a result of actions undertaken by others over which SRLM has no say.
- d) PC should have adequate/appropriate Accounting/Financial systems and Procedures and should Maintain proper books of accounts to track the expenditure.
- e) Interest accrued on the grant fund should be reported to SRLM in the QPR and Fund Utilisation Certificate.
- f) Unutilized fund after closure of the project may be returned to SRLM.

5. Reporting

- a) **Annual Work Plan (AWP):** The Annual Work Plans will be submitted in the format decided mutually. Fund should be released to PE based on the annual work plan prepared by the PC and approved by Project management Committee (PMC) set up to oversee the project implementation chaired by State Mission Director.
- b) **Quarterly Progress Reports:** quarterly reporting of the progress should consist of followings:
 - i. **Quarterly Progress Report (QPR):** This report should be submitted within 20 days of completion of the quarter to SRLM providing a description of activities undertaken / completed during the quarter, as per the AWP, as per the format prescribed by SRLM
 - ii. **Utilisation Certificate (UC):** An audited Fund Utilisation Certificate (FUC) in the format prescribed by SRLM should be submitted within 20 days of the end of each quarter to SRLM.
Note: Quarterly periods shall be calculated from the beginning of April 1st and ending March 31st of the relevant year.
- c) **Annual Progress Report** should be submitted yearly within 30 days of completion of the financial year, to SRLM, providing a detailed description of progress made in the project, as well as specific progress in project activities against the AWP, as per the format prescribed.
- d) **Audited Statement of Accounts:**
 - i. A consolidated annual audited statement of accounts of Producer Enterprise including a separate schedule regarding the project supported by SRLM should be submitted in the format prescribed by SRLM *within 15 days* from the approval of financials in Annual General Meeting.
 - ii. Grant received from SRLM should be treated as an Earmarked Fund. Only the revenue grant utilized during the year should be routed through Profit & Loss statement. The balance unutilized advance at the end of each financial year may be treated as advance towards acquisition of remaining capital items subject to a maximum limit of total Capex Grant outlay.
- e) **Project End Report:** A Project End Report should be submitted at the end of the project as per the format prescribed by SRLM.

The type of reports, frequency and period of submission is provided in the table below:

Name of the Report	Period	Frequency
Annual Work Plan (AWP)	Financial Year	Within 20 days from the end of previous Financial Year
Quarterly Progress Report (QPR)	Every Quarter	Within 20 days after completion of every quarter

Name of the Report	Period	Frequency
Utilisation Certificate (UC)	Quarterly unaudited	Within 20 days after completion of every quarter
	Six Monthly Audited	Within 20 days after completion of every six months
Annual progress Report	Financial Year	Within 30 days from end of Financial Year
Project End Report	One-time activity	End of the Project

f) Contributions from Other Sources not brought into the Accounts of the Grantee

- Details regarding funds from other sources utilised for the project, specifying the amounts brought into the accounts of the grantee, must be detailed in the format prescribed and Utilisation Certificate of this letter.
- A duly certified statement/document/letter of proof from the funding agency/government department/institution must be attached with the QPR / UC for the period under review, certifying the amount mentioned being raised from the said source towards the project.
- Project Management Committee shall undertake such activities as it deems fit to satisfy itself of the source of funding and its impact on the project.

g) Changes in Budget: Any modifications to / deviations from the Budget of any nature whatsoever regardless of its impact on the feasibility of the project shall be subject to the recommendation of Project Management Committee and approval of the competent authority.

6. Monitoring and Evaluation: The progress of the project will be reviewed & monitored by the Project Management Committee (PMC) set up for this purpose. SRLM may conduct audit of project fund. The Terms of Reference of the audit shall be shared with PE at least one month before the Audit. SRLM will appoint any external agency that it deems fit to carry out a technical/evaluation study as and when required. SRLM may take up documentation of the producers' enterprise as and when required.

7. Other Conditions: Following are the other conditions may be added by SRLM.

- No use of name of SRLM in any correspondence, display board may be done without prior information
- Indication of the clauses regarding Indemnification, Termination, Governing Law.

Annexure- II

Indicative Terms of Reference and Scope for Internal Auditor

The Producer organization may get the Internal Audit done on monthly basis or may engage the Internal Auditor on daily basis for pre audit of each transaction. It is highly encouraged that the auditor so engaged shall attend the office of the Producer Enterprise regularly and pre-audit all the files, purchase orders, payment and receipt vouchers, sales bills, purchase bills, entries pertaining to any other incomes, stock entries, cash book and bank book, reconciliations, Checking and applicability of TDS, TCS & GST etc. and establishment/service matters of the employees.

The firm should be in existence for at least 3 years before the date of engagement and have experience in conducting internal audits of Producer Companies/trading/Manufacturing concerns. The CA firm engaged for Internal Audit to deploy a Qualified Chartered Accountant or an Audit/Article Assistant with not less than 2 years of experience.

The Internal Auditor should also suggest other areas of improvement and should highlight any shortcomings in its monthly report after Complete checking of the Receipt/payment Vouchers as per the provisions of the GST Act. Reconciliation of Sales and Purchase Accounts with Store Books on monthly basis and debtors if any which are outstanding and doubtful.

The Internal Auditor shall submit a report indicating any discrepancies noticed in the utilization of funds as per the approved budget. Financial Accounts, Utilization Certificate, Procurement bank Reconciliation should be included in the report submitted to the CEO of the producer organization.

The internal Auditors are free to look into all the aspects of working which affect the financial management of the Producer Enterprise and any abnormality noticed by them whether covered in the guidelines shall be reported by them. The broad areas to be covered by the internal auditor is for Purchases, Fixed Assets and Inventory, Accounts, Trading Activities and legal compliances.

K-11062/04/2017/NRLM(Livelihoods) (e-358304)

Government of India
Ministry of Rural Development
Department of Rural Livelihoods
DAY – National Rural Livelihoods Mission

7th Floor, NDCC II Building
Jai Singh Marg, New Delhi, 1.
Dated 23rd Feb., 2021.

To

The State Mission Director,
SRLMs, All States/ UTs

Subject: Advisory on promotion of Producers' Groups for providing marketing support to small & marginal women farmers under DAY-NRLM.

Madam/ Sir,

I am directed to say that Under DAY-NRLM, as part of value chain development initiatives, producers' collectives are being promoted across the country which are being supported under different components of NRLM. Producers Groups as a small sized, un-registered entities support the small and marginal women farmers for aggregation & localised marketing activities. Based on the experiences of SRLMs, an advisory on "Promotion of Producers Groups for providing marketing support to small and marginal women farmers under DAY-NRLM" has been developed by the Ministry and is attached herewith. It has been approved by competent authority.

The advisory is intended to serve as framework for SRLMs for promotion of producers' groups for providing marketing support to small and marginal women farmers.

Yours faithfully,

Encl: As above



(H. R. Meena)

Deputy Secretary to Govt. of India

**Advisory on
Promotion of Producers' Groups for providing marketing
support to small & marginal women farmers
under DAY-NRLM.**

Contents

Introduction.....	3
Section I: Establishment of Producers Groups:	3
A. Producers Group (PG) and its functions.....	3
B. Process for promotion of the Producers Groups.....	4
C. Pre-formation activities:.....	4
D. Scoping to Establish Producers' Group:.....	6
E. Setting up a Producers' Group:	7
F. Support to Producers' Group under DAY-NRLM:.....	8
G. Graduation of Producers Group as a formal entity:.....	8
H. Convergence Opportunities:	8
Section II: Management of PG	9
A. Management of Business Processes:	9
B. Governance of Producers Group:.....	9
C. Krishi Udyog Sakhi and its role in the Producers Group:	9
D. Finance and Accounting Management:	10
Section III: Monitoring of Producers Groups.....	11
ANNEXURES.....	13

Introduction

DAY-NRLM has been working with the poor and vulnerable women and organizing them into Self Help Groups (SHG) to improve their livelihoods and enhance their income. A large percentage of SHG members are dependent on agriculture including livestock and NTFPs for their livelihoods. As a part of the value chain development interventions, NRLM promotes Producers' group (PG) below CLF level. It envisages to provide benefit to its members through the act of aggregation, will play a major role in helping farmers accessing the local market for more price realisation through reduction in transaction cost. Producers' Groups are seen as a business centric institution that will continue to have organic links with the community institution architecture of SHGs and federations but will focus more on creating value for small farmers and producers by enabling direct market linkage through aggregation & primary value addition. The overall aim is to make the Producer Groups efficient to reduce transactions costs & be market ready.

SRLMs are having varied experience of promoting producers' groups. Till date, a total of around 94,000 Producers Groups have been promoted out of which 19,000 Producers Groups are into providing marketing support to small & marginal producers. In order to bring a common understanding across the SRLMs on the promotion of the Producers Groups for marketing support to small and marginal producers this advisory is being issued which covers three parts, i) Establishment of Producers Groups covering the pre-formation, scoping and formation activities, ii) Management of Producers Groups covering the business processes, finance/accounts management & governance of PG and iii) Monitoring of Producers Group. This advisory also covers the broad steps and activities to be undertaken to promote a producers group using a participatory approach.

Section I: Establishment of Producers Groups:

A. Producers Group (PG) and its functions

Producer Group (PG) under DAY-NRLM is an informal group of women producers that would work primarily towards reducing transaction costs of agriculture produce, both perishables & non-perishables by collective procurement and marketing of farm produce, and gradually move towards primary processing of commodities to create a unique selling proposition for itself. The PGs are small sized, unregistered entities with little scope for significant business transactions and a few of them engaged in localized marketing activities catering to the local demand and supply situations. Its envisaged as a business organisation owned and governed by the poor and marginal producers & small entrepreneurs for their mutual benefits, enhanced ability of accessing resource, services, market and other facilities, reducing the transaction cost to market their produce, improved livelihood capabilities & enhanced income.

The producer group (PG) may be formed with at least member size of 20 producers having common interest of producing similar products and services with the opportunity of collectivization, aggregation, value addition and marketing of produces. However, size of the producer groups will depend upon the scope for aggregation, price of the commodity, market access & management etc. Focus may be given to incorporate small and marginal women farmer households. Women, irrespective of whether they are SHG member or not, should be mobilised as members of the Producers Groups.

Key Functions of Producers' Group may cover selection of potential commodities, continuous market engagement and access to market information, continuous assessment of transaction costs and strive to reduce it with each transaction cycle, organize market led production planning, establish and run Village level Aggregation Centre (VLAC) for aggregation of agri-produce, primary processing in the form of cleaning, washing, grading, sorting, packing etc.,

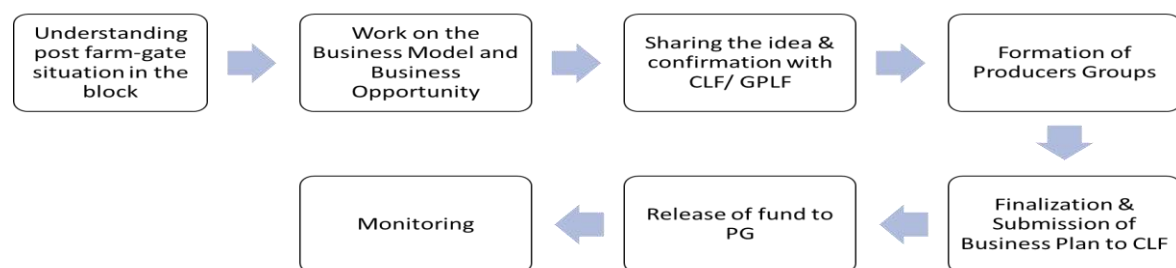
develop a relationship with market players and work towards the assured market for aggregated agri-produce, recording transactions and disbursement of proportional sale of receipt.

B. Process for promotion of the Producers Groups.

A systematic process is to be adopted to set up a Producer Group. Prospective farmers in the villages are made aware of the concept of PG and facilitated to form a Producer Group (PG). PG based on their business plan requirements and increase in membership over a period of time based on their maturity and opportunity may need to be facilitated to be converted as a legal entity like Cooperative, Producer Company, Trust etc.

The process for promotion of Producers Group majorly covers *understanding the post-farm gate situation in the block, creation of the business idea, awareness creation & mobilisation of the producers' members towards formation of producers' collectives, formation of Producers Groups and lastly Establishment of system and processes*. Focus may be given for promotion of PGs visualising the scope for large size commodity clusters.

Figure 1: Process for Setting of Producers Group.



C. Pre-formation activities:

Pre-formation activities are to be carried out at block level which will play an important role in promotion of Producers Groups in a block. Before promotion of Producers Groups, followings broad areas need to be looked into carefully and a report needs to be prepared. This will help the block staff in conceptualising the business model of PG in the block, set the target for promotion of Producers Group and Krishi Udyog Sakhi.

C1. Understanding the Post Farm Gate situation in the block: Before formation of the Producers Groups in a particular block, it is important to understand the post farm-gate situation in that block. Building the basic understanding about the post farm-gate situation of the selected block will be critical for promotion of Producers Groups. To under the situation, secondary research and primary research through Focused Group Discussion may be carried out. The focus may be given to build the understanding around following broad areas which will give a fair idea on the potential commodities, business opportunities and market information.

- a. **Value chain actors:** producers (farmers/cooperatives/farmers groups/ producers company etc.), buyers (agents/ traders/ processors/ representatives), processors (primary/secondary), selling agents like (traders/ wholesaler/ retailers/ consumers), service providers (Nursery/Planters/Spraying Providers/Rejuvenation).
- b. **Production Data:** area, production, average supplies and peak supplies, marketable surplus, productivity - Kgs/Acre.
- c. Seasonality of the commodities
- d. **Production constraints and challenges:** Nursery, input supplies, seasons, pest and disease management, profitability for production, cost of production, cash flows and expenditure timelines, technology interventions.

- e. **Flow of products, information and payments to end markets and value:** Critical Quality points (Grade, Moisture %), Holding capacity of the farmers and any interventions, buyers.
- f. **Marketing:** List of markets with their locations, cost of transportation, list of traders, timeline of sales and payment terms, buyer's perception and the quality, opportunities for improved marketing.

C.2. Feasibility Assessment: Feasibility assessment in a village may cover the area and Livelihood Profile of village, Crops under cultivation and other Details of Livelihoods. An indicative template is given at Annexure.1 & Annexure. 2 for reference.

C.3. Business Opportunity Assessment: The proposal to establish a PG in a village has to be assessed by looking at the strength of the village, agricultural production and marketing surplus, other livelihoods activities, market analysis and collective marketing opportunities that can be exercised to secure 'overall' better earnings to the prospective members including through savings in transaction costs and improvement in earnings by undertaking primary processing. Validation of the marketable surplus may be established through FGD with multiple stakeholders. A SWOT analysis for the produce from the villages may also help assess the situation. Unique selling proposition (USP) like Basmati rice, Alphanso mango etc. for the produce, if any may be identified which may differentiate the products from other products in the nearby market and help to fetch better price.

Assessment of the transaction cost at individual producer level is one of the critical elements to identify the business opportunity. Selling the produce in the market involves certain costs like Packing, Transportation – goods/products, Loading and unloading of produce, Travel expenses of the farmer/representative including on food/incidentals or other personal expenses etc., Commission, Deductions on weight and quality (towards moisture or such other feature as per generally accepted practices), Deduction towards payment like cash discount for immediate/early payment, Quantified "Time loss" to the farmers while keeping himself/herself away from village/other work and instead going to the market (also called as opportunity cost). Transaction cost analysis w.r.t. pre and post PG scenario may be calculated to assess the actual realisation of price per unit.

C.4 Business Model and Revenue Model: Business Model and the revenue model may be identified before promotion of PGs in a particular block which may cover the approach, size, products, markets, pricing, business promotion, development with reference to its business. In a way, it states what the entity should be doing and how so as to achieve business goals and build its revenue.

C.5 Financials: The financial health of any business or entity takes centre stage as the sustainability of the business and its ability to continue to work for the benefit of members relies on the financial and institutional health. Hence, the economics of the potential commodities may be prepared which may include cost benefit analysis, break even analysis etc. Every business aims at profitability and growth while meeting the expectations of the stakeholders. The profitability of a business is first assessed on business volume in terms of quantity or value at which the business is expected to meet all its costs, i.e., fixed and variable costs. A cost benefit matrix is at (Annexure-3) for reference.

C.6 Risk Assessment: Any business is associated with risks. The risks associated with agriculture can be broadly related to production, post-harvest handling/management and marketing. The PG is engaged with post-farm-gate part of the value chain and hence risks to the PG's business can arise out of produce quality, market access, price, and its realisation. Risk

associated with the commodities and its possible mitigation measures need to be properly ascertained.

C.7 Indicative Pricing & Actual Price: Ascertain the prevailing price for various types and grades of the produce from as many markets and sources as possible and derive the indicative price that can be offered to the members against their sales through the PG. Indicative price may be ascertained through deducting the cost items like moisture loss, as per normal trade practices, Price buffer to cover risks due to price volatility, Expenses expected to be incurred in marketing the produce, payment to Krishi Udyog Sakhi, corpus fund at PG level etc. from the total prices ascertained. Prior to scoping and setting up Producers Group, it is important have a tentative business plan by the block level mission unit.

D. Scoping to Establish Producers' Group:

Identification of Business Activities & Development of Business Plan: Identification of the business activities and development of business plan may be done through participatory approach with the intended women farmers. With the understanding on the potential commodities, business opportunities, business models and markets developed prior to promotion of PGs, discussion may be held with the intended members to make them understand the profile of the village w.r.t. different commodities, resources etc. and various business opportunities around it. The intended PG members may be facilitated to generate idea of building the business framework for PG including business model, select financials, risk assessment and such other incidentals.

Based on the business idea finalised by the intended members, a tentative business plan may be discussed with them and support them preparing the business plan. During the scoping on promotion of Producers' Groups, following important aspects of Producers Groups need to be discussed and properly oriented to the intended members;

- a. Importance of development of business plan
- b. Cash / Fund management includes opening of Bank account, collection of initial membership fee and support through CLF, who & how it will be managed.
- c. **Action Plan for PGs** includes the series of activities the PGs need to do while doing business like developing of business plan & submission, scheduling of the products for the market, collection data on marketable surplus, identifying market/buyers, pre-supply arrangements, collection and aggregation of products, primary processing of produce and quality check, weighing/aggregation/dispatch management, logistics plan, transaction closure & payment to members, fund management, role of Udyog Mitra etc.
- d. Sharing of Profit & Loss among the PG members.
- e. Resource planning (*the resources may be Infrastructure, working capital, Institution Building, Internal & External sources, Assessment & Management etc.*).
- f. Financials (*sales, purchases, expenses, surplus/deficit, patronage bonus, member-wise/product-wise realisation.*)
- g. **Assumptions** form important section of the Business Plan. The success or otherwise of a Business Plan relies on "realistic assumptions". Some of the assumptions while developing Business Plans include, no. of villages to be members of the PG, No. of members expected to channelize their products through the PG, marketable surplus expected at village level, marketable surplus expected to be channelled through the PG, expected price at which products are likely to be sold in the market, whether any direct market linkages are possible? If yes for which products, how much quantity and at what price, costs on transportation,

hamali etc., incentive to the Udyog Mitra. An indicative business plan template is given at Annexure 5.

E. Setting up a Producers' Group:

E.1 Setting up Producers Group: Adopting a systematic process to set up a Producer Group would be critical in promotion of a Producers Group with clear business idea and execution plan. It starts with awareness among the prospective farmers in the villages on the concept of PG and facilitation to form a Producer Group (PG). Setting up of a Producers Groups may include broad steps like awareness creation and mobilisation of producers, formation of Producers Groups and establishment of system and process.

To facilitate formation of Producers Groups in a block, SRLM may design a PG formation drive deputing its staff to work with Krishi Udyog Mitra to form PGs in potential locations. Conduct meetings (1-2 meetings may be required to form the PG) with the prospective PG members to form the Producers Groups. The activities may cover:

- a. Sharing business plans around the selected commodities, concurrence/endorsement of the PG on the shared Business Plan
- b. Orientation on the business processes to be followed,
- c. Facilitate PG members to decide on the name of the producers' group,
- d. Formation of Management committee (on rotation every season/quarter or as found suitable),
- e. Interaction with Banks to understand the formalities and documents needed to open an account,
- f. Decision on membership fees, (One-time cost); deciding timeline for collection
- g. Identification of location for setting up an aggregation centre,
- h. Share roles & responsibility of management committee, Udyog Mitra,
- i. Facilitate selection for leadership: Identify responsibility and define roles for leadership
- j. Set minimum agenda for subsequent meetings,
- k. Finalizing books of records that are to be maintained by Udyog Mitra
- l. Capacity Building Need Assessment of PG members.

E.2. Bank Account of Producers Groups

Reserve Bank of India through its Master Circular dated 18th September 2020 has recognised Producers Groups being promoted under DAY-NRLM as a collective to facilitate collective production and marketing for the produce of the members. In the Master Circular dated 18th September 2020, Point no.7.1.3 Banks are advised to open current account for the Producers Groups promoted under DAY-NRLM. Accordingly, Banks may be approached to open accounts for the Producers Groups.

E.3. Establishment of Village Level Aggregation Centre (VLAC)

Based on the requirement in the business plan, it is important to establish a VLAC to keep the assets they have and to facilitate aggregation of produce at a common point. For establishment of VLAC, following are the critical points that need to be looked into carefully and addressed accordingly while establishing the VLAC:

- a. **Awareness on the selection parameters for VLAC establishment:** Already constructed space may be rented as per business requirements which are expected volume of the commodities to be handled, storing assets, e.g., crates, weighing scale, moisture meter, seasonality etc.

- b. No land should be purchased or taken on lease for setting VLAC, unless explicitly indicated in the business plan
- c. Cost of running the VLAC is to be borne by the PG, hence generating profit from operations is a must.
- d. Orient Management/Executive Committee supervising activities of VLAC.
- e. Udyog Mitra as the Manager for VLAC would be oriented on various aspects to build her/his capacity to run the VLAC.
- f. VLAC establishment & management plan may be developed as per the category of commodities to be handled like Food Grains & Cereals, Fruits and Vegetables, NTFPs and Medicinal Plants which have different requirements as per their characteristics.

E.4. Training and Capacity Building

In order to nurture and build the capacity of stakeholders involved in PG promotion like block staff, Krishi Udyog Sakhi and PG Committee members, prior training need to be imparted to all. After promotion of PG, repeat training on critical aspects like business plan, business management, financials, maintenance of books of records may be imparted. A proper training module need to be prepared and implemented which may cover aspects like Business Planning & management, Institutional Processes, Management of PG, Books and Records, Internal Control and Checks, Legal Compliance (when it becomes registered entity), Mitigation measures to safeguard environment, Outreach plan, Product knowledge etc.

F. Support to Producers' Group under DAY-NRLM:

Under DAY-NRLM, provisions have been made to provide infrastructure and working capital support to the producers' groups. Guidelines on "Financing Producers Collectives under DAY-NRLM", issued on 24th May 2020 from the Ministry may be referred for funding support to the Producers Groups. For area/villages where CLF/GPLF has not been formed but the area/villages have the prospect of promotion of PG, the promotion and financing of the Producers Groups in such area may be taken up at block mission unit where the mission must have placed dedicated staff for value chain development.

G. Graduation of Producers Group as a formal entity:

Producers Group based on their business plan requirements and increase in membership over a period of time may need to be registered into a legal entity say Cooperative, Producer Company, LLP etc. Producers Groups should endeavor for this after a 2 – 3 years of operation. This may be assessed based on its (i) business performance, (ii) member strength and (iii) articulated plan to move forward for registration as a Legal Entity (Cooperative, LLP etc.). Consultation with legal experts may be planned to get a comparison of various legal forms. The comparison may be shared with PGs to elicit their choice and take a well-informed decision to either go /not go for registration as a legal entity. If the PG have already done business for minimum of two years with significant volume of business & business processes are adopted then it may be considered to be promoted as FPO to get support under the scheme "Promotion of 10,000 FPOs" of the Ministry of Agriculture.

H. Convergence Opportunities:

Convergence with the schemes/programs of other Ministries / Departments to leverage support is key to support the producers' groups on various aspects. Looking at the prospect convergence opportunities may be explored and support may be leveraged from the scheme/program like Article 275 and Van Dhan Vikas Kendra of Ministry of Tribal Affairs, establishment of community assets from MGNREGA/RUBAN of the Ministry of Rural Development, training

support from RSETI/KVK/TRIFED, PM Formalisation of Micro Enterprise of MoFPI, Agri Infrastructure Fund of Ministry of Agriculture etc. Further, any State-run program/scheme compatible for the activities of the Producers Groups may also be leveraged.

Section II: Management of PG

A. Management of Business Processes:

The business processes for the Producers Group primarily encompass the activities such as Business Activities Mapping with Accountability, Differentiating Perishables/Non-Perishables wherever relevant, Market Assessment (By Management and Udyog Mitra), Preparation of Seasonal Calendar of Produce, Farmer level Processes (Quality product, Post-Harvest Management & Market ready product), Market Intelligence, Product Handling and Marketing & Market Access, Dispatches/Delivery Management/Transportation of Produce on time and Documentation of all activities of PG. A business plan responsibility matrix is at Annexure 4 for reference. Each Producers Group should have such responsibility matrix with proper orientation to its members as part of the training program.

In order to avoid any losses at PG level and make PG risk averse, PG need to close the business transaction within one to two days for the perishable commodities and in case of non-perishable commodities PG should not store the commodity(ies) for longer period.

B. Governance of Producers Group:

Day to day activities is to be carried out by the Management Committee of the Producers Group. First, four (4) to six (6) PG members may be selected to form Management Committee. From the management committee, three persons may be selected as President, Secretary & Treasurer. Two of the Office Bearers which is to be declared by the PG would be responsible for carrying out Bank operations. Rotation of the management committee may be ensured in every two years. Followings are the key responsibilities of the Management Committee managing the group.

- Ensure that the PG is aligned to its vision, mission and works to achieve its set goals
- Provide vibrant leadership to PG
- Engage in day-to-day management and functioning of PG.
- Supervision and monitoring of business transactions.
- Oversee the activities of the Udyog Mitra.
- Develop greater understanding of market in tandem with UMs.
- Overall responsibility to oversee the business operation of the Producers Group.
- Indicate capacity building requirements of PG members
- Ensure participation of members for the designated training and exposure visits,
- Facilitate squaring off the accounts with the CLF/GPLF after completion of agreed upon business cycle with the CLF/GPLF.

C. Krishi Udyog Sakhi and its role in the Producers Group:

Seeding and scaling up value chain interventions in the specific location will be primary role of Krishi Udyog Sakhi. Key roles & responsibilities of the Udyog Mitra would cover identification of potential commodities for farm-gate value addition, promotion of producers collectives, aggregation and market linkages, identification of potential producers for formation of Producers Groups, set up aggregation mechanism and ensuring quality control, help in business

plan preparation, capacity building of producers on harvest and post-harvest management of relevant commodities being dealt by the producers group, dissemination of price information and quality specifications to the PG members, maintain procurement record of the members and maintaining stipulated books of records, act as a manager of a PG for all day to day business operations of the PG, support planning for the next cycle of transaction, periodically appraise the VO on status of PG through VO Livelihoods Sub-Committee, maintenance of the books of records of the Producers Collectives, may support Producers Enterprise in management of procurement centre in the village. A planning template for next cycle of transaction is at (Annexure 6). After initial support from SRLM for initial 2 to 3 years in tapered manner, as soon as the business of PG starts functioning in scale, the honorarium of Krishi Udyog Sakhi should come out of the profit generated from the business of the PG.

D. Finance and Accounting Management:

D.1: Books of Accounts for the Producers Groups: Maintenance of proper books of accounts is very important for any business organisation. It will help bring clarity, bring transparency, build trust among members and support smooth business operation. Followings are the list of books of accounts a Producers Group will maintain:

1. Cash Book
2. Daily business Register
 - a. Daily Procurement [*Member name, Commodity, Grade, Rate, Volume (Qntl/Ltr), Value (INR)*]. Receipt for each procurement. - *annex*
 - b. Daily Sales [*Commodity, market/buyer, Grade, Rate, Volume (Qntl/Ltr), Value (INR)*]
3. Member Ledger
4. Member pass book (transaction record book) – separate book for each member - *annex*
5. Assets register (*annex*)
6. Membership fees register (*annex*)
7. Vouchers (payment, receipt, sales, purchase) file

D2: Operating Profit & Loss Statement: In order to track the business growth & effectiveness of the PG, “**Operating Profit & Loss Statement**” will be prepared for every business cycle as proposed in the business plan proposal. A template for preparation of the Operating Profit & Loss statement is at *Annexure – 7* for reference.

Based on the operating profit and loss statement, profit may be distributed among members after every business cycle. Consequent upon calculation of operating profit / loss, 75% of the profit should be distributed among all active members based on their patronage (in term of value of commodities) and rest 25% of the profit may be kept as corpus fund with the PG which can be used to compensate any loss or meet any exigency expenses in future.

Section III: Monitoring of Producers Groups

Monitoring will be very important to ensure desired business output by the producers' groups and timely squaring off of loan account with CLFs. Followings are the broad areas for monitoring of the promotion of Producers Groups at different level:

Level	Monitoring Indicators	Reporting requirement to next level
CLF Level	<p><u>PG wise monitoring indicators</u></p> <ol style="list-style-type: none"> 1. Number of Producers Groups promoted (<i>PG profile data collected in format</i>) 2. Producers Groups developed and submitted the business plan to CLF 3. Number of members covered (<i>including caste category wise</i>) 4. Producers Groups received fund from CLF 5. Infrastructure/equipment procured and shared with the producers' groups. 6. Target volume and value of business for a FY. 7. Volume and value of business for a FY 8. PGs squared off the account with CLF 	<ol style="list-style-type: none"> 1. Information on the new PGs formed. 2. Members information. 3. PG wise business volume/value. 4. PGs squared off the working account after the business season. 5. No. of PG prepared Operating P&L statement.
Block level	<ol style="list-style-type: none"> 1. Number of Producers Groups promoted (<i>PG profile data collected and updated in online module</i>) 2. Producers Groups developed and submitted the business plan to CLF (PG wise) 3. Producers Groups received fund from CLF 4. No. of CLF procured infrastructure/equipment and shared with the producers' groups. 5. Target volume and value of business for a FY 6. Volume and value of business for a FY 7. Number of members covered (<i>including caste category wise</i>). 8. Number of PGs squared off the working capital account with CLF. 	<ol style="list-style-type: none"> 1. Updation of PG profile data in the website within one month of promotion of PG. 2. Monthly data update in PG /MPR module. 3. Field visit by the block staff to minimum 50% of the PG every month. <p>Visit to all PGs during preparation of business and squaring off account with CLF.</p>
State	<p>Monitoring of block wise data</p> <ol style="list-style-type: none"> 1. Number of PGs promoted 2. Number of PGs developed the business plan and submitted to CLFs. 3. Number of PGs received fund from the CLF 4. Volume & value of business in a FY (<i>as per the business plan</i>) – target & achievement 5. Volume and value of business by the PGs (MoM) 	<ol style="list-style-type: none"> 1. Check & confirm updation of profiles of PGs formed 2. Monthly business progress. 3. PGs squared off account with CLFs 4. Members coverage

Level	Monitoring Indicators	Reporting requirement to next level
	6. Number of PGs squared off account with CLF 7. State level staff to visit at least 10% of the Producers Groups in a FY.	
National Level	Monitoring of State/block wise data 1. Number of Producers Groups promoted 2. Number of PGs developed the business plan and submitted to CLFs. 3. Volume of business (target & achievement) 4. Number of PGs squared off account with CLF	

ANNEXURES

Annexure1: Area Profile (Village)

S No.	Particulars	Details
1	Name of the Village	
2	Name of the Gram Panchayat	
3	Name of the Block	
4	Name of the District	
5	Names of Nearest Towns/Cities with distance in Km	
6	How is the road connectivity to the Village	All Weather Road/Kutchha Road
7	Transportation facilities: Public Transport/Bus Public Transport/Train Private Transport/Bus Private Transport/Others	
8	Communication facilities (functional): Telephone/Landline: Telephone/Mobile: Internet services:	
9	Electricity supply	Uninterrupted/Intermittent
10	Total population of Village (Number)	
11	Number of Households	
12	Number landholding Farmers	
13	Number of landless/tenant Farmers	

Annexure2: Land & commodity profile of the Village

S No.	Particulars	Details
1	Name of the Village	
2	Name of the Gram Panchayat	
3	Total land area of the Village	
4	Area under agriculture in Ha.	
5	Irrigated area in Ha.	
6	Area under forest cover in Ha.	
7	Other land area in Ha.	
8	Agri. Lands – Types of Soils	
9	Irrigation: (Source, Seasonality)	
10	Major commodities grown	
11	Varieties of the commodities	
12	Any specific USP of the commodities	

Annexure3-: Cost Benefit Analysis

Particulars	Member – Own Sales	Member – Sales Through PG	PG – Only Channelling	PG - Trading	Udyog Mitra
Income/ Benefit	Value of goods sold in the Market or to others	Amount paid by PG as net realisation for the Products sold through PG	Any commission deducted as facilitation fee by the PG for the sales of produce through PG	Value of goods (aggregated from Members) sold in the Market	Monthly fixed amount received plus expected Commission on sale of produce through PG in the market.
Cost	Transaction costs	Costs on additional processes undertaken as per PG's requirement	Transaction Costs Payment to Udyog Mitra	Cost of Purchases plus Transaction Costs plus Payment to Udyog Mitra	Nil
Net Benefit	Net income after deducting costs	Net income after deducting costs	Net income after deducting costs	Net income after deducting costs	Net income after deducting costs
Qualitative aspects	Sales and realisation under own control; not depending on any others or PG	Assured market access; Transaction costs can be lesser Can save time required to sell the produce directly in market/others	No product handling risks. No price risks. Responsible to minimise the transaction costs	Will be subjected to Product handling risks and price risks. Will have to bear the transaction costs	Responsible for product quality, market access, price realisation and enhanced net earnings to the Members of the PG.
Perceived overall net benefit	Good or Not good	Good or Not good	Good or Not good	Good or Not good	Good or Not good

Annexure4-: Business Plan Responsibility matrix

S No.	Business Process	Responsibility
A	Collection of Data on Marketable Surplus from Members	Udyog Mitra with support from Members
B	Identifying at least three markets and three buyers for the products to be marketed	Udyog Mitra with support from Project Team
C	Primary Processing of Produce	Members
D	Quality check and aggregation of the product	Udyog Mitra and President or Secretary
E	Logistics arrangements	Udyog Mitra
F	Delivery of the produce in the market / to the buyer	Udyog Mitra and one of designated Members
G	Collection of Payment	Udyog Mitra and the designated Members
H	Settling payment to Members	President / Secretary
I	Compensation to Udyog Mitra	President / Secretary
J	Compiling transaction-wise Financials	Udyog Mitra

Annexure 5 - Template for Business Plan

Business Plan for <<Name of the Producers Group>>,

auto generated code number of the PG :					
A. Basic Details					
Location	Village	GP		Block	
Members	Total	SC	ST	OBC	Others
Name of Krishi Udyog Sakhi					

B. Commodities details													
Name of commodities	1....., 2....., 3.....												
Seasonality (H – Harvest, P – Production), tick in appropriate place	Commodity	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
	1												
	2												
	3												

C. Assumptions
<i>May cover no. of members to be involved, calculation of surplus production, transaction cost, price, etc.</i>

D. Business activities for the PG (aggregation, primary processing, transportation etc.) and plan. what, where, how, who?
<i>commodity-month wise procurement plan, establishment & management of VLAC</i>
<i>Marketing plan (market, transport arrangement etc.)</i>

E. Financial Projections		
		Amount (in Rupees)
E1. Total Revenue		
a. Commodity 1		
b. Commodity 2		
....		
E2. Total Procurement		
a. Commodity 1		
b. Commodity 2		
....		
E3. Operating Profit (E1 – E2)		

E4. Operating expenses		
E5. Net profit (E3 – E4)		

F. Fund Requirement			
Sr.	Head	Amount (Rs.)	Source
1.	Working Capital (<i>may be calculated as per the requirement in E2 & E4</i>)		
2.	Infrastructure		
	Total		
Proposed duration of fund requirement (in months) from the CLF/GPLF:			

Disclaimer by the Producers Groups:

It is to inform to the CLF/GPLF that the Producers Groups is agreed to the rate of interest fixed per annum for repayment of the working capital which will be refunded to the CLF/GPLF alongwith the capital as per the agreed terms and condition.

Signature of President

Signature of the Secretary

Signature of the Treasure.

Annexure 6- Preparing for aggregation and Plan for next business cycle.

PREPARING FOR AGGREGATION		
STEP	TASKS	NOTES
MARKET REPORT	<ul style="list-style-type: none"> Researching the prevailing market price and trend for the commodity over phone * Determination of price which can be offered to the PG Members 	<p>*This should be done either a day in advance or regular track must be maintained so that information is available at all times</p> <p>Based on the market price, the tentative gross and net price for the farmers need to be conveyed for them to take an informed decision.</p>
AGGREGATION DECISION	<ul style="list-style-type: none"> Announcing the price to all farmer members Estimation of quantity available for aggregation Determining viability of transport vehicle and cost optimization * Doing a cost – benefit analysis based on volume and price ** Collection announced as per norms/ timing of procurement and cut-off time# 	<p>*based on quantity available, ideal mode will be requisitioned. A local tractor/transport is always a much more viable medium as the same vehicle can be used for bringing back the unsold material/crates/gunny bags/farmers and also if they have bought something for their consumption from the market. The return cost can be apportioned accordingly.</p> <p>It is also important to see if the volume will be justifiable or an alternate can be found. This stage is critical to the success of the transaction and building up the confidence and profit of the farmers.</p> <p>**A cost benefit analysis will take care of issues like what is the likely revenue, the expenses which will be incurred, net realization of the PG, price realized by individual member, per kg. If this price is not higher than the existing market mechanism, the aggregation exercise itself may be rendered futile.</p> <p>#Farmers bringing their produce after the cut-off time will be denied to build in discipline.</p>
AGGREGATION – AT COLLECTION CENTRE		
COLLECTION	<ul style="list-style-type: none"> Farm produce is kept ready by the farmers Queuing up for collection/ collection process. Collection, Weighing, testing and grading begins 	<p>Farmers must keep only those materials ready which are of acceptable grade</p> <p>Tokens can be issued to farmers to avoid waiting time. Alternately, produce can be picked up from farm gate</p> <p>Produce must be segregated at collection stage as per the marketable grades. This is important to avoid rejection at <i>mandi</i> or if leads to time loss in further segregation at the market itself</p>

		Depending on the number of grades, separate collection lots of heaps to avoid mixing or confusion
	<ul style="list-style-type: none"> Recording of Quantity of Each Member 	The collection weight must be recorded in the farmers PG book, and materials register lying with the PG. Only produce grade and quantity must be recorded at this stage
	<ul style="list-style-type: none"> Repacking, marking and proper stacking of the produce 	If the produce is loaded at a collection point, the PG committee/udyog mitra should ensure that all these formalities are completed before the delivery vehicle arrives
LOADING	<ul style="list-style-type: none"> Arrival of the delivery vehicle and loading the produce 	
	<ul style="list-style-type: none"> Calculating grade/produce wise quantity received and handing it over to Udyog Mitra/Committee members 	udyog Mitra signs the materials register as an acknowledgement of total quantity received
SELLING – AT THE MANDI		
FINAL NEGOTIATION AT BUYER POINT	<ul style="list-style-type: none"> Arrival at the market and confirmation of best price available, re-negotiation Unloading of the produce at the buyers point and weighing. Matching the same with the quantity recorded in PG register 	This exercise is important to ensure that the best price is fetched for the produce Norms and process to be followed in case of significant difference or any dispute. <i>Dharam Kanta</i> , if available can be one way of solving this issue
CASH COLLECTION	<ul style="list-style-type: none"> Collection of payment as per the amount calculated, voucher preparation 	Voucher may be prepared to record calculations, keep track of shortage, rejection etc. This can be done on any plain paper too but signed by buyer and <i>udyog mitra</i>
POST SALES OPERATIONS		
AT THE MANDI	<ul style="list-style-type: none"> Depositing the commission /margin amount in bank as per established rule Getting the bank pass book updated If the delivery vehicle is mandated to go back to village, to finish the market work Payment of <i>hamali</i>/loading/unloading 	The percentage might vary across products/ grades as determined by the PGs, but should not be too high. The efficiency and viability of the transportation vehicle can be increased if it belongs to the PG village or neighborhood. It can be used for farmers to buy their stuff

	<p>expenses, if applicable, as per prevailing rates</p> <ul style="list-style-type: none"> • Payment of delivery expenses to the delivery vehicle 	
AT THE PG	<ul style="list-style-type: none"> • Calculation of net return and amount to be paid to each farmer • Recording transactions 	<p>Basis of calculation – price realized per kg/unit – grade wise. Total price realized – expenses on delivery, hamali, shortage, damage etc., minus amount to be deposited in bank. Per kg amount payable to each farmer member.</p> <p>The material register, cash book needs to be updated at this point for cash received, expenses incurred and amount deposited in bank</p>
DISBURSEMENT	<ul style="list-style-type: none"> • Inviting the farmers to collect cash proceeds • Making payment as per calculations arrived at • Updating pass book of PG Members 	<p>The farmers must be invited by turn to avoid unnecessary queues. Pass books must be updated on the spot</p> <p>Farmers should also be explained the calculation for the purpose of transparency</p>
PLANNING FOR NEXT AGGREGATION	<ul style="list-style-type: none"> • Planning /announcement of next cycle and delivery date/rate/time etc. for the same • Discussion regarding further improvement in the process 	<p>Based on the day's experience, a tentative plan for next aggregation can be discussed.</p> <p>PG committee, <i>Udyog Mitra</i> can discuss how aggregation can be made more robust based on experience so as to fetch a better price</p>

Annexure – 7 : Template for Operating Profit and Loss Statement

ABC Producers Group		
<i>address (village, GP, Block, District)</i> <i>[Auto-generated PG code]</i>		
Operating Profit & Loss Statement for the aggregation & sales Activities		
Business Cycle No. & Time period .....to.....		
	Amount (INR)	Amount (INR)
A. Total Revenue		
i. Sales Revenue		
ii. Revenue from other source if any		
B. Total value of procurement (B)		
C. Gross Profit (A-B)		
D. Operating Expenses		
i. Labour Charges		
ii. Transportation cost		
iii. Ancillary expenses for marketing/trading		
iv. Interest on loan		
v. Packaging cost, if any		
vi. Rent (<i>after grant support period</i>) *		
vii. Honorarium/incentive to udhyog sakhi (<i>after grant support period</i>) *		
E. Net Profit (C-D)		

**cost of Rent/Honorarium of Krishi Udyog sakhi should consider as operating expenses after funding period.*

Annexure – 8: Template for the books of accounts

1. Daily business Register

a. Procurement:

Date	Member Name	Member code	Commodity	Grade	Rate per unit	Volume (Qntl/Ltr.)	Value (Rupees)	Signature
1	2	3	4	5	6	7	8	9

b. Receipt for each procurement

Date of transaction					
Name of member					
Member code					
Details on commodity procured					
Commodity	Grade	Rate	Volume (Qntl/Ltr.)	Value (Rupees)	
<i>Signature of Udyog Sakhi</i>					

c. Daily Sales

Date	Commodity	Market/ Buyer	Grade (optional)	Rate per unit	Volume (Qntl/Ltr.)	Value (Rupees)	Payment	Signature
1	2	3	4	5	6	7	8	9

2. Member Ledger

Name of Member:									
Date	Receipt No.	Commodity	Grade	Rate per unit	Volume (Qntl/Ltr.)	Value (Rupees)	Paid (Rupees)	Payable (Rupees)	Signature Of member
1	2	3	4	5	6	7	8	9	10

4. Member Passbook

Date	Receipt No.	Commodity	Grade	Rate per unit	Volume (Qntl/Ltr.)	Value (Rupees)	Paid (Rupees)	Payable	Signature of Udyog Sakhi
1		2	3	4	5	6	7	8	9

5. Asset Register

Sr.	Name of Asset	Date of purchase	Value of Asset (Rupees)	Remarks
1	2	3	4	5

File No. K-11062/04/2017/NRLM(Livelihoods)
Government of India
Ministry of Rural Development
Department of Rural Development
(RL Division)

7th Floor, NDCC – II Building,
Jai Sing Marg, New Delhi
Pin – 110001

24rd May, 2019

To,

The Principal Secretaries of all States/UTs,

Subject: Guidelines for Financing of Producers' Collectives under DAY-NRLM

Madam /Sir,

I am directed to say that under the value chain development initiatives of DAY-NRLM, the primary producers are being organised into livelihoods collectives around specific livelihood activities like agriculture, livestock, NTFP collection etc. Producers' Collectives, viz. Producers' Groups (PG) and Producers' Enterprises (PE), are being promoted as member-based organizations under various components of DAY-NRLM such as Mahila Kisan Sashaktikaran Pariyojana (MKSP), NRLP and SRLM AAP. The World Bank funded NRETP also has value chain development for farm produce as one of its core components with substantial outlay for promotion of PG and PE.

To bring clarity on the financing these institutions a guideline for financing of Producers Collectives has been approved under DAY-NRLM. The guideline of "Financing of Producers' Collectives under DAY-NRLM" is attached herewith for kind information.

Yours faithfully,



(H. R. Meena)

Deputy Secretary to the Govt. of India
Tel.:011-23461747

Encl.: As above.

Copy to: CEOs/ SMDs of all States/UTs

Guidelines for Financing of Producers' Collectives under DAY-NRLM

Ensuring sustainable access to markets and remunerative prices for the produce of smallholder and marginal farmers is an essential part of the Livelihoods promotion strategy under DAY-NRLM. DAY-NRLM has been organizing the primary producers into livelihoods collectives around specific livelihood activities like agriculture, livestock, NTFP collection etc. As these livelihoods collectives are basically the collectives of primary producers they would be more appropriately called producers' collectives. Producers' Collectives are important means of linking producers with markets, as well as sourcing inputs, technology, information, and services. The promotion of producers' collectives is taken up under DAY-NRLM to benefit the small and marginal women farmers through –

1. Economies of scale
2. Improved market reach
3. Improved access to extension services
4. Reduction in transaction costs

Producers' Collectives, viz. producers' groups and producers' enterprises, are being promoted as member based organizations under various interventions of Farm Livelihoods under DAY-NRLM such as Mahila Kisan Sashaktikaran Pariyojana (MKSP), MKSP Annual Action Plan, World Bank Dedicated Fund for value chain development and other Farm Livelihoods initiatives. As on January 2019, there are more than 86000 producers' groups and 131 Producers' Enterprises promoted under DAY-NRLM. Producers' Enterprises (PEs) can be defined as registered, formal organizations of primary producers as member owners including co-operatives and Farmer Producer' Companies whereas the producer groups are the informal entity of the primary producers.

Building on the experiences of earlier projects, the National Rural Economic Transformation Project has been designed to continue to strengthen women led producer organizations to increase market access and value addition for farm produce. Higher order value chain interventions would be taken up to leverage the economies of scale and reduction in transaction cost and necessary investments will be made to support promotion of producer groups and formal producer enterprises. Therefore, farm value chain interventions would focus on the promotion of producers' collectives, viz. producers' groups and producers' enterprises to enable the small and marginal women farmers to access markets for their produce at a remunerative price.

Therefore, as more women SHG members are being organized into producers' collectives under various value chain interventions and a strong demand is being felt to engage in promotion of marketing activities with SHG members, there is a need to define the financing arrangements under DAY-NRLM for producers' collectives more clearly.

In this context, this comprehensive guideline for financing of Producers' Collectives under DAY-NRLM has been developed.

1. Attributes of Producers' Collectives

The table below defines the key attributes of the producers' collectives under DAY-NRLM:

Criteria	Attributes of Producer Collectives	
	Producer Group	Producer Enterprise
Membership criteria	Women SHG members who are primary producers	Women SHG members who are primary producers as shareholders
Nature of organization	Un-registered, informal entities who take up a common activity for backward and forward linkages,	Registered entity (as cooperative, FPC etc.)
Ownership issues	Infrastructure would be owned by Cluster Level Federation (CLF)/ GPLF	PE is owned by the members and infrastructure and other assets are owned by the PE
Key objective	Better price realization through reduction in costs (overheads) by aggregation, farm gate value addition (sorting, grading etc.), linkage to nearby large markets	Better price realization through value addition, market linkage, economies of scale, higher bargaining power etc.
Area of operation	Limited to a village or cluster of villages	Preferably large scale covering large areas except in NTFP / tribal areas or areas with niche products
Promoting organization	SRLM / CLF / GPLF	SRLM
Scale of operation	Low Village / cluster level activities	High Large scale entities covering large area with value addition, market linkage to big markets
Business Model	Simple business model with limited need for infrastructure and working capital	Robust model and taken up in a project mode
Accountability towards	Members	Shareholder members
Management structure	One to two of the PG members would ensure that proper records of transactions are maintained and would manage the operation (aggregation, sorting, grading, transport to market etc.). Volunteerism is ensured	Professional management structure as defined in the Producers' Enterprise Guidelines
Governance	Informal governance mechanism to be decided by the members	Board of Directors

2. General guidelines

2.1. DAY-NRLM would promote producers' collectives with the primary producers, for livelihoods promotion through deriving economies of scale, backward and forward linkages, and access to information, credit, technology, markets etc. The Livelihoods collectives would enable the poor to optimize their limited resources. DAY-NRLM would extend all necessary support to these producer collectives to make them sustainable, economically viable member controlled organizations in a time bound manner. The

details guidelines of promoting PE are covered under the **Guidelines for Promotion of Producers' Enterprises**¹ of DAY-NRLM and adherence to this guideline would be ensured while promoting PE.

- 2.2. DAY-NRLM would encourage value chain approach for developing forward linkage, so that the livelihoods collectives focus on a critical part of the value-chain and seek linkages with market and partnerships with other business entities where appropriate.
- 2.3. DAY-NRLM would also provide support for marketing to the institutions of the poor. Rural Haats would also be encouraged to directly link producer groups (SHGs) and individual producers with urban and peri-urban markets through a well-developed system of continuous identification and rotation of beneficiaries.

3. Financing of Producers' Groups under Day-NRLM - The following guidelines would apply for financing of Producers' Groups (PGs) under DAY-NRLM:

3.1. Allocation of fund by SRLM for promotion of PGs

- 3.1.1. SRLMs may plan for formation of PGs under SRLM Annual Action Plan, MKSP Annual Action Plan, NRETP or any other sub-components under DAY-NRLM.
- 3.1.2. The primary criteria for formation of PGs would be availability of marketable surplus for leveraging economies of scale resulting in better price realization for the farmers.
- 3.1.3. The SRLMs would assist the CLF/GPLF and PGs in preparation of the business plans for the PGs. Fund would be allocated to the CLF only against a business plan.
- 3.1.4. The fund to the PG would be released by the CLF/GPLF directly. Though SRLM has to ensure that PGs receive the required amount from CLF/GPLF on time to take up the marketing activity.

3.2. Funding mechanism

- 3.2.1. CLF/GPLFs would be provided a dedicated **value chain development fund** against the business plan submitted for all the PGs to be covered under the respective CLF/GPLFs. The PG would be provided the following funds through the CLF/GPLF under the value chain development component :
 - i. One time infrastructure fund (*grant to CLF/GPLF under CIF*)
 - ii. Working capital (*loan to PG from CLF/GPLF*)

The details of each of the fund components are given in section 3.4 below.
- 3.2.2. The funds allocated under this fund would not be used for any other purpose by the CLF/GPLF. The operating expenditure for the activities which are variable in nature linked to volume of transaction will not be part of the fund and would be taken up by the Producers' Groups through the operating profits generated from the activity.
- 3.2.3. It is envisaged that over the time SRLM would take initiative to promote Producer Enterprises (PE) by bringing the participants of such PGs together as members of the PE wherever such opportunities emerge. Once a Producer Enterprise has been formed in the region, the PE would take up the aggregation, value addition and marketing of those commodities in the same region. The role of PG would

¹<http://www.aajeevika.gov.in/content/guidelines-promotion-producers-enterprises-under-day-nrlm>

shift from developing forward linkages to providing extension services. Wherever possible, the working capital component of the value chain development fund provided to the CLF/GPLF for the Producers' Groups would be transferred to the PEs promoted under DAY-NRLM. This clause would be incorporated as part of the financing MoU between CLF and SRLM. The details on the role of the PGs, in the framework of the PE, are provided in the Guidelines for Promotion of Producers' Enterprises.

- 3.2.4. In the case of PGs promoted under SRLM Annual Action Plan, up to 20% of the NRLM funds may be allocated under the marketing & infrastructure support component for creating marketing infrastructure for PGs (25% in case of North East states & Sikkim), as per DAY-NRLM guidelines.
- 3.2.5. In the case of MKSP Annual Action Plan or Innovation Fund or any other fund source, the budget is examined and sanctioned by the Empowered Committee chaired by Secretary, RD. Therefore, in this case the quantum of funds would be approved by Empowered Committee.

3.3. Criteria for providing funds to Producer Groups: The criteria of for the transfer of funds are given below:

- i. Producer Group should have a very clear business plan with very clear profit margin projections
- ii. The proposed business model should not be based on a speculative model.
- iii. The relation between quality and price of the produce should be analyzed in the business plan.
- iv. Clear costing of the operations and the transparent, quality based pricing mechanism should be defined.
- v. The commodity risk would be borne by the members as the working capital fund is a loan product. So very prudent business model should be established with low risk element.
- vi. A membership fee would be collected from the members by the Producer Group.
- vii. Though in the initial cycles, the cost of the CRP (Udyog Mitra) may be borne by the CLF/GPLF/VO from the IBCB budget, provision should be made in the business plan when the Udyog Mitra would be paid by the PG from the profit earned.
- viii. No credit based sales should be encouraged.
- ix. Proper books of records, like cash book, stock book and farmer-wise ledger should be maintained.
- x. Producer Group has to settle its account with the CLF/GPLF on a season by season basis. The Producer Group will not be eligible for any further loans until the account has been settled for the previous season.
- xi. In case of business loss, the producer group members should repay working capital loan in proportion to their patronage. In exceptional cases the CLF may write-off the interest component and only consider the repayment of the principle.

3.4. Types of fund to Producer Groups

3.4.1. **One time infrastructure grant** – would be provided by the CLF/GPLF to the PG for purchase of village level infrastructure for aggregation and primary value addition such as weighing scale, crate, plastic sheets, sieving screens, moisture meters etc.

- i. The infrastructure grant should not exceed INR 1.5 lakhs. As the activities undertaken by the PGs would be village level aggregation, the investment in fixed assets should be limited to equipment for procurement (weighing scale, crates, plastic sheets, moisture meter etc.) and minimal processing (sorting, grading, drying etc.). No consumables or rentals should be provisioned under this fund. The indicative list of items that are permissible are –
 - a. Weighing scale (electronic / mechanical)
 - b. Moisture meter
 - c. Plastic sheets / tarpaulin sheets
 - d. Plastic Crates
 - e. Sieves for cleaning / grading
 - f. Low cost primary processing machines, for example – solar dryer, de-seeder, rice hullers, packing machine, grinder, dal mill.
 - g. Mobile tablet (one only)
 - h. Storage shelf
 - i. Solar lighting
- ii. Items not allowed to be set-up under this infrastructure grant to PG are:
 - a. Milk chilling centers / bulk milk coolers
 - b. Pre-cooling units / chillers
 - c. Integrated pack-houses
 - d. Civil construction works
 - e. Consumables items like Stationery
 - f. Fuel, consumables, spares and stores
 - g. Transport vehicles
- iii. The infrastructure created would be owned by the CLF/GPLF and should reflect in the asset register of the CLF/GPLF. The physical verification of these assets should be conducted in a periodic manner by the CLF/GPLF.
- iv. In case a Custom Hiring Center has been planned in the village/cluster, the CLF/GPLF must ensure that there is no duplication of equipment purchased by the PGs.
- v. Repair, maintenance and replacement: The responsibility for repair and maintenance would be mutually agreed between PG and CLF/GPLF. The primary repair and maintenance may be the responsibility of that PG, whereas the overall repair, maintenance and replacement of equipment purchased would be from the interest earned by the CLF/GPLF as mentioned in section 3.4.2 (vi).

3.4.2. Working capital

- i. The working capital would be provided as a loan to the PG by the CLF/GPLF.
- ii. Working capital loan should be released in stages as per the requirement defined in the business plan.

- iii. Working capital should not exceed funds needed to cover
 - a. Procurement activities of 3 days for perishables
 - b. Procurement activities of 10 days for non-perishables
 - c. This can be modified based on the experiences of the CLF/GPLF with the PG
- iv. The interest charged would not be greater than 7% per annum and to be charged only for the period for which the loan was with PG
- v. The working capital would not be held in perpetuity with the PG. The working capital borrowed by the PG would be repaid to the CLF/GPLF at the end of every season or production cycle or business cycle as per the business plan.
- vi. The interest earned by the CLF/GPLF on the working capital loan would be utilized by the CLF/GPLF for expansion of activities (members and products) and repair, maintenance and replacement of equipment (section 3.4.1(v)).

3.4.3. Training and capacity building

- i. Adequate provisions may be made by SRLMs under its IBCB budget component for training and capacity building.
- ii. The CLF/GPLF may budget for training and capacity building activities of the farmers being covered under PG, Livelihoods Sub Committees of CLF/GPLF as well as Village Organizations
- iii. The eligible items under this component will also include:
 - a. Payment of honorarium to the trainers / Community Resource Persons taken to support the Value chain development work
 - b. Cost of conducting the training of PG participants, CRPs, LH sub-committee members of CLF/GPLF and VO
 - c. Printing of IEC material
 - d. Cost of hiring resource persons for training
- iv. Cost of dedicated Block staff engaged to support CLF/GPLFs in value chain development interventions
- v. For initial 3-4 business cycles performance linked honorarium for the CRP (Udyog Mitra) may be budgeted under this component. After that cost of the same would be covered from the business profits or whatever found suitable by the PG.

4. **Financing of Producers' Enterprises under Day-NRLM:** DAY-NRLM would promote Producers Enterprise (PE) where size of operations would be extremely important for a self-sustained model. A strong business plan should be prepared by SRLMs for each PE before promoting producer enterprises. A producer enterprise would be promoted in a project mode with a project life cycle of 3-4 years within which the PE is expected to become self-sustained and economically viable, member controlled organizations. The SRLM would submit a detailed project proposal including the business plan of the proposed PE. This proposal would be appraised by DAY-NRLM and approved by the Empowered Committee of Ministry of Rural Development. The details guidelines of promoting PE are covered under the **Guidelines for Promotion of Producers' Enterprises** of DAY-NRLM and the SRLM would adhere to this guideline while promoting PE.

4.1. Funding support to the Producer Enterprise (PE): DAY-NRLM would provide grant support to establish the Producers' Enterprises. This grant support will be on the following components:

4.1.1. Infrastructure for Value addition –

- i. One time support for setting-up infrastructure for value addition
- ii. Processing facilities for value addition of agriculture, dairying or NTFP produce which may include facilities for weighing, cleaning, sorting, grading, packing, testing equipment, ripening chambers, oil extraction, specialized packaging etc.
- iii. Facilities including pack-houses, pre-cooling units, bulk milk coolers etc. may be proposed
- iv. Promotional costs for marketing, certifications costs (such as FSSAI, organic certifications) which add value or are part of legal compliances would be covered.
- v. Any infrastructure set-up would be owned by the PEs. Asset for a single individual member will not be permissible under this component.

4.1.2. IB/CB cost – The following costs would be covered for a period not exceeding 3-4 years:

- i. Includes costs of community mobilization into PE, social capital development (CRP – Udyog Mitra), training and capacity building of the PE staff and members.
- ii. Honorarium for Udyog Mitra
- iii. Remuneration for the block level staff of the PE

4.1.3. Working Capital – working capital required for procurement of produce from farmers for a period not exceeding 3 weeks.

4.1.4. Human Resource and administrative costs –

- i. Support for hiring professionals for managing the PE for a period not exceeding 3-4 years. This includes the cost of key manpower such as CEO, commodity experts, accountant etc. of the PE. The PE must have a lean HR structure.
- ii. One time cost of suitable accounting software, inventory management software, office furniture and fixtures and computers.
- iii. The office rental and ancillary expenditure to set-up the office like electricity cost etc. would be supported for a period not exceeding 1-2 years.
- iv. The human resource and administrative costs, this cost should not exceed 6% of the total funding support to the PE, as per the norms of DAY-NRLM.

4.1.5. Support for transportation of goods procured from the members: It is expected that at the initial stage of the operations, the PE may not be able to generate sufficient volumes to recover the costs for transportation of goods procured in the first leg, i.e. from primary procurement centers to the aggregation centers. Therefore, the PE would be provided support for part of the cost of the transportation of the goods from the primary procurement

centers to the aggregation centers for a period not exceeding 1-2 years. This fund should not be used for buying of vehicles.

4.2. Fund flow from SRLM to Producer Enterprise (PE)

- 4.2.1. SRLM would support the PE to prepare a detailed business plan for the proposed activities.
- 4.2.2. The PC must submit a Detailed Project Report to the SRLM.
- 4.2.3. The fund to the SRLM would be released by the SRLM directly to the account of the PE against the business plan and the DPR.

4.3. Criteria for fund release to Producer Enterprise (PE)

- 4.3.1. Fund release to Producer Enterprises will be made through electronic transfer systems, to the extent feasible.
- 4.3.2. The fund releases to the PE would be based on the business plan and the fund requirement projections approved by competent authority.
- 4.3.3. All releases to the PEs would be accounted for as advances in SRLM books of accounts except for working capital.
- 4.3.4. Actual expenditure reported to be booked as expenditures and the **unspent balances are to be refunded to the SRLM.**
 - i. The SRLM may periodically request for the audited reports of the PE accounts within the duration of the project period to verify actual expenditures.
 - ii. The expenditure reported by PE is to be included in the IUFR submitted by the SRLM.
 - iii. SRLM would ensure that the PEs promoted under DAY NRLM are audited as per the regulatory provisions of the appropriate laws (for example PEs registered as Producer Company should be audited as per the provisions of Company Act).
- 4.3.5. The working capital fund provided to a PE is a fund that is rotated multiple times during the project period as per the operational cycle of the Producer Companies (PC). This is a support from NRLM to the PE to become a viable business entity. The working capital released to the PC would be treated as expenditure in the SRLM books of accounts.
- 4.3.6. The following conditions would be applied for working capital release to the PE:
 - i. The working capital component releases would be as per the budget for the project approved by the competent authority (EC).
 - ii. The Producer Company would submit a working capital requirement plan against the approved working capital budget to the SRLM. SRLM would release the same to PE after due evaluation.
 - iii. The working capital should not be transferred as a lump-sum to the PE.
 - iv. Necessary care should be taken to avoid idle fund lying in the bank account.

- v. The working capital should be placed in the current account of the PC and should not be placed as a Fixed Deposit. The basic principle is that working capital support is provided to a PE for running the business and not for earning interest.

4.4. Procurement of equipment, machineries and services for value addition –

- 4.4.1. In the Empowered Committee (EC) meeting held on 7th Nov 2017, the EC has taken a decision that the equipment and machineries required by the Producers' Enterprises as per the approved proposals should be procured by the PE itself. (*Refer letter K-11060/10/2017/NRLM (Livelihoods)/Part2*)
- 4.4.2. As the PEs, having been promoted recently, may not have the technical and managerial capacity to undertake the procurement process, the SRLM may initially support the PE in developing a procurement manual and in taking up procurement of the equipment and the machineries. The funds budgeted in the approved proposals may be transferred to the PEs against a procurement plan, so that the PEs may undertake the procurement of the goods.

D*/173792/2019

File No. K-11062/04/2017/NRLM(Livelihoods) (358304)

Government of India
Ministry of Rural Development
Department of Rural Development
(RL Division)

7th Floor, NDCC – II Building,
Jai Singh Marg, New Delhi
Pin – 110001.
20th September, 2019

To

The Principal Secretaries,
Rural Development Department,
Assam, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra,
Odisha, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal

Subject: Guidelines on Farm Value Chain Development through promotion of Producers Enterprise under NRETP.

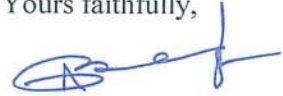
Madam / Sir,

The World Bank funded NRETP has value chain development for farm produce as one of its core components with significant outlay for promotion of large size Producers Enterprise through project mode.

In this regard, a guideline along with the project proposal submission template has been developed to be used by SRLMs for development of project proposal for promotion of Producers Enterprise under NRETP. The guideline on "Farm Value Chain Development through promotion of Producers Enterprise under NRETP" is attached herewith for kind information. SRLMs may refer this guideline while developing project proposal for promotion of farmer producer organization for submission to DAY NRLM under NRETP.

Encl: As above

Yours faithfully,



(Anita Baghel)
Director(RL)

Copy to:

The CEOs/SMDs of all States/UTs

Guidelines on Farm Value Chain Development through promotion of Producers Enterprise under NRETP

Table of content

1. Scaling up of Value Chain Initiatives under NRETP (National Rural Economic Transformation Project):.....	2
2. Strategy on Value Chain Development through promotion of Producers Enterprise.....	3
3. Objectives of Value Chain development interventions under NRETP	4
4. Expected Outcomes	4
5. Non-negotiables.....	5
6. Approach.....	5
7. Farm Based Value Chain Projects under NRETP.....	6
8. Funding	7
9. Convergence	7
10. Processes under NRETP for Value Chain Development through promotion of Producers Enterprise.....	8
11. Support to SRLM	10
12. Technical Support Agency	10
13. Support to Producers' Enterprise (PE)	10
14. Fund flow from SRLM to Producer Enterprise (PE)	11
15. Release of Funds	13
16. Necessary conditions for project approval	14
17. Project Completion	14

1. Scaling up of Value Chain Initiatives under NRETP (National Rural Economic Transformation Project):

DAY-NRLM has promoted interventions focused more towards increasing productivity in agriculture, livestock and Non Timber Forest Produce (NTFP) to diversify livelihoods and enhance incomes with a large number of women farmers (Mahila Kisan). The intervention strategies are well defined and SRLMs have been able to drive the interventions over last few years. It has also been recognized within DAY NRLM that there is a need for specific intervention to promote member owned and member controlled Producers' Enterprises to ensure better price realization to Mahila Kisans. Towards that, value chain development initiatives through promotion of producer collective enterprises have been introduced in few states over last 4 years.

Building on these experiences, National Rural Economic Transformation Project (NRETP) envisages moving towards higher order livelihoods interventions and aims to promote value chain interventions for establishing sustainable market linkages for small and marginal producers focusing on post farm-gate market linked initiative as one its core components. Comprehensive support architecture is the essential element of NRETP in terms of provisioning technical assistance, skills building, and investment support to enable such farmer-owned and farmer-led organizations to improve market access, value addition, quality enhancements and accessing market information for business decisions.

Under NRETP, 40 large size Producers Enterprises which are registered entities are planned to be promoted over next three years. This initiative would be taken up in a project mode so that these enterprises are developed in a time bound manner with clear outcomes in terms of economic sustainability and business viability. These Produces Enterprises would be supported for all the necessary investments required to establish such an enterprise without depending on any external financial support so that projects are executed without any delay caused by external dependence. This initiative will be taken up on a project financing mode to be implemented on a turnkey basis where SRLMs have to prepare a comprehensive project proposal including market assessment, business model, business plan, financial projections, risk assessment, professional management and sustainability plan for each of the Producers Enterprise.

Keeping the specific program objectives of NRETP, this guideline has been developed for the States to develop specific funding proposal for promotion of Producers Enterprise under farm livelihoods component of NRETP.

DAY-NRLM has already issued guidelines on "Promotion of Producers Enterprises", "MKSP – Value Chain Development" and "Financing Producers Collectives under DAY-NRLM". All these guidelines are developed to enable the SRLMs to design and implement the value chain initiatives so that the producers-based organizations promoted are sustainable – economically, socially, and environmentally. As value chain development through promotion of Producers Enterprise is an important component of World Bank funded NRETP project this is imperative to have a guidance note regarding this as well.

To ensure a systematic approach in project proposal development, appraisal and approval under NRETP for financing Producers Enterprises this guidance note is being issued.

2. Strategy on Value Chain Development through promotion of Producers Enterprise

2.1. Promotion of sustainable and economically viable Producers' Enterprises is a highly challenging and complex task and DAY-NRLM has identified the critical success factors for the success of a PE like policy issues, requirement of professional manpower with techno-managerial skill and financing challenges through various consultative processes.

The strategy envisaged to develop Producers' Enterprises is centred on the following aspects:

- a. **Robust Business model** - The focus should be on building member owned PEs. A robust business model which takes into account supply factors, market and consumer preferences is essential for success of Producers' Companies. Post farm-gate to market interventions would be supported. The business model has to be robust enough to clearly define value proposition for the farmers, for the consumers and for the PE.
- b. **Focus on value addition** – Interventions centred on post farm gate value addition and marketing would be the focus. A business model based on aggregation and speculation on market price will not be encouraged but a business model that is more focused on taking processing, packaging and marketing would be more robust and more sustainable.
- c. **Dedicated human resource** - Human Resource with relevant qualifications and experience as staff of the PE in the PE pay roll to manage the PE operations and business effectively would be extremely important. There need to be a dedicated team of experts with business skills at the SRLM level to support and steer the implementation of value chain interventions in the state.
- d. **Capacity building** - Mentoring and capacity building of small farmers is essential for the sustainability of PEs.
- e. **Financing** – Procurement infrastructure, processing infrastructure, working capital and viability gap funding to the PEs would be critical

2.2. Producers Enterprise

- a. A Producers' Enterprise (PE) is defined as registered formal organization of farmers including co-operatives and Farmer Producer' Companies.
- b. It is a community based organization (CBO) owned and governed by the community members as shareholders
- c. A Producers' Enterprise is built on Mutual Assistance Principles.
- d. The primary objective of these organizations is to ensure better economic return to the farmer producers by helping them to take up business activities.
- e. These enterprises operate as commercial organizations and being economically viable is of paramount importance for these organizations.

3. Objectives of Value Chain development interventions under NRETP

The objective is to empower women farmers and collectors through an integrated approach of developing Producers' Enterprises, building market linkage and capacity building programmed together.

The key objectives of value chain project through promotion of Producers Enterprise under NRETP are:

- a. To ensure **higher price realization** for the agriculture and allied activities, dairying and NTFP produce for the small and marginal women farmers
- b. Increasing influence of women farmers on the commodity value chain
- c. To ensure increased **bargaining power of small and marginal producers** by achieving economy of scale and therefore negotiate better prices.
- d. To develop **robust business models at scale** for the commodities produced by small and marginal women farmers
- e. To develop **scalable and sustainable Producers' Enterprises** to implement the value chain development interventions
- f. To create **opportunities for value addition** of commodities
- g. To take up **Capacity building** of the community for better post-harvest handling, knowledge of quality parameters
- h. To provide the platform for producers to promote their interests and influence policies in the local and national environment that affect their business and livelihood
- i. To promote the use **of ICT for** accounting, inventory management, payment to producers and market information dissemination in a transparent manner

4. Expected Outcomes

The expected outcomes of each project proposal submitted under NRETP will be achieved through the planned interventions as below:

- a. Better price realisation to the small and marginal women farmers
- b. Establishment of scalable and sustainable women Producers' Enterprises with robust business model and viable business plan having small and marginal women farmers as the shareholders
- c. Establishment of professional management structure for the Producer Enterprise
- d. Equitable sharing of profits among the members
- e. Access to market information for better marketing of their products
- f. Establishing market linkages through a multi-channel approach
- g. Development of Standard Operating Procedures for all processes of the Producers' Enterprises such procurement manuals, HR manuals, accounting processes
- h. Development and promotion of sustainable management, quality assurance and storage practices
- i. The overriding principle is that the producer enterprises promoted are sustainable – financially, environmentally and socially

The SRLM may develop partnerships with other reputed organizations having demonstrated experience in value chain development of the selected commodities for achieving the desirable outcomes. This would be as per the partnerships guidelines of DAY-NRLM.

Convergence with various departments for leveraging the resources would be strongly pursued.

5. Non-negotiables

While designing the proposal the SRLMs has to consider the non-negotiables of DAY-NRLM and should ensure that these principles are respected and are not violated. These non-negotiables have been clearly defined to make the project community owned community governed and sustainable. These principles would guide the project and make the project relevant for the small and marginal women farmers.

- a. The interventions would be focused on small and marginal women farmers. The Producers' Enterprises proposed to implement the interventions would be women Producers' Enterprises.
- b. The interventions proposed would be implemented through PEs and at scale.
- c. The producer Enterprise would be professionally managed having its own professional managers with requisite qualifications and relevant experience of running a business enterprise.
- d. The interventions would be focused on post farm-gate to market for agriculture produce, dairying and NTFP.
- e. The proposed interventions should be for replicating successful large scale models rather than taking up pilots.
- f. The Producers' Enterprises would be community owned and must adhere to the principles of co-operation.
- g. Any assets provided under the interventions would be community owned i.e. by a producers' enterprise.
- h. Any financial support such as working capital support, viability gap funding etc, to organizations other than PEs would not be permitted.
- i. The dedicated team at the SRLM level should be in place for NRETP. The team should consist of manpower with relevant techno-managerial experience in operations, financial management, commodity handling etc.
- j. No subsidy or grant to be provided to any individual.
- k. Core business of the Producers' Enterprise must be based on agriculture, Dairying or NTFP.
- l. Viability of the enterprise is ensured.

6. Approach

The Value Chain projects would be implemented by the Producers' Enterprise promoted for that specific purpose. The SRLM is the promoting organization of the PE. Already approved DAY-NRLM Guideline for the promotion of Producer Enterprises would be followed as a framework for implementation.

7. Farm Based Value Chain Projects under NRETP

7.1 About the Project proposal development

- a. The project objectives must be explicitly stated and formulated accordingly.
- b. The project will focus on geographic area taken under NRETP.
- c. While evaluating the proposal the size of the enterprise would be a key determinant to ascertain the sustainability. An enterprise which is not big enough may not be able to meet the overhead expenditure like quality manpower and also may not be able to attain the economy of scale.
- d. The Projects should be conceived in a manner so as to provide end to end solutions. Provision of a complete package of 'end-to-end' services through mobilizing women producers into Producers' Enterprises, providing access to a complete package of post- harvest services from procurement, value addition to marketing of produce should be made in the project in order to make it a holistic project. To the extent possible, the existing gaps in the marketing eco-system must be identified and addressed.
- e. The project proposal should draw extensively from the existing best practices in post- harvest practices, value addition and marketing.
- f. The project must have a clearly defined business model and business plan at the time of submission of the proposal. The template at **Annexure – I** is to be used for submission of project proposal.
- g. Project should lead to substantial tangible and intangible socio-economic benefits.
- h. Project should have a well-defined internal monitoring systems to track the progress i.e., physical and financial achievements. Appropriate Management Information Systems and accounting software should be essential component for setting up the PEs.
- i. The PEs proposed are to be professionally managed entities; hence the SRLM must ensure recruitment of professionals with relevant qualifications and experience in the pay roll of PEs. The Staff of PE must consist of commodity specialists (depending on the number of commodities handled) and accounts professionals.
- j. The project should be developed on the existing implementation experience of the implementing agency or its partners in implementation of large size value chain development interventions involving promotion of producer enterprises.

7.2 The components under the project

- a. Organization and mobilization of SHG women engaged in agriculture, rearing of milch animals and NTFP collection into Producer Enterprises should be one of the components of the project.
- b. Project would support the PE for hiring the professional managers for specific period and beyond that PE should be able to bear those expenses.
- c. Processing activities that add value to the agricultural, dairy or NTFP would be taken up by the Producer Enterprise and necessary infrastructure for the same would be

provisioned under the project. This would include agro-processing, food processing, storage, value addition, preservation, etc.

- d. Building market linkages is an essential component of the project.
- e. The producers enterprise may need to buy and store the produce for a short period of time and the project would support working capital towards that.
- f. In order to optimize the benefits from the value chain development project under NRETP, a well- defined convergence strategy should be mentioned at state, district and block levels in order to leverage schemes of various Ministries /Departments such as MGNREGA, Ministry of Agriculture, Department of Animal Husbandry, Department of Food processing etc. and similar schemes aimed at providing support to development of Enterprises or value addition infrastructure.
- g. Capacity building of producers in better harvest and post-harvest technology may also be part of the funding to the producer enterprise. The PE must plan for knowledge building, management and dissemination relating to markets, post-harvest practices and village level value addition. Producer enterprise would also take up the training of members and board of directors in governance of a producer enterprise

8. Funding

Ministry of Rural Development (MoRD) would provide funding support of up to 60% (90% for Assam) to the project submitted by the SRLMs under NRETP, balance is to be contributed by the respective state governments.

Participation of banks in financing the projects would be encouraged. The SRLM would be expected to define the financing mechanism for the Producers' Enterprise post the project period.

The SRLMs will be submitting the project proposals for a period of three (3) years and the funding will be made through a project route. The project will be approved for a three years project period.

The investment per household should not exceed INR 15000 over the period. Dairy value chain development requires higher infrastructure investment, hence in the case of dairy value chain projects; the investment per household should not exceed INR 18000 over the project period.

The investment per household would be calculated as:

Investment per household = total investment proposed for the project / number of unique farmers to be covered during the project period.

The total project cost for any single project shall not exceed INR 45 crores.

9. Convergence

DAY-NRLM has issued joint advisories with Ministry of Agriculture, Department of Animal Husbandry, Dairy and Fisheries and TRIFED. For implementation of the value chain interventions the SRLMs may explore convergence opportunities with other schemes and departments in their respective States.

10. Processes under NRETP for Value Chain Development through promotion of Producers Enterprise

10.1. Identification of project areas: The project area would primarily be the NRETP blocks. The non-NRETP/non-intensive blocks adjacent to the NRETP block where the project is being proposed may also be included with the condition that the SRLM would develop a plan to cover the non-intensive blocks under its social mobilization and financial inclusion interventions. The areas taken up under Mission Antyodaya would be given preference for promotion of value chain interventions under NRETP.

10.2. Project implementing agency (PIA): The State Rural Livelihoods Mission of NRETP States may propose projects under NRETP who will be henceforth called as Project Implementing Agency (PIA).

10.3. Proposal submission process and templates: The proposal for value chain development projects through promotion of Producers Enterprise for agriculture, dairying or NTFP may be submitted under NRETP in the proposal submission template. The proposal submission template is provided at **Annexure – I**. The detailed guidance on proposal development using the template is also provided in **Annexure I-A**. SRLMs will be submitting the project proposals for a period of three (3) years and the funding will be made through a project route.

10.4. Proposal approval Stages –

10.4.1. Desk appraisal: The proposal submitted by the SRLMs would be appraised by a team of experts having thorough understanding of value chain interventions including business models and commodity markets. The expert team would comprise of Farm Livelihoods team of DAY-NRLM handling value chain development interventions and National Resource Persons empanelled by NIRD&PR having expertise on value chain development. *The appraisal would be taken up following the scoring template as Annexure II*. The detailed guidance on scoring is also provided in **Annexure II-A**. Any proposal scoring less than 60% marks will not be considered.

The Appraisal Team would do the project appraisal based on the following

- a) Non-negotiables defined above in this guidance note.
- b) Project submission template and financial analysis, business plan, financial viability, sustainability, profitability.

In case the SRLM has proposed a Technical Support Agency, the mode of procurement has to be mentioned in the proposal.

In case the proposal is not found to be suitable to be taken to the pre-EC stage, the SRLM would re-work the proposal based on the comments of the Farm Livelihoods Team.

The Farm Livelihoods Team may undertake a field appraisal of the project areas to verify the readiness of the SRLM to implement value chain development interventions, suitability of the commodity and other factors.

10.4.2. Pre-Empowered Committee meeting: The Projects submitted would be examined and considered by the Pre-EC before it is submitted to the Empowered committee for its recommendation. The composition of the Pre-EC would be as under:

- i. Additional Secretary (RD) & Mission Director, NRLM – Chairman
- ii. Joint Secretary (Rural Livelihoods)
- iii. Lead, Farm Livelihoods – Member Convener
- iv. Team members - Concerned SRLM

The pre-EC meeting can be held multiple times during the appraisal stage of the proposal.

10.4.3. Empowered Committee: Once the projects have been examined in the Pre-EC meeting, the proposal would be put forth for approval by the Empowered committee. The composition of the Empowered Committee would be as under:

- i. Secretary, Department of Rural Development – **Chairman**
- ii. AS & FA, Ministry of Rural Development – Member
- iii. Additional Secretary (RD) - member
- iv. Representative from Niti Aayog – Member
- v. Joint Secretary, Ministry of Environment & Forest / Joint Secretary (Agriculture Marketing) - Member
- vi. Joint Secretary (Cattle & Dairy Division) - Member
- vii. Joint Secretary, Ministry of Tribal Affairs - Member
- viii. Joint Secretary, Ministry of Development of North East Region (In case of Projects from Assam) – Member
- ix. Joint Secretary, MoFPI. - Member
- x. Special Invitee/Expert (Two) - Member
- xi. Joint Secretary (Rural Livelihoods) Member-Convener

10.5. Role of the State Rural Livelihoods Mission

The State Rural Livelihoods Missions (SRLM) as Project Implementing agency (PIA) will place a dedicated team at the State level as provisioned under NRETP for proposal development and subsequent facilitation of the project roll-out.

Under NRETP, State Rural Livelihoods Mission has to engage dedicated staff as per the advisory issued under NRETP. Further, to provide technical support in value chain proposal development one Technical Support Agency need to be engaged from the very beginning for which budgetary provision has been made under NRETP.

10.6. Project Period: Projects are to be implemented within three years' time. Funding under NRETP would be as per the approved timeline of NRETP.

10.7. Eligible Items of Expenditure: Component-wise expenditure likely to be incurred for the project must be mentioned in the project document. The major cost components envisaged under the value chain development projects proposed are:

- a. Support to SRLM
- b. Technical Support Agency
- c. Support to Producers' Enterprise (PE)

Any kind of subsidy to individual members or asset creation for individual members is not permissible under this project.

11.Support to SRLM

During the initial stages of the project, the SRLM would undertake the activities for the incorporation of the PE. Therefore, the funds permissible under the Support to SRLM would include:

- 10.8. Pre-incorporation and incorporation expenses** – which includes expenditure towards preliminary survey (if required), identification of initial subscribers, facilitation of KYC of initial subscribers, hiring a Chartered Accountant, registration fees for the PE etc.
- 10.9. MIS entry and profiling of Mahila Kisans** – entry of the Mahila Kisan profiles in the DAY-NRLM Farm Livelihoods MIS would be taken up by the SRLM.
- 10.10. Documentation of best practices** – SRLM may document the initiative after 3 yrs of operation of the PE like case studies.

12.Technical Support Agency

The SRLM may take the services of a technical support agency for providing technical and handholding support to the specific PE(s) to be promoted within the proposal. The mode of procurement of the Technical Support Agency (TSA) must be specified in the proposal. Therefore, the TSA is to be taken to provide specific support to the specific PE. The Cost of the TSA should not be budgeted as a percentage of the total project cost. The cost should be defined as per clearly specified milestones and deliverables.

13.Support to Producers' Enterprise (PE)

Producers Enterprise (PE) would be promoted under NRETP where size of operations would be extremely important for a self-sustained model. A strong business plan should be prepared by SRLMs for each PE before promoting producer enterprises. A producer enterprise would be promoted in a project mode with a project life cycle of 3-4 years within which the PE is expected to become self-sustained and economically viable, member controlled organizations. The sub-components envisaged under the support to the PE are:

13.1. Infrastructure for Value addition (Plant, machinery, equipment)

- 13.1.1. One time support for setting-up infrastructure for value addition
- 13.1.2. Processing facilities for value addition of agriculture, dairying or NTFP produce which may include facilities for weighing, cleaning, sorting, grading, processing, packing, testing equipment, ripening chambers, oil extraction, specialized packaging etc.
- 13.1.3. Facilities including pack-houses, pre-cooling units, bulk milk coolers may be proposed which may be essential for taking up proposed processing and value addition activities
- 13.1.4. Promotional costs for marketing, certifications costs (such as FSSAI, organic certifications) which add value or are part of legal compliances would be covered.
- 13.1.5. Any infrastructure set-up would be owned by the PEs. Asset for a single individual member will not be permissible under this component.

13.2. Cost towards Strengthening Producer Enterprise (set-up cost) – The following costs would be covered for a period not exceeding 3-4 years:

- 13.2.1. Includes costs of mobilization of primary producers into PE, training and capacity building of the Board of Directors, shareholders and PE staff.
- 13.2.2. Honorarium for Udyog Mitra or any such cadre managing the collection centre activities.
- 13.2.3. Remuneration for the block level staff of the PE.
- 13.2.4. Cost of suitable accounting software, inventory management software.
- 13.2.5. Support for transportation of goods procured from the members: It is expected that at the initial stage of the operations, the PE may not be able to generate sufficient volumes to recover the costs for transportation of goods procured in the first leg, i.e. from primary procurement centers to the aggregation centers. Therefore, the PE would be provided support for part of the cost of the transportation of the goods from the primary procurement centers to the aggregation centers for a period not exceeding 1-2 years. This fund should not be used for buying of vehicles.

13.3 Working Capital: Working capital required for procurement of produce from farmers for a period not exceeding 3-4 weeks. Elements for working capital estimation may cover Cost of commodity procured (quantity procured per day, total days procurement, operating cycle - storage go-down, work in progress, finished goods, goods in transit, logistics cost). Working capital should be calculated in terms of no. of days equivalent to procurement cost.

13.4 Management Support:

- 13.4.1 Support for hiring professionals for managing the PE for a period not exceeding 3-4 years. This includes the cost of key manpower of the PE such as CEO, commodity experts, Procurement Head, Head of Processing Unit, accountant among others. The PE must have a lean HR structure.
- 13.4.2 The office rental and ancillary expenditure to set-up the office like electricity cost would be supported for a period not exceeding 1-2 years.
- 13.4.3 Office furniture and fixtures and computers.
- 13.4.4 The human resource and administrative costs should not exceed 6% of the total funding support to the PE, as per the norms of DAY-NRLM.

14. Fund flow from SRLM to Producer Enterprise (PE)

The fund under the budget head of 'Support to PE' would be released by the SRLM directly to the account of the PE against the annual work plan and the DPR.

14.1. Criteria for fund release to Producer Enterprise (PE)

- 14.1.1 Fund release to Producer Enterprises will be made through electronic transfer systems, to the extent feasible.
- 14.1.2 The fund releases to the PE would be based on the business plan and the fund requirement projections approved by competent authority.
- 14.1.3 All releases to the PEs would be accounted for as advances in SRLM books of accounts except for working capital. Advances should be adjusted against the UC submitted by the PE to SRLM.
- 14.1.4 Actual expenditure reported to be booked as expenditures and the unspent balances are to be refunded to the SRLM.

- i. The SRLM may periodically request for the audited reports of the PE accounts within the duration of the project period to verify actual expenditures.
- ii. The expenditure reported by PE is to be included in the IUFR submitted by the SRLM.
- iii. SRLM would ensure that the PEs promoted under DAY NRLM are audited as per the regulatory provisions of the appropriate laws (for example PEs registered as Producer Company should be audited as per the provisions of Company Act).

14.1.5 The working capital fund provided to a PE is a fund that is rotated multiple times during the project period as per the operational cycle of the Producer Enterprises. This is a support from NRLM to the PE to become a viable business entity. The working capital released to the PE would be treated as expenditure in the SRLM books of accounts.

14.1.6 **The following conditions would be applied for working capital release to the PE:**

- a) The working capital component releases would be as per the budget for the project approved by the competent authority (EC).
- b) The Producer Enterprise would submit a working capital requirement plan against the approved working capital budget to the SRLM. SRLM would release the same to PE after due evaluation.
- c) The working capital should not be transferred as a lump-sum to the PE.
- d) Necessary care should be taken to avoid idle fund lying in the bank account.
- e) The working capital should be placed in the current account of the PC and should not be placed as a Fixed Deposit. The basic principle is that working capital support is provided to a PE for running the business and not for earning interest.

14.2. Procurement of equipment, machineries and services for value addition –

14.2.1. In the Empowered Committee (EC) meeting held on 7th Nov 2017, the EC has taken a decision that the equipment and machineries required by the Producers' Enterprises as per the approved proposals should be procured by the PE itself. (Refer letter K-11060/10/2017/NRLM (Livelihoods)/Part2).

14.2.2. As the PEs, having been promoted recently, may not have the technical and managerial capacity to undertake the procurement process, the SRLM may initially support the PE in developing a procurement manual and in taking up procurement of the equipment and the machineries. The funds budgeted in the approved proposals may be transferred to the PEs against a procurement plan, so that the PEs may undertake the procurement of the goods.

14.3. General Conditions for Eligible Items of Expenditure by the PE

The project should incorporate expenditure on various components indicated in this guidance note to arrive at the project cost. Purchase of vehicles is not admissible in the projects. No cost escalation shall be borne by the Government of India.

At the end of the project period, the ownership and management rights of the infrastructure and assets created if any, under the project, shall remain with the PE. Reallocation of funds not exceeding 5% of the total project cost among major budget

heads will be permissible to accommodate any innovation within the project. Within the main budget heads reallocation of funds is permissible. However, reallocation on account of administrative expenditure shall not be permitted. Any Additional Information that may be relevant to the Project Proposal may be mentioned in the Project Document.

15. Release of Funds

The funds will be released directly to the concerned SRLM from the Ministry of Rural Development.

15.1. 1st Instalment: The first instalment will be released by MoRD to the SRLM on the approval of the project by the Empowered Committee. Out of the first instalment (i.e. 25% of the central share), 10% of the central share may be released after approval of the project. The SRLM would submit DPR to the Ministry of Rural Development. Rest of the 15% will be released immediately after submission of DPR to the Ministry of Rural Development for which a maximum period of 3 months from date of approval of the project by Empowered Committee will be permitted. In case Technical Support Agency (TSA) has been proposed, the TSA needs to be on-board before the release of the second tranche of the 1st instalment.

15.2. 2nd Instalment: The 2nd instalment of 50 % of central share will be released upon the following:

- a. The PE proposed has been incorporated.
- b. The PE Staff proposed has been recruited and positioned in the PE.
- c. Release of state share
- d. Submission of a Utilization certificate along with an expenditure statement for at least 60% of the released 1st instalment funds and contribution from state Government /other agencies and achievement of corresponding physical target.
- e. Submission of year-wise audit reports of the funds utilized;
- f. Quarterly reporting of progress in the prescribed formats.

15.3. 3rd Instalment:

The 3rd and final instalment of 25% of central share will be released upon the following:

- a. Utilization of 80% of the total available funds and achievement of corresponding physical targets.
- b. Submission of year-wise audit reports of the funds utilized;
- c. Regular reporting of progress in the prescribed format;
- d. A certificate from the Implementing/Coordinating Agency that the project is being implemented as per the approved project proposal.
- e. Before the release of the 3rd and final instalment, it will be open to MoRD to have verification of the progress of the project by a third party / independent agency.

15.4 Utilization of Interest earned on central release: The interest amount accrued on Government releases, if any, shall be adjusted against the Government share of the Project cost at the time of release of the third and final instalment.

- 15.5 **Releasing of Matching Share:** The State Government is required to release its corresponding matching share within a month of receipt of the respective instalment of the central share.
- 15.6 **Submission of progress reports:** The SRLM shall submit the progress report of the project by 15th of the month succeeding every quarter in the format prescribed by the Ministry. Failure to furnish the progress report would make SRLM liable to refund the Central funds released for the Project along with interest. It shall be open to the Ministry of Rural Development to prescribe such conditions, as it deems fit, from time to time to ensure proper execution of the project.
- 15.7 **Monitoring and review of the Project:** Monitoring and review of the Projects sanctioned and implemented will be done as per the NRETP monitoring and review mechanism.
- 15.8 **MIS:** The PEs promoted under NRETPs should have strong MIS and they would share relevant data with NRLM and SRLM on a regular basis to monitor the progress against the target.
- 15.9 **Audit:** Financial audit is to be carried out as per the NRETP audit norms. PE should have standard audit mechanism as per the regulatory requirements. The audit report together with action taken on the auditor's observations and physical progress under the project shall be furnished at the time of release of 2nd or 3rd instalment of the Central funds.

16. Necessary conditions for project approval

- a. Recommendation by the appraisal Team.
- b. Commitment of 40% (in case of Assam it is 10%) of the Project Cost by State Government.
- c. Professionals with relevant education and experience to be recruited by the SRLM under NRETP as per the Human Resource advisory related to NRETP.
- d. Exit and Scaling up strategy
- e. Predominant focus on vulnerable communities (ST/SC, Minorities and women headed households).
- f. Comprehensive project design – farm gate to market

17. Project Completion

It should cover the details of deliverables as indicated in the project and achievements made against these deliverables. A project completion report may be submitted by the SRLM highlighting the performance of the project against the deliverables.

Business Plan Proposal

Proposal for promotion of a Producer Enterprise
[Techno Economic Feasibility Report]

Name of the Proposal

Proposal Submitted to

Ministry of Rural Development, Government of India

Proposal Submitted By

<<name of the SRLM>>

The template

1. **Content Table**
2. **Acronyms used in the report**
3. **Executive Summary (300 words)**
4. **Project at a glance**

Commodities to be handled by the PE				
Geographic area	Name of Districts	Name of Blocks of concerned district		No. of villages
Total households to be covered				
Expected turnover (in Crores Rupees)	Y1 (.....)	Y2 (.....)	Y3 (.....)	
Year of breakeven of the Producers Enterprise				
Key interventions (eg. aggregation, value addition, packaging, labeling, marketing)				
Total budget (in Crore Rupees)	Direct support to PE	TSA Cost	Support to SRLM	Total
Per capita investment (Rupees)				
Estimated benefit to household (Rupees)				

5. **Value Chain Interventions taken up by the SRLM. (500 words)**

Experience of SRLM in Promotion of Producer Enterprises/ Producers Groups (current status, challenges, opportunities in similar conditions)

Table 1: Information on Producers Enterprise already promoted/supported by SRLM so far

Details		PE 1	PE 2	....
FPO Name				
Commodity being handled by the PE				
Promoting Agency (SRLM/MKSP NGO PIA)				
Name of District(s)				
Blocks (name of blocks)				
No. of villages				
Legal form of FPO (Company, Trust, Co-operative etc.)				
Registration No.				
Date of Registration				
Address of the PE				
Contact Persons (CEO)				
No. of employees in the payroll of the PE.				
Number of Members/ shareholders				
Number of active member last year. (members who have supplied their produce to PE)				
Total Support provided to PE	Infrastructure (Rupees)	Direct		
		Indirect		

Details			PE 1	PE 2	....
under DAY-NRLM/ NRLP/ MKSP till date.	Working capital (Rupees)	Direct			
		Indirect			
	Human resource (Rupees)	Direct			
		Indirect			
	Capacity Building (INR)	Direct			
		Indirect			
Source of support (DAY-NRLM / MKSP)					
Turnover during last three years: to be taken from the audited annual report of PE.					
Year 1					
Year 2					
Year 3					
Profitability (EBITDA), to be taken from the audited annual report of PE.					
Year 1					
Year 2					
Year 3					

Table 2: Information on Producers Groups

Geographies Covered (name of District and Block)	No. of villages covered	No. of PGs promoted	Total no. of active members	Commodities handled	Total amount of business (in Crore Rupees)

6. Introduction – Proposed Interventions (1000 words)

- a) **Inception and ideation of the proposed Value Chain Intervention**
- b) **Geographic profile for Intervention (representation through map as well)**
- c) **Profile(s) of proposed commodity(ies)**
 - i. Study of the selected commodity (ies): Production Scenario, Market, Economic systems and availability of local infrastructure, State or local policies for proposed commodities and value chain development, Brief analysis of substitute crops in the market.
- d) **International demand and supply scenario**

7. Value Chain Analysis (1000 words)

- a) Value chain opportunity analysis for the commodity at National and Local level.
- b) Value chain gaps identified.
- c) Point of intervention in the value chain.

8. Rationale behind selection of commodity and region. (250 words)

9. Key Deliverables of the Proposed PE

10. Business Context (1500 words)

- a) **Business Model**
 - i. Define the business based on the value chain gap analysis.

- ii. Value proposition for farmers (why the farmer should take the market services from the PE).
 - iii. Value proposition for Producers' Enterprise (competitiveness of PE)
 - iv. Value proposition for Customers (why buyers should come to the PE)
- b) Scenario Constraints/Opportunity affecting business model for proposed commodities:**
- i. General Information of Target group in the proposed area
 - ii. Land holding, NSA (Net Sown Area) under the targeted crop of previous 3 years, number of Households, Crop production data, estimated marketable surplus.
 - iii. Market Systems – Different Mandi price points, general market scenario at the village level and proximity for reference. Supply and Demand scenario.

11. Strategy for promotion of Producers Enterprise (600 words)

- a) **Implementation architecture** – role of SRLM as promoting agency, role of TSA, role of Producers Enterprise professionals.
- b) Plan for promotion of PE (survey, hiring of TSA etc.)
- c) Timeline for planned activities (Gantt Chart).
- d) Key indicators for business performance.

12. Formation of the Producers Enterprise with timeline (500 words)

- a) Mobilization of members
- b) Initial member (BoD) identification
- c) Registration of the Producers Enterprise.
- d) Statutory Compliances.
- e) Setting up of IT system
- f) Recruitment of Human Resource by the PE.
- g) Training & Capacity Building of the Board members, shareholders and the human resources with PE.

13. Business Process of the Producers Enterprise (1500 words)

- a) Outline key business process for the PE (texts and/or graphical representation).
- b) Procurement System [commodity(ies)]**
 - i. Collection Centre Identification process.
 - ii. Resources, along with the costs, at the Collection center
 - iii. Management of the collection centers.
 - iv. Crop procurement process along with do's and don'ts.
 - v. Identification of risks and their mitigation strategies.
 - vi. Procurement forecasting.
 - vii. Pricing strategy – benchmark market, price discovery etc.
- c) Warehousing and Processing Plan**
 - i. Crop movement from Collection center to the Central Warehouse/Processing Centre.
 - ii. Activities at Warehouse/Processing Centre
 - iii. Resources, along with their costs, at the Warehouse/Processing center.
 - iv. Packaging strategy with respect to channels (5kg, 10 kg, etc.), should be based on the marketing plan.
 - v. Identification of risks and their mitigation strategies.
- d) Marketing Plan**
 - i. Existing and potential crop marketing channels and their respective attractiveness and challenges.
 - ii. Market, product mix & pricing strategy.
 - iii. Commodity marketing Strategy and use of E-trading platforms (NCDEX/MCX).
 - iv. Labelling, Branding S
- e) Procurement Analysis and Estimates**
 - i. Commodity production potential in the catchment area.
 - ii. PE's procurement estimates:
 - 1. Potential members of the PE and their production estimates

2. Estimated marketable surplus with potential members of the PE.
3. Procurement competition in the catchment area and their Strengths and Weakness.
4. PE's Member acquisition strategy basis the competitors Strength & Weakness.

f) Market Analysis and plan of PE - Sell Side

- i. Existing Buyers of the selected commodity(ies) in the region
- ii. Define customer segments and target segment for PE.
- iii. Names of the APMC Mandi in the region and their catchment area, quality of commodity received, last 3 seasons prices & trends, listing of the big 20% of the buyers in the Mandi, cost implication of trading in the Mandi.
- iv. Names and location of the existing warehouses used to stock the targeted commodity in the region. Its capacity, targeted crop stored there, their USP, their arrangement with the owner of the commodity, warehousing costs etc.
- v. Local Mandi and Hatts in the region where the crop trades.
- vi. Industry(ies) operating in this market to source the selected commodity as their raw material.

g) Other untapped market exploration.

h) Pricing Strategies of PE

- i. Existing Farm gate price discovery mechanism.
- ii. Existing Marketing price discovery mechanism.
- iii. Price risk mitigation strategies.

i) Risks & Challenges in business processes of the enterprise

- i. Identifying all the possible operational and business risks in business
- ii. Corresponding internal controls and other risk mitigation strategies for all the identified risks.

j) Revenue Model

k) Opex and Working Capital working

l) Capex

m) Manpower

n) Total Cost of Business and Break-even Analysis

o) 3 years Projected Cash Flow

14. Financing

- a) Budget requirement in the prescribed table
- b) Budget justification.

A guidance note on the above template is at Annexure I A.

***Guidance note on the preparation of project proposal by using the prescribed template
“Business Plan Proposal – Techno Economic Feasibility Report”***

1. Content Table

Table of content as per the chapter prescribed in the template.

2. Acronyms used in the document

3. Executive Summary (300 words)

(About the proposed Producers Enterprise, what critical value chain gaps this is going to bridge (problem statement), in what geographical location with which targeted community. How this intervention will bring value proposition in selected commodity (ies) for the small and marginal farmers. How this PE profitability and operations is designed to be a sustainable organization.) Impact at household level this intervention will bring. Brief description.

4. Project at a glance

Project at glance is to be submitted in the table given below:

Commodities to be handled by the PE:				
Geographic area	Name of Districts	Name of Blocks of concerned district	No. of villages	
Total households to be covered				
Expected turnover (in Crores Rupees)	Y1 (.....)	Y2 (.....)	Y3 (.....)	
Year of breakeven of the Producers Enterprise				
Key interventions (eg. aggregation, value addition, packaging, labeling, marketing)				
Total budget (in Crore Rupees)	Direct support to PE	TSA Cost	Support to SRLM	Total
Per capita investment (Rupees)				
Estimated benefit to household (Rupees)				

5. Present interventions on value chain development by the SRLM. (500 words)

(Promotion of Producer Companies/ Producers Groups (current status, challenges, opportunities in similar conditions). Details of existing interventions being carried out by SRLMs (geographic area, commodities, household, period of intervention, type of intervention, profitability of the PE, benefit of household). If the SRLM has promoted Producers Groups (un-registered) details thereof needs to be provided. Tables 1 and 2 are self-explanatory

6. Introduction (1000 words)

a) Inception and ideation of the proposed Value Chain Intervention

How this intervention can bring value realization to the producers. This may also include production system of small and marginal farmers of the proposed area, existing interventions of various stakeholders (non-SRLM), positive learnings from existing interventions – what worked well and what didn't work. ¹

¹ The words limits are indicative. Please put more detail if you think they make the proposal more realistic and holistic.

b) Geographic profile for Intervention

- i. Map of the catchment area (indicating district, blocks, communication, adjacency)
- ii. Agricultural profile of the state in general and of the proposed region.

c) Profile(s) of proposed commodity(ies)

- i. **Production scenario of the commodity at National/State level. [Macro Study]** *Major commodities & their varieties produced at state and their contribution to national scenario. What is the growing season and how much volume is produced? How state stands in terms of production of the commodity and state's economic policy towards it? Is there any specific competitive advantage for the selected commodity(ies) vis-à-vis other States / Country?*

Table 3: Commodity wise Production Scenario (State level)

Sr no	Commodity	Name of variety (ies)	Season	Production area (acre)	Volume (Ton)		Yield (tons / acre)		Major Producing regions (Dist/block)
					State Volume	National Ranking (Volumetric)	State	National Ranking	
1									
2									
3									
4									
5									

- ii. **Production scenario of the commodity at Local level (proposed area). [Micro Study]** *Study of seasons and commodities produced at local level in the proposed area. Number of HH and area under production for that commodity. What are the different sales channels are used for particular commodity currently in the villages? What are operational challenges currently faced by producers while sales? Also fill the table below.*

Sr no	Commodity	Season	Variety	No. of Household	Production area (acre)	Volume (Ton)	Sales Channels	Operation losses (%)	Major Producing regions (Dist. / Village)
1									
2									
3									
4									
5									

iii. Market Study of the selected commodity(ies) for different value chains

- 1. **Market study of commodity (ies) - Major Mandi, Price trends and seasonality affect, commodity competitiveness (market, production, productivity & any USP etc.).** *Above survey would be beneficial for the PE in subsequent business and resource planning.*
- 2. **Economic systems and availability of local infrastructure (storage, processing, packaging, transportation).**
- 3. **State or local policies for proposed commodities and value chain development.**
- 4. **Brief analysis of substitute crops in the market.** *How production scenario get impacted by producers' sowing choice of substitute crops and subsequently its response to major sales channels available in the targeted catchment region? How these scenario impacts our targeted commodity (ies) supply?*

- d) **International demand and supply scenario (250 Words) – in case of the commodity (ies) as part of export or import. Tariffs, certification, packaging requirement with respect to global market scenario and its impact on commodity locally. Global production and market scenario (key importing /exporting country(ies) and season).**

7. Value Chain Analysis

- a) **Value chain opportunity analysis for the commodity at National and Local level.** *Value Chain Analysis is one way of identifying which activities are best undertaken by a business and which are best provided by others ("out sourced"). Studying a commodity national / local level provides*

a brief understanding about planning intervention for that particular commodity. It should include extensive study of commodity from production to consumer. How contribution margins are spread across different values chain for the commodity (ies).

- b) **Point of intervention for the business process.** *Brief commodity (ies) study and value chain gap in the proposed geography. The rationale to promote the Producers enterprise. Brief description.*
- c) **Output analysis in perspective with all the stakeholders involved in the business.** *Value chain capturing should be evaluated with respect to Stakeholders. It allows observing impact and defining business processes bring the optimized output.*
- d) **Validation of the intervention in terms with geography, producers and commodity.** *Every intervention brings local factors for commodity intervention like, infrastructure, production assumptions, market proximity etc. validation and sample survey can bring true scenario about the planning.*

8. Rationale behind selection of commodity and region. (250 Words).

Based upon above macro-level survey of commodity and market. What factors do you think PE brings in terms of market and product differentiation

9. Key Deliverables of the Proposed PE

Insert Table covering number of HH, Quantity, Area, Revenue estimations, operation expenses, capital expenses, working capital requirement, Procurement or Collection centers, Members, etc.

10. Business Context (1500 words)

a) Business Model – Producers' Enterprise process elaboration

- i. **Define the business based on the value chain gap analysis.** *Specific activities to be undertaken by the PC, Value added and captured by the respective activity, Risks involved in those value addition activities and the corresponding risk mitigation strategy.*
- ii. **Value proposition for farmers (why the farmer should take the market services from the PE).** *What value addition for the farmers can be brought through this business intervention? What other facilities such as financial inclusion, capacity building and training, business acumen etc. will be brought to producers?*
- iii. **Value proposition for Producers' Enterprise (competitiveness of PE):** *How this PE business model makes product or process differentiation in the current commodity market? Study of PE's strengths, weaknesses and other parameters with respect to current operational processes.*
- iv. **Value proposition for Customers (why buyers should come to the PE):** *what propositions, in terms of quality, business operations, social impact (social marketing), does PE brings to its customers which can be capitalized by them?*
- v. **Scenario Constraints/opportunity affecting business model for proposed commodities (Geography / community / policy / climate / Infrastructure/ market/competition)** *How PE can utilize local economic (State FPO policy / infrastructure) scenario to its benefit?*

b) General Information of Target group in the proposed area

- i. **Land holding, NSA (Net Sown Area) under the targeted crop of previous 3 years, number of Households, Crop production data, estimated marketable surplus.** *On the basis of general survey about the targeted geography and community a macro level information tabulation can be done. How many marginal HH are in the targeted area?*
- ii. **Market Information – Different Mandi price points and proximity for reference.** *Price trend study helps in seasonality affect and market scenario about supply and demand.*

11. Strategy for promotion of Producers Enterprise (600 words)

- a) **Implementation architecture – role of SRLM as promoting agency, role of TSA, role of Producers Enterprise professionals.** *Defining role and responsibility will bring clarity among the team and will also develop a sense of accountability.*
- b) **Development plan for promotional activities (survey, hiring of TSA etc.)**
- c) **Timeline for these activities (Gantt Chart).**
- d) **Key indicators for business performance:** *Volume projection, Turnover, Cost of procurement, and Cost of goods sold, Breakeven, Net investment, Number farmer household covered, investment per household Cost benefit.*

12. Formation of the Producers Enterprise (500 words)

- a) **Mobilization of members** *how mobilization process in the targeted region is planned? While mobilization should be done with respect to capacity planning in phases for next 3 years keeping scaling up in mind? Any plan to partnership with MKSP PIA for mobilization? Cost towards for “Sahayak” at collection centres would be part of mobilization cost who would be supporting mobilisation of farmers for PE.*
- b) **Initial member (BoD) identification.** *Initial members’ identification is critical for mobilization planning as they bring credibility in local and uncharted region. They can also help in mobilization planning and activities.*
- c) **Registration of the Producers Enterprise.**
- d) **Statutory Compliances (License / Certificate)** *Legal compliance.*
- e) **Setting up of IT system**
- f) **Recruitment of Human Resource by the PE.**
- g) **Training & capacity building of the board** *(on the business plan, Corporate Governance, and the functioning of the PC) and the human resource (management & operation) (200 words)* *Building learning curve for the producers and especially board of director is a necessity as it directly impacts the organizational culture and processes. Charting out a calendar for various knowledge and process-oriented workshops. Evaluation and measuring skills development steps. What else capacity building workshops is required and how that can be implemented?*

13. Business Process of the Producers Enterprise (1500 words)

a) **Outline key business process for the PE (150 words and/or graphically).**

How commodity (ies) move from farm gate to the customer and accountability matrix. Please explain.

b) **Procurement System [commodity(ies)]**

- i. **Collection Centre Identification process.** *How proximity of different regions will be decided to optimize logistic cost of collection centers? What will be transportation route map? What will be coverage span for a collection center (number of HHs or Villages) under a collection center? Each collection centres should be considered as a cost centre and break even analysis need to be taken up for each centre.*
- ii. **Resources, along with the costs, at the Collection center.** *What will be operational activities required at a collection center? What are the costs associated with a Collection Center (repackaging, rent, labor, etc.)?*
- iii. **Management of the collection centers.**
- iv. **Drop procurement process along with do’s and don’ts.** *What are the standard operational procedures for procurement of commodities? How quality parameter or grading is done? How can operational losses be reduced? What are the measure to maintain quality parameter of a commodity?*
- v. **Identification of risks and their mitigation strategies.** *What are commodity damage threats (fire, theft, and water leakage, rodent etc.) at collection center?*
- vi. **Procurement forecasting:** *Data is to be given in the table no.4 below:*

Table 4: Procurement Estimate

Particulars	Unit	Yr - 1	Yr - 2	Yr - 3
Total No of Collection centers (CC)	#			
Average potential farmers per CC	#			
Total No of Members	#			
Average quantity procured by CC from each farmer	MT			
Total Expected Procurement	MT			
Procurement Overview - Commodity 1				
Total No. of CCs	#			
Average No. of Members per CC	#			
Total No. of Members	#			
% of H.H involved in Cultivation	%			
% of H.H to supply	%			
# H.H. to supply	#			
Total Expected Procurement (in MT)	MT			
Procurement Overview - Commodity 2				
Total No. of CCs	#			
Average No. of Members per CC	#			
Total No. of Members	#			
% of H.H involved in Cultivation	%			
% of H.H to supply	%			
# H.H. to supply	#			
Total Expected Procurement (in MT)	MT			

c) Storing and Processing Plan

- i. **Crop movement from Collection center to the Central Warehouse/Processing Centre.** *Transportation facility for subsequent value chain activities. Optimization and scheduling of commodity activity to the processing plant.*
- ii. **Activities at Warehouse/Processing Centre SOP regarding packaging and storing process to reduce operational and quality losses.** *Inventory management operational activities FIFO, LIFO etc.*
- iii. **Resources, along with their costs, at the Warehouse/Processing center.** *Man power required at the Collection center. Quality parameter testing tools required for the commodity*
- iv. **Identification of risks and their mitigation strategies.** *Quality risk, volumetric loss risk, Theft and fire risk, etc. How we can mitigate these identified risk through various resource.*
- v. **Packaging strategy with respect to channels (5kg, 10 kg, etc.), should be based on the marketing plan.** *How much volume will be sold through different sales channels? What is the packaging strategy to protect quality of the commodity and marketing?*

d) Marketing Plan

- i. **Existing and potential crop marketing channels and their respective attractiveness and challenges.** *Through which channels commodity currently is sold? How contribution margins are distributed along the value chains? Which channels are viable for business operations?*
- ii. Please define your market & product mix. Describe Product, Price, Market, Promotion strategy.
- iii. **Crop marketing Strategy and use of NCDEX/MCX trading platform.** *What all trading and commodity platform available in the intervention area?*
- iv. **Labelling / Branding** *Labelling and certification required for sales and marketing in retail channels? Does these labelling can be utilized to capture social / cause marketing for FPO?FSAAI / ISO / Organic certification*

e) Procurement Analysis and estimates

- i. **Crop Production potential in the catchment area.** *Production scenario of commodities in terms of crop season, area under production, variety, number of HHs etc.*
- ii. **PC's procurement estimates**
 1. **Potential members of the PC and their production estimates**
 2. **Estimated marketable surplus with potential members of the PC.**
 3. **Procurement competition in the catchment area and their Strengths and Weakness** (300 words). *What all other companies procuring same commodities in the catchment area? How their incentive structure is designed? Do we have any competitive advantage over them?*
 4. **PC's Member acquisition strategy basis the competitors S&W** (200 words) *what are our strength over competitors in mobilization planning?*

f) Market Analysis and plan of PE - Sell Side

- i. **Existing Buyers of the commodity in the region** *Identification of buyers of commodities at every value chain activities. Market linkage with FPO through identification of buyers in different segment (B2B / B2C) will be essential for business planning.*
- ii. **Define customer segments and target segment for PE.** *Define what customers PE plans to target? Why that particular segment is targeted? How that market segment is growing over the year?*
- iii. **Names of the APMC Mandi in the region and their catchment area, quality of crop received, last 3 seasons prices & trends, listing of the big 20% of the buyers in the Mandi, cost implication of trading in the Mandi.** *Listing Mandi and trading platform with proximity of FPO. Identification of cost associated with the different channels will help in making sales strategy and revenue planning. Analyzing past price trend for Mandi/Trading platform*
- iv. **Names and location of the existing warehouses used to stock the targeted commodity in the region. Its capacity, targeted crop stored there, their USP, their arrangement with the owner of the crop, warehousing costs etc.** *Infrastructure facilities available at State and Center government.*
- v. **Local Mandi and Hatts in the region where the crop trades.** *Keeping track of price trends in local Mandi reflects demand and supply planning scenario.*
- vi. *Active agents of the industry that uses the commodity as their raw material.*

g) Other untapped market exploration.

- i. Possibility of exploring the arrangement with a national level processor or retailer of the commodity.
- ii. Exploring the trading on the commodity exchanges.
- iii. Exploring the possibility of using the PGS certification to tap market in and around the top 10 urban settlements in India.
- iv. Exploring Export potential.

h) Pricing Strategies

- i. **Existing Farm gate price discovery mechanism.** *Profit center concept building is necessary as PE might with be operating with multi commodity. Discovering cost and profit associated with each commodity will essential is selection of commodity or including new or removing.*
- ii. **Existing Marketing price discovery mechanism.**
- iii. **Price risk mitigation strategies.** *Risk mitigation strategy in terms of procurement (backward integration) and sales pricing (forward integration) , how PE can mitigate it and what are the tools can used to mitigate ?*

i) Risks & Challenges in business processes of the enterprise

i. **Identifying all the possible operational and business risks in business.** (200 words)

Commodity processes and product involve various risks like market risk, product damage risk, theft and other product quality risks.

Business process involves risk on operational basis like liquidity risk, profitability, supply or demand of raw material risks, occupational hazards etc.

Identification of these business and product risk is important as to mitigate and provide operation controls in the business operations.

iii. **Corresponding internal controls and other risk mitigation strategies for all the identified risks.** (200 words)

After identification of business risks, these risk should mitigated through various services and tools available at business context. Financial integration/linkage with the institutes to resolve Working capital funding. Availing product insurance for storage and collection centers.

j) Revenue Model

*It is a framework for generating **revenues**. It identifies which **revenue** source to pursue, what value to offer, how to price the value, and who pays for the value.*

It also helps to identify how renting, leasing, buying, commission based etc. activities have effect on revenue forecasting over the years.

Operational business activities can be focused to reduce losses and costs according to this.

Forecasting revenue for different commodities is also critical for business strategy.

There should be a clear identification of production lines, their revenue structures, net margin based on which net revenue is to be calculated.

k) Opex and Working Capital working

a. **Operating expense:** *An expense incurred in carrying out an organization's day-to-day activities, but not directly associated with production. **Operating expenses** include such things as **payroll, sales commissions, employee benefits and pension contributions, transportation and travel, amortization and depreciation, rent, repairs, and taxes.** There has to be opex projection for minimum 3 years.*

b. **Elements for working capital estimation:** While calculating the working capital cycle followings key components of the working capital has to be considered:

Cost of commodity procured (quantity procured per day, total days procurement, operating cycle - storage go-down, work in progress, finished goods, goods in transit)

c. Working capital should be calculated in terms of no. of days equivalent to procurement cost.

l) Capex

Capital expenditure proposal should be made for next 5 years. Its disbursement will depend upon appraisal of PE over the business financial years and its performance.

Value chain establishment in perspective with PE will happen over the years, as in PE might start with aggregation and over next few phases it might move into processes and packaging, so CAPEX proposal should be designed in accordance to it. Phase wise

Sr. No	Particulars	Year 1		Year 2		Year 3		Total	
		Unit	Amount (RS.)	Unit	Amount	Unit	Amount	Unit	Amount
1	Infrastructure								
	Building (renovation)								
	Machinery								
	Equipment								

2	Installation cost								
	Plant Setup								
	Office Set up (IT equipment, furniture etc.)								
3	Any Other								
	TOTAL								

m) Manpower

Please refer to the tab "Salary Budget" for an example. One should add the JD of the respective profiles. Year wise plan is to be included. Manpower cost would include full time staff on PE's pay roll.

n) Total Cost of Business and Break-even Analysis

While undertaking financial analysis for the PE it is expected that each commodity line is treated as a separate independent profit centre. Therefore business projections and forecasting should be taken up for three to five years and break-even point should be analyzed in terms of volume as well as value. It is also expected that the business should be contribution positive from the year one.

o) 3 years Projected Cash Flow

CASHFLOW STATEMENT

Particulars		Yr - 1	Yr - 2	Yr - 3
	<i>Initial Investment</i>			
<u>Operating Activities</u>				
Earnings before interest and tax				
Add: Depreciation				
Net Cash from Operations				
Changes in Working Capital				
Add: Increase in Current Liabilities				
Less: Increase in current Assets				
Net changes in Working Capital				
Tax Expense				
Total Cash flow from Operating Activities				
<u>Investing Activities</u>				
Additions during the year				
Total Cash flow from Investing Activities				
<u>Financing Activities</u>				
Increase / (Decrease) in equity share capital				
Increase / (Decrease) in Fund from Project				
Bonus				
Receipt of short term loan				
Repayment of short term loan				
Interest Paid on loan amount				
Total Cash flow from Financing Activities				
Opening cash balance				
Total Cash Flow for the year				

Particulars		Yr - 1	Yr - 2	Yr - 3
Closing Cash Balance				

14. Financing

The guidelines on “Guidelines for value chain development through promotion of Producer Enterprise under NRETP” may be referred to prepare the budget. The budget should include i) Broad component wise budget abstract & ratios, ii) Detailed budget and iii) Budget explanatory note. A tentative Budget template may be prepared for use by NMMU.

Producer Enterprise Business Plan Appraisal Template

For Value Chain Development projects through promotion of Producers Enterprise under NRETP

State Name	
Proposal Name	
Total Score	
Appraised by	
Business Intervention Remarks	
Business Model Idea	
Appraisal recommendation(s):	

Evaluation Criteria

1) Readiness of SRLM for project implementation:

- 1. Recruitment of Staff:** Status of the recruitment of human resource as per the advisory issued vide no.J-11060/50/2016(351142) dated 15th April 2019.

Level	Position	Provision as per the advisory	Human resource in place	Remarks
State	Senior Technical Expert – Value Chain & Forward Linkage	1		
	Project Manager- Livelihoods Training and Capacity Building	1		
	Technical Expert- Forward Linkage	1		
	Young Professional	5		
Block	Block Technical Coordinator- Forward Linkage	1		

- 2. Status of Engagement of Technical Support Agency:** TSA for value chain development engaged

<i>If yes, name of the TSA</i>	
<i>If no, what is the status</i>	

2) Evaluation of the Business proposal.

Sr.	Area	Total marks	Marks obtained
A	Core Business Model	20	
B	Intervention feasibility	10	
C	Implementation success factor	10	
D	Operational Strategy	20	
E	Financial sustainability	20	
F	Scalability/Risk Mitigation	10	
G	Impact	10	
	Total marks	100	

A. Core Business Model			
Sr. No	Evaluation Criteria	Score	Remarks
i	Commodity selection rationale (4)		
ii	Market analysis, (customer / competition) and sales channel selection and penetration strategy (4)		
iii	Value Chain Analysis for the selected commodity(ies) (4)		
iv	Value proposition to farmer and for market. (4)		
v	SWOT analysis of the business model. (4)		
	Total marks obtained		
Comments:			

B. Intervention Feasibility			
Sr. No	Evaluation Criteria	Score	Remarks
i	Quality of risk analysis and mitigation strategy (4)		
ii	Assessment of SRLM capacity – previous experience, placement of NRETP staff. (4)		
ii	Mobilization planning or strategy (2)		
	Total marks obtained.		
Comments :			

C. Implementation Success Factors			
Sr. No	Evaluation Criteria	Score	Remarks
i	Procurement strategy for PE. (centre, centre economics, estimation, management) – 3		
ii	Fund release mechanism – 2		
iii	Management of PE (Adequate & relevant Human resource – organogram) - 5		
	Total marks obtained		
Comments :-			

D. Operational Strategy of PE.			
Sr. No	Evaluation Criteria	Score	Remarks
i	Responsibility Matrix – who does what – 2		
ii	Strategy to establish operating procedure for PE – 2		
iii	Marketing strategy (market, segmentation) – 4		
iv	Logistics & warehousing plan. – 4		
v	Pricing Strategy – 4		
vi	Operating Expenses as % of Revenue – 4		
	Total marks obtained		
Comments :			

E. Financial Sustainability			
Sr. No	Evaluation Criteria	Score	Remarks
i	Cost Structure Quality (Fixed/Var. /Direct/ Indirect) – 5		
ii	Break Even Points (volume, time) – 5		
iii	Working capital turnover planning – 5		
iv	Cost benefit analysis – 3		
v	Plan to raise finance from financial institution, members & other sources – 2		
	Total marks obtained		
Comments :-			

F. Scalability			
Sr.No	Evaluation Criteria	Score	Remarks
i	Scope of expansion w.r.t. area, market, farmers, volume – 4		
ii	Scope of business scalability and down-stream value chain activities. – 3		
iii	Scalability of PE to 5x-10x Revenue in future – 3		
	Total marks obtained		
Comments :			

G. Impact			
Sr.No	Evaluation Criteria	Score	Remarks
i	Benefit to member (economic, non-economic) – 5		
ii	Creation of social capital – 5		
	Total marks obtained		
Comments :			

Guidance note on the project appraisal

Sr.	Area	Total marks
A	Core Business Model	20
B	Intervention feasibility	10
C	Implementation success factor	10
D	Operational Strategy	20
E	Financial sustainability	20
F	Scalability/Risk Mitigation	10
G	Impact	10
	Total marks	100

A) Core Business Model

Sr.	Parameters	Yes (1)	No (0)
1.1	Commodity Selection Rationale		
1.1.1	Commodity significance in state and intervention area		
1.1.2	Commodity significance in National scenario		
1.1.3	Commodity(ies) revenue generation potential		
1.1.4	Commodity(ies) demographic (HH/Small & Marginal) coverage in targeted area		
1.2	Market Analysis		
1.2.1	Demand and Supply analysis for the targeted commodity(ies)		
1.2.2	Markets and Sales channel identification		
1.2.3	Customer segment identification and demand generation strategy		
1.2.4	Competition analysis and product positioning strategy		
1.3	Value Chain Analysis for the selected commodity(ies)		
1.3.1	Commodity(ies) value chain analysis and opportunity identification (Local scenario)		
1.3.2	Intervention strategy and value chain capturing planning		
1.3.3	Output analysis with respect to all stakeholders involved in the business		
1.3.4	Value chain opportunity analysis at National and International market (if required)		
1.4	Value proposition to the Farmer and for the market		
1.4.1	Market linkage facilities provided to the target segment farmers		
1.4.2	Platform for ease of doing business transaction facilitation for farmers		
1.4.3	Transparent and ethical business practises implementation in selected areas		
1.4.4	Backward and latent facilities (Bank Linkage / Low Transactional Cost etc)		
1.5	SWOT analysis of the Business Model		
1.5.1	Strength and Organisational positioning with respect to target sell market (Internal)		
1.5.2	Sector and company weak points and its mitigation tactics (Internal)		
1.5.3	Opportunity commodities and company captures to capitalise (External)		
1.5.4	Elements identified in the environment that could cause trouble for the business or project.		

B Intervention feasibility

Sr.	Parameters	Yes (1)	No (0)
2.1	Quality of Risk Analysis and mitigation strategy		
2.1.1	Risk identification at different business processes and transaction		
2.1.2	Risk mitigation planning and sentivity analysis		
2.1.3	Cost of risk mitigation inclusive in business financial projections		
2.1.4	Preventive maintainence scheduling and implementation in business operations		
2.2	Assessment of SRLM Capacity		
2.2.1	NRETP staff and capacity at different federation in the State		

2.2.2	Past project management experience		
2.2.3	Technical partnerships and partners' capacity assessment		
2.3.4	Capacity and resource planning of SRLM for project management		
2.3	Mobilisation Planning or Strategy		
2.3.1	Capacity and resource scheduling in according to mobilisation planning		
2.3.2	Institutional and community building resource and partnerships		

C Implementation success factor

Sr.	Parameters	Yes (1)	No (0)
3.1	Procurement Strategy		
3.1.1	Collection center location and logistics route optimisation		
3.1.2	Ergonomics study of collection center of business operations		
3.1.3	Financial cost and volume break even point analysis		
3.2	Fund Release Mechanism		
3.2.1	Defined guidelines and structure with timelines		
3.2.2	Local state policy convergence scenario		
3.3	Management of Producer Enterprise		
3.3.1	Human Resource quality and capacity planning		
3.3.2	Business operation and resource planning of PE		
3.3.3	Value proposition for farmers and producer to join PE		
3.3.4	Internal financial and marketing strategic focus		
3.3.5	Standard operational procedure defining and implementation		

D Operational Strategy

Sr.	Parameters	Yes (1)	No (0)
4.1	Responsibility Matrix		
4.1.1	RACI Matrix - responsibility assignment chart		
4.1.2	Mapping out TASKS, MILESTONE, DEADLINES and REPORTING STRUCTURE		
4.2	Strategy to establish operating procedure for PE		
4.2.1	Business processes' SOP formulation and creating transparency to shareholders		
4.2.2	Training and capacity building of PE employees regarding BEST PRACTISES		
4.3	Marketing Strategy		
4.3.1	Market and customer identification in accordance with Value Chain analysis		
4.3.2	Market segmentation and identifying sales channels		
4.3.3	Market portfolio diversification with Business goals (Visibility / Risk / Profit)		
4.3.4	Product positioning, Branding and labelling tactics		
4.4	Logistics and Warehouse planning		
4.4.1	Inbound and Outbound logistics route and cost optimisation		
4.4.2	Warehousing capacity and SOP implementation (FIFO / LIFO)		
4.4.3	Raw material , WIP and Finished good packaging and quality conserving techniques		
4.4.4	Despatch and reverse logistics (Customer Relationship Management)		
4.5	Pricing Strategy		
4.5.1	Cost accounting principle formulation for Products		
4.5.2	Study of margins of stakeholders in different sales channels (Wholesalers, Retailer, Modern Retail, Ecommerce etc)		
4.5.3	Sales promotion strategy for sales partners		
4.5.4	Pricing Strategy matrix analysis (High Price - Low Price and High Quantity - Low Quantity) w.r.t product portfolio		
4.6	Operational Expenditure structure		
4.6.1	Identification of operational cost category (Fixed, Variable, Direct, Indirect)		
4.6.2	Improving contribution margin and sentivity analysis on the basis of Volume		
4.6.3	Operation expenses analysis		
4.6.4	Operation expenses controls in SOP and implementation of best practises		

E Financial sustainability

Sr.	Parameters	Yes (1)	No (0)
5.1	Cost Structure Quality		
5.1.1	Identification of Direct and Indirect cost in business operations		
5.1.2	Defining cost structure into smaller units (Product, Service, Product line, Division,) - COST ACCOUNTING PRINCIPLE		
5.1.3	Asset Light (recommended) or Asset Heavy business model		
5.1.4	Viability gap analysis - Especially required for new business in initial years		
5.1.5	Buy, Rent or Lease model - Cost Efficiency		
5.2	Break Even Analysis		
5.2.1	Production management		
5.2.2	Sensitivity analysis (Production planning [Volume] Vs Cost [Fixed and Variable])		
5.2.3	Measuring Profit and Loss at different Operating levels		
5.2.4	Margin of Safety		
5.2.5	Timeline and planning of break - even		
5.3	Working capital turnover planning		
5.3.1	Balance between growth, profitability and liquidity		
5.3.2	Financial Health		
5.3.3	Operational Equipment Efficiency		
5.3.4	Working capital turnover ratio		
5.4	Cost Benefit Analysis		
5.4.1	Developing benchmarks for comparing projects		
5.4.2	Weighing investment opportunities		
5.4.3	Establish a framework to outline the parameters of the cost benefit analysis		
5.4.4	Scheduling and evaluation cycle for Cost Benefit analysis and implementation		
5.5	Fund Raising from Financial Institutes		
5.5.1	Developing capability and benchmarks for facilitating Fund raising from External institutes		
5.5.2	Credit assessment and evaluation for companies to avail long term and short term debt instrument		

F Scalability/Risk Mitigation

Sr.	Parameters	Yes (1)	No (0)
6.1	Scope of PE's Operational expansion		
6.1.1	Expansion through concentration (increasing market share in product line)		
6.1.2	Expansion through diversification (New Product / New Market)		
6.1.3	Expansion through Joint Venture (B2B - Private Label)		
6.1.4	Scope of supply expansion through inclusion of FARMERS		
6.2	Scope of PE's scalability in selected commodity value chain activities		
6.2.1	Expansion through integration (value chain capturing)		
6.2.2	Commodity value chain diversification (number of products can be derived)		
6.2.3	Commodity market potential		
6.3	Scope of PE's business scalability		
6.3.1	Ability to handle increased market demands (maintain or improve profit)		
6.3.2	Ability to control unit cost with increasing market demand		
6.3.3	Organisation infrastructure or management ability of handling increase volume		

G Impact

Sr.	Parameters	Yes (1)	No (0)
7.1	Benefit to members (Shareholders)		
7.1.1	Low transactional cost		
7.1.2	Value proposition to members		
7.1.3	Transparency in Patronage distribution and procurement price		
7.1.4	Ease of Doing business with PE		
7.1.5	Training and capacity building		
7.2	Creation of Social Capital		
7.2.1	Mobilisation planning		
7.2.2	Community building strategy		
7.2.3	Grievance redressal mechanism		
7.2.4	Community communication strategy		
7.2.5	Awarness programm scheduling and planning		

File No- S-11051/04/2017/NRLM(SVEP)/359280
Government of India
Ministry of Rural Development
Department of Rural Development
DAY-National Rural Livelihoods Mission (Aajeevika)

7th Floor, NDCC-II Building
Jai Singh Road,
New Delhi-110 001

14th August, 2018

OFFICE MEMORANDUM

Subject – Guideline of Mahila Kisan Sashtkikaran Pariyojana for Value Chain Development

To bring exclusive focus on value addition and market linkages through producers' collectives and promotion of Producers Enterprises which are owned and governed by women farmers, a dedicated value chain development component has been approved under Mahila Kisan Sashtkikaran Pariyojana (MKSP).

The guideline of Mahila Kisan Sashtkikaran Pariyojana (MKSP) for Value Chain Development is attached herewith for kind information.

This has the approval of competent authority.



(Nita Kejrewal)
Joint Secretary to the Govt. of India
Ph.: 011-23461754

Encl: As above

To,

Principal Secretaries of all States

Copy to :CEOs / SMDs of all States

GUIDELINES FOR VALUE CHAIN DEVELOPMENT UNDER MAHILA KISAN SASHAKTIKARAN PARIYOJANA

Table of Contents

1. BACKGROUND	3
1.1 MAHILA KISAN SASHAKTIKARAN PARIYOJANA	3
1.2 VALUE CHAIN DEVELOPMENT INTERVENTIONS UNDER DAY-NRLM	3
1.3 DAY-NRLM STRATEGY ON VALUE CHAIN DEVELOPMENT	4
2 OBJECTIVES OF VALUE CHAIN UNDER MKSP	5
3 EXPECTED OUTCOMES	6
4 NON-NEGOTIABLES	6
5 APPROACH	7
6 VALUE CHAIN PROJECTS UNDER MKSP	8
6.1 ABOUT THE PROJECT	8
6.2 THE COMPONENTS UNDER THE PROJECT	8
7 FUNDING	9
7.1 GENERAL CONDITION	9
8 CONVERGENCE	10
9 PROCESSES UNDER MKSP FOR VALUE CHAIN DEVELOPMENT	10
9.1 IDENTIFICATION OF PROJECT AREAS	10
9.2 PROJECT IMPLEMENTING AGENCY	10
9.3 PROPOSAL SUBMISSION PROCESS AND TEMPLATES	11
9.4 PROPOSAL APPROVAL STAGES -	11
9.4.1 DESK APPRAISAL	11
9.4.2 PRE-EMPOWERED COMMITTEE MEETING	11
9.4.3 EMPOWERED COMMITTEE	12
9.5 ROLE OF THE STATE RURAL LIVELIHOODS MISSION	12

9.6	PROJECT PERIOD	12
9.7	ELIGIBLE ITEMS OF EXPENDITURE:	13
9.7.1	SUPPORT TO SRLM	13
9.7.2	SUPPORT TO PRODUCERS' ENTERPRISE (PE)	13
9.7.3	TECHNICAL SUPPORT AGENCY	15
9.8	GENERAL CONDITIONS FOR ELIGIBLE ITEMS OF EXPENDITURE	15
10	RELEASE OF FUNDS	15
10.1	1ST INSTALMENT	16
10.2	2ND INSTALMENT	16
10.3	3RD INSTALMENT	16
10.4	UTILIZATION OF INTEREST EARNED ON CENTRAL RELEASE	17
10.5	RELEASING OF MATCHING SHARE:	17
10.6	SUBMISSION OF PROGRESS REPORTS	17
10.7	MONITORING AND REVIEW OF THE PROJECT	17
10.7.1	STATE LEVEL	17
10.7.2	CENTRAL LEVEL	18
10.8	MIS	18
10.9	AUDIT	18
11	NECESSARY CONDITIONS FOR PROJECT APPROVAL	18
12	PROJECT COMPLETION	19
ANNEXURE – I: APPRAISAL CRITERIA – VALUE CHAIN PROJECTS UNDER MKSP		20
ANNEXURE I-A - GUIDANCE NOTE FOR APPRAISAL OF A MKSP AAP VALUE CHAIN DEVELOPMENT PROPOSAL		25
ANNEXURE – II: RESULTS FRAMEWORK		33
ANNEXURE – III PROPOSAL SUBMISSION TEMPLATE		35

1. Background

1.1 Mahila Kisan Sashaktikaran Pariyojana

In 2011, the Ministry of Rural Development launched “Mahila Kisan Sashaktikaran Pariyojana” (MKSP), a sub component of the National Rural Livelihood Mission (NRLM) to improve the present status of women in agriculture, and to enhance the opportunities for her empowerment. The primary objective of the MKSP is to empower women in agriculture by making systematic investments to enhance their participation and productivity, as also create and sustain agriculture based livelihoods of rural women. By establishing efficient local resource based agriculture, wherein women in agriculture gain more control over the production resources and manage the support systems, the project seeks to enable them to gain better access to the inputs and services provided by the government and other agencies. Once the production capacities of women in agriculture improve, food security ensues for their families and communities.

In 2012, the scope of MKSP was extended to Non Timber Forest Produce (NTFP) based livelihoods to promote NTFP collectives to increase the income of tribal NTFP collectors through sustainable harvest and scientific post-harvest practices for higher returns; negotiate better with market forces while also taking up various value addition activities at appropriate levels. The intervention would envisage strengthening the NTFP value chain on end-to-end basis and creating strategic public-private-panchayat partnerships for the benefit of all stakeholders.

Interventions to promote value chain for ensuring better market linkages for the produce were envisaged as one of the important interventions under MKSP, both for agriculture and NTFP.

1.2 Value chain development interventions under DAY-NRLM

Under MKSP and various other Farm Livelihoods interventions, Producers’ Groups (PGs) have been formed to undertake primary level aggregation and value addition activities at the village level. These PGs are small sized unregistered entities and engaged in localized marketing activities based on the local demand and supply situations. The PGs, being small and disaggregated cannot individually engage effectively in large scale economic activities.

As a result the impact of the PGs in ensuring better prices for the small and marginal producers was not very significant in terms of exploiting the true market potential. It has been realized that to achieve the desired goal of getting the maximum percentage of every consumer rupee spent a larger professionally managed and community owned institution would be more effective.

In 2015-16, DAY-NRLM, under its' World Bank supported National Rural Livelihoods Project (NRLP) had launched a special fund for promotion of large size value chain interventions building on the strength of Community Based Organizations (CBO) under DAY-NRLM. Several initiatives focused on value chain development for market linkages have been taken up under this special fund in various states.

1.3 DAY-NRLM Strategy on Value Chain Development

To consolidate the value chain development experiences under DAY-NRLM and to bring specific impetus on value addition and market linkages the scope of MKSP is now extended to incorporate proposals for value chain development with exclusive focus on value addition and market linkages through collective action and promotion of Producers Enterprises (PE) which are owned and governed by the producers.

Under DAY-NRLM, it is envisaged that the members of the existing PGs would be federated into Producers' Enterprises of size to attain the economy of scale through value chain interventions. In geographies, where PGs have been promoted under Farm Livelihoods interventions, the members of the PGs would be federated into Producers' Enterprises.

Promotion of sustainable and economically viable Producers' Enterprises is a highly challenging and complex task and DAY-NRLM has identified policy, techno-managerial manpower and financing challenges through various consultative processes and from experience. There is a need for a special intervention to promote member owned and member controlled Producers' Enterprises to ensure better price realisation to Mahila Kisans. These interventions would be covered under the MKSP Value Chain Development interventions. The value chain interventions in agriculture, dairying and NTFP under MKSP Value Chain will be implemented through Producer' Enterprises.

The strategy envisaged to develop Producers' Enterprises is centred on the following aspects –

- a. **Robust Business model** - The focus should be on building member owned PEs. A robust business model which takes into account supply factors, market and consumer preferences is essential for success of Producers' Companies. Post farm-gate to market interventions would be supported.
- b. **Focus on value addition** – Interventions centred on value addition and marketing would be encouraged rather than interventions based on purely aggregation and marketing.
- c. **Dedicated human resource** Human Resource with relevant qualifications and experience as staff of the PE to manage the PE operations effectively. There would focus on placement of a dedicated team of experts at the SRLM level (Spear Head Team) to support and guide the implementation of value chain interventions proposed by the SRLMs.

- d. **Capacity building** - Mentoring and capacity building of small farmers is essential for the sustainability of PEs through a dedicated team.
- e. **Financing** – Procurement infrastructure, processing infrastructure, working capital and viability gap funding to the PEs

As a component of DAY-National Rural Livelihoods Mission (DAY-NRLM) Ministry of Rural Development is extending the scope of Mahila Kisan Sashaktikaran Pariyojana (MKSP) to development of value chain interventions through promotion of sustainable Producers' Enterprises for interventions from farm gate to market with exclusive focus on market linkage.

Producers Enterprise

- A Producers' Enterprise (PE) is defined as registered formal organization of farmers including co-operatives and Farmer Producer' Companies.
- A producer enterprise is built on Mutual Assistance Principles
- The primary objective of these organizations is to ensure better economic return to the farmer producers by helping them to take up business activities.
- These enterprises operate as commercial organizations and being economically viable is of paramount importance for these organizations.

2 Objectives of Value Chain under MKSP

The objective of this component of MKSP is to empower women famers and collectors through an integrated approach of developing Producers' Enterprises, building market linkage and capacity building programed together.

The key objectives of value chain component of MKSP are:

1. To ensure **higher price realization** for the agriculture, dairying and NTFP produce for the small and marginal women farmers
2. Increasing influence of women farmers on the commodity value chain
3. To ensure increased **bargaining power** of **small and marginal producers** by achieving economy of scale and therefore negotiate better prices.
4. To develop **robust business models at scale** for the commodities produced by small and marginal women farmers
5. To develop **scalable and sustainable Producers' Enterprises** to implement the value chain development interventions
6. To create **opportunities for value addition** of commodities
7. To take up **Capacity building** of the community for better post-harvest handling, knowledge of quality parameters
8. To provide the platform for producers to promote their interests and influence policies

in the local and national environment that affect their business and livelihood.

9. To promote the **use of ICT** for accounting, inventory management, payment to producers and market information dissemination.

3 Expected Outcomes

MKSP Value Chain proposals being submitted should have clearly stated outcomes. The expected outcomes that must be achieved through the planned interventions:

- a. Better price realisation to the small and marginal women farmers
- b. Establishment of scalable and sustainable women Producers' Enterprises with robust business model and viable business plan having small and marginal women farmers as the shareholders
- c. Establishment of professional management structure for the Producer Enterprise
- d. Equitable sharing of profits between the members
- e. Access to market information for better marketing of their products
- f. Establishing market linkages with institutional buyers
- g. Development of Standard Operating Procedures for all processes of the Producers' Enterprises such procurement manuals, HR manuals, accounting processes.
- h. Development and promotion of sustainable management, quality assurance and storage practices

The SRLM may develop partnerships with other reputed organizations having demonstrated experience in value chain development of the selected commodities for achieving the desirable outcomes. This would be as per the partnerships guidelines of DAY-NRLM.

Creation of standalone marketing infrastructure such as retail outlets, market yards, if necessary, should be taken up through convergence.

The result framework of the project is attached as Annexure- II.

4 Non-negotiables

While designing the proposal the PIA has to consider the non-negotiables of DAY-NRLM and MKSP Value Chain and should ensure that these principles are respected and are not violated. These non-negotiables have been clearly defined to make the project community owned,

community governed and sustainable. These principles would guide the project and make the project relevant for the small and marginal women farmers.

- a. The interventions would be focused on small and marginal women farmers. The Producers' Enterprises proposed to implement the interventions would be women Producers' Enterprises.
- b. The interventions proposed would be implemented through PEs and at scale.
- c. The producer Enterprise would be professionally managed having its own professional managers with requisite qualifications and relevant experience of running a business enterprise
- d. The interventions would be focused on post farm-gate to market for agriculture produce, dairying and NTFP.
- e. The Producers' Enterprises would be community owned and must adhere to the principles of co-operation.
- f. Any assets provided under the interventions would be community owned i.e. by a producers' enterprise.
- g. Any financial support such as working capital support, viability gap funding etc, to organizations other than PEs would not be permitted.
- h. A dedicated team at the SRLM level should be in place before any intervention is proposed. The team should consist of manpower with relevant techno-managerial experience in operations, financial management, commodity handling etc.
- i. No subsidy or grant to be provided to any individual
- j. Market linkages have to be identified before submission of proposal. The market linkages must be worked out before the producers' enterprise is promoted
- k. Core business of the Producers' Enterprise must be based on agriculture, Dairying or NTFP.

5 Approach

The Value Chain projects would be implemented by the Producers' Enterprise promoted for that specific purpose. The SRLM is the promoting organization of the PE. DAY-NRLM Guideline for the promotion of Producer Enterprises would be followed as a framework for implementation.

6 Value Chain Projects under MKSP

6.1 About the Project

- a) The objective of the MKSP Value Chain Development is to empower women to sustain and to enable better price realisation through value addition, market linkage based livelihoods by establishing sustainable Producers' Enterprises. The project objectives must be explicitly stated and formulated accordingly.
- b) The objective is also to build on existing producers' groups that have been formed under MKSP agriculture and livestock interventions to federate their members into market linked, sustainable Producers' Enterprises.
- c) While evaluating the proposal the size of the enterprise would be a key determinant. An enterprise which is not big enough may not be able to meet the overhead expenditure like good quality manpower and also may not be able reach the economy of scale.
- d) The Projects should be conceived in a manner so as to provide end to end solutions. Provision of a complete package of 'end-to-end' services through mobilizing women producers into Producers' Enterprises, providing access to a complete package of post-harvest services from procurement, value addition to marketing of produce should be made in the project in order to make it a holistic project. To the extent possible, the existing gaps in the marketing eco-system must be addressed.
- e) The project proposal should draw extensively from the existing best practices in post-harvest practices, value addition and marketing.
- f) The project must have a clearly defined business model and business plan at the time of submission of the proposal
- g) Project should lead to substantial tangible and intangible socio-economic benefits.
- h) Project should have a well-defined internal monitoring systems to track the progress i.e., physical and financial achievements. Appropriate Management Information Systems and accounting software should be set up by the PEs.
- i) The PEs proposed would be professionally managed entities; hence the SRLM must plan for recruitment of professionals with relevant qualifications and experience in the proposal.
- j) The Producers' Enterprises Staff must have relevant qualification and experience. The Staff must consist of commodity specialists (depending on the number of commodities handled) and an accountant.
- k) The project should be developed on the existing implementation experience of the implementing agency or its partners in implementation of large size value chain development interventions involving promotion of producer enterprises.

6.2 The components under the project

- i. Promotion of Producer Enterprise through organization and mobilization of SHG women in agriculture should be the core element of the project.

- ii. The PEs would be owned and governed by the community and would be managed by the professionals. Project would support the PE for hiring the professional managers for some period.
- iii. The Producer Enterprise so promoted would engage in post-harvest value development for agriculture, dairying or animal husbandry produce and NTFP.
- iv. Processing activities that add value to the agricultural, dairy or NTFP would be taken up by the producer enterprise and necessary infrastructure for the same would be provisioned under the project. This would include horticulture, agro-processing, food-processing, storage, value addition, preservation, etc. The business model of the PE must be clearly identified.
- v. Building market linkages is an essential component of the project. The market linkages must be identified before the project is proposed.
- vi. The producers enterprise may need to buy and store the produce for a short period of time and the project would support working capital towards that.
- vii. In order to optimize the benefits from the project under MKSP Value Chain, a well-defined convergence strategy should be mentioned at central, state, district and block levels in order to leverage schemes of various Ministries /Departments such as MGNREGA, Ministry of Agriculture, Department of Animal Husbandry, Department of Food processing etc. and similar schemes aimed at providing support to development of Enterprises or value addition infrastructure.
- viii. The PE must plan for knowledge building, management and dissemination relating to markets, post-harvest practices and village level value addition.
- ix. Capacity building of producers in better harvest and post-harvest technology may also be part of the funding to the producer enterprise.
- x. Producer enterprise would also take up the training of members and board of directors in governance of a producer enterprise

7 Funding

7.1 General condition

Ministry of Rural Development (MoRD) would provide funding support of up to 60% (90% for North East and hill states) to the project submitted by the SRLMs under MKSP Value Chain. Balance is to be contributed by the respective state governments or any other donor agencies, national and international in the form of grants.

Participation of banks in financing the projects would be encouraged. The SRLM would be expected to define the financing mechanism for the Producers' Enterprise post the project period.

The SRLMs will be submitting the project proposals for a period of three (3) years and the funding will be made through a project route. The project will be approved for a three years project period.

The investment per household should not exceed INR 15000 over the period. Dairy value chain development requires high infrastructure investment, hence in the case of dairy value chain projects, the investment per household should not exceed INR 18000 over the project period.

The investment per household would be calculated as:

Investment per household = total investment proposed for the project / number of unique farmers to be covered during the project period.

The total project cost for any single project shall not exceed INR 45 crores.

8 Convergence

DAY-NRLM has issued joint advisories with Ministry of Agriculture and Department of Animal Husbandry, Dairy and Fisheries. For implementation of the value chain interventions the SRLMs may explore convergence opportunities with other schemes and departments in their respective States.

9 Processes under MKSP for Value Chain Development

9.1 Identification of project areas

The project area would primarily be the intensive blocks under DAY-NRLM. If a project is being conceived in an intensive block, the non-intensive blocks adjacent to the intensive block may also be included with the condition that the SRLM would develop a plan to cover these non-intensive blocks under its social mobilization and financial inclusion interventions.

The areas taken up under Mission Antyodaya would be given preference for promotion of value chain interventions under MKSP- Value Chain Development.

Priority would be given to those areas where there are existing producers groups in significant numbers promoted under DAY-NRLM.

9.2 Project implementing agency

The State Rural Livelihoods Mission of any State may pose projects under MKSP- Value Chain Development.

9.3 Proposal submission process and templates

The proposal for value chain development projects under agriculture, dairying or NTFP may be submitted under MKSP Value Chain in the proposal submission template provided. The proposal submission template is provided in Annexure – III.

The SRLMs will be submitting the project proposals for a period of three (3) years and the funding will be made through a project route.

9.4 Proposal approval Stages -

9.4.1 Desk appraisal

The proposal submitted by the SRLMs would be appraised by a team of experts having thorough understanding of value chain interventions including business models and commodity markets. The proposal submitted by the SRLMs would be appraised by a team of experts having thorough understanding of value chain interventions including business models and commodity markets. The expert team would comprise of Farm Livelihoods team of DAY-NRLM handling value chain development interventions and National Resource Persons empanelled by NIRD&PR having expertise on value chain development. The appraisal would be taken up following the scoring template as Annexure I. The detailed guidance on scoring is also provided in Annexure I-A.

Any proposal scoring less than 60% marks will not be considered.

The Appraisal Team would appraise the project based on the following -

- a. Non-negotiables defined in the MKSP Value Chain Guidelines
- b. Results Framework defined in MKSP Value Chain Guidelines
- c. Project submission template and financial analysis, business plan, financial viability, sustainability, profitability.

In case the SRLM has proposed a Technical Support Agency or Field Implementation partner, the mode of procurement has to be mentioned in the proposal.

In case the proposal is not found to be suitable to be taken to the pre-EC stage, the SRLM would re-work the proposal based on the comments of the Farm Livelihoods Team.

The Farm Livelihoods Team may undertake a field appraisal of the project areas to verify the readiness of the SRLM to implement value chain development interventions, suitability of the commodity and other factors.

9.4.2 Pre-Empowered Committee meeting

The Projects submitted would be examined and considered by the Pre-EC before it is submitted to the Empowered committee for its recommendation. The composition of the Pre-EC would be as under:

- i. Joint Secretary (Rural Livelihoods) - Chairman
- ii. Farm Livelihoods Team – Member Convener
- iii. Concerned SRLM Team members

The pre-EC meeting could be held multiple times during the appraisal stage of the proposal.

9.4.3 Empowered Committee

Once the projects have been examined in the Pre-EC meeting, the proposal would be put forth for approval by the Empowered committee. The composition of the Empowered Committee would be as under:

- i. Secretary, Department of Rural Development - **Chairman**
- ii. AS & FA, Ministry of Rural Development - Member
- iii. Senior Adviser (RD), Planning Commission - Member
- iv. Joint Secretary, Ministry of Environment & Forest - Member
- v. Joint Secretary (Agriculture Marketing) - Member
- vi. Joint Secretary (A &DD)/JS (Fy) - Member
- vii. Joint Secretary, Ministry of Tribal Affairs - Member
- viii. Joint Secretary, Ministry of Development of North East Region (In case of Projects from North East) - Member
- ix. Special Invitee/Expert (Two) - Member
- x. Joint Secretary (Rural Livelihoods) Member-Convener

9.5 Role of the State Rural Livelihoods Mission

The State Rural Livelihoods Missions (SRLM) as Project Implementing agency (PIA) will place a dedicated spearhead team at the State level for proposal development and subsequent facilitation of the project roll-out. However, before recommending the project to MoRD, SRLM will obtain the requisite approval for commitment for state share.

Spearhead will comprise of one or two commodity experts, one expert in financial management and one expert in promotion of producers' enterprises and operations. This team should be a separate team apart from the existing farm livelihoods team. The cost of this spearhead team could be met by the SRLM out of the provision available under DAY-NRLM for administrative expenses.

9.6 Project Period

Projects are to be implemented within three years' time

9.7 Eligible Items of Expenditure:

Component-wise expenditure likely to be incurred for the project, like beneficiary mobilization, cost of training and capacity building, monitoring fees, administrative expenditure etc. must be mentioned in the project document.

The major components envisaged under the value chain development projects proposed under MKSP Value Chain are:

- a. Support to SRLM
- b. Support to Producers' Enterprise (PE)
- c. Technical Support Agency

Any kind of subsidy to individual members or asset creation for individual members is not permissible under this project.

9.7.1 Support to SRLM

During the initial stages of the project, the SRLM would undertake the activities for the incorporation of the PE. Therefore, the funds permissible under the Support to SRLM would include:

- a. **Pre-incorporation and incorporation expenses** – which includes expenditure towards preliminary survey (if required), identification of initial subscribers, facilitation of KYC of initial subscribers, hiring a Chartered Accountant, registration fees for the PE etc.
- b. **MIS entry and profiling of Mahila Kisans** – entry of the Mahila Kisan profiles in the DAY-NRLM Farm Livelihoods MIS would be taken up by the SRLM profiles. In case the entry of the Mahila Kisan profiles would be budgeted under the administrative expenses under the support to PE component.
- c. **Administrative expenses** – includes the following components
 - **Spearhead team** – the SRLM may budget the salary and travel expenses of the spearhead team under this component
 - **Monitoring and Evaluation** – includes expenditure towards baseline, mid-line and end-line surveys, independent evaluation to be taken up etc.
 - **Documentation/Dissemination of best practices** – the SRLM may document the best practices developed in the project to replicate in other areas.

9.7.2 Support to Producers' Enterprise (PE)

As the value chain interventions would be implemented under the aegis of the PE, the support to PE for value addition viability gap funding and HR support for a limited period, working capital support and procurement infrastructure would be provided under this

component. This component would be released to the PE by the SRLM after the registration of the PE and the submission of the DPR by the PE to the SRLM.

The sub-components envisaged under the support to the PE are:

- a. **Infrastructure for Value addition** - The MKSP for value chain development would provide financial assistance to PEs for–
 - i. Processing facilities for value addition of agriculture, dairying or NTFP produce which may include facilities for weighing, cleaning, sorting, grading, packing, testing equipment, ripening chambers, oil extraction, specialized packaging etc.
 - ii. Facilities including pack-houses, pre-cooling units, bulk milk coolers etc. may be proposed
 - iii. The SRLM may specify the plan for convergence with other Departments such as Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture, Ministry of Food Processing Industries, TRIFED etc. in the proposal
 - iv. Promotional costs for marketing, certifications costs (such as FSSAI, organic certifications) which add value or are part of legal compliances would be covered.

Any infrastructure set-up under MKSP value chain component would be owned by the PEs. Asset for a single individual member will not be permissible under this component.

- b. **Viability gap funding** – includes costs of community mobilization, social capital development, training and capacity building and logistics expenses of the PE.
 - i. Selection of areas where there is significant presence of SHGs and social capital is encouraged. Therefore, community mobilization should not exceed 5% of the support to PE
 - ii. Total viability gap funding should not exceed 20% of the support to the PE.

Any staff working at block level or below can be considered under the training and capacity building cost.

- c. **Administrative cost of PE** –
 - i. **Support for professional management** includes the cost of key manpower such as CEO, commodity handling experts, accountant etc. of the PE. The PE must have a lean HR structure.

ii. **Setting up of the PE**– includes cost of suitable accounting software, inventory management software, office furniture and fixtures and computers.

The administrative cost of PE should not exceed 6% of the support to PE cost.

d. **Working Capital** – the project would support the PE for the working capital required for procurement of produce from farmers for a period of 3 weeks. That means if the PE has a plan to procure paddy then the support on working capital would be equivalent to cost of paddy procured for 21 days.

9.7.3 Technical Support Agency

The SRLM may take the services of a technical support agency for providing technical and handholding support to the specific PE(s) to be promoted under this proposal. The mode of procurement of the Technical Support Agency (TSA) must be specified in the proposal.

Therefore the TSA are to be taken to provide specific support to the PEs.

The Cost of the TSA should not be budgeted as a percentage of the total project cost.

The cost should be defined as per clearly specified milestones and deliverables.

9.8 General Conditions for Eligible Items of Expenditure

The project should incorporate expenditure on various components indicated under MKSP to arrive at the project cost. The administrative expenses for managing the project shall not exceed 6% with the condition that savings if any in the administrative component may be used for furthering the activities of the Project but not vice versa. Purchase of vehicles is not admissible in the projects. No cost escalation shall be borne by the Government of India.

At the end of the project period, the ownership and management rights of the infrastructure and assets created if any, under the project, shall remain with the PE. Reallocation of funds not exceeding 5% of the total project cost among major budget heads will be permissible to accommodate any innovation within the project. Within the main budget heads reallocation of funds is permissible. However, reallocation on account of administrative expenditure shall not be permitted. Any Additional Information that may be relevant to the Project Proposal may be mentioned in the Project Document.

10 Release of Funds

The funds will be released directly to the concerned SRLM from the Ministry of Rural Development.

10.1 1st Instalment

The first instalment will be released by MoRD to the SRLM on the approval of the project by the Empowered Committee. Out of the first instalment (i.e. 25% of the central share), 10% of the central share may be released after approval of the project. The SRLM would submit DPR to the Ministry of Rural Development. Rest of the 15% will be released immediately after submission of DPR to the Ministry of Rural Development for which a maximum period of 3 months from date of approval of the project by Empowered Committee will be permitted to the PIA. In case Technical Support Agency (TSA) has been proposed, the TSA needs to be on-board before the release of the second tranche of the 1st instalment. The placement of spearhead team to spearhead this activity at the SRLM level in a focused manner is a necessary condition for project approval.

10.2 2nd Instalment

The 2nd instalment of 50 % of central share will be released upon the following:

- a. The PE proposed has been incorporated.
- b. The PE Staff proposed has been recruited and positioned in the PE.
- c. Entry of Mahila Kisans covered and CRPs developed in the National Livelihoods MIS.
- d. Release of state share
- e. Submission of a Utilization certificate along with an expenditure statement for at least 60% of the released 1st instalment funds and contribution from state Govt./other agencies and achievement of corresponding physical target.
- f. Submission of year-wise audit reports of the funds utilized;
- g. Quarterly reporting of progress in the prescribed formats
- h. A certificate from the Designated Agency that the project is being implemented as per the approved project proposal.

10.3 3rd Instalment

The 3rd and final instalment of 25% of central share will be released upon the following:

- a. Utilization of 80% of the total available funds and achievement of corresponding physical targets.
- b. Entry of Mahila Kisans covered and CRPs developed in the National Livelihoods MIS.
- c. Submission of year-wise audit reports of the funds utilized;
- d. Regular reporting of progress in the prescribed format;
- e. A certificate from the Implementing/Coordinating Agency that the project is being implemented as per the approved project proposal.
- f. Before the release of the 3rd and final instalment, it will be open to MoRD to have verification of the progress of the project by a third party / independent agency.

All financial documents (UC, Audit report etc.) and the project report submitted by the SRLMs should be scrutinized and authenticated by the SRLM before they are forwarded to the Ministry of Rural Development.

10.4 Utilization of Interest earned on central release

The interest amount accrued on Government releases, if any, shall be adjusted against the Government share of the Project cost at the time of release of the third and final instalment.

10.5 Releasing of Matching Share:

The State Government/other donor agency is required to release its corresponding matching share within a month of receipt of the respective instalment of the central share.

10.6 Submission of progress reports

The SRLM shall submit the progress report of the project by 15th of the month succeeding every quarter in the format prescribed by the Ministry. Failure to furnish the progress report would make SRLM liable to refund the Central funds released for the Project along with interest.

It shall be open to the Ministry of Rural Development to prescribe such conditions, as it deems fit, from time to time to ensure proper execution of the project.

10.7 Monitoring and review of the Project

Monitoring and review of the Projects sanctioned and implemented will be done at two levels i.e. at the Central level by NMMU and at the State level by the RD Department or the SMMU. 1.5% of the central share in a project will be given to agencies identified at central level for appraisal, fund routing, monitoring and coordination.

10.7.1 State Level

For monitoring and periodic review of the sanctioned project, a Committee at the State level, headed by the Secretary (RD) of the State is to be constituted who will be responsible for reviewing and monitoring the Project/s. The Mission Director, SRLM would be convenor of the committee. The State Committee shall have participation from Forest and Environment, tribal development and Women and Child Development Departments, Department of Agriculture, Department of Animal Husbandry, Dairying and Fisheries.

The spearhead Team to spearhead the value chain activities in a focused manner at the State Level would undertake regular monitoring and handholding of the Value Chain development interventions and the PEs.

10.7.2 Central Level

At the Central Level, the Farm Livelihoods Team will periodically review and monitor the MKSP Value Chain projects sanctioned under the scheme. The team would brief the Empowered Committee about the progress of the ongoing projects periodically. In addition, an advisory body including the representatives from private organizations, industries, marketing firms etc. would be constituted at the Central Level to give necessary advice to the Ministry of Rural Development on the implementation of MKSP.

The National Resource Persons (NRP) may also be utilized for periodic review and monitoring of the project.

10.8 MIS

The DAY-NRLM Farm Livelihoods MIS has been developed at the National level to capture household level interventions through various data points. The data pertaining to the Mahila Kisan covered, CRPs developed and Producers' Enterprise promoted must be entered into the Farm Livelihoods MIS. The SRLM must plan for MIS staff at the State level and block level.

10.9 Audit

1. The Ministry of Rural Development retains the right to carry out internal audit of funds and financial implications of the project, if deemed necessary.
2. Financial audit is to be carried out by the Chartered Accountant of the SRLM or any other authority appointed by the State Government. The audit report together with action taken on the auditor's observations and physical progress under the project shall be furnished at the time of release of 2nd or 3rd instalment of the Central funds.

11 Necessary conditions for project approval

- a. Recommendation by the appraisal Team
- b. Commitment of 40% of the Project Cost by State Government.
- c. Professionals with relevant education and experience to be recruited by the SRLM.
- d. Exit and Scaling up strategy
- e. Predominant focus on vulnerable communities (ST/SC, Minorities and women headed households)
- f. Comprehensive project design – farm gate to market

12 Project Completion

Process Documentation from the beginning will be useful for developing audio visual for further scaling up and midway corrections. Documentation is an essential requirement of the project along with video recording for important project milestones, giving the status of the project participants before and after. It should cover the details of deliverables as indicated in the project and achievements made against these deliverables. The completion report of the project should be made available by the SRLM to MoRD within three months from the date of project completion along with final utilization certificate and audit reports and funds that remained unspent, if any.

Annexure – I: Appraisal Criteria – Value Chain Projects under MKSP

State Name:

Proposal Name:

Total Marks Awarded:

Appraisal Decision:

Name of appraiser/s:

Minimum marks for considering project viable - 60

Evaluation Criteria	Marks Awarded	Remarks
<ul style="list-style-type: none"> • Does the proposal clearly articulate the opportunity? <ul style="list-style-type: none"> • Any detailed value chain study taken up? • Situation Analysis (3 marks) <ul style="list-style-type: none"> ○ Opportunity ○ Strength ○ Weakness ○ Threat • What is the overall project rationale and context? (2 marks) <ul style="list-style-type: none"> ○ In terms of demand/supply analysis ○ Rationale for commodity selection – livelihood opportunity /intended impact (results) ○ Business risk (and mitigating measures planned) • What is intended impact on livelihoods and the local economy? (5 marks) <ul style="list-style-type: none"> ○ # HH impacted 		

<ul style="list-style-type: none"> ○ Opportunity for local employment creation <p style="text-align: center;">(Total Marks: 10 points)</p>		
<p>Does the proposal have a strong business model and a business plan?</p> <ul style="list-style-type: none"> ● Institutional Mechanism (5 marks) <ul style="list-style-type: none"> ○ Type of Producer Enterprise (PE) proposed ○ Scale of PE proposed – annual turnover and no. of members ○ Business model of the PE ○ Fund flow mechanism proposed ● Market Analysis (5 marks) <ul style="list-style-type: none"> ○ Does the project demonstrate a strong market orientation – market linkage/private sector partnership etc.? ○ Market intervention measures/partnerships suggested ○ National and local scenario developed for the commodities ○ Total production of the commodities identified in the selected areas and the percentage targeted to be procured by the PEs. ○ Terms of trade, presence of intermediaries, middlemen, local traders, mandis etc. ● Benefit to the individual members in terms of net increase in income (15 marks) <ul style="list-style-type: none"> ○ Per unit increase in price realization to the farmer ○ Per household investment ○ Benefit cost ratio ○ % of consumer rupee passed on to the farmer ● Gap Analysis (5 marks) <ul style="list-style-type: none"> ○ Who are the competitors? 		

<ul style="list-style-type: none"> ○ What would be the competitive advantage for the PE over the competitors? ○ What would be the strength / USP of the PE in business? ● Financial analysis (8 marks) <ul style="list-style-type: none"> ○ Business plan of the PE ○ P&L projections for 5 years ○ Break-even of the PE – <ul style="list-style-type: none"> ▪ 1st year of operations ▪ 2-3 year of operations ▪ 4-5 year of operations ○ Return on net assets (net income / (fixed assets + working capital)) ○ IRR of the project <ul style="list-style-type: none"> ▪ <5% ▪ 5-10% ▪ 10-20% ▪ 20-30% ▪ > 30% ● HR Strategy (6 marks) <ul style="list-style-type: none"> ○ HR structure proposed for the PE ○ Profile of the manpower to be recruited ● Are any Business Development Services proposed? ● ICT proposed (3 marks) <ul style="list-style-type: none"> ○ Accounting and inventory management software ○ Is DBT proposed? ○ MIS 		
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<ul style="list-style-type: none"> • Stakeholder analysis (3 marks) <ul style="list-style-type: none"> ○ Social Capital to be created through the project (Udyog Mitra) ○ Community ○ Local market traders ○ Service providers (logistics etc.) <p style="text-align: center;">(Total Marks: 50 points)</p>		
<p>Technical Support Agency (TSA) and capacity building strategy</p> <ul style="list-style-type: none"> • Has a TSA been proposed? • Procurement mechanism? • Is there a Capacity building plan for – <ul style="list-style-type: none"> • Community • Udyog Mitra • PE Staff • Board of Directors of PE • Spearhead team • Is there a partner for capacity building ? <p style="text-align: center;">(Total Marks: 10 points)</p>		<ul style="list-style-type: none"> •
<p>What is the overall implementation readiness of the SRLM?</p> <ul style="list-style-type: none"> • Spearhead Team (SHT) (10 marks) <ul style="list-style-type: none"> ○ Has the SRLM placed a dedicated spearhead team for value chain interventions? ○ Composition of the SHT (profile of SHT members) – Commodity specialist, finance, accounting and commercial expert, supply chain management expert. • Prior experience of SRLM (5 marks) <ul style="list-style-type: none"> ○ Existing project portfolio – formed PE or not with women SHG members, Turn over, profitability, management structure of PE, 		

<p>number of commodities handled, years of operation, return on investment, benefit to farmer members, profits shared with members etc</p> <ul style="list-style-type: none"> • Is there a Monitoring, Learning, and Evaluation plan in place? (5 marks) <ul style="list-style-type: none"> ○ Is there a plan for baseline and M&E? <p style="text-align: center;">(Total Marks: 20 points)</p>		
<p>What is the post project sustainability?</p> <ul style="list-style-type: none"> • Exit strategy of the SRLM • For how many years would the SRLM provide handholding support after the project period? • Is there any suggested financing mechanism for post-project maintenance costs? • Is there a bank financing mechanism worked out? <p>(Total Marks: 5 points)</p>		

Annexure I-A - Guidance note for appraisal of a MKSP AAP Value Chain development proposal

(This is an indicative guidance for doing appraisal of the MKSP-AAP Value chain proposal. The appraisal should be a judicious mix of qualitative assessment along with objective criteria)

Evaluation Criteria	Scoring Guidance
<ul style="list-style-type: none"> • Does the proposal clearly articulate the opportunity? <ul style="list-style-type: none"> • Any detailed value chain study taken up? • Situation Analysis (3 marks) <ul style="list-style-type: none"> ○ Opportunity ○ Strength ○ Weakness ○ Threat • What is the overall project rationale and context? (2 marks) <ul style="list-style-type: none"> ○ In terms of demand/supply analysis ○ Rationale for commodity selection – livelihood opportunity /intended impact (results) ○ Business risk (and mitigating measures planned) • What is intended impact on livelihoods and the local economy? (5 marks) <ul style="list-style-type: none"> ○ # HH impacted 	<p>The appraiser has to assess the quality of the value chain analysis. If no study has been undertaken the proposal would be given '0' against the total marks assigned '10'.</p> <ol style="list-style-type: none"> 1. Situation Analysis <ol style="list-style-type: none"> a. 3 marks if all aspects – Opportunity, Strength, Weakness and Threat are of good quality and captures the field level realities b. Marks to be proportionately reduced based on how many aspects of SWOT are covered in detail 2. Project rationale and context <ol style="list-style-type: none"> a. Comprehensive coverage of demand & supply analysis, risk analysis and rationale for commodity selection clearly articulated b. The rationale should be thorough and should give a complete picture of the business proposition 3. Intended impact on livelihoods – <p>The proposal should be of scale and there should be a positive impact on aspects of local economy such as employment generation. If the proposal is for covering 2000- 4999 HH it would get 1 marks, 5000 HH or above it would get 2 marks, more than 10000 HH would get 3 marks. Any proposal proposing to cover less than 2000 would get '0'</p> <p>If the proposal has scope for local/farm gate value addition having employment opportunity for 50 people it would get 2 marks, between 25-</p>

<ul style="list-style-type: none"> ○ Opportunity for local employment creation <p>(Total Marks: 10 points)</p>	<p>49 people employment would get 1 mark. No marks if it is less than 25 people</p>
<p>Does the proposal have a strong business model and a business plan?</p> <ul style="list-style-type: none"> ● Institutional Mechanism (5 marks) <ul style="list-style-type: none"> ○ Type of Producer Enterprise (PE) proposed ○ Scale of PE proposed – annual turnover and no. of members ○ Business model of the PE ○ Fund flow mechanism proposed ● Market Analysis (5 marks) <ul style="list-style-type: none"> ○ Does the project demonstrate a strong market orientation – market linkage/private sector partnership etc.? ○ Market intervention measures/partnerships suggested ○ National and local scenario developed for the commodities ○ Total production of the commodities identified in the selected areas and the percentage targeted to be procured by the PEs. 	<ol style="list-style-type: none"> 1. Institutional mechanism - The institutional mechanism proposed should follow the Guidelines for promotion of Producers’ Enterprise under DAY-NRLM. In case of deviation from the PE guidelines the proposal will get ‘0’. If the proposal adheres to the PE guidelines an assessment has to be made on <ul style="list-style-type: none"> ● Annual turnover of PE – more than 10 crore: 3 ; 5-10 crore: 2, less than 5 crore : 1 ● The business model should be robust with clear role differentiation between BOD and the professional managers – if yes then give 1 mark and if no then give ‘0’ mark ● Clear articulation of fund flow mechanism from SRLM directly to PE based on the business plan should be there - if yes then give 1 mark and if no then give ‘0’ mark 2. Market Analysis – <ol style="list-style-type: none"> a. The appraisal team should evaluate the marks based on comprehensiveness of market study and market analysis. b. The proposal should display a complete understanding of the terms of trade and flow of value along the entire chain of the selected commodities. <ul style="list-style-type: none"> ● The market linkage established with organized sector – if yes then give 2 mark and if no then give ‘0’ mark ● The role of existing middlemen clearly articulated- – if yes then give 1 mark and if no then give ‘0’ mark

<ul style="list-style-type: none"> ○ Terms of trade, presence of intermediaries, middlemen, local traders, mandis etc. ● Benefit to the individual members in terms of net increase in income (15 marks) <ul style="list-style-type: none"> ○ Per unit increase in price realization to the farmer ○ Per household investment ○ Benefit cost ratio ○ % of consumer rupee passed on to the farmer ● Gap Analysis (5 marks) <ul style="list-style-type: none"> ○ Who are the competitors? ○ What would be the competitive advantage for the PE over the competitors? ○ What would be the strength / USP of the PE in business? ● Financial analysis (8 marks) <ul style="list-style-type: none"> ○ Business plan of the PE ○ P&L projections for 5 years ○ Working capital plan ○ Break-even of the PE – <ul style="list-style-type: none"> ▪ 1st year of operations ▪ 2-3 year of operations 	<ul style="list-style-type: none"> ● Market analysis in terms of transaction costs been done for both local and distant market s – 2 marks, done only for one market give 1 mark and not done at all give '0' 3. Benefit to individual members – <ul style="list-style-type: none"> a. Emphasis should be placed on the benefit proposed for the women farmers through the proposed intervention. b. Marks to be allotted according to the benefit cost ratio and the net realization accrued to the farmer over the duration of the project. c. % of consumer rupee can be deduced from the efficiency proposed to be brought into the value chain. <ul style="list-style-type: none"> ● Net return to farmers is more than 20%: 10 marks ● Net return to farmers is between 15- 20% : 7 marks ● Net return to farmers is between 10-15%: 5 marks ● Net return to farmers is between 5- 10%: 2 marks ● Net return to farmers is less than 5%: 0 marks ● Benefit cost ratio (after 3 yrs of intervention) more than 3 times : 3 marks ● Benefit cost ratio (after 3 yrs of intervention) between 2-3 times: 2 marks ● Benefit cost ratio (after 3 yrs of intervention) between 1-2 times: 1 marks ● Per HH investment between 10-15 thousand : 1 marks ● Per HH investment less than 10 thousand : 2 marks 4. Gap analysis – <ul style="list-style-type: none"> a. Articulation of the opportunity through usage of tools such as Porters model, PESTLE etc. b. Marks to be allotted according to the benefit cost ratio and the net realization accrued to the farmer over the duration of the project.
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<ul style="list-style-type: none"> <ul style="list-style-type: none"> ▪ 4-5 year of operations ○ Return on net assets (net income / (fixed assets + working capital) ○ IRR of the project <ul style="list-style-type: none"> ▪ <5% ▪ 5-10% ▪ 10-20% ▪ 20-30% ▪ > 30% • HR Strategy (6 marks) <ul style="list-style-type: none"> ○ HR structure proposed for the PE ○ Profile of the manpower to be recruited • Are any Business Development Services proposed? • ICT proposed (3 marks) <ul style="list-style-type: none"> ○ Accounting and inventory management software ○ Is DBT proposed? ○ MIS • Stakeholder analysis (3 marks) <ul style="list-style-type: none"> ○ Social Capital to be created through the project (Udyog Mitra) ○ Community ○ Local market traders 	<p>c. % of consumer rupee can be deduced from the efficiency proposed to be brought into the value chain.</p> <ul style="list-style-type: none"> • Identified competitors at two levels or more(village, mandi, distant market): 2 marks • Identified competitors at least at first level (village): 1 marks • Not identified competitors: 0 mark • Clearly articulated competitive advantage for the PE over the competitors at both levels: 2 marks • Clearly articulated competitive advantage for the PE over the competitors at village/mandi level: 1 mark • Not articulated clearly the competitive advantage for the PE over the competitors: 0 mark • How the PE will overcome the competition is clearly articulated: 1 mark • How the PE will overcome the competition is not clearly articulated: 1 mark <p>5. Financial analysis –</p> <p>a. Marks to be allotted in proportion to year of breakeven (early breakeven more marks), IRR (higher IRR gets more marks) and high Return of net assets</p> <p>b. The appraising team should understand the industry / sectoral benchmarks while appraising on the financial criteria.</p> <ul style="list-style-type: none"> • Prepared the projection for P & L for first five years: 2 marks • Not prepared the same: 0 mark • Breaking even in 3 years: 3 marks • Breaking even in 4 years: 2 marks
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<p>○ Service providers (logistics etc.) (Total Marks: 50 points)</p>	<ul style="list-style-type: none"> ● Breaking even in 5 years: 1 marks ● Breaking even in more than 5 years: 0 mark ● If there is no projection for breaking even the proposal may not be considered ● Turn over/working capital ratio more than 10: 3 ● Turn over/working capital ratio between 7-9 : 2 ● Turn over/working capital ratio between 5-7: 1 ● Turn over/working capital ratio less than 5: 0 <p>6. HR Strategy – The HR strategy proposed should follow the Guidelines for promotion of Producers’ Enterprise under DAY-NRLM.</p> <ul style="list-style-type: none"> ● Dedicated manpower in the pay roll of the PE has been provisioned with 1 CEO, 2 commodity expert, 1 expert in finance & accounts : 4 marks ● Dedicated manpower in the pay roll of the PE has been provisioned with 1 CEO, 1 commodity expert, 1 expert in finance & accounts : 3 marks ● Have provisioned for at least 1 CEO/commodity expert, 1 expert in finance & accounts: 2 mark ● Have not made any provision for staff in PE pay roll : Reject the proposal ● Performance based incentive structure has been introduced: 2 marks <p>7. ICT proposed - The ICT proposed (accounting and inventory management software, DBT facility etc.) should follow the Guidelines for promotion of Producers’ Enterprise under DAY-NRLM</p>
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	<ul style="list-style-type: none"> • Provisioned for suitable software for accounting and inventory management : 2 mark • Provisioned for direct payment to the bank accounts of the members: 1 mark <p>8. Stakeholder Analysis-</p> <ul style="list-style-type: none"> • The plan for the mobilization of farmer producer is clearly articulated: 2 mark • A cadre of community resource persons (Udyog Mitra) has been planned: 1 mark
<p>Technical Support Agency (TSA) and capacity building strategy</p> <ul style="list-style-type: none"> • Has a TSA been proposed? • Procurement mechanism? • Is there a Capacity building plan for – <ul style="list-style-type: none"> • Community • Udyog Mitra • PE Staff • Board of Directors of PE • Spearhead team • Is there a partner for capacity building ? <p>(Total Marks: 10 points)</p>	<p>Technical support agency for field level implementation and capacity building strategy proposed should follow the Guidelines for promotion of Producers’ Enterprise under DAY-NRLM.</p> <ul style="list-style-type: none"> • Adequate provision has been made for a TSA for field level implementation: 4 mark • How the TSA would be taken on board is articulated: 2 marks • A clear plan including module development Result for capacity building for community, Udyog Mitra, PE staff, BOD of PE is there : 2 marks • Planned to take a capacity building partner : 2 marks
<p>What is the overall implementation readiness of the SRLM?</p> <ul style="list-style-type: none"> • Spearhead Team (SHT) (10 marks) 	<p>1. Spearhead team placed should follow the Guidelines for promotion of Producers’ Enterprise under DAY-NRLM.</p> <p>The appraisal team should evaluate the composition of SHT in terms of relevant qualification of the team and the experience of the team members</p>

<ul style="list-style-type: none"> ○ Has the SRLM placed a dedicated spearhead team for value chain interventions? ○ Composition of the SHT (profile of SHT members) – Commodity specialist, finance, accounting and commercial expert, supply chain management expert. ● Prior experience of SRLM (5 marks) <ul style="list-style-type: none"> ○ Existing project portfolio – formed PE or not with women SHG members, Turn over, profitability, management structure of PE, number of commodities handled, years of operation, return on investment, benefit to farmer members, profits shared with members etc ● Is there a Monitoring, Learning, and Evaluation plan in place? (5 marks) <ul style="list-style-type: none"> ○ Is there a plan for baseline and M&E? <p>(Total Marks: 20 points)</p>	<p>in the commodities proposed. People having experience in commodity business in commercial sector would get higher weightage.</p> <ul style="list-style-type: none"> ● SHT is having dedicated 5 or more members: 10 marks ● SHT is having dedicated 4 members: 8 marks ● SHT is having 3 members: 6 marks ● SHT is having 2 members: 4 marks ● SHT is having 1 member: 2 marks <p>2. Experience of the SRLM – The SRLM should have prior experience in implementation of aggregation, value addition and marketing through Producer Enterprises / Producer Groups.</p> <ul style="list-style-type: none"> ● Have experience of promoting producer enterprises in agriculture/dairy/horti/NTFP with at least 1000 members in last 5 yrs: 3 marks ● Have promoted at least 100 producer groups in last 5 yrs: 2 marks <p>3. Monitoring and evaluation plan – clearly defined targets and indicators for measuring performance of the project.</p> <ul style="list-style-type: none"> ● A detailed plan for base line survey with time line has been incorporated: 2 mark ● Result framework has been objective and clear in terms of output/outcome and indicators: 2 marks ● Performance monitoring for PE has been worked out: 1 mark
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<p>What is the post project sustainability?</p> <ul style="list-style-type: none"> • Exit strategy of the SRLM • For how many years would the SRLM provide handholding support after the project period? • Is there any suggested financing mechanism for post-project maintenance costs? • Is there a bank financing mechanism worked out? <p>(Total Marks: 5 points)</p>	<p>1. There should be plan for post project sustainability of the institutions promoted under the project.</p> <p>The plan should include all the aspects detailed in the Guidelines for promotion of Producers' Enterprise under DAY-NRLM.</p> <ul style="list-style-type: none"> • The exit strategy of SRLM is gradual and clearly defined in number of years: 1 mark • In case project takes longer than 3 yrs to break even, the support strategy is clearly articulated: 1 mark • Plan exists for financing through bank/other agencies : 1 mark • Co financing through convergence has been planned with clear commitment: 2 marks
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Annexure – II: Results Framework

Project Development Objective – To establish sustainable and viable Producers’ Enterprises owned by women primary producers that enables their improved access to market having an increased ownership of the value chain.

Result Framework for Value Chain development under DAY-NRLM

Outcome / Outputs	Indicators	Means of Verification
Sustainable and viable Producers’ Enterprises (PE) established	<ol style="list-style-type: none"> 1. % of PEs promoted which are financially viable at the end of the project period 2. % of PEs being managed with relevant experience as per the PE guidelines 3. % of PEs who have achieved turnover of more than ___crore 4. % of PEs having SOPs developed for 1. SOPs developed for – Procurement, Sales, Pricing, Payment to Farmers, Storage and quality, Logistics, Finance and Human Resource (recruitment and performance incentives). 5. Use of IT systems for accounting 6. MIS for monitoring at PE level 7. Data entry in Livelihoods MIS at National Level 8. Professionals with relevant experience and education managing the PE operations 	<p>Through assessment of –</p> <ol style="list-style-type: none"> 1. Analysis of financial Indicators – <ol style="list-style-type: none"> a. Profitability b. Break-even point c. EBIDTA 1. Baseline data 2. YoY business operations data 3. Books of accounts 4. Employee profile in the payroll of the PE
To ensure member centrality and governance in the PEs promoted	<ol style="list-style-type: none"> 1. % of producers in the operating area enrolled as members 2. % of the total produce of the member farmers handled 3. % PEs having patronage based profit sharing mechanism 4. % of profit shared with the members 5. % of consumer rupee that flows back to the producer 5. % of PEs have timely election of their Board of Directors as per bylaws 	<p>Through assessment of -</p> <ol style="list-style-type: none"> 1. Financial Statements 2. Bylaws of the PE 3. Survey

	6. % of PEs submitted legal and financial compliances as per Company Law requirements 7. % of PEs having extension services for better harvest and post-harvest technology 8. % members of the PEs receiving the extension services 9. % of PEs providing market information services 10. % of the members of the PEs receiving market information services 11. % of PEs having transparent procurement mechanism 12. % of PEs having transparent pricing mechanism	
To ensure the members move up in the value chain for better return	1. % PEs having a business model and business process established based on understanding of the value chain 2. % of PEs undertaking value addition activities (except aggregation, grading, cleaning and sorting) <ul style="list-style-type: none"> ▪ Percentage of value addition in the value of the produce sold 	1. Reporting and submission of documents
To establish market linkage	1. % of PEs having market linkages with institutional buyers	1. MoUs with institutional buyers
To ensure better price realization to the farmers	1. % of PEs ensured better price realization to the members by at least 10% 2. Increase in income of the farmers	1. Current local market price 2. Reduction in losses

Annexure – III Proposal Submission Template

FRAMEWORK FOR DEVELOPING THE PROJECT PROPOSAL FOR VALUE CHAIN INTERVENTIONS UNDER MKSP

1. Background & Context

1.1. Situation Analysis

1.1.1. Analysis of the scenario of the identified commodities in the State and country

2. Supply and demand dynamics

2.1. Analysis of the activity/ subsector – at producer/ collectors level, at secondary aggregation level, at value addition level, margin spread, existing bottlenecks in aggregation, value addition and marketing, design issues etc.

2.2. Demand and supply condition of the commodity/products to be dealt.

2.3. Potential of export of the commodity.

2.4. Whether there is an unmet demand for the product in the state, nationally and internationally

2.5. Price trend of the commodity/products in the market.

2.6. Based on the above demand-supply and price analysis, determine whether product has a good potential to increase income of the primary producers and job opportunities in the value chain

3. Geography Selection

3.1. Location of proposed model. Rationale for selecting that area of operation.

4. Value chain and activities mapping

4.1. What are the main broad functions for the value chain being explored for intervention?

4.2. Who are the main value chain actors involved in the chain?

4.3. What are the different segments and the margin spread within each value chain segment?

4.4. How does the product flow among the value chain actors and in what volumes?

4.5. Traditional market and emerging market identification for the product developed.

4.6. Terms of exchange with supplier and buyer (Credit period offered).

4.7. Specific problems of small and marginal producers as a value chain player.

4.8. Analysis of the local market including the APMCs, their advantages and dis-advantages.

5. Prioritizing the interventions:

5.1. What are the gaps in the value chain?

5.2. Developing the points of interventions. Determining the stage(s) in the value chain where the interventions to be incorporated.

6. Rationale for intervention

6.1. Pro poorness of the activity – How the intervention is going to address specific marketing problems of small and marginal farmers.

6.2. If expansion of existing intervention, then what has been the output/ outcome of the previous intervention (previous outreach - household, acreage, number of artisans etc; results of the intervention in terms of benefit to the producers and income enhancement, etc)

6.3. Techno economic analysis

6.4. Please mention the area specific context of the problem envisaged to be tackled through the submitted proposal.

6.5. Analyse the gaps in the existing value chain, which will be addressed by the project.

6.6. Please provide suitable rationale for the type of investment expected.

6.7. The benefits to small and marginal farmers from the intervention?

7. Objectives/Key Deliverables

7.1. Please mention the deliverables from the proposal.

7.2. Please mention the key objectives of the proposal in measurable terms

8. Target Group

8.1. Who is the target group? How many households? How many villages/ GPs? How many blocks/ districts? What per cent of small farmer/ marginal farmer/ poor/ EPVG/ SECC deprived HH/ ST/ SC/ OBC families of the target areas are covered in the intervention? What are the roles to be played by these households?

9. Value proposition of the interventions

9.1. What value will the proposal add to the livelihood portfolio of the household?

9.2. Increase in margin in the activity (return to producers' enterprise) as well as overall income enhancement at the household level?

There is a need to quantify the value proposition.

10. Intervention

10.1. Describe the key interventions being proposed – Is it only an aggregation model or does it involve aggregation and primary processing or any other model (*please specify*)?

11. Market Analysis Section

This section is basically a summary of the Marketing Plan. It needs to show the demand for the product to be marketed, the proposed market, trends within the industry, a description of the

pricing plan and packaging. This section should also take up an Industry Analysis. This section evaluates the playing field in which the producers' enterprise will be competing, and includes well-structured answers to key market research questions such as the following:

- What are the sizes of the target market segments? – This section assesses the customer segment(s) that would be served. This section must convey the needs of the target customers. It must then show how the products satisfy these needs. What are the trends for the industry as a whole? What is the geographical area of the market?
- Who are potential buyers and what is their current source of the product?
- How many potential customers are in that area?
- What percent of the market to be catered? How much markets share that will have in the future? How quickly will you reach that percentage?
- Who are the competitors? What are their strengths and weaknesses?
- Is the business seasonal?

12. Marketing Strategy

What will be the strategy to attract and keep the segment of this market (USP)?

- 1.1. customer quality
- 1.2. product quality
- 1.3. price
- 1.4. location
- 1.5. promotion
- 1.6. persuasion—personal selling
- 1.7. satisfaction guarantee/product warranty
- 1.8. distribution
- 1.9. credit (if yes, what is the credit policy and payment terms?)
- 1.10. terms of trade

13. Location of the Physical Infrastructure like common facility centre etc.

- 13.1. What is the location of the Physical Infrastructure and why it is chosen as location?
- 13.2. Will the building be rented, leased, or owned by the producers' enterprise?

14. Licenses/Permits/Registrations

- What licenses or permits are required to be obtained?
- How long does it take to get the needed licenses/permits? What is the cost involved?
- Describe the insurance coverage if required?

15. Training and capacity building

Details of the trainings proposed including topic, frequency and technical agency/ resource persons for -

- Members of the PE
- Board of Directors
- Udyog Mitras / CRPs
- PE staff

16. Producers' Enterprise

16.1. Management Section

- Outline the organizational structure and management team of the producers' enterprise. Include the legal structure of the Producers' Enterprise whether it is a producers' company, a cooperative society or a MACS etc.
- Please elaborate the reasons for choosing a particular legal structure and the pros and cons for the same.
- HR structure of the PE

Phasing strategy and timelines may be mentioned for the way the producers' enterprises are planned to evolve

16.2. Business model and business plan

- How will the raw material/ traded goods flow? What are the interventions for reducing cost of raw materials/ traded goods?
- What are the technology interventions? How it is demystified and transferred?
- How is knowledge transferred? What is the system of community extension mechanism? What are the roles of the community professionals?
- How does the marketing of the produce/ product/service take place? What will be the intervention in this aspect?- *to be detailed in the marketing section*
- If forward linkages are proposed to be developed, what level of business analysis has been made?
- Detailed business plan of the Producers' Enterprise including –
 - a. P&L projections for 5 years
 - b. Break-even analysis
 - c. Commodity-wise P&L and cost analysis
- How the monitoring of the activity takes place? What is the MIS? How MIS feeds into course corrections?

16.3. Fund Flow mechanism

- How does the fund flow happen?
- For what activity the funds are routed?
- To whom?
- How the fund utilization is monitored?

16.4. Implementation arrangement

- Has the SRLM placed a dedicated Spearhead Team for implementation of value chain intervention? Profile of the Team members to be given.
- Will a Technical Support Agency be taken on board? What is the procurement process?
- What is the role of the Technical support agencies?
- Who are the other partners in the entire implementation process? What are their roles and responsibilities?

16.5. Output/ outcome

- Total number of household covered
- Number of Producer enterprises formed? Estimated turnover of the PEs.
- Number of professionals trained and groomed for running the producers' enterprise?
- Economic benefits to the producers? Increased price realisation / income to the farmer
- Profitability of producers' enterprises measured through a pre and post interventions projections for P&L, Balance Sheet, Cash Flows and ROI
- A result framework may be submitted in the format given in Annexure II of MKSP Value Chain Guidelines.

17. Other important aspects

- What is the level of credit¹ aspect in the activity?
- If the working capital/ input cost is subsidized by when the activity can be totally financed from the banks/ Financial Institutions?
- Break even analysis of the producers' organizations?
- What is the cost of intervention per beneficiary household

¹ It is expected that the inputs/ working capital at individual level is met from CIF or bank loans

- What additional cost will be required for scaling-up the program and what will be the per household costing?²

18. Overall Budget requirement

- Support to Producers' Enterprise
- Support to SRLM
- Technical Support agency

19. Risk Analysis

Comprehensive analysis of the risks such as product risk, market risk, commodity risk, price risk, business risk and the respective risk mitigation strategy to be proposed.

20. Convergence

What are the different convergence needs of the households (related to the proposed activity in this particular proposal) in terms of assets/ infrastructure (both individual and common); services (department of agriculture/ fisheries/ AHD/ SME, etc); Please elaborate how the following convergence will be made possible and whether there will be a proposal to use the special convergence fund window.

² The initial cost per household may be higher which will reduce as the number of household goes up



एक कदम स्वच्छता की ओर



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December 13, 2017

DO No. K-11062/04/2017/NRLM(Livelihoods)

Sir/Madam,

Under DAY-NRLM, initiatives have been undertaken towards building value chain development interventions with focus on sustainable agriculture, livestock and NTFP to enable small and marginal farmers to gain better price realisation, access to markets, improved technologies for value addition and technical support.

Through various DAY-NRLM interventions such as Mahila Kisan Sashktikaran Pariyojana (MKSP), MKSP Annual Action Plan, SRLM Annual Action Plan and World Bank Dedicated Fund, more than 86 thousand producers' groups (PGs) have been promoted. The PGs are small sized, unregistered entities with little scope for significant business transactions and a few of them are engaged in localized marketing activities catering to the local demand and supply situations. Notwithstanding the definite advantages this model has, being small and disaggregated, the PGs cannot legally and functionally engage effectively in large scale economic activities. Therefore, under DAY-NRLM, there is a need to promote member owned and member governed Producers' Enterprises (PEs) of significant size at which economies of scale would confer advantages of bargaining power.

To facilitate the SRLMs in the promotion of Producers' Enterprises based on backward and forward integrated value chains harnessing capital, organized production, processing and marketing for significant economic impact on the livelihoods, it is necessary to have a standardised and structured approach.


In this context, the **Guidelines for promoting Producers' Enterprises under DAY-NRLM** (enclosed), have been developed through a series of consultations with States, experts and other stakeholders. A model Memorandum of Association and Articles of Association for a Producer Company (under Companies Act, Part IX A), is also part of the guidelines to ensure good governance principles and equity.

The Guidelines are intended to serve as a framework for SRLMs for the promotion of sustainable, member owned and member governed Producers' Enterprises (PEs).

With regards

enc: a/a

To,
The SMDs/CEOs of all SRLMs States/UTs

Yours Sincerely,

(Atal Dulloo)



Guidelines for promotion of Producers' Enterprises Under DAY-NRLM

**Deendayal Antyodaya Yojana-National Rural Livelihoods Mission
(DAY-NRLM)**

Table of Contents

1	PRODUCERS' ENTERPRISES	4
1.1	CONTEXT	4
1.2	PRODUCERS' GROUPS UNDER DAY-NRLM	5
1.3	RATIONALE FOR IMPLEMENTATION OF VALUE CHAIN DEVELOPMENT THROUGH PRODUCER ENTERPRISES	6
1.4	TYPES OF PRODUCERS' ENTERPRISES UNDER DAY-NRLM	7
2	ROLE OF IMPLEMENTING AGENCY (SRLM)	9
2.1	SPEARHEAD TEAM (SHT)	9
2.2	TRAINING AND CAPACITY BUILDING OF SHT	11
2.3	EXIT STRATEGY	11
3	IDENTIFICATION OF AREA OF INTERVENTION	12
3.1	ASSESSMENT OF POTENTIAL FOR PEs	12
3.1.1	SCOPE OF INTERVENTION BASED ON VALUE CHAIN GAP ANALYSIS AND CENTRALITY	12
3.1.2	SENSITIVITY ANALYSIS	14
4	FORMATION OF PRODUCERS' ENTERPRISES	15
4.1	SCOPE AND OBJECTIVES OF THE PE	15
4.2	REGISTRATION OF THE PE	15
4.2.1	PRINCIPLES OF CO-OPERATION	15
4.2.2	TYPES OF REGISTRATION	16
4.3	IDENTIFICATION OF BUSINESS MODEL	17
4.4	MEMBERSHIP	19
5	BUSINESS MODEL OF PRODUCERS' ENTERPRISES	21
5.1	FEASIBILITY STUDY	21
5.2	TRADING AND/OR VALUE ADDITION	21
5.3	BUSINESS DEVELOPMENT SERVICES (BDS)	22
5.4	BUSINESS STRATEGY AND PLAN	22
5.4.1	DEFINING OPERATIONAL AREA	22
5.4.2	FINANCING	22
5.4.3	STRATEGIC BUSINESS UNITS	22
5.4.4	MARGIN AND REVENUE MODEL	23
5.4.5	CAPITAL MOBILIZATION STRATEGY	23
5.4.6	BUILDING RESERVES (ABSORBING MARKET SHOCKS, BUSINESS GROWTH)	23
5.4.7	MARKETING STRATEGY	23
5.5	PROFIT DISTRIBUTION	24
6	OPERATIONS OF THE PRODUCERS' ENTERPRISES	26
6.1	PROCUREMENT STRATEGY	26
6.2	UDYOG MITRA	27

6.3	PRICING AND PAYMENT TO MEMBERS	27
6.4	IT SYSTEMS	28
7	<u>BUSINESS RISK OF PRODUCERS' ENTERPRISES</u>	29
7.1	RISK ASSESSMENT	29
7.2	RISK MITIGATION	29
8	<u>BUSINESS PRINCIPLES OF PRODUCERS' ENTERPRISES</u>	30
8.1	CENTRALITY	30
8.2	FAIR BUSINESS PRINCIPLES	30
8.3	STANDARD OPERATING PROCEDURES	30
9	<u>HR STRUCTURE OF PRODUCERS' ENTERPRISES</u>	31
9.1	ORGANIZATION STRUCTURE	31
9.2	PERFORMANCE BASED REMUNERATION STRUCTURE	31
10	<u>GOVERNANCE OF PRODUCERS' ENTERPRISES</u>	32
11	<u>TRAINING AND CAPACITY BUILDING FOR PRODUCERS' ENTERPRISE</u>	33
11.1	PRODUCER ENTERPRISE STAFF	33
11.2	BOARD OF DIRECTORS OF THE PRODUCERS' ENTERPRISE	33
11.3	TRAINING TO MEMBERS	33
12	<u>SEQUENCE OF ACTIVITIES (PRE-OPERATIVE STAGE) FOR PRODUCER'S ENTERPRISE</u>	35
12.1	DETAILED CHECKLIST OF ACTIVITIES	36
	<u>ANNEXURE I: MODEL MEMORANDUM OF ASSOCIATION & ARTICLES OF ASSOCIATION FOR A PRODUCER COMPANY INCORPORATED UNDER COMPANIES ACT 1956, PART IX A</u>	41
	<u>ANNEXURE II – CASE STUDIES REFERENCE IN THE DOCUMENT</u>	60

List of Abbreviations

AoA	Articles of Association
BoD	Board of Directors
CBO	Community based organization
CEO	Chief Executive Officer
CLF	Cluster Level Federation
FPO	Farmer Producers' Organization
GST	Goods and Service Tax
MACS	Mutually Aided Co-operative Societies
MKSP	Mahila Kissan Sashaktikaran Pariyojana
MoA	Memorandum of Association
NABARD	National Bank for Agriculture and Rural Development
NGO	Non-government organization
NRLM	National Rural Livelihoods Mission
PACS	Primary Agricultural Cooperative Societies
PC	Producers' Company
PE	Producers' Enterprises
PG	Producers' Group
SHG	Self Help Group
SHT	Spearhead Team
SRLM	State Rural Livelihoods Mission
SFAC	Small Farmers Agri-Business Consortium
VO	Village Organization

1 Producers' Enterprises

1.1 Context

As per agriculture census 2010-11 there are 138.35 million operational holding in India and 12.78% of that are female operational holders, an increase from 11.7% in 2005-2006. The operated area is 159.59 million Ha and 10.34% are held by female holders, an increase from 9.33 % in 2005-06. This indicates a rise of 10% in the number of women directly involved in agriculture and a large percentage of agriculture workers are also women. The 2010-11 census also indicates that small and marginal holdings together constituted 85.01 percent against 83.29 percent in 2005-06. And 44.58 % of the operated area is under this holding against 41.14 % in 2005-06. It may be observed that there is an increase in the number of small and marginal holdings.

DAY-NRLM works with small and marginal women farmers and aims to bring strong focus to address the issues of the small and marginal producers such as productivity enhancement, extension service delivery and value chain development for improved market access. The fragmented production system has several challenges. It has been well documented that small and marginal producers have very small marketable surplus; so the cost of marketing is high due to un-favourable economies of scale. Besides, there is high asymmetry in market knowledge and information.

Organization of small and marginal producers into member owned and member controlled **Farmer Producer Organizations (FPOs)** or Producers' Enterprise (PE) has emerged as one of the most effective mechanism to address challenges faced by small and marginal farmers such as access to markets, access to credit and access to technology and inputs and markets.

Producers' Enterprises (PEs) can be defined as registered, formal organizations of farmers including co-operatives and Farmer Producer' Companies. The primary objective of these organizations is to ensure better economic return to the farmer producers by helping them to take up business activities. These enterprises operate as commercial organizations and being economically viable is of paramount importance for these organizations.

This document is intended to serve as the guiding principles for development of Producers' Enterprises under DAY-NRLM. This guideline would serve as a framework for market linked interventions with small and marginal farmers and would also help:

1. To understand the main purpose and benefits of promoting PEs under DAY NRLM;
2. To develop a strategy to be adopted by the implementing agencies for promoting sustainable producers' enterprises; and
3. To provide comprehensive guidance to the implementing agencies to promote PEs that are sustainable member owned and member controlled organizations.

1.2 Producers' Groups under DAY-NRLM

DAY-NRLM has been working with the poor and vulnerable women and organizing them into Self Help Groups (SHG) to improve their livelihoods and enhance their income. A large percentage of SHG members are dependent on agriculture including livestock and NTFP for their livelihoods. Self Help Groups (SHGs) are formed at the village level, which are then federated into Village Organizations (VOs) and further into Cluster Level Federations (CLF). Under various farm livelihoods interventions initiated under DAY-NRLM such as Mahila Kisan Sashktikaran Pariyojana (MKSP) and the Livelihoods annual action plan of the States, small and marginal women farmers are organized into institutions to enable them to access timely technical support at their doorstep. At the village level or cluster level, Producers' Groups (PGs) have been formed with women farmers involved in similar kind of activities like agriculture, livestock or NTFP. Some of the features of PGs are:

1. PGs are predominantly **un-registered** entities and usually organized as a Common Interest Group.
2. In many cases, PGs have been provided working capital support and infrastructure support by the SRLM through the VO or CLF
3. SRLMs have supported the PGs in formation of business plans
4. More than **75%** of the Producers' Groups are multi-commodity PGs
5. Average Size of PG: **35 SHG members** (*except for Kerala – 5 SHG members per PG*)

The PGs are small sized, unregistered entities with little scope for significant business transactions and a few of them engaged in localized marketing activities catering to the local demand and supply situations. Their business model is primarily based on economies of aggregation and thus aimed at reduction in individual transaction costs involved. Their target markets are also local and usually fall within a short radius. Notwithstanding the definite advantages this model has, being small and disaggregated, the PGs cannot legally and functionally engage effectively in large scale economic activities. Therefore, under DAY-NRLM, there is a need to promote member owned and member governed Producers' Enterprises of significant size at which economies of scale confer advantages of bargaining power.

The presence of social capital developed, Community Resource Persons and Community institutions are prime movers for economic prosperity and social development of any cluster. Hence, it is envisaged under DAY-NRLM to develop value chain interventions in geographies where SHGs, social capital and Producers' Groups are in abundance.

The value chain development strategy under DAY-NRLM would now focus on the promotion of market linked Producers' Enterprises which have a robust business model for better price realisation of small and marginal farmers; this would go a long way to make these organizations sustainable.

1.3 Rationale for implementation of value chain development through Producer Enterprises

The global economic trend of value chains has been moving towards consolidation of primary production, value addition through marketing and branding. Economy of scale would be a critical success factors to be competitive in the today's market. There is evidence that PEs can take the small and marginal farmers and producers higher up in the value chain and help them in getting remunerative prices for their produce. Therefore, DAY-NRLM would endeavor to promote large size women Producers' Enterprises in the farm sector like agriculture, dairy, NTFP and also in the non-farm sector like handloom, handicrafts and other non-farm rural produce.

To understand the impact of large scale Producers' Companies, we may look at the example of Aranyak Agri Producer Company Limited, a women Producers' Company in Purnea district promoted by Bihar Rural Livelihoods Promotion Society (BRLPS).¹

The districts of Purnea and Katihar in the north east of Bihar are major producers of rabi maize crop but they are at the mercy of market intermediaries like village traders and commission agents when it comes to marketing their produce. Keen on taking the focus of Self Help Groups (SHGs) beyond member savings and internal loaning with bank linkages, the Bihar Rural Livelihoods Promotion Society (BRLPS) or JEEVIKA decided to form Producer Groups (PGs) in these districts. To demonstrate the increased returns to farmers through produce aggregation and collective marketing, an intervention was started in Purnea district through the registered Producer Company "Aranyak Agri Producer Company Limited" (AAPCL).

The formation of AAPCL has impacted the entire maize value chain in the area of operation by way of reduced cost of cultivation, dilution of lock-in of the farm output to local trader who traditionally supplied farm inputs on credit; and a better price realization which was 20% higher than what had been realized in previous years from sales to local traders and mandi sales. The benefits to the members have led to an increase in the maize procurement by the AAPCL from 10.06 MT in the first year of its operation (2014-15) to 13902 MT in the year 2017-18 and both the number of members and the scale of procurement by the AAPCL are expected to grow in the coming years with improved livelihood support to the farmers participating in the project. More than 3400 farmers are doing business with AAPCL and the turnover has reached Rs 19 crore in 2017-18.

The intervention demonstrates how a producers' company promoted at scale can increase bargaining power, bring about better price realisation and take small and marginal farmers up the value chain. The best practices from AAPCL and other Producers' Companies have been used as the basis to develop the guidelines in the chapters.

¹ Source: Business Models for Livelihoods Promotion – compendium by DAY-NRLM. The full text of the case study is given in Annexure II.

The formation of PEs would benefit the small and marginal women farmers through -

1. **Economies of scale and increased bargaining power:** PEs bring together the business activities of many individual small-scale producers and thereby increase the overall scale which would lower business costs and enable high volume, improved quality, and consistency in supply. PEs can increase small-scale producers' bargaining power by achieving large volume and therefore negotiate better prices.
2. **Improved market reach-** Most small-scale producers are unable to get a good price for their produce because they are unable to access markets where prices are higher. PEs can enable them to access remunerative markets by achieving the scale necessary to deal with buyers in these markets, or by value addition to the commodities to access higher value markets.
3. **Access to finance** – financing is a key challenge for small and marginal farmers, PEs can access institutional finance.
4. **Risk mitigation** – with the increased bargaining power and access to better markets, PEs can help small and marginal farmers mitigate market risks by offering competitive price for the commodities.
5. **Improved access to extension services** – PEs provide production related technical and technological services including input services, conduct training and capacity building activities.
6. **Increased policy influence** - Large PEs can provide the platform for producers to promote their interests and influence policies in the local, national, and even international environment that affect their business and livelihood.
7. **Professional management** – PEs are professionally managed entities, hence the management has the technical and managerial expertise which would help the management of the PEs in ensuring better returns.

Therefore, all large scale value chain interventions under DAY-NRLM would be implemented through the promotion of Producers' Enterprises.

1.4 Types of Producers' Enterprises under DAY-NRLM

1. **Brownfield PEs** – Many SRLMs and MKSP partners have been promoting PGs under different agriculture, livestock and NTFP interventions. Each member of the PGs, which are in contiguous villages and involved in similar business purpose, should be organized into various PEs to be promoted based on geography and commodity.

The PGs should remain as activity groups and would not participate in economic activities. The PGs would now engage in extension activities related to productivity enhancement such as Farmer Field schools, crop advisories and agro-advisories.

Many of the PGs are engaged in providing support to the producers in marketing of their producer in the neighbouring markets as a standalone support service. These PGs may continue to function if federating the members of these PGs into PEs is not feasible.

2. **Greenfield PEs** – PEs set up in areas where value chain interventions have not been implemented before through PGs or institutional mechanism would be referred to as

Greenfield PEs. The implementing agency has to carry out adequate due diligence before promoting PEs in Greenfield areas.

2 Role of implementing agency (SRLM)

The State Rural Livelihoods Mission (SRLM) is the implementing agency of the value chain interventions. As the implementing agency, the SRLM ensure its preparedness for establishing a successful and sustainable Producers' Enterprise. The approval of the proposals on value chain development under NRLM would be subject to the preparedness of the SRLM and the most important preparedness criteria is positioning of a spearhead team (dedicated for PE promotion) by the SRLM.

2.1 Spearhead Team (SHT)

The promotion of PEs requires specialized techno-managerial skill sets which need to be built in the SRLMs to enable scaling up of value chain interventions and regular monitoring. The SRLM should put together a multi-functional team to spearhead the PE initiatives and provide lifecycle guidance. This team would be dedicated for the promotion of PEs in the State. The Spearhead team would consist of Commodity experts, finance, costing & accounts expert, production & operations expert, market expert, Capacity building and institution building expert. The members of SHTs would have relevant experience in handling businesses with top line and bottom line responsibilities in commercial organizations. The role of the SHT would be –

1. Identification of commodities, preparation of business plan and proposal
2. Assist in pre-incorporation activities of the PE
3. Positioning the dedicated PE staff (core staff)
4. Assistance to the PE in operations for at least 2 cycles and ensuring compliance
5. SHT and NMMU would be responsible for business counselling, regular review of performance and progress and provide regular feedback for performance improvement and achieving results. The key areas to be monitored and assessed are:
 - a. Regular capacity building based on whether the management has adequate capacity to run the business
 - b. Whether the BOD is taking greater responsibility
 - c. Relationship between BOD, members and the management for ensuring synergy
 - d. Whether the SOPs are being followed
6. To build a larger level eco-system to facilitate trade / market linkage
7. Facilitate convergence for leveraging resources

However, the SRLM may also take on board technical support agencies (TSA)/ individual consultants with expertise on specific commodities or interventions to further support the SHT. TSA is not a replacement for the Spear Head Team, but a support to the SHT.

Case study: In the dairy sector, NDDDB Dairy Services has been involved in promoting Milk Producers' Companies. To understand the role of the implementing agency we may take a look

at *Shreeja Mahila Milk Producers Company Ltd., Andhra Pradesh*² in defining the business model and governance of the Producers' Company.

Dairy sector intervention is a sustainable source of livelihood opportunities for women SHGs, both individually as well as collectively. It offers a promising potential for expansion along the entire value chain, from pooling and cooling of milk to high-value processing. More than 56,640 women milk producers/SHG members of Shreeja Mahila Milk Producers Company Ltd. (SMMPL) have demonstrated considerable acumen in handling milk-related operations like milk collection, testing, storage and transportation, and also have displayed a flair for managing assets such as bulk milk cooling units. With the help of stronger backward and forward linkages and support of technical support unit (NDDDB) in terms of technology intervention, the scope to enhance both the scale as well as the scope of women involvement, have helped two folds – (i) improve livelihood opportunities for the SHGs, while releasing the personal time and organizational resources of higher-level institutions (ii) enabled these institutions to concentrate on more productive and value-adding products and services. The business model of SMMPL, cogently illustrate the role of women in enhancing the value-chain efficiency of the dairy sector while improving their livelihoods.

Chittoor District Milk Producer Union Ltd. commonly known as “Chittoor Dairy” was started in 1969 with 6000 litres per day which eventually went up to 2.5 lakh litres per day in 1989-90. Due to slump in prices of the milk powder, the dairy unit could not pay the milk producers and eventually was shut down in 2002. The producers started pouring milk with private dairies, getting less price. The farmers demanded better price and approached DRDA and the District Collector. Services of NDDDB was sought, SMMPL was born as a part of National Dairy Plan Phase 1, supported by NDDDB Dairy Services (NDS).

DRDA came forward to establish 116 bulk milk chilling units (BMCUs), each with a capacity of 3000-5000 litres, by end of March 2016 to support women SHGs. The BMCUs were managed by the Mandal Mahila Samakhya to enable timely chilling at the production clusters at 4 degrees centigrade, to prevent spoilage of milk. The BMCUs procured milk from 2220 village level milk pooling points (MPP) strategically connected with 186 milk routes, which are managed by a member of the SHG “*Palamitra*”. These functionaries are trained to operate the fully automatic weighing and quality testing equipment for determining fat and SNF content in the milk, based on which price was paid to the milk producers is decided.

The structure/governance:

- a. Producer Member: a women who wishes to become a member should possess milch cattle producing milk and make a payment of Rs.50 towards admission fee and Rs.1 per litre towards share capital. She must supply minimum 500 litres of milk for at least 200 days in a year and acquire minimum of 5 shares of each Rs.100 face value. Based on patronage, producer members are categorized into 3 classes, which translates into member's representational privileges in the composition of Board of Directors.
- b. Village Contact Group (VCG): VCGs are formed - with 3 to 7 producer members - at the village level to strengthen relationships and the flow of information between the company and its members, and further encourage and enroll new members.
- c. Member Relation Group (MRG): MRGs are apex bodies, formed with members of VCGs covering 10 to 12 MPPs, with a membership tenure of 1 year.

² Source: Business Models for Livelihoods Promotion – compendium by DAY-NRLM. The full text of the case study is given in Annexure II.

- d. Board of Directors (BOD): The Company is governed by a board consisting of persons elected or appointed as Directors with at least five and not more than 15 Directors.
- e. Shreeja MMPCL staff: Shreeja employs 266 managerial, technical and field support staff deployed at various levels to supervise, coordinate and manage its activities.

The sector expertise of the Team at NDDB Dairy Services enabled the PE to reach the scale of operations, turnover while also ensuring governance and representation of all farmers. More than 80% of the shareholders are small and marginal women farmers.

2.2 Training and Capacity building of SHT

Before promotion of PE, the SRLM should ensure that the Spearhead Team is in place. The SRLM should organize regular trainings for the SHT on the following –

1. Business planning - process of analyzing the business and its markets, developing individual understanding of and gaining broad agreement on a viable business strategy, and setting clear targets and objectives.
2. Analyzing business costs (fixed and variable, sunk cost)
3. Cash flow management, Working capital management
4. Operational management
5. Producer Enterprises, governance, membership and types of legal frameworks
6. Business counselling and performance monitoring

2.3 Exit strategy

To enable PEs to become independent organizations and financially sustainable businesses, the implementing agency needs to plan all their support work with a clear exit strategy that is agreed and understood by both parties. Therefore, from the very beginning the SHT of SRLMs would focus more on strengthening the capacity of the PE staff rather than running the PE business themselves.

3 Identification of area of intervention

Responsibility – Spearhead Team (to be set up by the SRLMs to kick start value chain interventions and promotion of PEs from the proposal development stage).

Rationale - Prior to promotion of any PE, the implementing agency (SRLM) must establish the geographic area, basket of commodities and the economic activities that can be taken up by the PE. The Spearhead Team (SHT) is responsible for conducting a thorough analysis of the external environment, building commodity profiles and also undertaking value chain analysis of all the commodities identified, formulate intervention strategies and develop business models.

This section details the activities to be undertaken to assess the potential and also suggests some tools for assisting with the analysis.

3.1 Assessment of potential for PEs

The key factors to be considered while assessing the potential for establishing PEs –

1. **Geography focused** - The assessment should be geography and stakeholder centric and *not commodity centric*. The area should be contiguous and the target group would be small and marginal women farmers.
2. **Cluster approach** – the focus should be on a cluster approach i.e. in areas where there are existing clusters of one or more commodities.
3. **Participatory value chain development methodology** – the approach to commodity shortlisting and identification of intervention should focus not only on data, rather it should focus on deriving the information from discussion with the community including SHG and federation members and identifying the critical value chain gaps.
4. **Market led approach** – An assessment of the markets and demand, both local and distant, should be undertaken for the shortlisting of commodities.

3.1.1 Scope of intervention based on value chain gap analysis and centrality

1. **Selection of geography** – The implementing agency should identify the geography based on the extent to which community mobilization into SHG's has taken place. It is preferred to take up the interventions in intensive blocks where the mobilization of the poor is nearly saturated.
2. **List of potential commodities** – The SHT must conduct secondary analysis to prepare a list of the commodities or economic activities (agriculture, NTFP, dairying etc.) that are cultivated/ collected or available in the selected area.
3. **Shortlisting 4-5 major commodities for intervention** – The list of commodities may be narrowed down through FGDs with the community, study of the local markets and mandi, and carrying out a SWOT analysis of the commodities. The SWOT analysis may have to be validated with another round of FGDs with the community and also to address any information gaps.

4. **Commodity profile (production to end market)** – The commodity profile would address the production system, seasonality, cyclicity, stakeholder, market dynamics, price volatility and value addition opportunities for commodity. The commodity profile would also give an understanding of the value proposition to the producers’ individually and collectively. A thorough value chain analysis would be critical tool in this activity. The value chain analysis must cover the production process to the end market with detailed information on value added and cost incurred at each stage. A clear understanding of the flow of the commodity from farm gate to various markets should emerge from the analysis. All the relevant transaction costs should be documented properly. The commodity profile would also provide an understanding of the gaps that can be addressed in the commodity value chains.
5. **Portfolio of commodities** – Ideally every PE should have a portfolio of commodities for ensuring year-round operation with the exception of Dairy which is a round the year activity. . Each of the commodities in the commodity portfolio must be a profit center for the PE. The need for a portfolio of commodities is four-fold:
 - a. **Optimization of overheads (economies of scale and scope)** – higher contribution and optimized utilization of capacity.
 - b. **Optimization of working capital** – rotation of working capital would ensure that the working capital is not idle
 - c. **Risk mitigation** – the risk is spread over a basket of commodities
 - d. **Ensuring member loyalty and member centricity-** PE should endeavour to support its members in marketing different commodities produced by them if found economically viable.

The steps are summarized in the following table:

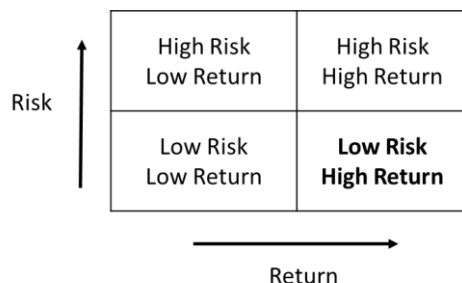
Process		Data and Tools
Step 1	Shortlist Geography / area of intervention	1. Presence of NRLM SHGs 2. Level of SHG mobilization 3. Areas where productivity enhancement activities have already been taken up under NRLM
Step 2	List of potential commodities	1. Secondary data analysis 2. Commodities cultivated/ collected by small and marginal farmers 3. Number of producers involved
Step 3	Shortlisting 4-5 major commodities for intervention	1. FGD with the community 2. FGD at local market / mandi 3. SWOT analysis of the commodities 4. 3E Model – To assess the external environment of the commodity 5. End-use market analysis and value chain study

Step 4	Validation of the commodities selected	1. FGD with the community to validate the shortlisted commodities and fill any information gaps.
Step 5	Commodity profile (production to end market)	1. Scale - Number of small and marginal HHs covered, Marketable surplus 2. Production system (pre-harvest, harvest, post-harvest) 3. Uniqueness of the commodity (seasonal advantage, active ingredient) 4. Market dynamics – Existing and potential markets, Legal barriers, Demand supply dynamics, price volatility <i>Analysis may be conducted with the help of Technical agency / competent manpower at SRLM level</i>
Step 6	Creation of portfolio of commodities and the commodity-wise interventions	1. Seasonality/ cyclicity 2. Member affinity / ease of building transactional intensity 3. Gaps in the existing value chain 4. Defining the business models 5. Business viability / profitability for each commodity intervention <i>Each commodity must have the potential to be a profit center</i>
Step 7	Validation of the commodity portfolio	1. FGD with the community to validate the interventions and fill any information gaps.

3.1.2 Sensitivity Analysis

A detailed analysis of the change in the profitability of the entire portfolio of commodities should be measured for price volatility and demand/sales volume of commodities. This would give the SHT an insight into the riskiness of the commodity portfolio selected. A suitable model such as What If analysis may be undertaken to build different scenarios for the PE.

Based on the risk and the estimated returns for each commodity, the commodity would fall into any one of the four quadrants given below. It is recommended to consider commodities with moderate / low risk and suitable risk mitigation mechanisms must be put in place.



4 Formation of Producers' Enterprises

Responsibility – Spearhead Team

Objective - The objective of this step is to define the value proposition for the commodities and the business model of the PE, identify the appropriate legal framework, draw a feasible business plan and formulate the membership criteria for the PE.

4.1 Scope and Objectives of the PE

To define the scope and objective of the PE, the value proposition to the members must be defined. A value proposition is defined as an innovation, service, or feature intended to make an enterprise or product attractive to its members and customers, in this case we focus on the value proposition of the PE to its members.

The value proposition to the farmers can be all or several of the following –

1. Better price realisation to farmers
2. Greater share of the consumer rupee to the producers
3. **Timely payment** to the Producers
4. Safeguarding the interests of farmers by providing **round the year access to organised market**
5. Eliminating trader/ middlemen and **providing direct access to market**
6. **Capacity building** of stakeholders through education, training and other extension activities
7. Input and **extension services**

The value proposition of the PE is critical to build member affinity and loyalty towards the PE. High level of member affinity would ensure that the PE can capture the majority of the marketable surplus of its members and would give it an advantage over its competitors and other market players.

4.2 Registration of the PE

Registration of the PE should be under suitable legal framework which follows the principles of co-operation and the legal framework may be adopted by understanding the pros and cons of the available frameworks.

4.2.1 Principles of co-operation

The principles of co-operation are -

1. **'Self-Help'** is based on the belief that all people can and should strive to control their own destiny. PE members believe that full individual development can take place only in association with others. Individuals also develop through cooperative action by the skills they learn in facilitating the growth of their PE. PEs are institutions that foster continuing education and development of all those involved with them;
2. **'Self-Responsibility'** means that members assume responsibility for their PE – for its establishment and its continuing vitality. Members have the responsibility of promoting

- their PE among their families, friends and acquaintances. Members also ensure that their PE remains independent.
3. Producer Enterprises are based on **'equality'**. Members, whether an individual or a group, are all equal. It does not depend on the social and economic status of the member.
 4. Achieving **'equity'** within a PE is a continuing, never-ending challenge. It also refers to how members are treated within a PE. They should be treated equitably in how they are rewarded for their participation in a PE, normally through patronage dividends, allocation to capital reserves in their names, or reduction in charges.
 5. **'Solidarity'** ensures that cooperative action is not just a disguised form of limited self-interest. All members including the employees and non-members who are closely associated with the cooperative should be treated fairly.

4.2.2 Types of Registration

The PEs may be registered under the Co-operative societies Act, Mutually aided co-operative societies Act or the Producers' Company Act. The SHT may decide on the type of registration on the basis of external environment, policy implications, short-term and long term advantages and interest of the women members. However, it is preferred that the type of registration where the interests of the members are safeguarded should be chosen.

The legal and administrative implications of the different types of registered entities are provided in the table below.

Legal and Administrative Implications different types of institutions³

Criteria	Legal Form					
	Society	Public Trust	Cooperative	Producer Company	Sec 25 Company	Private Company
Basic orientation	Welfare	Mutual benefit	Patronage/ welfare	Patronage/ commercial	Welfare	Commercial
Accountability towards	Promoters	Members	Members	Members	Promoters	Shareholders
Registration under	Societies Registration Act, 1860	Indian Trusts Act, 1882	Cooperatives Act, under different states	Section 581 Companies Act, 1956	Section 25, Companies Act, 1956	Companies Act, 1956
Registration Authority	Registrar of Societies	Charity Commissioner	Registrar of Cooperatives	Registrar of Companies	Registrar of Companies	Registrar of Companies
Minimum number of promoters	At least seven members for registration	At least two trustees for registration	At least five directors for registration	At least five directors for registration	At least two directors for registration	At least two directors

³ Source: Livelihood Augmentation in Rainfed Areas: Volume II, Entrepreneurial Strategies for Augmenting Rural Livelihoods, Development Support Centre, Ahmedabad

Governance Structure	Governance council	Board of Trustees	Executive Committee	Board of Directors	Board of Directors	Board of Directors
Producer control	Difficult	Difficult	Mandatory	Mandatory	Difficult	Open
Surplus disposal to members	Not possible	Possible	Mandatory	Mandatory	Not possible	Possible
Tax Benefits	++++	+++	++	++	++++	+
Equity participation. by members	Not possible	Possible	Mandatory	Mandatory	Possible	Expected
Equity participation - External	Not possible	Possible	Not possible	Not possible	Difficult	Easy
Commercial loans	Difficult	Difficult	Possible	Possible	Possible	Easy
Dissolution	On approval by 3/5th majority of members;	charity commissioner may revive/ reorient the trust	Liquidation possible as per procedure of cooperative law	Possible as per procedure of company law	Dissolution possible	Possible as per procedure of company law

4.3 Identification of Business model

A business model can be defined as a plan for the successful operation of a business consisting of identification of sources of revenue, the intended customer base, products, choice of processing technology and details of financing. The business model identified must take into account the following parameters –

1. Member centricity
 - 1.1. Percentage of poor involved in the activity
 - 1.2. Proportion of household income from the commodity
 - 1.3. Addition to current income levels
2. Year round operations
 - 2.1. Single commodity
 - 2.2. Multi commodity
3. Understanding markets specificities
 - 3.1. Existing stakeholders
 - 3.2. Extant factors – existing client patron relationship, indebtedness
4. Legal Implications
 - 4.1. Taxation (GST, others)

Case study: The inclusive poultry value chain model in the tribal block of Kesla⁴ has been highly successful and we may derive the learnings from this case study on how to build fair business principles into the business model so that there is equity among all members.

PRADAN (an NGO and NSO partner of DAY-NRLM) had initiated inclusive poultry value chain in 1992 to enhance income for small holder broiler farming, from backyard poultry in a tribal block Kesla, in Hoshangabad district of Madhya Pradesh. As per the Annual Report of 2015-16, the intervention reached to more than 6000 women broiler farmers, organized into more than 10 cooperatives, and one producer's company, with a collective revenue of more than INR 42.5 crores.

The small-holder broiler value chain attempts to adapt complex production technology to the small farmer's context and, at the same time, achieve economies of scale through the collective procurement of inputs and marketing of produce. The essential elements of the model are:

- a. Decentralized production infrastructure with 300-400 birds in the homestead backyard, which fits into the daily life of the tribal woman.
- b. Production efficiency with rigorous training of producers, intensive production support and on-call referral veterinary services of high quality.
- c. Cost effectiveness with collective procurement of inputs and sale of birds to achieve economies of scale, and backward-forward integration.
- d. Creation of a system to address the volatile nature of the market by de-linking production efficiency from enterprise efficiency, and collectivization of operations when dealing with markets.
- e. Customized financial and MIS software for decentralized operations.
- f. Charges of para-vets linked to production parameters.

The model comprises decentralized rearing of birds by primary producers (all women producers) at the village level, who are supported by their collective institution (cooperative/producers' company) for a variety of services. These services are delivered either directly (veterinary) or through service providers (input supply and knowledge services) trained by PRADAN. The collective institution/cooperative/producers' company, is manned by trained professionals and governed by people's representatives. The institution monitors the performance of primary producers through its service providers.

The producers organize themselves into clusters and select a representative for the Board of Directors. The Board of Directors meets once a month, in which all important issues such as input and output prices, performance of different clusters, new appointments, remuneration and performance of staff are discussed, and decisions are taken. The CEO who is responsible for day-to-day management and operational decisions, reports on the business performance of the cooperative in the monthly Board Meeting.

⁴ Source: Livelihood Augmentation in Rainfed Areas: Volume II, Entrepreneurial Strategies for Augmenting Rural Livelihoods, Development Support Centre, Ahmedabad. The full text of the case study is given in Annexure II.

The CEO is supported by community based supervisors for the provision of farm services and production management. The supervisors are paid according to their output. The Annual General Meeting (AGM) is convened to discuss issues such as distribution of surplus etc. the audited report is circulated in advance and is approved in the AGM.

The small holder cooperative value chain remained competitive in the market for the following reasons:

- a. The input supplies such as poultry feed, day-old chicks and veterinary services, are provided at the producers doorstep. The unit size is designed to allow the family to deploy its surplus labour optimally.
- b. This system builds on low or no cost slack labour available in rural households which is about 60% higher margin than the industrial poultry manufacturers.
- c. The aggregation of produce is done by cooperative. The increased cost of collectivization, and providing veterinary and management support to farmers is offset by the market outreach directly to retailers, thus doing away with distributors.

The proportion of a farmer's margin with respect to the total margin in the chain at the production end is about 44%. The annual income in the case of home-based broiler farming is about Rs.13,000–18,000. The farmer-centric character of the value chain is the key to its success because at the lower unit size. The production cycle is 5-6 per year. The feed conversion ratio (kg of feed/kg body weight of bird) is 1.65. Achieve less than 5% mortality rate due to door step services by para vets/CRPs. The average flock weight is 1.5 kg, increasing overall efficiency index to 246. The small-holder value chain introduced in Kesla increased the margin farmers receive by eliminating intermediate actors.

The farmer centric nature of the business model has been a key factor for the success of the Kesla Co-operative. Such fair business principles must be adopted in all the PEs to ensure that the small holders are brought higher up in the value chain.

4.4 Membership

The membership rules would depend on the commodities, value of the commodities and relative contribution of the members involved in the various commodities. The SHT may work with PE leaders and community members to make the constitution a document that is understood and owned by members and enables them to exercise their rights and responsibilities within the organization. The following non-negotiables have to be defined as part of the membership rules of the PE -

1. **Individual membership** - Women farmers would be direct members of the PE. A member information card, with profile details and transaction details would be maintained by the PE.
2. **Business only with members** - Non-member procurement would not be encouraged. The women farmers should be made members of the PE before starting transaction with the PE. An intermediate stage – Nominal membership – may be created with suitable terms and conditions to allow non-members to transact with the PE. However, all

- nominal members should be made full members of the PE to continue the transactions at the earliest.
3. **Active members** – Suitable terms and conditions for patronage may be defined based on the supply of certain quantity and agreed quality of commodity such that the member contributes regularly to the PE.
 4. **Member equity in proportion to patronage** – The patronage based member classes and commodity wise calculation of equity should be maintained.
 5. Appropriate accounting methods to ensure that costs, profit and loss is calculated for each commodity handled in the portfolio of commodities handled by the PE.
 6. Appropriate accounting methods especially for multi-commodity PEs to ensure fair sharing of commodity-wise patronage bonus, as all members may not contribute all commodities in the same proportion and commodity-wise profits and costs may vary from time to time.
 7. Mechanism for transparent and fair sharing of commodity-wise loss should be established.
 8. Appropriate mechanisms for member communication and grievance redressal.

5 Business model of Producers' Enterprises

Responsibility – Spearhead Team and PE

Objective - The objective of this step is to define complete business model, capital mobilization strategy and the profit distribution mechanism.

5.1 Feasibility Study

The feasibility of the PE should be measured through the triple bottom-line concept. The Triple Bottom-line is an accounting framework that incorporates three dimensions of performance: social, environmental and financial. Instead of focusing solely on its financial outcomes, consideration should be given to the company's social, economic and environmental impact.

1. **Economic impact (Profit)** – refers to the net profit generated by the business activities of the PE. A few of the economic indicators are –
 - i. Net Profit;
 - ii. Internal Rate of Return (IRR);
 - iii. Contribution margin;
 - iv. Members' income per unit measure of commodity.
2. **Social impact (People)** – refers to fair and transparent business practices that benefit the community. A few of the social impact indicators are –
 - i. Women empowerment
 - ii. Increase in household income
 - iii. equity and access to social resources
3. **Environmental impact (Planet)** – refers to sustainable environmental practices adopted by the PE.

5.2 Trading and/or Value addition

The PE must move towards value addition of the commodities and the business model must not be solely based on trading.

In case commodity trading activity is being undertaken, a model entirely based on speculation is discouraged.

The various types of value addition can be –

1. **Improving quality** (grading) – increase in income by obtaining higher prices by improving the quality of an existing product.
2. **Processing** - by processing a product a PE can increase its value and deal directly with buyers of the processed product. However, processing requires significant resources and management experience.
3. **Differentiation**: PEs need to give their products a unique identity, which differentiates their product from others in the market.

5.3 Business development services (BDS)

The PE should focus on providing value added package to members to build loyalty and business growth. The business development services should be treated as an investment rather than an expense. The list of business development services that may be provided by PEs can be -

1. **Input Supply Services:** The PE may provide low cost and quality inputs to member farmers by undertaking bulk purchase or procurement.
2. **Insurance Services:** The PE may facilitate various insurance like Crop Insurance, Cattle Insurance, Electric Motors Insurance and Life Insurance.
3. **Technical Services:** The PE may promote best practices of farming, diversifying and raising levels of knowledge and skills in agricultural production and post-harvest processing that adds value to products.
4. **Networking Services:** Making channels of information (e.g. about product specifications, market prices) and other business services accessible to rural producers; facilitating linkages with financial institutions, building linkages of producers, processors, traders and consumers, facilitating linkages with government programs.
5. **Financial Services:** The PE may facilitate savings and loans products to members for productive purposes (inputs on credit etc.). *The PE would not provide loans for consumption purposes.*

5.4 Business Strategy and plan

A comprehensive business strategy defines the objective and long term and short term goals of the PE, allocation of existing resources, revenue model, marketing strategy and operational strategy.

5.4.1 Defining operational area

The operational area of the PE should be defined by the business principles rather than administrative boundaries within a state. This implies that the PE should not be restricted to a block or district. After an analysis of scale, business viability and operational feasibility it should be decided whether the PE would cover a single district/block or multiple districts/blocks. **Large scale PEs are preferred over smaller scale PEs** for the reasons that have been articulated in the earlier chapters.

5.4.2 Financing

The promotion of the PE should be taken up on project finance mode to cover the setting up of value addition infrastructure, procurement infrastructure, working capital and viability gap funding for one to two years.

5.4.3 Strategic business units

Producers' Enterprises are preferred to be multi-commodity, multi-activity enterprises as it has many benefits in terms of optimizing overheads, working capital, diversifying the risk and enhancing member affinity. It is important to ensure that each commodity is a profitable unit and there is no cross-subsidisation. Hence it is essential that each commodity is established and treated as a Strategic Business Unit (SBU).

Each SBU should have clearly defined –

1. SOPs – for procurement, sales, quality
2. Member traceability – volume and patronage
3. Balance sheet, P&L – revenue, cost and profit

5.4.4 Margin and revenue model

There should be a margin and revenue model in place and the sensitivity analysis should be done for the margin and revenues for each commodity. The models should also account for the elasticity of the supply and demand for each commodity.

5.4.5 Capital Mobilization strategy

The SHT must clearly define the capital mobilization strategy of the PE for different categories:

1. **Initial equity participation from members** – Equity participation should be defined for each commodity and should be proportional to the volume contributed by the respective member either paid at one time or instalments over a defined period.
2. **Start-up capital** - The start-up capital would be provided to the PE through the project linked to raising capital from its members. The start-up capital would be a grant.
3. **Capital for expansion** – The capital for expansion may be mobilized through institutional sources, raising further equity and through the built-in reserves.
4. **Member traceability** – It is important to note, that while increasing capital stake of members based on patronage the PE has to ensure member traceability and should be in the form of equity and deposits.

5.4.6 Building reserves (absorbing market shocks, business growth)

The PE must have a provision to build reserves from the net profit (after deduction of patronage bonus) for the following reasons –

1. **Business growth** – expansion of business verticals, expansion of geographies
2. **Absorbing market shocks** – price volatility, yield volatility, inadequate procurement
3. **Force Majeure**

5.4.7 Marketing strategy

Once a PE has identified marketing options, it needs to develop a marketing strategy based on a careful assessment of the options and the PE members' priorities and capacity. This assessment should narrow down the options to two or three marketing options, covering different markets, different products, or a combination of both. The following issues should be considered in this process:

1. **Members' priorities:** the primary commodities cultivated / collected by the members
2. **Competitive advantage:** unless the PE can sell a product at a lower price than other producers or offer a better product that justifies a higher price, it would struggle to compete.
3. **Market risk:** PEs need to pay particular attention to the risk involved in different marketing

options. The most profitable opportunities are often the most risky and so PEs need to find the right balance between security and profitability for their members.

4. **PE capacity:** where PEs have a choice between local or distant markets, the PEs should first gain experience and develop their capacity in the local market before attempting to access more risky and demanding markets.
5. **Non-monetized costs:** In rural economies production and processing are often dependent on 'free' family labour or exchanged labour from other community members. Some market options may involve crop choices that have important implications for natural resources or a household's ability to produce other crops. All these options involve costs that are rarely considered in cash value even though they affect the livelihoods of family members, in particular women. These costs need to be taken into account when PEs assess different market options.

The advantages and disadvantages of different types of market linkages are summarized in the table below –

	'Spot' markets	Contractual arrangements
Advantages for PEs	There is no obligation to sell products to any particular buyer. PEs are free to find the best offer for each transaction.	The business risk is shared between producers and buyers. Buyers may provide additional market services, which producers cannot obtain in the market.
Disadvantages for PEs	PE take on all the business risk. Prices and income are uncertain and it can be difficult to plan production and investments if income from sales is unpredictable.	PEs have to honour the contract even if they would be able to receive better terms or prices from other buyers. If individual members or associations break the contract the PE may lose future business

5.5 Profit Distribution

The PEs should distribute the profits to members based on the following principles:

1. The distribution of profits has to **be equitable and not equal**.
2. Profits are distributed based on patronage, i.e. how much each member has sold or bought through the PE keeping in view the differences in initial and advance payments made.

These principles affect members' incentives and motivation to invest in the PE or use the PE's services.

6 Operations of the Producers' Enterprises

Responsibility – Spearhead Team and the PE team

Objective - The objective of this step is to define operations strategy of the PE.

The operational model of a PE has to be robust and clearly defined. We may look at the example of *Vasundhara Agri-Horti Producer Company Limited (VAPCOL)*⁵ to understand how a Producer Company can build a marketing strategy and its own brand.

Vasundhara Agri-Horti Producer Co. Ltd (VAPCOL), promoted by BAIF in 2004, is a multi-State second-tier farmer organisation registered as a Producer Company under the Companies' Act. Its members are first-tier Farmer Organisations (registered or unregistered) having primary membership of individual farmer producers. Farmer Organisations are equity holders in VAPCOL. The goal of this organization is to manage production, harvesting, procurement, grading, pooling, handling and marketing, selling and export of primary produce of its members. The cooperatives or any other producer institutions preferably within the project area that are into manufacturing; marketing and processing of agri-horti produce can become a member in the VAPCOL.

Today the producer company has a membership base of 55 producer organizations spread across various States of India representing a primary membership base of about 41000 farmers. VAPCOL deals in multiple commodities produced by its members primarily fruit and nuts.

Procurement: The member organizations of VAPCOL directly own the entire chain of activities right from procurement of raw produce from the farmer upto the final processing and quality-wise grading of the produce, while VAPCOL is responsible for the marketing of these products. It also provides technical support in production processes, quality management and packaging. Other than that, it disburses working capital loan to members for smoothly carrying out their operations

Quality Control: VAPCOL ensures quality of products under supervision of Food Technologists and Agri-graduates. All the products have to pass through the procurement norms set by the Company.

Marketing: VAPCOL is promoting and marketing the farmers' produce under the brand name "Vrindavan", which presents varied range of products such as fresh fruit and derivatives of raw and ripe Mango, Amla derivatives, plain and flavoured Cashew Kernel and other F&V preserves. All the branches are involved in marketing of the products. It has explored several marketing options including retail, distributor, wholesale, Kiosks as well as Hyper stores. In addition to that, VAPCOL has also forayed in e-market channels such as Snapdeal and Amazon with Vrindavan products.

The quality control and strong procurement systems of the Producer Company have enabled it to build several marketing options including institutional buyers.

6.1 Procurement Strategy

The procurement of the commodities would be done by the PE. The PE may establish procurement centres at village or cluster level as per business requirement (volume, distance

⁵ Source: <http://vrindavan.co.in>

from markets) and the infrastructure of procurement center would be leased or hired or owned and operated by the PE. The procurement centers may be operated by the Udyog Mitras against a payment of commission linked to the business volume– who would be a member of the PE from the same cluster / village as the center.

It is important to note that the PG, being an informal body, would have no economic role, the PG should facilitate IEC activities and also would be responsible for the provision of extension services.

6.2 Udyog Mitra

The PE may set-up procurement centers covering one village or a cluster of villages. At the procurement center level, the Udyog Mitras – a member of the PE from the same cluster or village would be responsible for the procurement, quality assurance and other logistics requirement. The Udyog Mitra would be paid a commission on procurement. The role of the Udyog Mitra would be to –

1. Ensure fair and transparent procurement, storage and transportation
2. Fair and transparent record-keeping
3. Ensure quality of the commodity procured.
4. Improve communication between PE and members
5. Information dissemination to the members
6. Support regular interactions between PE members

6.3 Pricing and Payment to members

Pricing - The SHT should assist the PE staff to determine the pricing mechanism to all for fair and transparent procurement of the commodities. Depending on the external environment, market dynamics and the commodities dealt with, the following points related to pricing must be included in the SOP -

1. Price discovery – which are the benchmark markets for the commodity?
2. Pooling Price mechanism versus outright purchase
3. Grading and quality parameters to be defined based on
 - a. Market acceptance
 - b. Health and safety (such as FSSAI)
 - c. Consistency.
 - d. Shelf-life
 - e. Packaging and labelling

Payment - As it has already been mentioned that the membership of the PE would be confined to women farmers. The PE would transfer the amount due to the member directly to the members' bank account.

6.4 IT systems

IT systems would be put in place to maintain accounts and operations. To being with, a suitable accounting software may be used to maintain the accounts of the PE.

7 Business risk of Producers' Enterprises

7.1 Risk assessment

A risk assessment need to be carried out for the portfolio of commodities under the PE. Especially in the case of perishables it should be rigorous.

7.2 Risk mitigation

The mechanism for the risk mitigation for the PE must be established.

1. Product diversification
2. Spot transaction versus forward contracts
3. Transportation – ex-premises or FOR on destination
 - a. Ex-premises – the risk of transportation is borne by the buyer
 - b. FOR on destination – the risk of transportation is borne by the PE
4. Allocation of risk must be defined for the PE and the members–
 - a. Price risk
 - b. Storage losses and processing losses
 - c. Transportation losses
 - d. Quality / rejection risk

8 Business principles of Producers' Enterprises

8.1 Centrality

The PE must be a **member centric organization** and the business should be built on fair business principles, equitable cost, profit sharing and good governance for the benefit of the members.

8.2 Fair business principles

The PE must adhere to the fair trade principles, these components must be reflected in the Memorandum of Association (MoA) and Articles of Association (AoA) of the PE –

1. **Protect the interest of Small and marginal producers** - the PE should seek to enable them to move from income insecurity and poverty to economic self-sufficiency and ownership.
2. **Equitable and not equal sharing of profits**
3. **Transparency and Accountability** - The PE is transparent in its management, representation and is accountable to all its stakeholders
4. **Fair Trading Practices** - The organization trades with concern for the social, economic and environmental well-being of marginalized small producers and does not maximize profit at their expense. The organization maintains long term relationships based on solidarity, trust and mutual respect.
5. **Payment of a Fair Price** - A fair price is one that has been mutually agreed by all stakeholders.
6. **Ensuring no Child Labour and Forced Labour**
7. **Empowerment of women**
8. **Providing Capacity Building**
9. **Respect for the Environment**

The model MoA and AoA for a Producer Company is provided in Annexure I. This MOA and AoA may be referred to by the SRLMs during the incorporation process of the Producer Companies.

8.3 Standard Operating procedures

For the key functions of the PE, clearly laid out SOPs have to be prepared by the PE staff with the support of the SHT –

1. Procurement
2. Sales
3. Pricing
4. Storage and quality
5. Logistics
6. Finance
7. Human Resource (recruitment and performance incentives)

The Standard operating procedures must cover the following –

- a. End to end process to followed
- b. Person responsible at every stage and the person responsible overall
- c. Formats for capturing the relevant information
- d. Frequently asked questions (FAQs)

9 HR structure of Producers' Enterprises

Responsibility – Spearhead Team and PE staff

Objective - The objective of this step is to define the organization structure and HR processes of the PE.

9.1 Organization Structure

The SHT must design the organizations structure of the PE on the basis of the geographic spread, scale of operations and activities to be undertaken by the PE. The PE should have a detailed HR manual. The organization structure may be divided into –

1. **Core Staff** – The core staff would be minimal staff on the payroll of the PE and would handle the key decision for each business vertical.
2. **Non-core Staff** – The non-core staff would consist of field manpower who are hired for specific tasks/jobs on retainer basis at the cluster level to handle the operations of the PE.

As discussed in chapter 5, the Udyog Mitra would be present at the procurement center level to handle the procurement, quality and other logistics.

The success of any organization can be attributed to the human resources who are driving the operations and decision making on a day-to-day basis. Hence, it is essential that the PE must have dedicated and professional manpower with relevant experience for each business vertical.

The PE must recruit dedicated manpower from the beginning and the costing of the salaries of core and non-core staff must be part of the business plan.

The begin with, the PE would have a lean management structure with the following core team –

1. **Commodity experts** – The commodity expert would look after the end-to-end operations for the particular commodity. The functions would include commodity handling, procurement, quality, trading/ marketing, defining SOPs. The commodity expert would be responsible for the P&L of the commodity. The CEO of the PE may be chosen from the commodity experts. The commodity expert should have had prior experience in dealing with agriculture commodities and markets preferably in commercial organizations.
2. **Finance, costing and accounts** – One person for managing the finances of the PE with relevant experience would be responsible for commercial activities, logistics, maintaining books of accounts and legal compliances of the PE.

9.2 Performance based remuneration structure

The remuneration structure for all staff (core and non-core) should have a fixed component and a variable component that is linked to performance. Depending on the level and type of operations handled.

10 Governance of Producers' Enterprises

The governance functions would be defined in the Memorandum of Association (MoA) and Articles of Association (AoA) of the Producers' Enterprise. The model MoA and AoA for a Producers' Company is given in Annexure I.

The following are the key members responsible for ensuring good governance of the PE.

- 1.1. Board structure – eligibility criteria for selection and appointment of board members. The roles and responsibilities would be defined in the MoA and AoA of the PE.
- 1.2. Commodity sub-committees – to ensure profitable operations and representation of all producers for every commodity. The roles and responsibilities would be defined in the MoA and AoA of the PE.
- 1.3. PE management - Experts and professionals with proven track record in handling businesses (not on deputation from implementing agency)

This MOA and AoA should be referred to by the SRLMs during the incorporation process of the Producer Companies.

11 Training and capacity building for Producers' Enterprise

Responsibility – SRLM, SHT and PE Staff

Objective - The objective of this step is to define the training and capacity building plan for the SRLM, SHT, PE staff and the community.

Training is a key component for the success of the intervention. A robust training plan should be prepared by the SRLM to ensure that the all levels of staff are prepared for the implementation.

The trainings to the Producers' Enterprises' staff, board of directors and the spearhead team are the responsibility of the SRLM.

11.1 Producer Enterprise Staff

It is expected that the PE would recruit staff with required qualification and experience. The Staff of the Producer Enterprise must be taken through various training programme as and when required. The training may cover the following topics –

1. Empowering Grassroots Members
2. Strengthening Governance and Leadership
3. Supporting Effective Market Research
4. Strengthening Business Management
5. Supporting Improved Production
6. Supporting Appropriate PE Structures
7. Facilitating Trade Linkages
8. Facilitating Access to Market Services
9. Business understanding and judgement
10. Negotiation skills and confidence
11. Market information

11.2 Board of Directors of the Producers' Enterprise

The Board of Directors have to be taken through trainings at regular intervals to build their capacity for good governance and decision making. There are three main areas of leadership capacity building that needs to be conducted -

1. Leadership and Management skills
2. Business understanding
3. Motivation, integrity and dedication
4. Participatory governance processes

11.3 Training to Members

The following trainings should be conducted for the members of the PE. **The responsibility of the training of the members lies with the PE.**

1. Technical Capacity (value addition, quality, post-harvest, pre and post production)

2. Business and market literacy
3. Basic management and accounting
4. Formal structures and rules - These define members' rights and the formal systems of decision- making and control, such as voting rights.
5. Motivation and trust - If individual members do not trust the PO's decision-making process or they are not satisfied with the benefits they receive from the PE they may become disillusioned and withdraw from active involvement in the PE.

12 Sequence of Activities (pre-operative stage) for Producer's Enterprise

Step 1	SRLM recruits Spearhead Team at the State level with experts on commodity value chains, finance etc.
Step 2	SHT identifies the geography based on SRLM presence, shortlists 3-4 commodities based on scoping study, seasonality and feasibility of business plan. Subsequently the SHT develops the proposal and submits the proposal for approval. The proposal contains the business plan, operations and the market linkage plan.
Step 3	NRLM sanctions the proposal depending on the appraisal of the business plan and benefit to the small and marginal women farmers
Step 4	SRLM brings on board TSA / individual experts for further support to SHT (if felt necessary, not an essential component)
Step 5	A detailed feasibility study is conducted to identify the villages, locations of the procurement / processing centres etc.
Step 6	Training and capacity building for Udyog Mitra, Board of directors and community is detailed and planned
Step 7	Identification of Board of Directors (BoD) based on the geographic spread and the commodities selected
Step 8	Hiring of CA, KYC of first subscribers and registration of PE (responsibility of the SHT)
Step 9	Recruitment of CEO and other PE staff as proposed and orientation of the staff
Step 10	Support PE Staff in preparation of Detailed Project Report which contains the implementation timelines
Step 11	Fund release to the PE (SRLM to directly release fund to PE) against the DPR approved by the SRLM
Step 12	Identification of field functionaries (not staff, performance based remuneration)
Step 13	Training of BoD, field functionaries and PE Staff

12.1 Detailed checklist of activities

Sl.	Outcomes	Activities	Responsibility
1	Preparation of DPR, business plan and SOPs		
1.1		Preparation of DPR	Spearhead Team
1.2		Preparation of business plan	Spearhead Team
1.3		Preparation of SOPs	Spearhead Team
2	Incorporation of PE		
2.1		Identification of potential first subscriber	Spearhead Team
2.2		Arrange a meeting of shortlisted 20-25 producers and hold a preliminary discussion with them	Spearhead Team
2.3		Subscriber workshop with shortlisted 25-30 producers for finalization of first directors and initial subscribers	Spearhead Team
2.4		Shortlisting the names of PE	Spearhead Team
2.5		Preparation of MoA and AoA	Spearhead Team
2.6		Filing the application for Digital Signature and DIN of Directors	Spearhead Team
2.7		Applying for Incorporation of the company	Spearhead Team
3	Recruitment of Chief Executive		
3.1		Preparation and approval of JD for Chief Executive	PE Board supported by Spearhead Team
3.2		Sourcing of CV's	PE Board supported by Spearhead Team
3.3		Screening & Shortlisting of candidates, Interview of candidates	PE Board supported by Spearhead Team
3.4		Issuing appointment letter and confirmation of joining date	PE Board supported by Spearhead Team
4	Positioning of Staff for PE		
4.1		Preparation and approval of other manpower as per plan	PE Board supported by Spearhead Team
4.2		Sourcing of CV's	PE Board supported by Spearhead Team
4.3		Screening & Shortlisting of candidates, Interview of candidates	PE Board supported by Spearhead Team

4.4		Issuing appointment letter and confirmation of joining date	PE Board supported by Spearhead Team
5	First board meeting of PE		
5.1		Obtaining incorporation documents	PE Board supported by Spearhead Team
5.2		Identifying registered office/HO location and signing lease deed, preparing documents for ROC	PE Board supported by Spearhead Team
5.3		Agenda and detail document to be finalised	PE Board supported by Spearhead Team
5.4		Translation of agenda in local language	PE Board supported by Spearhead Team
5.5		Various forms to be procured locally	PE Board supported by Spearhead Team
5.6		Issuing notice for the Board Meeting	PE Board supported by Spearhead Team
6	BOARD MEETING conducted		
6.1		Finalize agenda for board meeting-	PE Board supported by Spearhead Team
6.2		1. Mandatory Approval	
6.3		2. Appointment of CEO / manager	
6.4		3. Approval for member enrollment	
7	Statutory Compliances		
7.1		Filing of PAN number & TAN number	PE supported by Spearhead Team
7.2		Filing of VAT & Service Tax registration	PE supported by Spearhead Team
7.3		Appointment of auditors	PE supported by Spearhead Team
7.4		Obtaining different licenses (FSSAI, Labelling of packs, Weights and Measures, etc.)	PE supported by Spearhead Team
7.5		Registration for PF, ESI, Contract labour etc.	PE supported by Spearhead Team
8	Legal and administrative readiness of the PE		
8.1		Opening of Bank A/C	PE supported by Spearhead Team
8.2		Finalizing phone No., mail id	PE supported by Spearhead Team
8.3		Application for telephone / mobile connection	PE supported by Spearhead Team
8.4		Designing and printing of office stationery-ph. Mail id	PE supported by Spearhead Team

8.5		Getting company rubber stamp/ seal ready	PE supported by Spearhead Team
8.6		Collection of share capital towards membership	PE supported by Spearhead Team
8.7		Opening of PE's current account	PE supported by Spearhead Team
9	RECEIPT OF FUND BY PE from SRLM		
9.1		Submission of DPR to SRLM by PE	PE supported by Spearhead Team
10	Identification of procurement centers		
10.1		Identification of villages for survey based on secondary data	PE supported by Spearhead Team
10.2		Finalization of survey format & appointment of survey agency	PE supported by Spearhead Team
10.3		Start of survey at field	PE supported by Spearhead Team
10.4		Data entry & Submission of data by surveying agency	PE supported by Spearhead Team
10.5		Identification of Potential villages based on survey report	PE supported by Spearhead Team
10.6		Final list of procurement centers	PE supported by Spearhead Team
11	Setting up procurement centers and identification of Udyog Mitras		
11.1		Field Validation	PE supported by Spearhead Team
11.2		Procurement route mapping	PE supported by Spearhead Team
11.3		Conduct village level meeting & selection of Udyog Mitra	PE supported by Spearhead Team
11.4		Agreement with Udyog Mitra	PE supported by Spearhead Team
12	Second Board meeting for membership approval and Membership Drive		
12.1		Agenda and detail document to be finalised	PE supported by Spearhead Team
13	Third Board meeting for convening AGM (& orientation of Board)		
13.1		Village level meetings and members enrollment	PE supported by Spearhead Team
13.2		Collection of share capital towards membership	PE supported by Spearhead Team
13.3		Opening of Bank A/c of those members who are not having it	PE supported by Spearhead Team

13.4		Collection of PAN card and other address proof details of the members	PE supported by Spearhead Team
13.5		Issuing notice for AGM	PE supported by Spearhead Team
13.6		Planning and initiating membership drive	PE supported by Spearhead Team
13.7		Preparation of IEC materials	PE supported by Spearhead Team
13.8		AGM Conducted	PE supported by Spearhead Team
14	Office Finalization and readiness		
14.1		Identification of location and finalization of Corporate office	PE supported by Spearhead Team
14.3		Requirement assessment and purchase of IT hardware and software	PE supported by Spearhead Team
14.4		Installation of IT hardware and software at Head Office	PE supported by Spearhead Team
14.5		Domain name and email IDs	PE supported by Spearhead Team
14.6		Implement software solution for maintaining members' record	PE supported by Spearhead Team
14.7		Preparation & Finalization of scope of work for branding & communication	PE supported by Spearhead Team
14.8		Setting up PE office	PE supported by Spearhead Team
15	Member mobilization		
15.1		Village level meeting for member mobilization/ enrolment	PE supported by Spearhead Team
16	Infrastructure for commodity procurement (if any)		
16.1		Finalizing Technical Specification for procurement of any equipment planned	PE supported by Spearhead Team
16.2		Training & orientation of Udyog Mitra	PE supported by Spearhead Team
16.3		Udyog Mitra incentive structure finalization	PE supported by Spearhead Team
16.4		Finalizing pricing mechanism for procurement and sales	PE supported by Spearhead Team
17	Purchase-IT and accounting infrastructure		
17.1		Installation of procurement and billing software	PE supported by Spearhead Team

17.2		Setting up producer payment system through A/C	PE supported by Spearhead Team
17.3		Trial run of the procurement at the centers	PE supported by Spearhead Team
18	Statutory Compliances		
18.1		Filing of PAN number & TAN number	PE supported by Spearhead Team
18.2		Filing of VAT & Service Tax registration	PE supported by Spearhead Team
18.3		Appointment of auditors	PE supported by Spearhead Team
18.4		Obtaining different licenses (FSSAI, Labelling of packs, Weights and Measures, etc.)	PE supported by Spearhead Team
18.5		Registration for PF, ESI, Contract labour etc.	PE supported by Spearhead Team
19	Service contracts for forward linkage		
19.1		Identification, Finalization & agreement with primary transport vehicle	PE supported by Spearhead Team
19.2		Finalization of secondary transport vehicle & agreement	PE supported by Spearhead Team
19.3		Identification and Agreement for forward linkage	PE supported by Spearhead Team
20	Adopting Policy, Manuals and SOPs		
20.1		SOP implementation	PE supported by Spearhead Team
20.2		Logging and Reporting Formats- QA	PE supported by Spearhead Team
20.3		Forms & Registers customization	PE supported by Spearhead Team
20.4		SOP Preparation for PE team	PE supported by Spearhead Team
20.5		User Documents at Workplace	PE supported by Spearhead Team
20.6		Udyog Mitra Training module preparation	PE supported by Spearhead Team
21	OPERATIONALIZATION OF PE and commencement of procurement		

This checklist and steps are indicative and may change based on the situation.

Annexure I: Model⁶ *Memorandum of Association & Articles of Association for a Producer*

Company incorporated under Companies Act 1956, Part IX A

⁶ To be used only for Producers' Enterprises that are promoted under part IX A of the Companies Act, 1956

Incorporated under the Companies Act, 1956 (1 of 1956)

Part IX-A

(Producer Company)

Company Limited by Shares

Memorandum of Association

of

..... Mahila Producer Company Limited

- I Name** The name of the Company is Mahila Producer Company Limited.
- II Location of the registered office** The registered office of the Company will be situated in the State of _____.
- III Objects** The objects for which the Company is incorporated are:
- A. The Objects to be pursued by the Company on its incorporation are:**
1. To carry on the business of pooling, purchasing, processing, value addition and marketing of _____⁷ primarily of the Members and also of others, marketing of the same and to deal in activities that are part of or incidental to any activity related thereto.
 2. To provide or arrange to provide technical and managerial services in the areas of (input, productivity enhancement, information and knowledge) for the benefit of the Members.
 3. To provide education, training and other activities which may promote the principles of mutuality and mutual assistance amongst the Members.
 4. To arrange that the quality of produce⁸ pooled from the members and others and subsequently marketed would meet the standards laid down by the Company and the statutory authorities.
 5. To extend various financial services to the Members.

⁷ Specific commodity or commodities that would be handled by the Producers' Company to be mentioned here

⁸ Specific commodity or commodities to be mentioned here

B. Matters which are necessary for furtherance of the Objects specified in clause III A are:

1. To carry on the business and deal in any Primary Produce.
2. To own, hire, arrange for, and set up facilities, including manufacturing and processing thereof, of the Primary Produce which the Company is authorized to deal with.
3. To finance procurement, processing, marketing and other activities that include extending of credit facilities to its Members.
4. To generate, transmit and distribute power from animal waste, other biomass, and renewable energy sources.
5. To own, hold on lease, hire, manage, sell, let on hire, convey, mortgage, assign or otherwise acquire or dispose of, any undertaking, movable or immovable properties and assets.
6. To engage in, support, commission, finance and otherwise engage in research and development.
7. To provide education, organise education and training programmes, seminars and conferences for its members, directors, producers, employees and any other persons associated with the business of the Company.
8. To borrow money or raise or secure the payment of money on such securities or otherwise in such manner as the Company may deem expedient.
9. To draw, make, accept, discount, execute and issue bills of exchange, promissory notes, bills of lading, warrants, and such other negotiable or transferable instruments or securities of all types.
10. To decide to transfer its assets and liabilities, in whole or in part, to any other Producer Company whether by sale or purchase for shares or otherwise, to divide itself into two or more new Producer Companies, to amalgamate and form a new Producer Company, or to merge with any other Producer Company.
11. To enter into partnership, agreement or arrangement with any person or body corporate whether by way of formation of subsidiary company, joint venture, partnership, union of interest or in any other manner, and to promote any other company or companies including Producer Company or Companies, for the purpose of promoting the objects of the Company.
12. To take or hold mortgages, liens, and charges to secure payment or any money due to the Company.
13. To insure any of the properties, undertakings, contracts, risk or obligations of the Company in any manner whatsoever.

14. To make donations or subscription, to any institution for the purposes of promoting the social and economic welfare of the Members or promoting the mutual assistance principles as may be directly or indirectly conducive to any of the objects of the Company or otherwise expedient, subject to the provisions of section 581ZH of the Act.
15. To open and operate accounts with any bank or banks and give any instructions in connection therewith.
16. To accumulate funds, lend, provide financial assistance to any person and institution, with such securities or without securities upon such terms and conditions as may be determined from time to time.
17. To invest in, acquire, hold and deal in shares, stocks, debentures, bonds, negotiable instruments, obligations and securities issued by any producer company, constituted or carrying on business in India or elsewhere and other securities and instruments specified in section 581ZL of the Act. .
18. To give any guarantee for the payment of money or the performance of any obligation or undertaking.
19. To apply for, purchase or otherwise, acquire any goodwill, patent, patent right, copyright, trademark, design, brand, formulae, licence, lease, concessions, conferring any exclusive or limited right to use, intellectual property rights, or any secret, proprietary or other information as to any invention which may seem capable of being used for any of the purposes of the Company; and to use, exercise, develop or grant licences in respect of the property rights, or information so acquired which may directly or indirectly to benefit the Company.
20. To establish provident fund, gratuity fund, superannuation fund and other funds, and to create any trust for the benefit of employees.
21. To establish and support or aid in the establishment and support of associations, institutions, funds, trusts and conveniences and to take up such welfare measures or facilities for the benefit of its members, employees and their dependents.
22. To enter into arrangements, and agreements for rendering, and obtaining of technical know-how, services including consultancy, technical and other collaboration with individuals, firms, research laboratories, bodies corporate or any other persons whether in or outside India.
23. To accept gifts, grants, or donations, in cash or in kind or of property, provided that the conditions of such gifts in no way limit or compromise the interests of the Company.

24. To form, float, promote, support or take membership of any professional bodies, other mercantile and public bodies, associations or federations for the protection, advancement, growth of commerce and industry and for protection and welfare of persons engaged therein.
25. To apply for, promote, and obtain any order, regulation, or other authorisation or enactment, which may directly or indirectly benefit the Company.
26. To arrange for or obtain insurance for members and their productive assets.
27. To purchase, sell or supply machinery, equipment or consumables.
28. To reimburse all costs associated with the promotion and registration of the Company including registration, legal fees, printing of a memorandum and articles and the payment thereof, subject to the provisions of section 581C(4) of the Act.
29. To carry on all or any of the businesses which the Company is entitled to do, as principals or in any other lawful capacity, and by or through agents, or otherwise, and either by itself or in conjunction with or through other institutions or persons.
30. To carry on any other business, service and activity, ancillary or incidental to any of the activities referred to above which may seem expedient for the Company to enhance, directly or indirectly, the value or profitability of the Company, and which may promote the principles of mutuality and techniques of mutual assistance amongst the Members in any manner.

IV Territories to which objects extend The objects of the Company shall extend to the whole of India.

V Liability of Members The liability of the Members is limited and this liability is limited to the amount unpaid if any on the shares held by them.

VI Share Capital The Authorised share capital of the Company is Rs. _____ (Rupees Fifty Lakhs only) divided into _____ equity shares of Rs.100/- (Rupees One Hundred each).

Sl .No	Name, address Occupation of Subscriber	Number of Equity shares taken by the subscriber	Signature of Subscribers	Name, Addresses and Signature of Witness

Date:

Place

**Incorporated under Part IX-A of the Companies Act, 1956
(Producer Company)**

Company Limited by Shares

Articles of Association

of

..... Mahila Producer Company Limited

1. General

- 1.1 Wherever in the Companies Act, 1956 and or Companies Act, 2013 (to the extent applicable) it is provided that the Company shall have any right, privilege or authority if so authorised by its Articles, then by virtue of this Article, the Company is hereby specifically authorised, empowered and entitled to have such right, privilege or authority, as have been permitted by the Act without there being any specific provision and or separate Article in that behalf herein provided.
- 1.2 Regulations contained in Table 'A' of Schedule I of the Companies Act, 1956 and Table F of Schedule I of the Companies Act, 2013 (to the extent applicable) shall not apply to the Company.
- 1.3
- i. The Company is a producer company within the meaning of Section 581A(l) of the Companies Act, 1956.
 - ii. All the limitations, restrictions and provisions of the Companies Act, 1956 read with Companies Act, 2013 (to the extent applicable), other than those specified in Part IXA of the Companies Act, 1956, applicable to a private company shall, apply to the Company, and as if it is a private limited company in so far as they are not in conflict with the provisions of Part IXA of the Act.
 - iii. The company is deemed to be a private Company within the meaning of the Companies Act, 1956 read with Companies Act, 2013 (to the extent applicable) with such minimum paid up capital as may be prescribed under the applicable provisions of the Companies Act, 2013 and accordingly,
 - a. Restricts the right to transfer its shares in the manner and to the extent hereinafter provided; and
 - b. Prohibits any invitation to the public to subscribe for any shares on, or debentures of, the Company.

2. Definitions

- 2.1 In the Articles and the Memorandum of Association of the Company, unless the context otherwise requires, words or expressions shall have the meanings as provided below.

- i. **'Act'** means the Companies Act, 1956 (1 of 1956) unless specified otherwise.
- ii. **'Active Member'** means a Member who fulfils the quantum and period of patronage of the Company as laid down by the Board.
- iii. **'Articles'** means Articles of Association of the Company for the time being in force.
- iv. **'Board'** or **'Board of Directors'** means the board of directors of the Company constituted under the provisions of the Act and the Articles.
- v. **'Chairman' or 'Chairperson'** means Chairman of the Board of Directors, for the time being of the Company.
- vi. **'Chief Executive'** means an individual appointed as such under the provisions of the Act.
- vii. **'Company'** means the Mahila Producer Company Limited, registered under Part IXA of the Companies Act, 1956.
- viii. **'Director'** means the Director, for the time being of the Company.
- ix. **'Financial Year'** means the period ending on the 31st day of March every year, and where it has been incorporated on or after the 1st day of January of a year, the period ending on the 31st day of March of the following year, in respect whereof financial statement of the company is made up.
- x. **'Limited Return'** means the maximum dividend, as laid down in the Articles.
- xi. **'Member'** means an individual woman Producer admitted as a Member of the Company.
- xii. **'Officer'** includes any Director or Chief Executive or Secretary or any person in accordance with whose directions or instructions part or whole of the business of the Company is carried on.
- xiii. **'Mutual Assistance Principles'** means the principles set out in Part IXA of the Act, and as provided in article 3.
- xiv. **'Patronage'** means the extent to which a Member participates in the business of the Company by quantity of primary produce supplied and such other criteria as may be decided by the Board from time to time.
- xv. **'Patronage Bonus'** means payments made by the Company out of its surplus income to the Members in proportion to the value of their respective Patronage.
- xvi. **'Primary Produce'** means milk, vegetables, fruits, Non-Timber Forest Produce, fish, meat, egg or any other produce arising from agriculture, horticulture, pisciculture, NTFP collection and dairy farming (including animal husbandry) and any other product including by-products of such produce, that would assist

or promote any of the aforesaid activities or anything ancillary thereto, and any activity which is intended to increase the production or improve the quality thereto.

- xvii. **‘Producer’** means any person engaged in production of any Primary Produce or collection of NTFP in which the Company is engaged.
- xviii **‘Producer Company’** means a body corporate having objects or activities specified in the Act and registered as a Producer Company.
- xix. **‘Secretary’** means an individual appointed as such under the provisions of the Act read with Companies Act, 2013 (to the extent applicable)
- xx. **‘Withheld Price’** means part of the price due and payable for the produce supplied by any Member to the Company; and as withheld by the Company for payment on a subsequent date in the manner specified in the articles.

2.2 Interpretation

In the Articles unless the context otherwise requires:

- i. Words importing the masculine gender shall be taken to include feminine; and
- ii. The term ‘article’ refers to the specified provision(s) of the Articles hereof.

3. Mutual Assistance Principles

- 3.1 The Membership shall be voluntary and available to all eligible persons who agree to make use of the services of the Company and are willing to abide by the provisions of the Memorandum and the Articles of Association of the Company.
- 3.2 The Company shall be administered by a Board consisting of persons elected or appointed as Directors, and the Board shall be accountable to the Members.
- 3.3 There shall be Limited Return on share capital.
- 3.4 The surplus arising out of the operations of the Company shall be distributed amongst the Members as Patronage Bonus after providing for Limited Return on share capital, transfer to reserves, providing for development of business, education of members etc. as may be decided by the Board/General Body of shareholders.
- 3.5 The Company may co-operate actively at local, national and international level with other producer companies, cooperatives, other entities and organisations.

4. Membership

- 4.1 The Company may have individual women Producers as its Members.
- 4.2 Qualifications and procedure for obtaining Membership
 - i. An individual woman Producer engaged in production of primary produce or collection of NTFP would be eligible for applying for Membership of the Company. Membership shall be limited to only one producer from each household.

- ii. An individual woman Producer desirous of becoming a Member of the Company shall apply in prescribed application form to the Company and undertake in writing to abide by the provisions of the Memorandum and the Articles of Association of the Company.

In addition, she will pay a non-refundable admission fee, subscribe to equity shares of the Company and satisfy other conditions laid down by the Board from time to time.

- iii. No person, who has any business interest which is in conflict with business of the Company, shall become a Member of the Company.
- iv. Such an individual woman Producer shall become a Member after the Board of Directors passes a resolution accepting her admission as a Member.

4.3 Conditions for continuation and cancellation of Membership

- i. Membership shall continue as long as a Member does not fail to meet the criteria as may be prescribed by the Board from time to time.
- ii. A Member, who acquires any business interest which is in conflict with the business of the Company, shall cease to be a Member of the Company.
- iii. Any Member who is not eligible to continue as a Member shall be served a written notice by the Company for removal as Member and given an opportunity of being heard. The Member would need to reply to the notice within the stipulated period as specified in the notice. Thereafter, the Board shall take a decision in the matter.

4.4 Voting Rights of Member

Every member shall have a single vote, provided the member remains an active member throughout the year. However, at the first Annual General Meeting of the Company, all members shall have a single vote each.

4.5 Price to be paid to the Members

The members shall be paid price for the produce supplied as per the guidelines framed by the Board.

4.6 Information to Member

The Members may obtain information relating to the general business of the Company.

4.7 Active Member

The Board, if so desires, lay down the criteria with respect to quantum and period of patronage for an Active Member. An active member is a member who has patronized the company by supplying a minimum quantity of primary produce in year that is to be decided by the Board of Directors from time to time.

5. Funds

Funds may be raised by (i) issue of equity shares to Members, (ii) admission fee and deposits from Members, (iii) issue of debentures to Members, (iv) loans and advances and (v) grants, aid, subsidies and donations.

6. Share Capital

- 6.1 The authorised share capital of the Company shall be as stated in clause VI of the Memorandum of Association of the Company.
- 6.2 The share capital of the Company shall consist of fully paid-up equity shares only.
- 6.3 The shares held by the Member in the Company, shall as far as may be, be in proportion to her or its patronage.
- 6.4 The share capital of the Company shall be under the control of the Board who may allot or otherwise dispose of the same to such members in proportion to the Patronage, as far as may be, and on such terms and conditions against payment in cash or kind or in lieu of the whole or part of the sale proceeds of produce or products supplied by the Members, and at such times and for such consideration as the Board may decide.
- 6.5 The Company may, by Ordinary Resolution:
- i. increase the share capital;
 - ii. consolidate and divide all or any of its share capital into shares of larger amount than its existing shares;
 - iii. sub-divide its existing shares or any of them, into shares of smaller amount than is fixed by the Memorandum of Association, subject, nevertheless, to the provisions of the Act; and
 - iv. Cancel any shares which have not been taken or agreed to be taken by any person, and diminish the amount of its share capital by the amount of the shares so cancelled.
- 6.6 The Company may reduce in any manner in accordance with the provisions of the Act, (i) its share capital, (ii) balance in the securities premium account, (iii) capital reserves, and (iv) reserves arising out of amalgamation, merger, division, reorganization, reconstruction or in any other manner.
- 6.7 The Board may at any time decide to issue equity shares in a dematerialized form, and also compulsorily convert the existing equity shares in a dematerialized form.
- 6.8 The Company may purchase its own equity shares in accordance with the provisions made under the Companies Act, 1956 read with Companies Act, 2013 (to the extent applicable).
7. Transfer of equity shares

Subject to the provisions of Sections 581 ZC and 581ZD of the Act, a Member may transfer the whole or part of her shares to a Member after obtaining the prior approval of the Board.

8. Surrender of equity shares

8.1 Where the Board is satisfied that any Member has failed to retain the qualifications as a Member, the Board shall direct the Member to surrender her shares to the Company at par value or such other value as determined by the Board.

8.2 The Member also, if so desires, apply to the Company to surrender her equity shares. After the receipt of application from the Member, the Board may take a decision in the matter. The Board shall prescribe the procedure for surrender of equity shares.

8.3 A surrendered equity share shall be deemed to be the property of the Company and may be sold to members or otherwise cancelled as the Board thinks fit.

Management of Producer Company

9. Board of Directors

9.1 The Company shall be governed by the Board consisting of persons elected or appointed as Directors.

9.2 The Board of the Company shall have at least five and not more than eleven Directors. The Board may co-opt one or more Expert Directors not exceeding one-fifth of the total number of Directors for such period as the Board may deem fit.

9.3 The subscribers who have signed the Memorandum and the Articles of Association have designated Five Directors, who shall govern the affairs of the Company until the directors are elected. The election of Directors shall be conducted within a period of ninety days of the registration of the Company.

9.4 The Board shall from time to time with the approval of the General Body of shareholders decide the criteria for categorising members into different classes based on patronage.

9.5 i. The number of positions on the Board representing each class of members, to the extent possible, shall be based on patronage of the respective class. However, for the first 3 years of the operations of the Company, this requirement can be waived by the Board.

ii. Directors representing a particular class of members shall be elected / appointed from amongst and by the respective class of members.

9.6 i. One fourth of total elected Directors shall retire by rotation at every Annual General Meeting of the Company and the position vacated by rotational retirement shall be filled up ensuring the representation in accordance with article 9.5.

- ii. The vacant position on the Board as per 9.6 (i) shall be filled based on the recommendation of the Nominating Committee appointed by the Board.
 - iii. Every Director, who retires in accordance with the articles, shall be eligible for re-appointment as Director. However, no person shall be elected / appointed as Director for more than two consecutive terms.
- 9.7 To fill the vacant position(s) on the Board or otherwise, the Board may co-opt Additional Director(s) and the Director(s) so appointed shall hold office till the next Annual General Meeting of the Company or for a shorter period if the Board decides so at the time of appointment.
- 9.8 The Directors at its meeting shall elect a Chairman from amongst the Directors, other than the Expert Director and the Chief Executive, for a period of four years. For the election of the Chairman of the Company, the Expert Director and the Chief Executive will not have voting rights.
- 9.9 The Chairman shall preside over the meetings of the Board. In her absence, the Directors present shall elect one of the elected Directors to preside over the meeting.
- 9.10 A meeting of the Board shall be held not less than once in every three months and at least four such meetings shall be held every year.
- 9.11 Notice of every meeting of the Board of Directors shall be given in writing to every Director for the time being in India, and at his/her usual address in India to every other Director.
- 9.12 The Chief Executive shall give notice as aforesaid not less than seven days prior to the date of the meeting of the Board.
- Provided that a meeting of the Board may be called at shorter notice and the reasons thereof shall be recorded in writing by the Board.
- 9.13 The quorum for a meeting of the Board shall be one-third of the total strength of directors, subject to a minimum of three including the presence of at least one elected Director and one Expert Director. Notwithstanding the above, the quorum for the meeting of the Board of Directors shall not require the presence of the Expert Director in case there is no Expert Director on the Board of the Company.
- 9.14 All the decisions of the Board shall be decided by a majority vote. Each Board Member shall have one vote. In the case of equality of votes, the Chairman or the person presiding shall have a casting vote except for election of Chairman.
- 9.15 No Director shall participate on any matter in which she has personal interest except as a member.
- 9.16 An elected Director shall cease to be member of the Board on her losing the status as a Member of the Company. Also, a Member shall not be eligible for appointment as a Director on the Board or the office of the Director shall become vacant if:

- i. she is convicted by a Court of any offence involving moral turpitude and sentenced in respect thereof to imprisonment for not less than six months;
- ii. the Producer Company, in which she is a director, has made a default in repayment of any advances or loans taken from any company or institution or any other person and such default continues for ninety days;
- iii. she has made a default in repayment of any advances or loans taken from the Producer Company in which she is a director;
- iv. the Producer Company, in which she is a director:
 - a. has not filed the annual accounts and annual return for any continuous three financial years commencing on or after the 1st day of April 20XX⁹; or
 - b. has failed to, repay its deposit or withheld price or patronage bonus or interest thereon on due date, or pay dividend and such failure continues for one year or more;
- v. default is made in holding election for the office of director, in the Producer Company in which she is a director, in accordance with the provisions of the Act and articles;
- vi. The member has committed any act which has damaged the interest and reputation of the Company;
- vii. The member has wilfully deceived the Company;
- viii. the annual General meeting or extraordinary General meeting of the Producer Company, in which she is a director, is not called in accordance with the provisions of this Act except due to natural calamity or such other reason;
- ix. she has failed to satisfactorily complete the prescribed training programme, as prescribed by the Board from time to time, within six months of being elected/appointed as a Director. This training programme is intended for equipping her with the requisite skill sets and knowledge to satisfactorily discharge her responsibilities;
- x. she has not passed at least 10th or equivalent standard from any recognized educational institution.
- xi. she is or becomes a member of any legislative body such as Parliament, State Legislatures, Zila Parishad/ District Council, Gram / Village Panchayat; or
- xii. she is or becomes an office bearer of any political party at any level i.e. village, Taluka, District, State or National level.
- xiii. She is of unsound mind and stands so declared by a competent court.

⁹ The year of financial transaction to be added.

xiv She is an un-discharged insolvent or has applied to be adjudicated insolvent and such application is pending.

xv She has not been allotted a DIN number.

9.17 The Directors may be entitled to such fees and allowances including travelling and hotel expenses for attendance at the meetings of the Board and its Committees, if any constituted by the Board in terms of provisions of section 581U of the Act, as may be decided by the Board.

9.18 Powers and Functions of the Board

- i. Subject to the provisions of the Act and the Articles, the Board shall exercise all such powers and to do all such acts and things, as that the Company is authorised so to do.
- ii. In particular and without prejudice to the generality of the foregoing powers, such powers may include the following matters, namely:
 - a. determination of the dividend payable;
 - b. determination of the quantum of withheld price;
 - c. recommend patronage bonus to be approved at General Meeting;
 - d. admission of new Members;
 - e. pursue and formulate the organisational policy, objectives, establish specific long-term and annual objectives, and approve corporate strategies and financial plans;
 - f. appointment of a Chief Executive;
 - g. approval of organization structure of the Company;
 - h. acquisition or disposal of property of the Company in its ordinary course of its business;
 - i. investment of the funds of the Company in the ordinary course of its business;
 - j. sanction any loan or advance, in connection with the business activities of the Company to any Member, not being a Director or his/her relative;
 - k. constitute a Nominating Committee in terms of the provisions of section 581U of the Act, to scrutinize applications received from eligible Members for positions on the Board based on the defined criteria as approved in the General meeting and as provided in these Articles, and accordingly recommend eligible members to the Board for its consideration. In turn the Board, after due consideration in the Board meeting, shall recommend Members for the position on the Board to be elected or appointed by the Members in the Annual General Meeting; and
 - l. approve interim budget which shall form integral part of the budget to be approved at Annual General Meeting (AGM);
 - m. take such other measures or do such other acts as may be required in the discharge of its functions or exercise of its powers.
- iii. The Board shall exercise its powers at its duly convened meeting where the required quorum is present to transact the business.

9.19 Liability of Directors

- i. When the directors vote for a resolution, or approve by any other means, anything done in contravention of the provisions of the Act or any other law for the time being in force or the Articles, they shall be jointly and severally liable to make good any loss or damage suffered by the Company.
 - ii. The Company shall have the right to recover from its Directors:
 - a. Where such Director has made any profit as a result of the contravention specified in the Act, an amount equal to the profit so made.
 - b. Where a company incurred a loss or damage as a result of the contravention specified in the Act, an amount equal to that loss or damage.
 - iii. The liability imposed under article 9.19 (ii) shall be in addition to and not in derogation of a liability imposed on a Director under any other provision of the Act or any other law for the time being in force.
- 9.20 Removal of Director
A Director may be removed by simple majority of the Members present and voting at the General Meeting in accordance with the provisions of the Act.
10. Chief Executive and his functions
- 10.1 The Company shall have a full time Chief Executive, by whatever name called, who shall be appointed by the Board.
- 10.2 The Chief Executive shall be Ex officio Director of the Board and such Director shall not retire by rotation.
- 10.3 The qualifications, experience and the terms and conditions of service of the Chief Executive, including the remuneration payable to Chief Executive, shall be such as may be determined by the Board.
- 10.4 The Chief Executive shall be entrusted with substantial powers of management as the Board may determine. Without prejudice to the generality of the foregoing, he shall also exercise powers and discharge the functions laid down in the Act.
11. General Meetings
- 11.1 The Company shall in each year, hold, in addition to any other meetings, a General Meeting, as its Annual General Meeting and shall specify the meeting as such in the notices calling it, and not more than fifteen months shall elapse between the date of one Annual General Meeting of the Company and that of the next.
- 11.2 Every General Meeting shall be called, for a time during business hours, on a day that is not a public holiday and shall be held at the registered office of the Company or at some other place within the city, town or village in which the registered office of the Company is situated.
- 11.3 A General Meeting of the Company shall be called by giving not less than fourteen days prior notice in writing.
- 11.4 i. At any General Meeting, a resolution put to the vote of the meeting shall, unless a poll is demanded under the Articles, be decided by show of hands.

- ii Before or on the declaration of the result of the voting on any resolution on a show of hands, a demand for a poll can be made by one-tenth of the total number of Members or 100 Members, whichever is lower, present in person or by proxy.
- 11.5 The Company may, if permissible, allow the Members of the Company to participate in any General Meeting through electronic mode.
- 11.6
 - i.
 - a. Attendance of such number of Members as provided in the Act shall form the quorum for the General Meeting.
 - b. Attendance either in person or by proxy shall be considered for the purpose of quorum.
 - c. No person shall be appointed a proxy unless she is a Member.
 - d. A proxy shall be entitled to vote on a show of hands as well as in a poll.
 - ii. If there is no quorum within half an hour from the scheduled time of meeting, the meeting shall stand adjourned to reassemble on the same day at the same place after three hours from the appointed time. If at the reassembled meeting, the quorum is not present within half an hour, the Members present shall constitute the quorum and may transact the business for which the meeting was called.
- 11.7 The Company shall hold its first Annual General Meeting within a period of ninety days from the date of its incorporation.
- 11.8 The Memorandum and Articles of the Company shall be laid before the first Annual General Meeting.
- 11.9 The Members shall adopt the Articles of the Company and appoint directors of its Board in the first Annual General Meeting.
- 11.10 The notice calling the Annual General Meeting shall be accompanied by the following documents, as approved by the Board namely:
 - i. the agenda of the Annual General Meeting;
 - ii. the minutes of the previous Annual General Meeting or the Extra-Ordinary General Meeting;
 - iii. the names of candidates, if any, to the office of director including a statement of qualifications in respect of each candidate;
 - iv. the audited balance sheet and profit and loss accounts of the Company and its subsidiary, if any, together with a report of the Board of Directors of the Company with respect to:
 - a. the amount proposed to be carried to reserves;
 - b. the amount to be paid as Limited Return on share capital;
 - c. the amount proposed to be disbursed as Patronage Bonus;
 - d. any other matter of importance relating to energy conservation, environmental protection, expenditure or earnings in foreign exchanges;

- e. any other matter which is required to be, or may be, specified by the Board;
 - v. the text of the draft resolution for appointment of Auditors; and
 - vi. the text of any draft resolution proposing amendment to the Memorandum or Articles to be considered at the General Meeting, along with the recommendations of the Board.
- 11.11 The following powers shall be exercised only at the Annual General Meeting, namely:
- i. approval of budget and adoption of annual accounts of the Company;
 - ii. approval of Patronage Bonus;
 - iii. issue of Bonus Shares;
 - iv. declaration of Limited Return and decision on the distribution of Patronage;
 - v. specify the conditions and limits of loans that may be given by the Board to any Director;
 - vi. approval of the criteria for categorising members into different classes;
 - vii. approval of guidelines for constitution of Nominating Committee in order to scrutinize the application for vacant position by eligible members and recommend the same for consideration at the Annual General Meeting through the Board; and
 - viii. approval of any transaction of the nature as is to be reserved in the Articles for approval by the Members.
- 11.12 An Extra-Ordinary General meeting may be called at any time:
- i. By the Board; or by the Board on the requisition made in writing, duly signed and setting out the matters for the consideration, made by one-third of the Members entitled to vote in any General Meeting, proceed to call an Extra-Ordinary General Meeting in accordance with the provisions contained in the Act.
 - ii. If the meeting is called upon requisition by Members and there is no quorum within half an hour from the appointed time of the meeting, the meeting shall stand dissolved.
 - iii. All items of business to be transacted at the General Meeting shall be deemed as Ordinary and the provisions of section 102 of the Companies Act, 2013 shall not apply.
12. **Investments out of the General reserves**
Investments out of the General reserves shall be made in accordance with the provisions of Act and Rules framed there under from time to time.

13. **Bonus Shares**
The Company may, upon recommendation of the Board and passing of resolution in the General Meeting, issue bonus shares by capitalization of amounts from General reserves in proportion to the shares held by the Members on the date of the issue of such shares.
14. **Amalgamation, Merger and Division**
As provided under the provisions of the Act, the Company by a resolution passed at its General Meeting may decide to transfer its assets and liabilities, in whole or in part, to any other Producer Company, to divide itself into two or more new Producer Companies, to amalgamate and form a new Producer Company, or to merge with any other Producer Company.
15. **Loans and advances etc. to the Members and to any Director or his relative**
- 15.1 Subject to the provisions of the Act, the Board may provide financial assistance to the Members by way of (a) credit facility, to any Member, in connection with the business of the Company; (b) loans and advances, with or without security to any Member.
- 15.2 Any loan or advance to any Director of the Company or his/her relative shall be granted only after the approval by the Members at a General meeting.
16. **Investment in other companies, formation of subsidiaries, etc.**
Subject to the provisions of the Act, the Company by previous approval of Members at its General meeting, may make investments and dispose of any such investments in other companies, enter into partnership, agreement or arrangement with any person or body corporate whether by way of formation of subsidiary company, joint venture, partnership, or in any other manner, and to promote any other company or companies including Producer Company or Companies, for the purpose of promoting and consistent with the objects of the Company.
17. **Internal Audit**
The Company shall have internal audit of its accounts carried out at such interval and in such manner as may be decided by the Board.
18. **Books of account**
The books of account shall be kept at the Registered office of the Company in accordance with and as provided under the provisions of the Act. If the Company has any branch office, the books of accounts shall be kept as per the provisions of the Act applicable for keeping the books of accounts of branch office.
19. **Common Seal**
- 19.1 The Board shall provide for the safe custody of the common seal, if any.
- 19.2 The common seal of the company shall not be affixed to any instrument except by the authority of a resolution of the Board or of a committee of the Board authorized by it in that behalf, and except in the presence of at least two directors and of the secretary or such other person as the Board may appoint for the purpose; and those two directors and the secretary or other person aforesaid shall sign every instrument to which the common seal of the company is so affixed in their presence.

19.3 All deeds, agreements, instruments, letters, bonds, affidavits, declaration, indemnities, power of attorney and other documents of any nature whatsoever entered into by the Company shall be executed by such person(s) duly authorised by the Board or the Committee thereof.

20 **Secrecy Clause**

20.1 Every Director, Chief Executive, Officer, manager, secretary, trustee, Member of a committee, servant, agent, accountant or any other person employed in the business of the Company shall observe strict secrecy respecting all transactions of the Company except when required so to do by a Court of Law and except so far as may be necessary in order to comply with any of the provisions contained in the Articles.

20.2 No Member shall be entitled to inspect the Company's books or will be given any confidential information relating to the business of the Company without the permission of the Board of Directors of the Company.

21. Resolution of Disputes

Any dispute relating to the formation, management or business of the Company as provided under the provisions of the Act shall be settled by conciliation or by arbitration as provided under the Arbitration and Conciliation Act, 1996, and the decision of the arbitrator on the dispute shall be final.

Annexure II – Case Studies referenced in the document

ARANYAK MAHILA AGRI PRODUCERS COMPANY

Amrita Dhiman | E N Reddy | Sridhar Telidevera | K V Raju

Abstract

The districts of Khagaria, Madhepura and Purnea in the north east of Bihar are major producers of rabi maize crop but they are at the mercy of market intermediaries like village traders and commission agents when it comes to marketing their produce. Keen on taking the focus of Self Help Groups (SHGs) beyond member savings and internal loaning with bank linkages, the Bihar Rural Livelihoods Promotion Society (BRLPS)/JEEVIKA decided to form Producer Groups (PGs) in these districts. To demonstrate the increased returns to farmers through produce aggregation and collective marketing, a pilot project was started in Purnea district through the registered Producer Company “Aranyak Agri Producer Company Limited” (AAPCL).

In documenting the business model, the study team has adopted a modified Customer Value Proposition (CVP) Business Model that emphasises four elements, namely: a value proposition that fulfils an important need for the customer in a better way than competitors’ offerings do; a profit formula that lays out how the venture makes money while delivering the value proposition; the key resources; and key processes needed to deliver that proposition. The study maps the maize value chain from the seed production and supply agencies, suppliers of other key production inputs, producer farmers, local grain traders and brokers, wholesalers, commodity exchanges, and to end-use buyers.

An important finding of the study was that the formation of the PGs and the AAPCL has impacted the entire maize value chain by way of reduced cost of cultivation, dilution of lock-in of the farm output to local trader who traditionally supplied farm inputs on credit; and a better price realisation which was 20% higher than what had been realised in previous years from sales to local traders and mandi sales. The benefits to the members have led to an increase in the maize procurement by the AAPCL from 10,060 quintals in the first year of its operation (2014-15) to 30,348 quintals in the following year and both the number of PGs and the scale of procurement by the AAPCL are expected to grow in the coming years with improved livelihood support to the farmers participating in the project.

1.0 Introduction

1.1 Maize Intervention of Bihar Rural Livelihood Promotion Society (BRLPS)

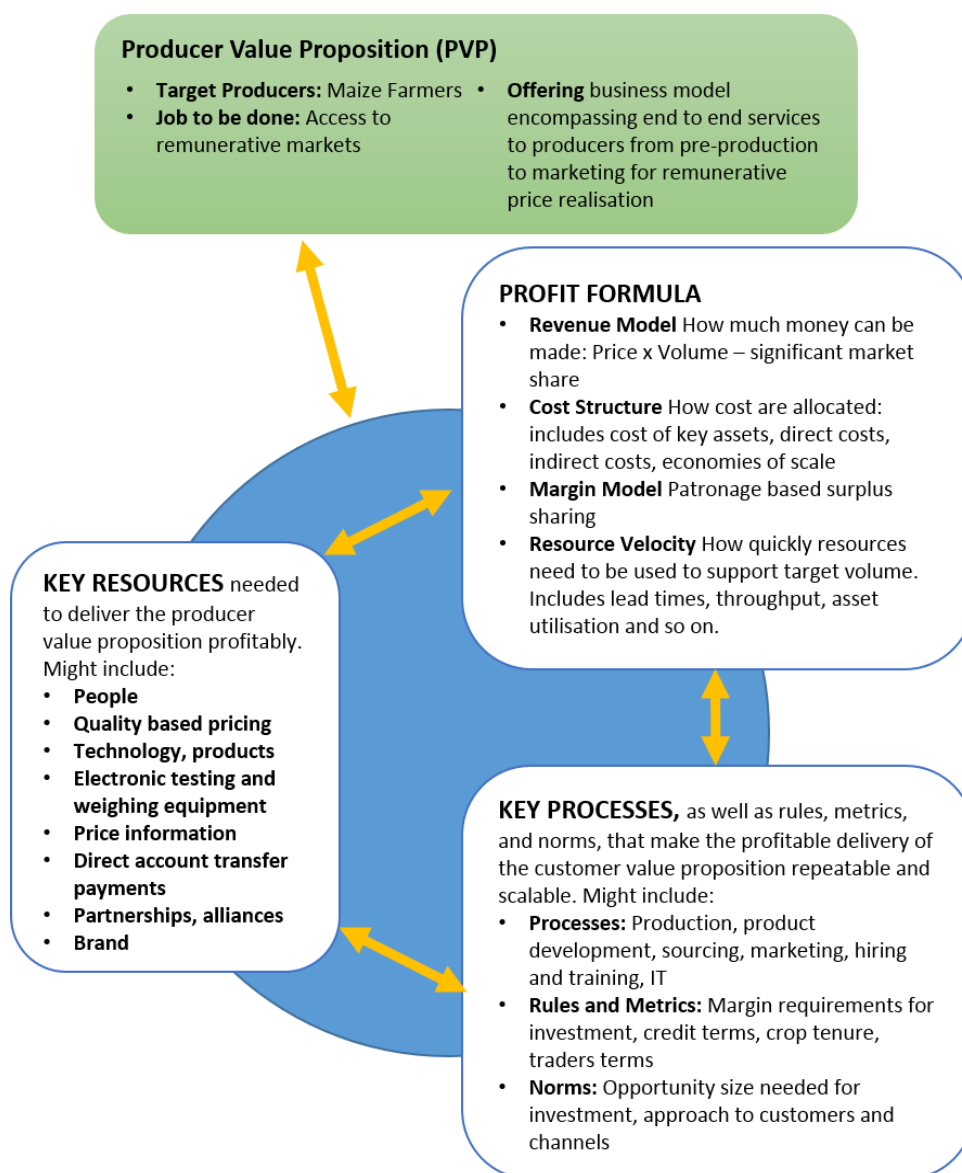
BRLPS/JEEVIKA is an autonomous society functioning under the Department of Rural Development, Government of Bihar, with the mandate of implementing the activities of State Rural Livelihoods Mission. In order to improve the livelihoods of rural poor, JEEVIKA has built a strong base of community institutions in the form of women Self-Help Groups (SHGs) and federated them into Village Organisations (VOs) and Cluster Level Federations (CLFs), which has brought more than one million households into this network. While these grassroot-level institutions have



mainly focused on member savings and internal loaning along with bank linkages; in order to improve returns from farm based/non-farm based economic activities, it is necessary to increase their productivity and create appropriate market linkages. Towards realising this objective, the project therefore formed Producer Groups (PGs) comprising of 40-120 producers related to paddy, wheat, maize, pulses, vegetables, etc. It was expected that members of Producer Groups would be able to participate better in the value chain and reap benefits on account of lower input costs due to economies of scale, strength of collective bargaining, and better returns due to produce aggregation and gaining access to efficient and sustainable markets. Thus, with an aim to demonstrate the increased returns to farmers through produce aggregation and collective marketing, a pilot project was started in Purnea district through the already-registered Producer Company “Aranyak Agri Producer Company Limited” (AAPCL).

2. The Customer Value Proposition

The study team adopted the Customer Value Proposition (CVP) Business Model articulated in “Reinventing your Business Model”, by Johnson, M. W., Christensen, C. M., & Kagermann, H. Harvard Business Review, 50–60 (2008) with a **producer centric perspective**. The underlying assumption is that successful ventures already operate according to a business model that can be broken down into four elements: a *customer value proposition* that fulfils an important job for the customer in a better way than competitors’ offerings do; a *profit formula* that lays out how the venture makes money delivering the value proposition; and the *key resources* needed to deliver that proposition. **Picture: Pro-Producer Value Proposition Business Model**



2. Aranyak Agri Producer Company Limited

2.1 Genesis

Aranyak Agri Producer Company Limited (AAPCL) is a federation, promoted by the Bihar Rural livelihood Project (a poverty alleviation project of Government of Bihar), of small & marginal women farmers organised into Producer Groups (PGs) and individual farmers.

The company was incorporated in the month of Nov' 2009 with its registered office at Purnea. The Producer Company has an authorised share capital of Rs. 5 Lakh and it was able to initially mobilise a paid up share capital of Rs. 1 lakh by issuing 20 shares each (with a face value of Rs.10/-) to 500 families. The present membership of the company is 2,465.

The vision of AAPCL is to improve rural livelihoods, especially of poor, small and marginal women farmers through income enhancement by establishing their self-governed, sustainable & efficient backward & forward support systems. To fulfil its vision, it has also spelled out a comprehensive mission statement, whereby it is working towards "enhancing productivity & net returns of shareholders (small and marginal women farmers) by developing market-led production system & enable farmers' and their institution to flourish independently in the competitive agribusiness environment."

The foremost long-term business goal of AAPCL is to be a successful and viable farmers' institution in order to:

- Fulfil the needs of small & marginal women farmers by timely supply of all major, quality agricultural inputs like good seeds, fertilisers, pesticide, farm machineries, farm tools & others with competitive price to all shareholders.
- Provide support to the members for better marketing of their produce, having shareholders of minimum 2500 farmers along with coverage of 40% of SHG members.

Thus, the objectives of the producer company may be spelled out as under:

1. Production, procurement, processing, packing, storage, marketing, selling, distribution and trading of all Agriculture commodities.
2. Production, Procurement Processing, Storage and marketing of Vermi compost.
3. Supply of agriculture inputs like quality seeds, compost, chemical fertilisers, pesticides and farm machineries & farm equipment to support the good agriculture production in time and with appropriate price.
4. Extension activities relevant for effective and efficient agribusiness management at farm level and providing consultancy services to both shareholders and other interested farmers for profitable agri-business ventures.

Thus, AAPCL was formed by JEEVIKA to improve the livelihoods of women farmers of Purnea district. The Maize producers groups were formed out from already members of SHGs promoted by JEEVIKA and thus were aware of the benefits joining community-based institutions. In the initial years the PC played a very limited role like promotion of usage and supply of Vermi compost and other agri-inputs and suffered losses and almost became dormant.

During the year 2014, a **baseline survey** was conducted by JEEVIKA and Technoserve, an international not-for-profit organisation, among 20 PGs to understand the Maize cultivation and marketing practices, i.e. average area under cultivation, source of inputs, cost of production, average production and productivity, marketable surplus, marketing channels and price realisation, etc. The base line survey clearly established that the Maize producers have no access to modern agricultural practices and they have been selling their produce mostly at the village level itself to local traders. The producer members of PGs and Aranyak PC had no access to modern, fair marketing channels. JEEVIKA in partnership with Technoserve, decided to undertake a pilot in Dhamdaha block of Purnea to demonstrate the possibility of increased returns through Maize aggregation and collective marketing through the farmer producer organisations (PGs and PC).

In order to ensure better prices to maize producers the pilot aimed at:

- Establishing a transparent, scientific price discovery mechanism on a daily basis by factoring the prices of local/village trader and prices prevailing in Gulab Bagh mandi and NCDEX.
- Adopting modern, fair electronic weighing systems as against the manual weighing practices adopted by the village trader.
- Adoption of fair grading practices for determining the grade of Maize (A,B or C) by using digital moisture meter and scientific grading chart, as against the manual grading process followed by the local trader which is highly subjective
- Implementing timely, transparent payment system by crediting the amounts in farmer member's bank account directly within a maximum period of 5 days.
- Eliminating multiple market intermediaries like village level trader, commission agent and large trader at Gulab Bagh mandi among others, before the produce is sold to institutional buyers.

Based on the baseline survey, ten most potential PGs have been selected by the Producer Company for the Maize aggregation and market linkage operations during 2014-15. The coverage of PGs has been increased to 27 in the next year (2015-16).

2.2 Price Realisation

Though the maize yield of Purnea at 35-40 quintals per acre is high, the producer group members expressed that break even for a farmer happens only if the maize production is greater than 30 quintals. The harvest prices realised by the farmers in the state as well as the district are lower than the minimum support price (MSP) of Rs.1325 per quintal, despite the fact that Rabi maize produced in the area has fetched a very good price in the Asian markets.

Main reasons for lower price are:

- Absence of an effective agricultural produce marketing mechanism,
- Lack of proper drying facilities, high costs of tarpaulins and insufficient storage space
- Credit linked sale - farmers borrow necessary working capital from local traders and thus forced to sell their produce to the local trader
- High logistics cost of transporting maize to local mandi



2.3 Buying Practices of Local Traders

The local traders may, at times, purchase the produce at a higher price than the existing market price but incorrect weighing and grading practices adopted by them fetch a lower price. The members felt that the loss on account of unfair practices is as high as 5 kg per quintal. The percentage of members who borrow from the local traders is around 75% of the total producer group members.

2.4 Availability of Labour

The availability of agricultural labour in the region is not a problem as the household members who migrate on seasonal basis return home at the time of sowing and harvest of the crop. The agriculture labour is paid in either in kind or cash. The labour costs for male and female are Rs 200 and Rs 100 per day with lunch being an added benefit. However, the PC is experiencing difficulty in finding labour for collecting the produce and to transport the produce. Due to uncertainty in the collection quantities on any given day, some days the procurement team and labour either remain idle or have too much on demand to do. Labour and transport vehicles are engaged on throughout the season contract on substantial fixed plus little variable payments basis.

Picture: Grain moisture measured by moisture meter and manually by traders



Source: Field survey in Bihar grain market, 2016

2.5 Members Expectations

The members expressed the need for development of complete package of services including supply of inputs like seed, fertiliser, pesticides and working capital for crop production. They were in complete agreement that collectivisation has given them an advantage in the market and the necessary backward linkages can decrease the input costs into production and free them from 'credit linked-sales' to the local traders on whom many of them are dependent for inputs including seeds and fertilisers on credit. They desire that PC obtain dealership license for fertiliser and pesticides



supply so that the same can be made available at lower prices to members. Similarly, they discussed the advantages of having own seed production plan and processing unit or a tie-up with key seed manufacturing companies.

The members as well as the directors of the company stressed on the importance of mobilising savings to meet capital requirements for setting up feed industry as part of developing forward linkages as it adds more value to the production process. The directors of the company and some of the members of the producer group have visited model collectives in places like Mulukanoor in Telangana state to study, understand and strive for implementing integrated value chain in their company. Further to the visits the promoting institutions have developed training material and provided the members with appropriate training in good practices for maize cultivation.

2.6 Operations of PC

The overall quantity available for procurement from producer groups is approximately estimated to be 30,000 tonnes and in the year 2016-17. PC has procured 3100 MT up to June 18, 2016. The reasons for lower procurement quantity are lock-in with traders who supplied inputs on credit, PC's access to limited working capital, and members' strategy to sell to the PC when the prices are higher. The members of Producer Groups have gained sufficient market insights as to when to sell their produce so that it fetches a higher price. The spot prices are announced every day and the members decide whether to sell the produce or not on that day.

2.7 Member Participation in Producer Company's Commercial Operations

The Aranyak Agri Producer Company started its Maize procurement activities during FY 2014-15 with 10 Producer Groups (PGs) spread over two clusters viz., Amari and Meerganj. During the year, a total quantity of 10060 quintals was procured from 243 members spread over 10 PGs. Thus in the initial year 9.78% of total membership of 2485 participated in the commercial operations.

On an average each member contributed to 41.40 qtls. of Maize at an average realisation of Rs.1008/- per quintal. Additionally members were paid a patronage bonus of Rs.50/- per qtl. The supply of Maize from different PGs ranged from 372 qtls (Dhanteras PG) to 1709 qtls. (Khushiali PG).

During the second year, Maize aggregation from PGs registered a substantial increase of around 202%, from 10,060 qtls to 30,348 qtls. Simultaneously, the farmer member participation in the procurement also showed a significant jump with a total of 817 members from 27 PGs (32.88 % of total membership) contributing to the procurement, at an average of 42 qtls. Members realised an average price of Rs.1,149/- per qtl. As the PC is yet to make patronage bonus payment ,assuming that same level of Bonus payment would be made during second year, the average realisation works out to y Rs.1200/- per quintal (approx.), an increase of over 13% .

It is significant to note that there has been no increase in per member contribution (around 42 qtls.) indicating that higher procurement could be made due to an increase in number of PGs. The PC needs to take up intensive member awareness programme to encourage members to trade a maximum share of their produce through PC.

An analysis of performance of different PGs which participated in Maize aggregation during both 2014-15 and 2015-16 reveals that a majority (7 out of 10) of the PGs have either maintained or improved their contribution, implying members confidence in the collective enterprise. However, in case of Khushiali PG and Dhanteras PG there has been a sharp decline in procurement. While Khushiali PG, which made handsome procurement of 1,710 quintals in 2014-15 made a poor procurement of only 907 quintals in the following year, in case of Dhanteras PG the performance has been even more disappointing with a procurement of only 118 qtls in the second year as compared to 372 qtls made during the first year. In case of Dhansahyog PG, there has been a marginal decline in procurement; against a first year procurement of 1,287 qtls the PG procured 1,214 qtls in the next year. The Producer Company needs to look in to the reasons for this reduction in procurement and take necessary remedial measures to build members confidence in the system. The Producer Group wise procurement details are given at Annexure.

3.0 Profit Formula

3.1 Revenue Model

The Revenue model adopted by the Producer Company envisaged realisation of best possible price by selling the same to national level institutional traders rather than local traders. For this purpose, the PC has partnered with NCDEX e-Markets Limited (NeML) and also hired a NeML/NCDEX accredited warehouse for storing the material to enable off season sale for better price realisation.

In the initial year of operations a total of 1006 MT could be procured from 279 farmer members spread over 10 PGs. The PC sold 290 MT through the electronic platform of NCDEX (spot basis), at an average sale realisation of Rs. 1132/-per quintal while 490 MT was sold through NCDEX Forward sale, at an average realisation of Rs.1440/-per quintal. The PC also sold around 118 MT of A grade material in the open market with a price realisation of Rs.1152/-per quintal. The balance quantity being B and C grade quality was also sold in the local Gulab Bagh mandi at an average realisation of Rs.1044/quintal. Thus it may be seen that sale through Forward trading has fetched a 20% higher price realisation in comparison to spot sales and local mandi sales. Going forward the PC should put suitable infrastructure like accredited warehouses and grading & material handling systems and risk mitigation measures in place to participate in spot and futures trading through electronic trading.

3.2 Cost Structure

Considering the fact that agri commodity markets operate on very thin margins the PC aims at reducing the cost by achieving higher volumes in the future years. At present the PC is not having significant manpower costs and other overheads as the CEO and other key managerial and field level staff are on deputation from JEEVIKA. However, once the operations stabilise the PC has to plan to recruit these personnel and other staff.

3.3 Working Capital Arrangements for Business

Each Producer Group has been given a onetime support of Rs.6.10 lakhs by JEEVIKA, Rs.1.10 lakhs towards establishment cost for purchase of electronic weighing equipment, tarpaulin, moisture meter, registers etc., and balance Rs.5.00 lakhs as revolving fund for business. For the first year of operations 10 PGs have deployed an amount of Rs.50 lakhs towards working capital; further, an amount of Rs.10 lakhs was provided as loan by Cluster Level Federation (CLF) @0.6% interest per month i.e 7.2% per annum. For the current year the PC has been successful in sourcing an amount of Rs. 100 lakhs from State Bank of India, Rs.50 lakhs from Friends of Women World Banking (FWWB), Ahmedabad, besides using internal resources of Rs.2 crores from PGs and CLF.

3.4 Price Realisation by Producer Members

During the first year of operations the members realised an average price of Rs.1008/- per quintal besides an assured Patronage Bonus of Rs. 50/- per quintal. This is an increase of 10.55 % as compared to the sale realisation of Rs. 957/-per quintal, when produce was sold to local trader.

4.0 Key Resources**4.1 People**

The company has a 5 member Board which is responsible for the overall decision making and governance. The Board appoints a Chief Executive Officer, an officer on deputation from JEEVIKA, for managing the affairs of company. The CEO is assisted by an Accountant and other Field staff involved in supporting the PGs in the areas of commercial operations and agriculture extension activities. The COO post has not been filled up yet. At present the Producer Company has very limited staff on its rolls. However, JEEVIKA, the promoting agency has provided senior and middle level managers on deputation basis.

4.2 Technology, Equipment

At each of the maize collection centres, the PC has provided electronic weighing equipment for proper weighing, digital moisture meters for moisture testing, tarpaulin, set of basic registers, etc. Furthermore, the Village Resource Person (VRP), Extension workers and Women producers have been trained in moisture testing, grading and weightment methods, which has instilled confidence among the members in the new system owing to its transparency. The members can now understand the exploitative practices of local traders. Moreover, every morning the Price Discovery Team- i.e. team of officials of PC, JEEVIKA and Technoserve- collect prices offered by the local trade, Prices of Gulab Bagh Mandi; and after factoring in the expenses involved in weightment, loading and unloading and final deliver at the warehouse, warehouse rentals, gunny bag expenses, etc. arrive at a procurement price, which is communicated immediately to all VRPs and women producers through SMSes.

4.3 Alliances, Partnerships

The JEEVIKA forged an important alliance with Technoserve in its effort to take up the maize aggregation and collective marketing at Purnea. Bill and Melinda Gates Foundation has funded a project to provide technical assistance for developing and supporting Producer Organizations, through which Technoserve is able to support the pilot project at Purnea.

Another important partnership of JEEVIKA/PC is with NCDEX e Markets (NeML) and NCDEX. The reason Aranyak Agri Producer Company has taken membership of these national level commodity trading organisations so that the producers will have access to the best possible, transparent marketing channels and vast network of buyers trading on these electronic platforms. The membership enables the Producer Company to trade Maize in both spot markets

as well as Futures markets. The company also entered into an agreement with StarAgri Warehousing and Collateral Management Limited which is an established name in warehouse management. The NeML accredited warehouse hired by the company at Gulab Bagh Mandi is managed by M/s Star Agri. As per the arrangement M/S Star Agri is responsible for safe keeping of material stored, undertaking periodical fumigation and other quality assurance measures and receipt and delivery of material stocked.

4.4 Brand

The Producer Company is yet to take up serious brand building exercise as currently it is focusing on bulk trading through electronic platforms of NeML and NCDEX. However, it is heartening to note that even on electronic trade channels the “JEEVIKA Maize” sold by Aranyak Agri Producer Company generates more interest and possibly higher price due to its better quality.

4.5 Information

The company, through a daily price discovery mechanism ensured that the members receive market prices on a daily basis, through Short Messaging Service (SMS). This had a very positive effect as the members felt confident about the transparent and scientific process. An unintended positive effect of this has been that the private trader also many a time is compelled to raise the price and offer even slightly better price.

4.6 Key Processes

The entire business model and process flow has been systematically mapped and documented to avoid communication gaps amongst the stakeholders. Realising the need for accurate information flow across the organisation and also among the stake holders, ICT has been given great thrust. The factors considered for daily price discovery are communicated through SMS on mobile, covering the grading norms, charges applicable for various services like weighing, loading/unloading transportation.

5.0 LESSONS

- Maize trading is influenced by domestic/international supply and demand conditions. Maize, besides being an important food crop, has several industrial/pharmaceutical applications. In view of this high price volatility is observed in the bulk prices. In the Indian context, as most of the Maize is grown in Kharif season, there is also a production risk leading to price volatility. Since the markets are getting increasingly integrated, through national electronic trading platforms, it is safe to assume that going forward there will be a business risk for Maize as a commodity trading.
- In order to manage the trading risk in futures markets the company must go for hedging. Further, to mitigate high level of commodity trading risk, the Producer Company should explore the opportunities to enter value added products like poultry feed manufacturing, for which captive market from JEEVIKA promoted poultry ventures would be available.
- The company should also enter in a long-term arrangement with well designed, modern warehouses accredited by NCDEX so that there is no uncertainty for storage for undertaking futures trading.
- The day-to-day and month-to-month maize price fluctuations are reasonably high and so the bonus payment system should account for both quantity sold by and prices paid to members.
- It was suggested to the Board members that the PC could consider batch wise weighted average procurement price as basis for deciding on the patronage bonus in order to even out the price fluctuations. The producer members and Board members realised the importance of such a practice as it encourages farmers to sell their

produce to the company in a predictable manner. The farmers could set a particular calendar date for the material pickup without any concern for price fluctuations and doing so would also optimise their procurement costs related to logistics. This would enable the company to optimally utilise their collection vehicles by designing the collection routes and scheduling the pickup times for material pick up as against traveling in random directions not knowing early which farmer would be interested in selling on a particular day. The latter practice lead to delay in pickups and farmers selling their produce to local traders.

- For implementing an effective input supply system it is suggested that at the beginning of the sowing season, the quantity requirements of key inputs for different members may be taken with some advance payment (say 25% of cost) so that the farmers are committed to purchasing quantities that they have indented. This would also partially meet the working capital requirement.
- Another important backward linkage to enhance quality of maize is to adopt maize drying technology that uses skinned maize cobs as fuel. It is capital intensive and members felt that they can adopt this technology after mobilising more savings. However, the optimal size of the dryer and its location are important parameters that need to be considered at the time of design.

SHREEJA MAHILA MILK PRODUCERS COMPANY

Srinivas Chekuri

Abstract

Chittoor district is known for its impressive livestock population and rearing milch animals is a household enterprise for majority of the small farmers in the district. The Chittoor District Milk Producers Union Ltd., popularly known as the "Chittoor Dairy" was established in 1969 with 6000 litres processing capacity per day which went up to 2.5 lakh litres per day (LPD) in 1989-1990. Due to slump in the prices of milk powder, the dairy could not pay the farmers for the milk procured from them and as the losses mounted up, the unit finally shut down its operations on 31-08-2002. At the same time, a number of private dairies came up following liberalisation of the economy and their number in the district increased from 16 to 37 between 2000 and 2005. Due to a prolonged drought and consequent crop failures, more farmers started keeping cows for their livelihoods and were selling the milk to private dairies. As the Chittoor Dairy remained sick, the private dairies grouped into a syndicate and began exploiting the milk producers without enhancing the milk price till 2005. The milk producers got vexed and approached the district authorities -the District Collector and the District Rural Development Agency (DRDA) seeking help to get a remunerative price for their milk. The district authorities in turn sought intervention of the National Dairy Development Board (NDDB), which established the Shreeja Mahila Milk Producers Company Limited (SMMPCL) as part of its National Dairy Plan- Phase One. The SMMPCL operates across Chittoor and adjoining Anantapur districts of AP.

In order to help women members of the Self Help Groups (SHGs), DRDA came forward to establish Bulk Milk Cooling Centers (BMCUs) in the district, managed by Mandal Mahila Samakhyas (MMS) to enable timely chilling of the milk at the production clusters itself to prevent spoilage of milk. By the end of March 2016, a total of 116 BMCUs were established in the district by DRDA, each with a daily milk chilling capacity between 3000 and 5000 litres. The BMCUs procured milk from the village-level Milk Pooling Points (MPPs) and chilled the milk to 4 degree Centigrade before supplying to the Balaji Dairy, a subsidiary of Mother Dairy, promoted by NDDB. The SMMPCL also has its own retail network for marketing liquid milk under its own 'Shreeja' brand and only the excess milk is transferred to Balaji Dairy. A total of 56,640 women milk producers have benefited from SMMPCL's milk procurement and marketing, covering the dairy value chain from production to milk chilling and retailing as well as making bulk supplies of milk for higher value-added processing at the Mother Dairy Unit- Balaji Dairy.

Each of the 2200 MPPs that facilitate primary milk collection are managed by a member of the SHG who is designated as 'Palamitra' (Dairy Friend) and these functionaries are trained to operate the fully automated weighing and quality testing equipment for determining fat and SNF content in the milk, based on which price to be paid to the milk producers is decided. Besides supporting the livelihood of the SHG members, who earn Rs. 57 per day per lactating cow, the SMMPCL makes a margin of Rs. 2 per litre of milk supplied to the Balaji Dairy and a much higher margin on the milk directly marketed by the Producer Company. The daily procurement is already at a level of 2,57,000 LPD, which works out to an average of 4.50 LPD per member

1.0 Genesis of Shreeja MMPCL

National Dairy Plan Phase I (NDP I) is a Central Sector Project for a period of 2011-19 to promote “Mission Milk”-The Next Revolution. NDP I focus on 18 major milk producing states which account for over 90% of the country’s milk production and Andhra Pradesh is one among them.

Under the NDP Phase I, the World Bank is supporting NDDB with the objectives of a) Increase productivity of milch animals to increase milk production to meet the rapidly growing demand for milk, and b) to help provide rural milk producers with greater access to organized milk- processing sector.

Therefore, NDDB initiated promoting 5 Producers Companies in various parts of the country under NDP Phase I. Shreeja MMPCL is one among these 5 companies incubated by NDDB and facilitated through NDDB Dairy Services (NDS) which is a technical service provider.

Shreeja MPC in AP was incorporated on 3rd July 2014. The MPC began its operations from 15th Sept 2014.



Project Area (Districts) : Chittoor and Anantapur

1.1 Structure

- A. Producer Member: A woman who wishes to become a member should possess milch cattle producing milk and make a payment of ₹50 towards admission fee and ₹1/litre towards share capital. She must supply minimum 500 litres of milk for at least 200 days in a year and acquire minimum of 5 shares of each ₹100 face value. Based on patronage, producer members are categorised into 3 classes, which translates into member’s representational privileges in the composition of Board of Directors.
- B. Village Contact Group (VCG): VCGs are formed - with 3 to 7 producer members - at the village level to strengthen relationships and the flow of information between the company and its members, and further encourage and enrol new members.
- C. Member Relation Group (MRG): MRGs are apex bodies, formed with members of VCGs covering 10 to 12 MPPs, with a membership tenure of 1 year.
- D. Board of Directors (BOD): The company is governed by a board consisting of persons elected or appointed as directors with at least five and not more than fifteen directors.
- E. Shreeja MMPCL Staff: Shreeja employs 266 managerial, technical and field support staff deployed at various levels to supervise, coordinate and manage its activities.

1.2 Business Activity and Coverage

Shreeja MMPCL is involved in milk procurement, purchase, processing, and sales; and is directly engaged in selling milk products in order to optimise profits for its members. Shreeja procures milk through MPPs at village levels and chills to 4⁰ Centigrade at BMCUs. After chilling, the entire 2.57 lakh milk is transported to Balaji Dairy for further processing and value addition, out of which 13000 litres of milk per day is converted into dairy products, which is marketed by Shreeja under its own brand name. The balance milk is sold to Balaji Dairy.

1.3 Dairy Development Support Services

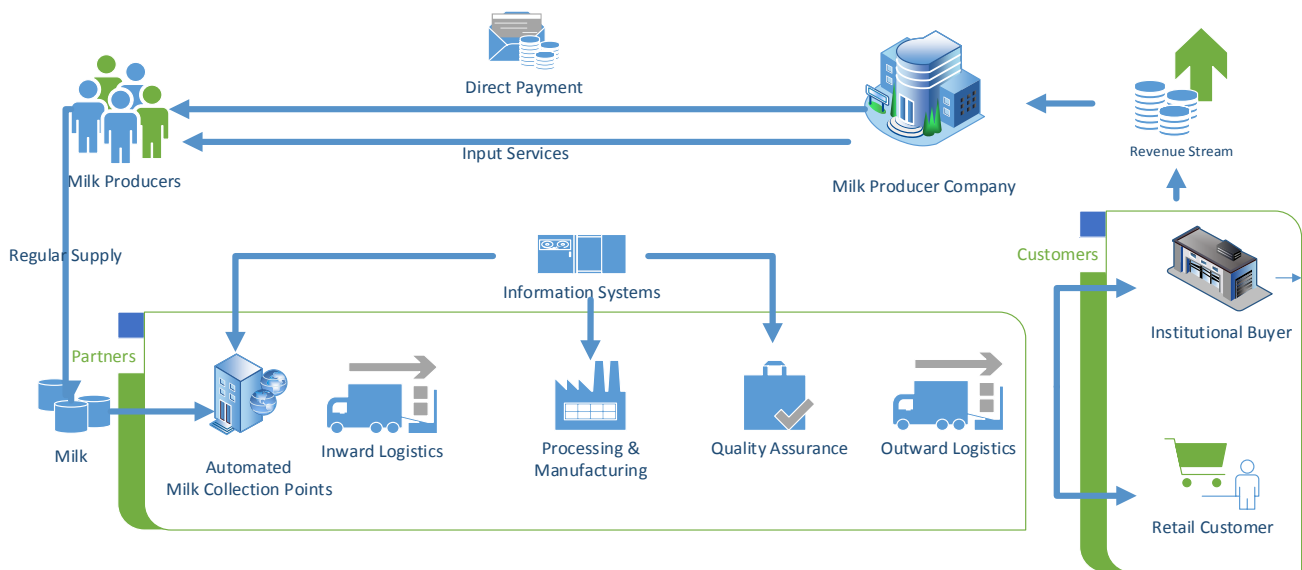
- A. Producer Institution Building (PIB): Under PIB, Shreeja organises and carries out various ‘member education’ programmes, such as: (i) member awareness programme, (ii) women awareness programme, (iii) quality and clean milk programme, and (iv) know your member programme.
- B. Ration Balancing Programme (RBP): Under RBP, Shreeja provides animal nutrition, feed, health, and artificial insemination services to member beneficiaries.

- C. Cattle Feed & Mineral Mixture Supply: Shreeja has tied up with Vallabh Feeds, Narsaraopeta to prepare cattle feed and mineral mixture, sold under the brand name of Shreeja.
- D. Kamdhenu: With a view to enhance milk procurement, the district administration (in convergence with the bankers and NABARD) provide a unique milch animal procurement programme.
- E. Pala Pragathi Kendras: In order to promote a new concept of community joint management of dairying activity, Shreeja established Pala Pragathi Kendra, which are a mini dairy model replicated for the poorest of the poor.

1.0 Business Model

Procurement, processing, value addition and trading of milk products are the core business activities of Shreeja MMPCL.

Business Model – Flow diagram



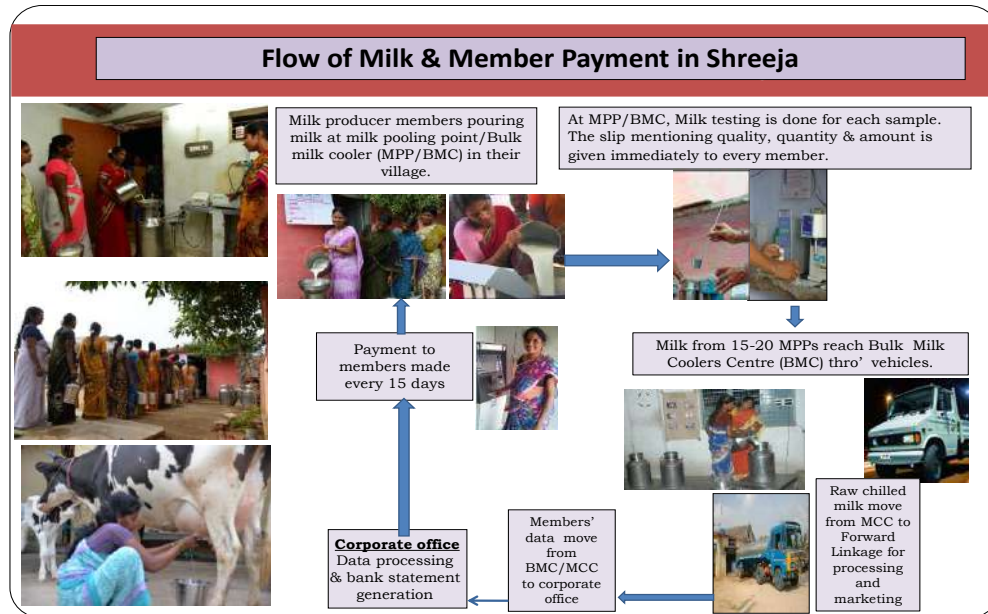
2.1 Milk Production System

Women milk producers are part of a well-defined production eco-system in Chitoor district, who are being enriched through the backward and forward support services as catalysed by DRDA and Shreeja. These Women SHG members, who are small and marginal rural farmers, are engaged in dairying for generating supplementary household income. These women would typically own a minimum of 2 or even more cows, with an average milk yield per day per cow as 6-7 litres. Direct costs involve - feed, mineral mixture and calcium supplements, green fodder and dry fodder. Indirect costs involve - interest on bank loans, shed cost, insurance, veterinary service, and other maintenance costs. Since it is a household endeavour, all family members contribute labour, which gives them a marginal profit over expenditure.



2.2 Milk Procurement System - Milk Pooling Points (MPPs)

There are 2200 MPPs set up at different villages from where milk is procured from members. These MPPs are strategically connected through 186 milk routes that lead to nearby cluster BMCUs in order to optimise operations. These MPPs are managed by a Pala Mitra, who too is a member of a local SHG group and ensure (a) cleanliness of the centre, (b) examination of the milk - taste and smell, (c) weighing of the milk, (d) milk testing (SNF and Fat content), (e) receipt generation, and (f) handover USB drive to transporter.



2.3 Milk Chilling System - Bulk Milk Cooling Units (BMCUs)

Raw milk procured at the MPPs are brought to 108 BMCUs, where they are cooled to 4⁰ C to prevent bacterial growth and ensure quality. Five women SHG members are employed for managing each BMCU, who are paid on per litre basis. After cooling, the milk is transported in special containers to the central processing plant at Balaji Dairy, Tirupati for further processing. The cost of the transportation is borne by Shreeja MMPCL.

2.4 Milk Processing & Value Addition System

All of the 2.57 lakh litres of chilled milk is brought to Balaji Dairy for further processing and value addition, out of which 13000 litres per day is converted to 200 ml and 500 ml polypacks, which are sold under the Shreeja brand name. The balance milk is sold to Balaji Dairy.

2.5 Milk Marketing System

Shreeja is striving towards establishing its own distribution and marketing network in Tirupati for the sale of its milk products. At present, its procurement share is 12% in the district, which it intends to increase by introducing a diversified product range and increase in the quantum of sales. It is furthermore trying to facilitate market linkages with institutional buyers such as TTD and Mondelez-Cadbury Company.



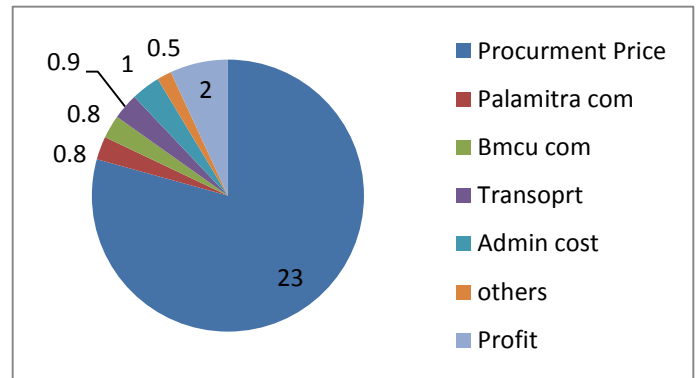
3.0 Economics of Operations

Shreeja’s current procurement is 2.57 LLPD average. Out of which 13000 LPD it directly markets as value added milk products and remaining 2. 44 LPD chilled milk it sells to Balaji Dairy.

A) Balaji Dairy buys unprocessed Milk / litre Milk @ 29/-

Litre Milk Costs & Profit (Sale Price @ Rs 29/-)

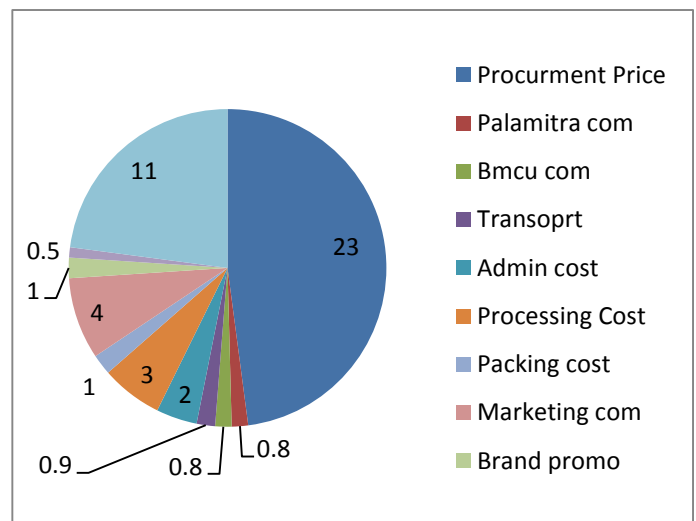
Procurement Price	23
Palamitra Com	0.8
Bmcu Com	0.8
Transport	0.9
Admin Cost	1
Others	0.5
Profit	2



Hence Rs. 2/- margin is generated through selling procured and chilled unprocessed milk to Balaji Dairy per litre by Shreeja MMPCL.

B) Direct Sale of Processed & Packed Milk / litre Full Cream Milk @ 48/-

Procurement Price	23
Palamitra Com	0.8
Bmcu Com	0.8
Transport	0.9
Admin Cost	2
Processing Cost	3
Packing Cost	1
Marketing Com	4
Brand Promo	1
Others	0.5
Profit	11



Rs. 11/- profit is generated through direct sale of value added milk per litre. Now only 13000 LPD milk is sold by Shreeja MMPCL.

4.0 Significance

Despite the fact that Shreeja MMPCL started its procurement operations in the district less than 2 years ago, it has made impressive strides in the growth of the dairy business which is evident from the fact that its membership numbers have increased to 56,640 members with an average per day procurement of 2.57 LLPD. Its per member average milk supply is @5.6 litre and share capital generated is 5.9 crores. Shreeja aims to reach 78,000 milk producers with a procurement capacity of 4 LLPD by 2017-18 to become the top 10 dairies in the country.

5.0 Lessons

The following lessons emerge from this study for business models for livelihoods promotions:

Marketing

- Brand stabilisation efforts in order to distinguish it from the Mother Dairy brand.
- Linkages with institutional buyers for facilitating direct sales.
- Market expansion to neighbouring markets.
- Increased milk sales through direct marketing.

Integration

- Establishment of own Feed Manufacturing plants.
- Strengthening of production enhancement.
- Full capacity utilisation of BMCUs and other outsourced facilities.

Participation

- Enhancing member participation, capital contribution and involvement.

3

Creating Inclusive Poultry Value Chains: The Kesla Cooperative Model¹

Introduction

PRADAN is a public service organization that promotes rural livelihoods in the poverty stricken region of central India² – home to the largest concentration of global poor.³ PRADAN focuses its attention on three main areas, namely, creation and enhancement of livelihoods, the integrated development of natural resources, and rural enterprises.

This case describes PRADAN's intervention to enhance income from backyard poultry in Kesla block. Efforts initiated in 1992 have led to the establishment of a model for small holder broiler farming, which is being replicated in other states such as Jharkhand, Chhattisgarh and Orissa. By April 2008, PRADAN was working with 5,306 women broiler-farmers, organized into 15 cooperatives, and one producers' company, with a collective turnover of about Rs 400 million. This is the largest conglomeration of small-holder poultry farmers in India.

Background and Context of Intervention

Profile of the area

Kesla is a tribal block in the otherwise prosperous district of Hoshangabad in Madhya Pradesh. About 44% of the population of Kesla are tribal and 13% are scheduled castes. The poultry project is concentrated in the southern part of the block, where nearly 80% of the population is tribal. Typically, a tribal family in the area earns about Rs 15,000–18,000 per year, one-third of which comes from rainfed agriculture with low productivity, another third from the collection of minor forest produce, and the rest from wage earnings. Most of the budgets of the target households are in deficit; hence, they tend to reduce consumption, and forward sell the expected produce from agriculture and forests.

Home-based Fowl Rearing in Kesla

Rearing of country fowl is popular among poor households. A household typically keeps ten to fifteen fowls, which survive mainly by scavenging on household waste. This activity — backyard country fowl rearing — uses very little of family resources,

labour or cash, and provides Rs 1,200–1,800 of income in a good year, mainly meeting requirements for emergency cash. In addition, the family gets some eggs for consumption. The activity also has social value. Poultry is reared for festive occasions, ceremonial purposes, celebration, and as game. Chicken is regarded as a special delicacy with which one may honour one's guests.

Usually, the women in the household take care of the flock. The tribal households make no efforts to improve the quality of the breed or the flock. Stockbreeding is left to chance; no selective breeding is practised. Inbreeding is common, leading to diminished performance. Veterinary advice is generally not available. Indigenous medicines are sometimes used for known diseases and injury. Less than 5% of the households have built dedicated pens for their flock; usually the flock shares the owner's home.

Birds attain the weight of 800-900 gm in six to seven months. The birds, on an average, lay 30 to 50 eggs a year in three batches of 10 to 20 eggs each. Though hatchability is high at around 70-80%, the rate of chick mortality is high too at 40-60%. Survival rates across ages are low. During summer, due to disease outbreaks, the death rate is high; it is not uncommon for the entire flocks to be completely wiped out if a disease breaks out.



Poultry (broiler) industry in India

With India's economy rapidly expanding, growth in the broiler sub-sector is marked by a rising demand for animal protein. Poultry industry has been growing at the rate of 12% annually over the last decade. At present, the annual national consumption is 2.2 million tonnes. A CII-McKinsey report on the sector predicts that the demand for broilers will increase to 10 billion by 2015. The per capita annual chicken consumption in India is 850 gm, and in rural areas it is 350 gm against the world average of 9.5 kg. This shows that there is considerable scope for future growth.

Chicken is the first-choice meat for the non-vegetarian population because of its wide culinary adaptability to various Indian cuisines. On health grounds chicken being white meat is preferred over goat and lamb. Further, on religious grounds chicken is acceptable to both Hindus and Muslims.

The opportunity to achieve a double-digit annual growth rate in poultry industry has essentially been cornered by the large growers, and the lot of the small farms has been worsening. The latter's share in the total marketed production has dwindled from 55% in 1970 to less than 10% today. This process of concentration of production in the hands of big producers has also been aided by the failure of small growers to negotiate with the organized poultry industry, which is increasingly becoming market-oriented and vertically integrated.

Home-Based Broiler Farming Intervention

Key Elements of the Model

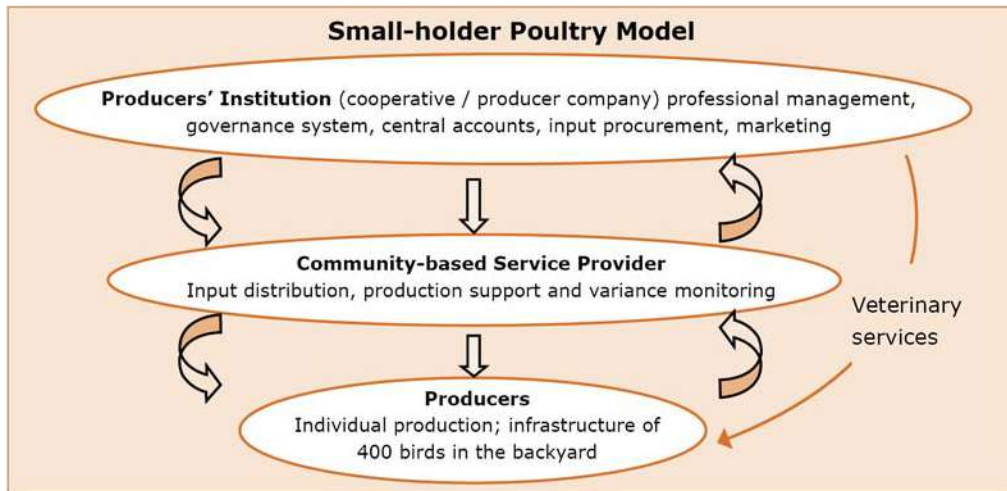
The home-based broiler poultry model, described in the following section, has demonstrated that it is possible for small farmers to participate in this growing industry. They have been able to match the efficiency of big farmers and organized integrators. Today, these producers constitute the largest commercial production houses in Madhya Pradesh and Jharkhand.

The small-holder broiler value chain attempts to adapt complex production technology to the small farmer's context and, at the same time, achieve economies of scale through the collective procurement of inputs and marketing of produce. The essential elements of the model are:

- Decentralized production infrastructure with 300-400 birds in the homestead backyard, which fits into the daily life of the tribal woman.
- Production efficiency with rigorous training of producers, intensive production support and on-call referral veterinary services of high quality.
- Cost effectiveness with collective procurement of inputs and sale of birds to achieve economies of scale, and backward-forward integration.
- Creation of a system to address the volatile nature of the market by de-linking production efficiency from enterprise efficiency, and collectivization of operations when dealing with markets.
- Customized financial and MIS software for decentralized operations.
- Charges of para-vets linked to production parameters.

As shown in Figure 1, the model comprises decentralized rearing of birds by primary producers at the village level, who are supported by their collective institution for a variety of services. These services are delivered either directly (for example, veterinary)

Figure 1: Elements of the Home-based Broiler Poultry Farming Model



or through service providers⁴ (for example, input supply and knowledge services) trained by PRADAN. The collective institution is manned by trained professionals and governed by people's representatives. The institution monitors the performance of primary producers through its service providers.

Functioning of a typical producers' institution

All women producers are members of the cooperative/producers' company. Producers organize themselves into clusters, and select a representative for the Board of Directors. The Board of Directors meets once a month. In this meeting, all important issues such as input and output prices, performance of different clusters, new appointments, remuneration and performance of staff are discussed, and decisions are taken.

In the monthly Board meeting, the CEO, who is responsible for day-to-day management and operational decisions, reports on the business performance of the cooperative. The CEO is supported by community-based supervisors for the provision of farm services, and production management. The supervisors are paid according to their output. The Annual General Meeting (AGM) is convened to discuss issues such as distribution of surplus, etc. The auditor's report is circulated in advance, and is approved in the AGM.

Evolution of the Small-holder Broiler Farming Model

The model described above has evolved over two decades of experimentation and intervention; it has taken place through four stages.

Phase I: Experimentation (1988–1992)

The experimentation stage began in 1988 with trials of improved breeds of cockerels, and superior dual-purpose birds. However, such breeds were not suitable for the small-holder because the production cycle was too long, the market was limited, and the capacity of the family to produce them on household waste was also limited. It was soon realized that if money had to be spent on providing shelter and feed to the birds, perhaps it would be better to choose the best breeds with high feed conversion ratio, short production cycle, and good market value.

Phase II: Pilot testing and demonstration of broiler farming (1992–1997)

This phase was spent in learning the intricacies of raising broilers because this required a sophisticated and technology-intensive production process. Getting an understanding of the markets, including the entire value chain, was considered crucial for success. For example, in the initial years, some farmers started specializing in brooding (a critical part of production), and supplying the chicks to other farmers. This process was decentralized after it was discovered that brooders did not have a stake in producing quality chicks because there were no verifiable indicators for quality. Further, much time was spent on learning how to contain diseases. Ranikhet was a major killer during those days.

Phase III: Scaling up (1997–2002)

The poultry industry is highly volatile; hence, it is critical to de-link the risks of production from those of the enterprise. If this were not done, producers with better market information would gain, and others would lose even their working capital. In 1998, the cooperative evolved a system of fixed prices, in consultation with producers, which made it possible to de-link the risks of producers from those of the enterprise. The idea was also applied to inputs because their prices also tended to vary along with the market price of ready birds. This aspect of the Kesla model has sustained primary producers even during recurring market shocks on account of bird-flu scare in the past five years.

Phase IV: Prototype development and replication (2002 to Date)

Creating a market for broilers was the first big hurdle. The cooperative soon realized that the production volumes and the transaction costs to reach Bhopal market made exploitation of that market an unviable proposition. The local 'table meat market' was essentially for goat meat, which was sold fresh, cut into pieces of required quantities. The chicken sold was mostly country fowl, which was sold by numbers, and not by

weight. It took two years to establish broiler as an alternative meat product sold by weight in this market. The growth of Kesla Poultry is closely linked to the growth of chicken market in Sarni-Pathakheda. This is a coal-mining area about 60 km from Kesla, which has a large worker population with high disposable incomes. Till 2000, almost two-thirds of the produce of the cooperative was sold in this market. Even today, the cooperative sells only 10-15% of its total produce in Bhopal; it sells the rest in local markets within a radius of 60 km.

In 1992, 2,500 table birds were traded per month in the area. By 2005, this area became the third largest broiler cluster in Madhya Pradesh, producing over 2,00,000 table birds every month. The demonstration of broiler farming with the tribal poor has had a multiplier effect. With the easy availability of poultry feed stores, vaccines and delivery of chicks at the farm, the job of rearing broiler birds has become much easier. Other large farmers have also found it expedient to set up broiler farms as more bird traders come to the area. Organizing the supply of quality inputs at competitive prices with little production was another challenge that took many years to address. In 2004, PRADAN initiated the small-holder poultry in Jharkhand. Basic inputs such as feed and medicines were just not available even in the state capital, Ranchi. Producers had to compromise on the quality of inputs. Moreover, it was common to find producers using expired vaccines and spurious medicine of unknown brands. Systematically, the producer collective started negotiating with manufacturers in Kolkata, and given the increasing size of operations, a few showed interest, and started dealing directly with the cooperatives. The cost of inputs has now drastically reduced due to collective procurement through the Jharkhand Poultry Federation.

Economic Viability

Value Chain Analysis

In this section we provide a comparative analysis of three systems of poultry (broiler) production and supply:

- a) Country fowl supply chain
- b) Industrial broiler value chain
- c) Home based cooperative value chain

Tables 1, 2 and 3 provide a comparison of the margin analysis for the three systems. The profitability as well as strengths and weaknesses of each are discussed below.

Country fowl value chain

The starting point of the supply-chain is the production of birds in the farmer's backyard. The total cost of rearing a marketable bird is estimated at Rs 20 per bird.⁶ The first transaction takes place in the household when brokers pick up birds from households, and take them to the local market – nearby *haat* or *kasba*, where primary bulking takes place. Traders from cities visit local markets to settle on birds for retailing. Transaction costs include haulage losses and maintenance costs at different points. A distinctive feature of the chain is scarcity of supply in a small, niche market. In the terminal market in urban areas, sale of these birds constitute a small portion of the retailers' business. The return per bird to the farmer is high, and the farmer's share in the supply chain is highest at 63%. However, the annual return for a family maintaining only 10–15 birds is Rs 1,200–1,800, representing only about 10-12% of the annual income.

Industrial broiler value chain

This takes into account the large private poultry farmers, with a production capacity of 5,000–10,000 birds/cycle, who source the inputs from the market, and supply birds in the wet market. A recent phenomenon of the poultry industry is the emergence of 'integrator'. An integrator is a large corporate entity such as the HV Group, Suguna, or Godrej, which operates at all the value chain nodes, coordinating the business vertically. The total production in India, as on 2007, in the hands of integrators is about 15%. In most of the areas, where small-holder poultry model has been introduced, presence of integrators is minimal.

Small-holder cooperative value chain

The small-holder value chain introduced in Kesla is more efficient than the industrial poultry value chain. Thus, it is able to stay competitive. The main reasons are as follows:

- i. The farmer gets inputs, such as poultry feed, day-old chicks and veterinary services, provided at her doorstep, and is thus free from the resource constraints of the typical small farmer. The unit size is also designed to allow the family to deploy its surplus labour optimally.



Table 1: Country Fowl Supply Chain

Transaction Points	Cost of Production /Buying (Rs)	Selling Price (Rs)	Gross Margin (Rs)	Transaction Costs (Rs)	Net Margin (Rs)	% Return	% of Terminal Market Price	% Net Margin of Total Margin	Actors
Production End	20	60	40	0	40	200%	60%	63%	Individual Households
↓									
Brokering Point	60	70	10	5	5	8%	70%	8%	Brokers
↓									
Primary Market/Bulking	70	85	15	5	10	14%	85%	16%	Local Village Haats
↓									
Terminal Market	85	100	15	7	8	9%	100%	13%	Traders

Prices are illustrative, male birds are costlier by Rs 10-15.

Table 2: Industrial Broiler Value Chain

Transaction Points	Cost of Production (Rs)	Selling Price (Rs)	Gross Margin (Rs)	Transaction Costs (Rs)	Net Margin (Rs)	% Return on Investment	% of Terminal Market Price	% Net Margin of Total Margin	Actors
Production End	35.5	38	2.5	0	2.5	7%	76%	33%	Entrepreneur
↓									
Wholesaling	38	40	2	1.5	0.5	1%	80%	7%	Traders
↓									
Distribution	40	43	3	1.5	1.5	4%	86%	20%	Traders
↓									
Terminal Market	43	50	7	4	3	7%	100%	40%	Traders

Table 3: Small-holder SCooperative Value Chain

Transaction Points	Cost of Production /Buying (Rs)	Selling Price (Rs)	Gross Margin (Rs)	Transaction Costs (Rs)	Net Margin (Rs)	% Return	% of Terminal Market Price	% Net Margin of Total Margin	Actors
Production End	34	38	4	0	4	12%	76%	44%	Individual Households
↓									
Primary Bulking	38	40	2	1	1	3%	80%	11%	Cooperative
↓									
Wholesaling	40	43	3	2	1	3%	86%	11%	Traders
↓									
Terminal Market	43	50	7	4	3	7%	100%	33%	Traders

- ii. The production system builds on low (or no) cost slack labour available in rural households. Thus, compared to the large farmer in peri-urban areas, the margin is almost 60% higher.
- iii. The aggregation of produce to create marketable lots is done by the poultry cooperative. The increased cost of collectivization, and providing veterinary and management support to farmers is offset by the market outreach directly to retailers, thus doing away with distributors. Most of the cooperative's market is in the hinterland — dispersed small rural markets, requiring wholesalers to service retailers directly at their shop.

The proportion of a farmer's margin with respect to the total margin in the chain at the production end is about 44%, lower than that of the country fowl supply chain which is 63%. However, the critical point is the absolute income in the hands of the farmer. The annual income in the case of home-based broiler farming is much higher at about Rs 13,000–18,000.

A comparison of the three value chains brings out how the home-based cooperative broiler value chain becomes efficient by bringing functions in-house (Table 4). The home-based broiler value chain is, at its core, a scaled-down version of modern industrial broiler value chain. The farmer-centric character of the value chain is the key to its success because at the lower unit size, the return per unit has to be higher than the industrial broiler chain. The small-holder value chain introduced in Kesla increases the margin farmers receive by eliminating intermediate actors. The proportion of the farmer's margin with respect to the total margin in the chain in this model is about one-third less than that of the indigenous value chain; however, the key variable to note is the low-carrying capacity of the indigenous value chain, giving the farmer low absolute returns.

Economic Impacts of the Kesla Cooperative

Economics at the farmer's level

A woman poultry farmer requires only one cent of land (435 sq ft) for her trade; she may own it or take it on a lease. She earns between Rs 13,000-18,000 a year, which works out to Rs 65-90 a day, for approximately 200 days of engagement in the activity per year. This income, available to her in a regular stream of cash flow, helps her to meet her expenses and contributes to capital formation. The financial details of an individual farmer in the value chain are given in Table 5.

**Table 4: Comparison of cooperative value chain
with existing supply/ value chains**

Particulars	Country fowl supply chain	Industrial broiler value chain	Cooperative value chain
Pre-production features	- Chick is obtained from in-situ hatch of eggs in the household - Birds scavenge	- Chicks are supplied from hatcheries - Feed is bought from private company (compound livestock feed) or prepared in-house	- Chicks are supplied from hatcheries or are of own production - Feed is produced in cooperative's own unit
Production features	- No significant labour deployment required in the family - No access to veterinary/technical services	- Outside labour is employed - Veterinary/technical services from market	- Deployment of family labour - Round the clock veterinary/technical services at the doorstep
Production cycle (in a year)	1.5	5-6	5-6
Feed conversion ratio (kg of feed/kg body weight of bird)	5	1.8	1.65
Mortality rate (%)	30 %	5 %	5 %
Average flock weight (kg)	0.9	1.5	1.5
Efficiency index	60	220	246
Marketing features	Directly picked from farms by procurers or sold in local haats	Involves elaborate chain of wholesalers and distributors for supply to retailers	Direct to retailers, wholesalers, and cooperative-owned retail outlets
Total value chain margin (Rs/kg)	63	7.5	9
Average flock size (birds)	10	5,000	350
Average investment (Rs in'000)	Minimal	1,000	50
Average annual margin (Rs)	1,500	2,00,000	15,000
Primary producer's share in terminal price	60 %	76 %	76 %
Primary producers ⁵ share of overall margin	63 %	33 %	44 %
Price assurance mechanism	Price discovery not in the hands of farmers	No mechanism	Pooled across farmers and time. Delinked production and market.

The table shows that a typical broiler farmer can break even in about two years. The woman's participation in the activity has multiple benefits and impacts, which go beyond the mere economic uplift of the household (Box 1 for an illustration).

Table 5: Economics of Individual Broiler Unit

Particulars	Units	Amount
Particulars Birds per cycle/ batch	No.	400
Batches/year	No.	6
Days engagement/year	No.	210
Capital investment	Rs	36,000/-
Working capital	Rs	17,000/-
Margin/batch	Rs	3100/-
Annual margin	Rs	18600/-
Break-even point	Years	2

Phoolwati Bai, a Proud Poultry Farmer of Mandipura

Phoolwati Bai lives in Mandipura Village. Her family comprises her husband and six sons. She is a landless farmer. Prior to starting poultry, her only regular source of income was from loading sand in the local sand mines, earning hardly Rs 10–15 a day. She often migrated to neighbouring areas for wage work during harvesting season. Her husband worked as a wage labourer in Itarsi, 25 km from Mandipura, earning Rs 1,000–1,500 every month. She started poultry farming in 1997. From her first batch, she earned Rs 1,500. She repaired her house taking a loan of Rs 19,000 from her SHG, and successfully repaid it from the profits of the poultry farm. She then took a loan of Rs 30,000 under Prime Ministers's Rojgar Yojana (PMRY),⁷ to expand her poultry shed in 2005. She has been regularly repaying the instalments, and is confident of repaying it within a few years. She and her husband have completely stopped wage labour and migration. She is concerned about her children's education and career. One of her sons passed the higher secondary examination with a first division and is now employed. She has also invested in two LIC policies and deposits a premium of Rs 883 twice a year. In 2007–08, Phoolwati Bai earned Rs 38,000 net income from the broiler rearing activity.

Economics at the cooperative level

The financial performance of the Kesla cooperative, which was registered in 2001, is discussed in brief. Salient financial parameters for the last four years are shown in Table 6. The annual turnover of the cooperative has doubled in the last three years. The surplus is distributed to members, and only a small portion is kept by the cooperative.

Rs 67.2 lakhs distributed to members in 2007–08 is four times more than the sum distributed in 2004–05. As on 2007–08, its net worth is Rs 33.4 lakhs. In addition, it has created a price-risk mitigation fund of Rs 10 lakhs.

Table 6: Financial Performance of Kesla Cooperative

Particulars	2007-08	2006-07	2005-06	2004-05
No. of members	459	376	354	276
Margin distributed to members (Rs)	67,22,219	40,53,373	26,80,242	19,31,271
Total sales (Rs)	5,84,41,173	3,81,95,184	3,39,17,392	2,70,61,784
Gross profit (Rs)	15,27,175	20,71,622	11,52,429	25,10,402
Profit before non-cash charge (Rs)	3,73,950	3,14,291	2,53,632	2,71,411
Net profit (Rs)	2,47,850	1,10,000	(60,078)	45,623

The year 2005-06 was an exceptionally bad year for the industry, with bird flu scare keeping ready bird prices depressed for four months. The farmers' margins dropped as they contributed their income from one batch to keep the cooperative afloat. The cooperative suffered a small loss that year, which was made up in subsequent years.

Conclusion

Over the past two decades, PRADAN has been able to evolve a model of home-based broiler farming by small producers, that has proved both competitive and resilient, generating gainful self-employment, for over 5,000 women farmers. With a few local adaptations, the model, which was originally developed in Kesla, has been replicated successfully in Jharkhand, Orissa, and Chhattisgarh and is poised for further expansion.

In the last few years, the poultry industry has become vertically coordinated, that is, functions from chick production to marketing are increasingly coming under the control of single entities. The vertical integrators operating at all the sector nodes — grandparent stock, commercial chicks, feed, and marketing — have made the industry much more capital intensive and scale sensitive. The current efforts are geared to making small-holder poultry meet the challenge of sectoral consolidation and scale.

The value chain developed helps insulate the families from price fluctuations and supply uncertainties of the market while strengthening the production system through improved market access, better capital management, high-quality production services, and technical hand-holding. The small-holder poultry model has demonstrated that it is possible for the small farmers to participate in this growing industry. They have been

able to match the efficiency of big farmers and organized integrators. Today, these producers constitute the largest commercial production house in MP and Jharkhand.

The cooperatives are further federated into two state-level secondary organizations, namely, Jharkhand Women Poultry Federation and Madhya Pradesh Women Poultry Producers Company. The federations pass on the benefits of vertical integration, professional and technical support, economies of scale, and increased bargaining power with external suppliers and regulators while providing a platform for knowledge and process-sharing between its member cooperatives. They help member cooperatives in, a) reducing input cost for feed (a major component of total expenses), and b) ensuring supply consistency through collective purchase or the creation of in-house production facilities. This helps leverage the strengths of both centralized and decentralized structures.

Plans have been drawn up to launch a national collective with a mandate to protect and promote the interests of small-holder broiler farmers by 2009. The current plans aim at reaching 10,000 farmers by 2012, with a cumulative annual turnover of Rs 400 crores, and generating Rs 35 crores for its member-producers.

End-notes

1. Authored by Anish Kumar, Programme Director, PRADAN

2. PRADAN is registered as a charitable society in the state of Delhi under the Societies Registration Act (Act XXI of 1860). In 2007, PRADAN worked with 1,50,000 families of central India — organizing women into SHGs and assisting families in their livelihood activities.

3. Out of an estimated 280 million poor families in India, close to 65% live in Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, and West Bengal.

4. These are rural youth from the local areas who have been trained by PRADAN staff and who identify strongly with the cooperative movement.

5. Efficiency Index = Average body wt (kg) x Liveability (%) x 100

6. This includes the cost of the egg, family labour spread over 180 days and cost of watch and ward calculated at the rate of Rs 3/hour. The food scavenged by the bird is not included in the cost.

7. A scheme for the self employment of educated youth.

नागेन्द्र नाथ सिन्हा, आई.ए.एस.
सचिव
NAGENDRA NATH SINHA, IAS
SECRETARY



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DO # K-11060/09/2020-21/NRLM/(Livelihoods)-Part(1)

October 18, 2021

Subject: Use of Enterprise solution by Producers Enterprises promoted under DAY-NRLM

Under DAY-NRLM, as part of value chain development interventions, Producer Enterprises are being promoted by various SRLMs. Further, NRLM is also supporting implementation of "Formation and Promotion of the 10,000 FPOs" scheme of the Ministry of Agriculture & Farmers Welfare through selected SRLMs as CBBOs and Foundation for Development of Rural Value Chains (FDRVC) as Implementing Agency for promotion of women owned FPOs. To perform the business operations in a transparent manner, the Producer Enterprises need to adopt IT based systems to efficiently manage and track various business processes.

2. Foundation for Development of Rural Value Chain (FDRVC), which is a Special purpose Vehicle set up by MoRD and the Tata Trusts, supports the NRLM and SRLMs in development and implementation of value chain development projects through promotion of large sized women owned Producers Enterprises in farm and non-farm sector. To bring corporate best practices in management of Producer Companies, FDRVC has developed one IT based Enterprise Resource Planning application for the Producer Enterprises (PEs).

3. The PEs and FPOs promoted by various SRLMs under DAY-NRLM may use this enterprise solution developed by FDRVC. This will help SRLMs in efficient management of various business processes of the PEs/FPOs. The ERP solution will be available to them on payment of a small amount for server fees, maintenance and training cost. This is a generic software and can be used by any FPO promoted by any agency of the State Government or any other agency can also adopt the software. Those desirous of utilizing the same may contact FDRVC in this regard at the following address: -

Shri Alok De,
Chief Executive Officer,
Foundation for Development of Rural Development (FDRVC),
3rd Floor, D-58, Janakpuri Institutional Area (near Central Sanskrit University),
New Delhi
[email: alok@fdrvc.in, ceo@fdrvc.in]

4. You are accordingly requested to kindly instruct not only your rural development departments/SRLMs but your other agencies promoting similar institutions.

Yours sincerely,

sd/-

(Nagendra Nath Sinha)

Chief Secretaries of all States/UTs.

Copy to: -

**The Additional Chief Secretary/Principal Secretary/Secretary, Rural Development
Departments in all States/UTs**

NPS

(Nagendra Nath Sinha)

फाइल संख्या/ File No. K-11011/01/2022-23/MKSP/Beekee.....

भारत सरकार/Government of India

ग्रामीण विकास मंत्रालय/Ministry of Rural Development

ग्रामीण विकास विभाग/Department of Rural Development

ग्रामीण आजीविका विभाग/ Rural Livelihoods Division

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दिनांक/ Dated: 28th December, 2023

To,

The State Mission Director/CEOs
State Rural Livelihoods Mission,
All States and UTs

Subject: Guidance notes for subsectors

Madam / Sir,

As you are aware, DAY - NRLM is promoting subsectors on a large scale. For effective implementation of subsectors, guidance notes on the same for preparation of Annual Action Plans are enclosed for kind perusal and further necessary action. This will be discussed in the upcoming AAP workshop.

Yours faithfully,


रमन वाधवा/(Raman Wadhwa)

उप-निदेशक (प्रशासन)/Deputy Director (Admin)

Copy to:

1. PPS to Additional Secretary (RL), MoRD, Govt. of India, New Delhi.
2. PPS to Joint Secretary, RL-II, MoRD, Govt. of India, New Delhi.



GUIDANCE NOTES FOR SUBSECTORS FOR PREPARING ANNUAL ACTION PLANS

GUIDANCE NOTES FOR SUBSECTORS FOR PREPARING ANNUAL ACTION PLANS

Table of Contents

Guidance notes for Subsectors for Preparing Annual Action Plans	05
Bamboo Subsector	10
Moringa Subsector	24
Honey and Beekeeping Subsector	30
Spices Subsector	35
Aquatic Livelihoods Subsector	39
Organic Farming Clusters	47
Promotion of Natural Farming through SHGs	52
Millet Intensification Program (MIP)	56
Biofortified Grain Production (Iron Pearl Millet, Calcium Finger Millet and Zinc Wheat)	64



Guidance Notes for Subsectors for Preparing Annual Action Plans

Background

DAY-NRLM being a livelihoods program is focused more on income generation and livelihoods security of the poor women. The emphasis is on supporting multiple livelihoods for a household to ensure food and nutritional security, to ensure income flow throughout the year and to overcome the vulnerabilities thus building the climate change resilience. DAY - NRLM is a household centric approach and supports households through promotion of Agro Ecological Practices, Organic Farming, livestock, poultry, NTFP based activities integrated at the household level where each household is having more than one source of income strengthened.

The program was adequately supported through a combination of other programs including the Mahila Kisan Sashaktikaran Pariyojna (MKSP), National Rural Livelihoods Project (NRLP) and National Rural Economic Transformation Project (NRETP) and Annual Action Plans (AAP).

Over the years, the focus and narrative of the program has been constantly evolving to answer to a more dynamic national and global policy environment suited to newer challenges like climate change and urban centric growth et al. Progressively, the program also felt the need to align itself to shift from basic focus on strengthening and stabilizing livelihoods' interventions through improved inputs and production methods to gradually shift its focus to building more resilient economy at the community level through diversification of livelihood options, improved natural resource management practices and improved focus on Value Chain interventions to increase their resilience and to reduce the vulnerability of low income households. The program adopted various livelihood subsectors like agriculture, livestock and non-timber Forest Produce (NTFP), under its portfolio to ensure reduced dependency on a single source of income. Recent focus of the DAY - NRLM is "Mission Lakpathi Didi" and subsector approach is one of the powerful tools to achieve "Mission Lakpathi didi".

Subsector approach

In this context, the focus of the DAY - NRLM has shifted to a more demand-driven approach to integrate the products/services into existing marketing channels. Resultantly, the formation of Producer

Groups (PGs), Producer Enterprises (PEs) and FPOs are steps taken in this direction. The idea is that the women collectives should be able to transform themselves into producer collectives to take advantage of the entire value chain on a strong institutional backing.

The sub-sector approach is an evolved model, harnessing benefits of value addition and promising higher returns to the growers. The sub-sector approach is more technology driven and would also require higher investments at community level enterprises. The CBOs would also require upskilling and a gradual orientation towards enterprise level planning and resource utilisation. Further, since the outlook would be more market focussed, more emphasis would be required on quality and associated data collection and documentation. It would be also necessary to pre-empt market movements and plan all activities in accordance with that.

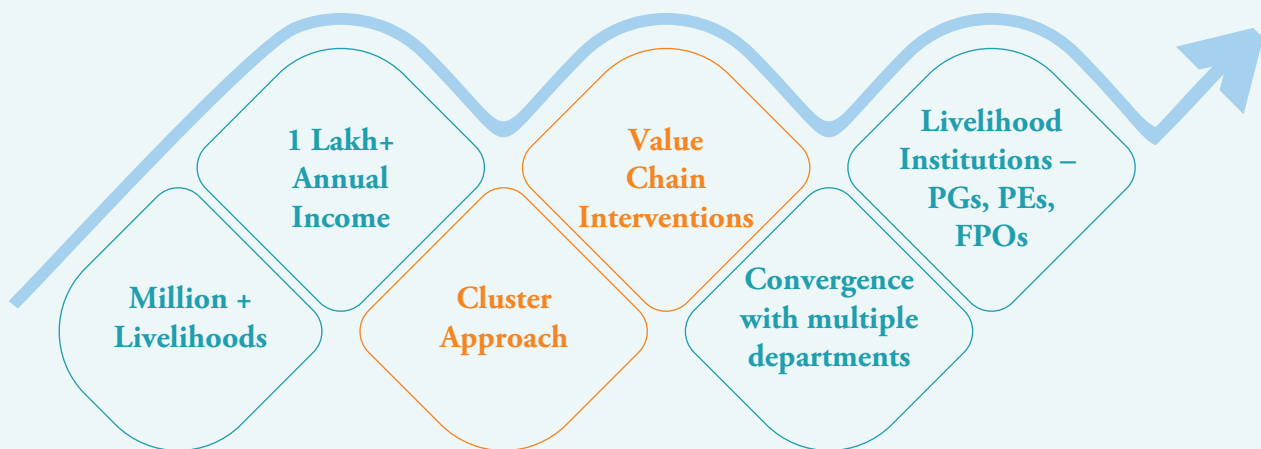
The CBOs will be provided with quality inputs and technical guidance at each stage for productivity enhancement through adoption of best Package of Practices (POP). Also, the aggregation, processing and packaging will take place through Common Facility Centres (CFCs). Wherever possible, private partnerships will be encouraged for support on production and marketing side.

For each sub-sector, convergence mechanism will be worked out to take advantage of various inter-departmental schemes and subsidies.

Going forward, the communities would need to take a more nuanced approach to understand the different Value Chain systems, related technologies, and market fluctuations. In this regard, the concept of sub-sector interventions is to consolidate various farm related interventions into 12 sub-sectors based on various commodities of promise to realise the potential to create sustainable livelihoods to 25 million households.

Following is the illustration of subsectors:

Key Features



Promising subsectors

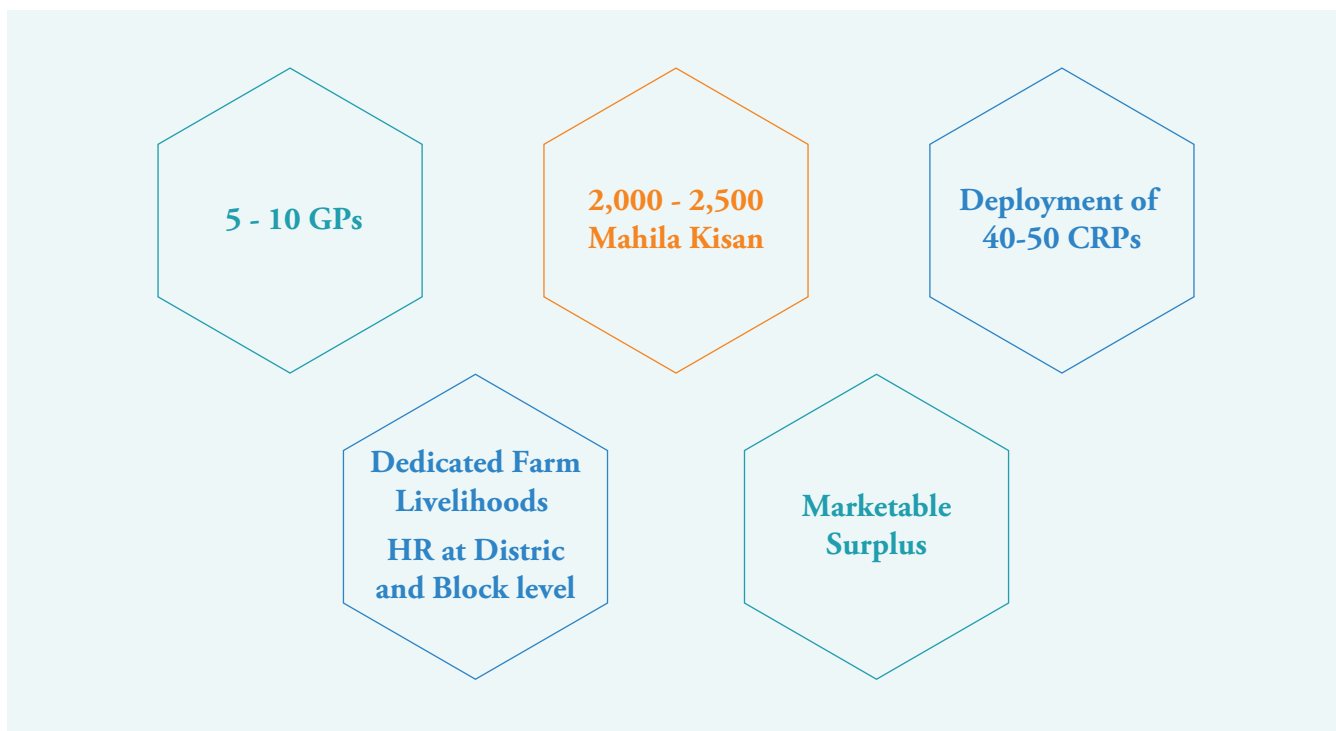
DAY – NRLM identified following sub sectors as promising subsectors, however SRLMs may identify other crops / commodities which have potential to create a million livelihoods and provide sustainable annual income of Rs.one lakh.

S.No	Sub-Sector	S.No	Sub-Sector
1	Bamboo	7	Banana
2	Honey & Beekeeping	8	Tomato - Onion - Potato
3	Fisheries & Aquaculture	9	High Value Horticulture
4	Moringa	10	Backyard Poultry
5	Medicinal & Aromatic Plants	11	Livestock - Pig, Goat Rearing
6	Spices - Ginger, Turmeric, Chillies	12	Tasar - NTFP

Subsector Cluster

Cluster is defined as a geographical concentration of targeted subsector crops / Commodities offering scope for specialisation in production, postharvest management, marketing and value addition. These clusters provide growth and development opportunities to SHG members. The Cluster Development approach will facilitate in realising suitable economies of scale in production and post-harvest activities and is required to help in better price realisation and empowerment of the farming community to enhance their income through building competitiveness across the entire value chain.

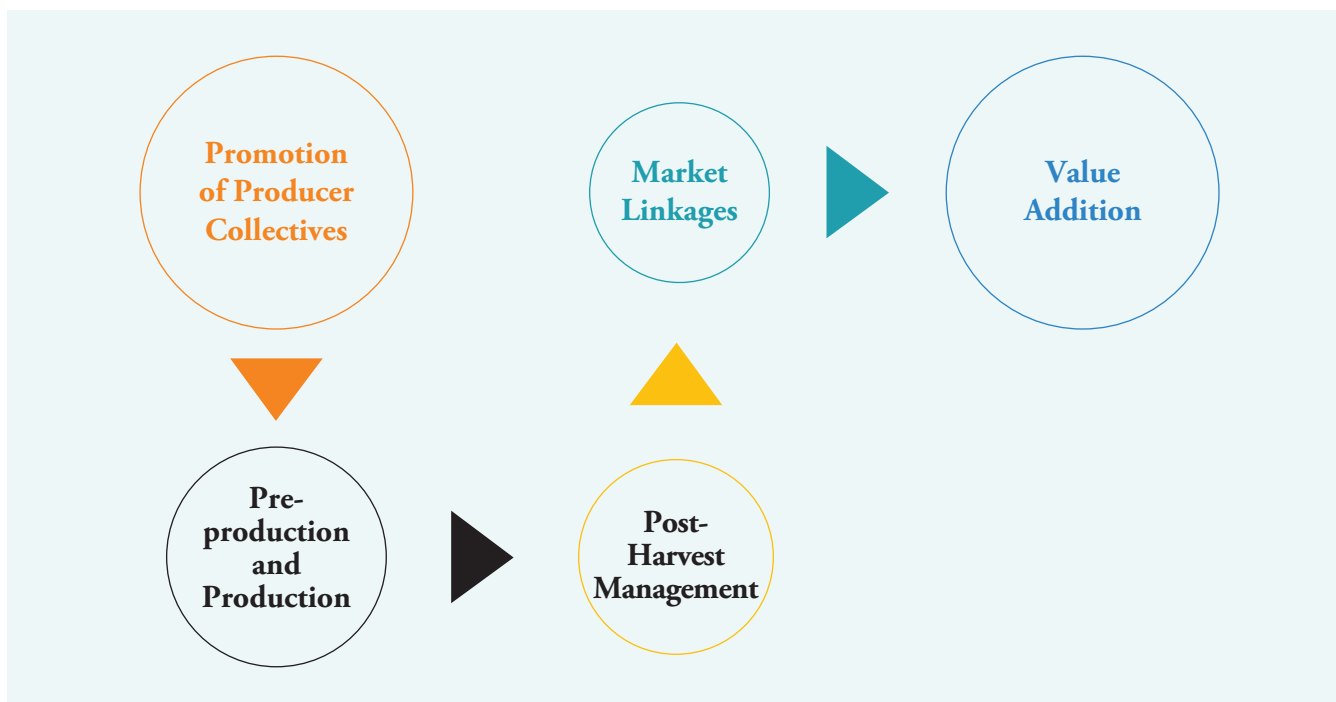
Cluster should cover at least 10 – 15 Gram Panchyats with about 2,000 – 2,5000 Mahila Kisans. Cluster should have at least 40-50 Community Resource Persons (Krishisakhis/Pashu Sakhis etc) with considerable experience. Blocks and Districts where the cluster is proposed should have the dedicated human resource for farm livelihood activities. Cluster should have the marketable surplus produce to ensure market linkages. Following are the key features of a subsector:



Key Interventions

The interventions around these sub-sectors are proposed to be more holistic and will address the entire Value Chain - starting from inputs to production to aggregation to processing and marketing. The Value Chain interventions will follow an Annual Action Plan and will take a cluster

approach through the involvement of Community Based Organisations (CBOs) to look after the production and processing aspect while the livelihood institutions like FPOs, PEs and PGs will take care of aggregation and marketing. Following are the focus activities/ interventions for the subsectors:



Promotion of Producer Collectives

Leverage existing Producer Collectives (PG/FPO/PE) or promote new Producer Groups and federate these producer groups into Farmer Producer Organisations / Farmer Producer Companies (FPOs/FPCs) and build their capacities through training and awareness, as well as necessary credit linkages.

Pre-production and Production

Ensure supply of disease-free quality planting material / inputs / seeds / introduction of new and improved varieties Promote the adoption and dissemination of Good Agricultural Practices including organic / natural farming / scientific livestock management practices to improve productivity.

Establishment of Custom Hiring Centres to supply advanced farm machinery and tools to reduce drudgery of women farmers and to ensure timely agriculture operations.

Promote use of farm management software and related innovations, promote advanced digital solutions, such as geo-tagging, weather and disease forecast, by leveraging Internet of Things (IoT), Blockchain for traceability, Information Technology (IT) and Remote Sensing.

Promotion of production-related infrastructure for protected cultivation, nurseries, compost pits, micro-irrigation, precision farming, seed banks etc.

Establishment of Bio Input Resource Centres (BRCs) for supply of quality organic / natural farming inputs. BRCs may be established by FPOs / entrepreneurs.

Post-Harvest Management

Facilitate FPOs/PEs in creation of decentralised infrastructure at the farm gate for post-harvest handling of produce, including collection centres at primary processing by establishing the necessary credit linkages from banks, Agri Infra Fund etc.

Establishment, expansion and modernisation of FPO level infrastructure for post-harvest management including collection centres, reefer vans, integrated pack-houses, ripening chambers, pre-cooling units, cold rooms, primary processing etc for better price realisation.

Market linkages

Support FPOs / PEs in marketing campaigns (print/electronic), organising buyer-seller meets etc Collate and disseminate market intelligence with inputs on real-time market needs including export protocols. Any other activity/ intervention required for establishment of market linkages for realising better prices.

Value Addition

Appropriate value addition activities can be promoted through PGs / FPOs / PEs. Primary and secondary processing units can be established for value addition. PM FME scheme of MoFPI may be leveraged.



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Bamboo Subsector

I. Background

Bamboo has become a highly tradable commodity around the globe in recent years. However, it is widely used to replace conventional materials, including wood for furniture, hardwood for flooring and decking, and plastic in everyday items, such as toothbrushes, charcoal production, medicinal products, and bamboo fibre, to replace synthetic cotton fabrics. The cost of bamboo cultivation is low, and the time required for bamboo to grow to its full potential is much less than that of other hardwoods. Bamboo is one of the fastest growing plants and can survive in various climatic and edaphic conditions. It is a highly versatile, robust, renewable, and environmentally friendly plant species. It can be grown quickly and easily and sustainably harvested in a 3 to 4-year cycle; it has been an integral part of India's cultural, social, and economic traditions since immemorial. India, China, and Myanmar share nearly 80% of the world's bamboo reserves.

Being one of India's most valuable natural resources, given the vast diversity in its applicability and enormous potential for the improvement of rural and tribal livelihoods and the environment, bamboo is among the most critical resources to be leveraged toward the alleviation of rural poverty and empowerment of women. It supports multiple livelihoods for a household to ensure income flow, nutritional and food security throughout the year and overcome vulnerabilities, thus building resilience towards climate change. From a global trade point of view, India has tremendous potential to develop the bamboo business sector in rural areas, particularly among the rural poor women. In this regard, the bamboo value chain is one of the promising sub-sector approaches of the DAY – NRLM to achieve "Mission Lakpathi Didi." Hence, this concept note on the bamboo value chain has been prepared to highlight the significance and scope of the bamboo value chain towards ensuring sustainable development in our rural areas.

II. About Bamboo

Bamboo, belonging to the grass family, represents one of the most incredible natural renewable resources. Long, slender stems of bamboo called 'culms' are characterised by well-demarcated nodes and internodes. The bamboo plant is a complex system consisting of two sets of similarly structured vegetative axes: one above the ground and the other below the ground. A bamboo clump originates from a seed or plantlet or as a part of another clump. Each clump has several shoots called culms, which are tightly packed or with more loosely spaced culms. These culms take 4-6 years to mature. Bamboo is the fastest growing and highest yielding renewable plant resource as it produces and spreads its culms yearly till its flowering stage. Bamboo, flowers and seeds once in a lifetime, and the whole bamboo clump ends its life after the flowering. Hence, bamboo is technically termed monocarpic. Flowering in bamboo varies from species to species, from 30, 40, 60, and more than 80 years in different species.



Bamboo Species Diversity

Bamboos are the most diverse group of plants on the earth, and it is estimated that the total diversity of bamboo worldwide varies from source to source; however, the latest reports reveal the occurrence of 1,439 species of 116 genera. India stands next to China regarding species diversity, having 136 species under 23 genera, and the central bamboo-growing regions are the northeast, Western Ghats, and the Andaman and Nicobar Islands.

Bamboos are considered the most suitable crop for commercial plantation due to the following properties of the plant:

1. Bamboo as the prime candidate for the agro-forestry sector:

- Adaptability to various climatic and rainfall conditions due to multiple species. Bamboo can be grown in rainfall, varying from 30 to 250 cm per annum.
- Swift growth and a short growth cycle imply that Bamboo grows faster than comparable wood species while consuming less water. Fourteen commercially important species mature within four to five years, after which annual harvests are possible.
- It is among the foremost plant types in terms of biomass generation. Bamboo accounts for as much as 25% of the total biomass in tropical regions.

2. Viability as material for construction, scaffolding, furniture, flooring, and other uses

Bamboo has a tensile strength of 28,000 lbs per square inch versus 23,000 lbs per square inch for mild steel. It is among the world's best natural engineering materials and an essential component of earthquake-resistant construction. This strength and flexibility make it a potential alternative to steel in many applications.

- Lightness and flexibility make the Bamboo plant an excellent material for constructing prefabricated housing and structures.
- Other applications include:
- Wood substitution- Laminates and composites
- Structural applications in infrastructure, interior decoration, floorings

- Creative Manufacturing in Home, Decor, and Fashion categories
- Agarbatti industry
- Furniture and household items
- Bamboo-activated charcoal, biochar, biofuel
- Replacement of single-use plastics (kitchenware, cutlery, chopsticks, toothbrushes)
- Bamboo fibre for textiles, fabrics, yarn, cloth, clothing and fashion applications

3. Energy Resources

- Bamboo can be used in gasifiers as a fuel source and thermal applications, replacing furnaces and diesel oils.
- Bamboo can be used to manufacture charcoal briquettes, which are superior to charcoal from other sources in terms of calorific value.

4. Climate Benefits

- Generates almost 35% more oxygen than equivalent stands of trees
- Acts as a sequestration agent: Certain Bamboo species have been known to sequester as much as 17 T of CO₂ per hectare annually.
- Prevents Soil Erosion due to extensive net-like root systems and rhizomes, which bind soil together.
- Bamboo can be a suitable substitute for timber and wood in many applications. Timber substitution is an effective strategy for biomass renewal and afforestation since Bamboo plants, growing faster than timber, can regenerate felled biomass much more quickly than trees.

5. Nutrition and Health

- Bamboo shoots regularly provide nutrition to millions worldwide. The nutritional properties of Bamboo shoots are extensively documented, and studies show that Bamboo shoots are rich in nutrients, have high fibre content, are low in calories, and are low in fat.
- Traditionally utilised in local medicinal systems in South Asia, Bamboo shoots have been proven to function as natural medicines, with qualities including the ability to lower cholesterol and antioxidant and anti-inflammatory properties.

III. Market Potential

The bamboo-bearing area in India is estimated to be 16 million hectares. However, most of the bamboo growing areas are in the forests of India and are not easily accessible for commercial purposes. India is a net importer with a negligible share in the international market. The global export of bamboo in 2021 was INR 45,440 crores*. India's share of exports in 2021 was INR 659 crores*, only a meagre 1.45% of global trade. The global exports of bamboo products are expected to reach INR 1.31 lakh crores* by 2030. The global bamboo market is expected to grow at a CAGR of 4.6% and reach USD 22.86 billion by 2026. India imported over USD 107 million worth of bamboo raw materials in 2021. 31% of the global imports of bamboo raw materials are by India.

Additionally, India would be required to import raw bamboo worth nearly INR 9-10,000* crores for its domestic usage in 2030 on a conservative basis. This poses a substantial untapped opportunity for increasing the sustainable cultivation of bamboo and improving the livelihoods of the small and marginal cultivators. Carbon mitigation is crucial for achieving our net zero targets.

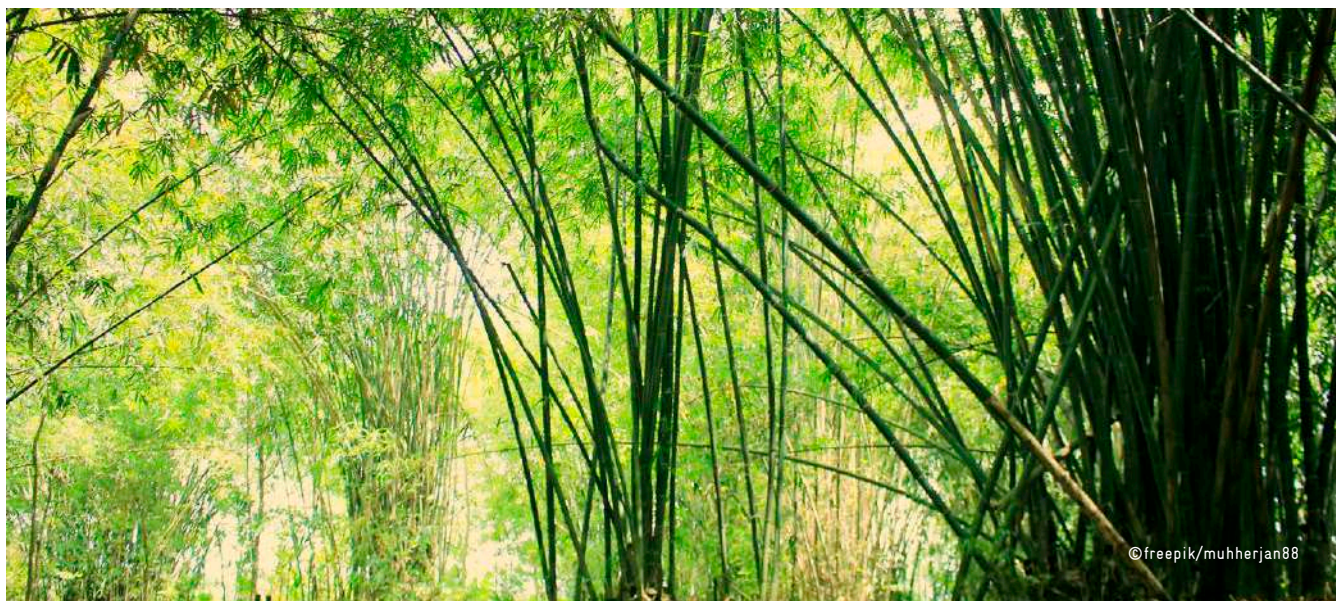
Hence, if India needs to improve its global market share, it must start with privately owned commercial bamboo cultivation. India has a massive advantage in terms of climate, land suitability, and area. Promoting smallholder women-owned plantations of commercially suitable bamboo species will provide enormous income generation potential for women.

IV. Need for Bamboo Plantation

Although India has diverse bamboo species, only a few are identified for commercial cultivation in the form of plantations. National agencies involved in promoting bamboo in the country have prioritised species to be promoted based on their industrial and commercial application values. Among the commercially important species, the endemic species to the Indian subcontinent have been given the top priority for cultivation. National Mission on Bamboo Application referring to BIS (Bureau of Indian Standards) standards, 21 priority bamboo species are identified for domestication or cultivation in a suitable geographical location based on the suitable geographic conditions of the species. The identified species include *Bambusa balcooa*, *B. bambos*, *B. membranaceous*, *B. nutans*, *B. pallida*, *B. polymorpha*, *B. tulda*, *B. vulgaris*, *Dendrocalamus brandisii*, *D. giganteus*, *D. sikkimensis*, *D. hamiltonii*, *D. strictus*, *Melocanna baccifera*, *Ochlandra travancorica*, *Oxytenanthera stocksii*, *Schizostachyum dullooa*, and *Thyrsostachys oliveri*. Based on the agro-climatic and agroecological conditions of the region, suitable bamboo species will be identified for commercial cultivation.

Bamboo Nursery for Quality Planting Material Since

bamboo is monocarpic in nature, the availability of planting materials makes it challenging to supply large farmers at a time. Hence, the large-scale planting of bamboo requires nursery-raised planting materials. While the cost of the plant is a significant consideration, the nursery's reputation, from where it comes from, is crucial. Nursery plays a vital role due to the need to propagate and maintain substantial planting stocks.



V. Overview of Agroclimatic and Agroecological Zones

Agro-climatic zones

An “Agro-climatic zone” is a land unit in major climates suitable for a certain range of crops and cultivars. The planning aims to scientifically manage regional resources to meet the needs of food, fibre, fodder, and fuel wood without adversely affecting the status of natural resources and the environment. Crop yield is (FAO, 1983). The Planning Commission, in the mid-term appraisal of the planning targets of the Seventh Plan, has divided the country into fifteen broad agro-climatic zones.

Agro-climatic zones suitable for bamboo cultivation

Bamboo occurs in almost every region of the country except in temperate parts such as Kashmir. Bamboos form a vital constituent of the deciduous and evergreen forest. They are spread from tropical to temperate regions extending from alluvial plains to high mountains ascending to altitudes 3000 m above mean sea level.

Based on the climatic parameters, the areas particularly suited for bamboo cultivation are The northeastern region, western ghats, the Baster region of Madhya Pradesh, and the Andaman and Nicobar islands simultaneously; the agroclimatic regions showing suitability for bamboo cultivation include the Eastern Himalayan Region, Eastern Plateau and Hills Region, Western Plateau and Hills Region, Southern Plateau and Hills Region, West Coast Plains and Ghats Region, Eastern Plateau and Hills Region, Central Plateau and Hills Region, Western Plateau and Hills Region.

Climatic factors suitable for bamboo cultivation

Bamboos grow well in high rainfall areas, having mean annual rainfall ranging from 1250 to more than 5000 mm; however, it also occurs in dry deciduous forests of low rainfall areas (750-1000mm). It withstands varying temperatures ranging from -50c to 460 c. Snow has practically no influence on its growth.

Agro-ecological zones

An agroecological zone is a land unit carved out of the agro-climatic zone and superimposed on a landform that influences both the climate and length of the growing period.

Agro-ecological zones suitable for bamboo cultivation

Based on the availability of suitable ecological factors, the agro-ecological regions which are suited for bamboo cultivation are the Deccan Plateau, Hot Arid Eco-Region, Central (Malwa) Highlands, Gujarat Plains and Kathiawar Peninsula Ecoregion, Deccan Plateau, Hot Semi-Arid Eco-Region, Deccan Plateau (Telangana) And Eastern Ghats, Hot Semiarid Ecoregion, Eastern Ghats And Tamil Nadu Uplands And Deccan (Karnataka) Plateau, Hot Semiarid Eco-Region, Central Highlands (Malwa And Bundelkhand), Hot Subhumid (Dry) Ecoregion, Chhattisgarh/Mahanadi Basin Agro-Eco-Region, Eastern Plateau (Chhota Nagpur) And Eastern Ghats, Hot Subhumid Ecoregion, Eastern Plain, Hot Subhumid (Moist) Ecoregion, Eastern Himalayas, Warm Per humid Eco-Region, North-Eastern Hills (Purvanchal), Warm Per humid Ecoregion, Western Ghats And Coastal Plain, Hot Humid-Per humid Eco-Region, Islands Of Andaman-Nicobar And Lakshadweep, Hot Humid To Per humid Island Ecoregion.

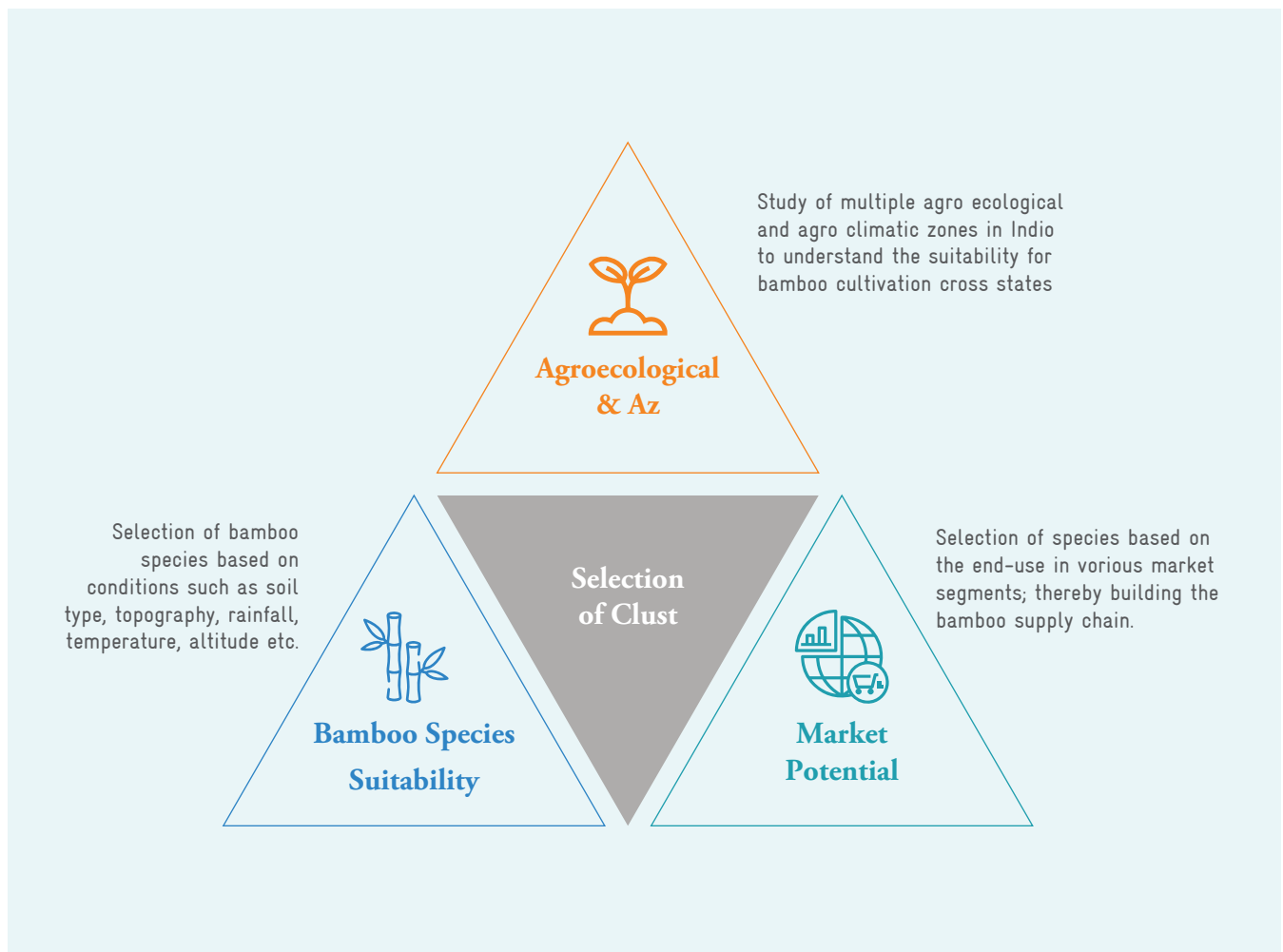
Ecological factors suitable for bamboo cultivation

The ecological factors for bamboo cultivation are soil texture and structure, drainage pattern, soil moisture, altitude, and physiographic location. Each species has its characteristics depending upon edaphic conditions. Bamboo species prefer deep, loamy soils, sandy soil, and fertile clay loams, although they may grow in sloppy, hilly areas having very meagre soil layers. They may also grow in degraded soil with low fertility. Bamboo prefers well-drained soils, though some species flourish along riverbanks, Nallahs, stream beds, and other moist sites.

VI. Criteria for Identification of Bamboo Cluster

The selection of the bamboo cluster will be primarily based on the state's Agroecological and Agroclimatic zone study. Further, criteria include the availability of landholding among rural and tribal farmers and the suitability of commercially viable bamboo species for the region. Other factors include:

- Cluster with more small and medium farmers, having a minimum cultivable landholding of 0.3 acres
- The chosen cluster must be devoid of occurrences of natural fire
- The region should have basic irrigation facilities
- Cluster with reasonable connectivity to link production centres with markets



VII. Key Activities and Timeline

S.No	Activity	Timeline	Y0 (2024)				Y1 (2025)				Y2 (2026)	Y3 (2027)	Y4 (2028)																										
			A p r i l	M a y	J u n	J u l	A u g	S e p	O c t	N o v	D e c	J a n	F e b	M a r	A p r	M a y	J u n	J u l	A u g	S e p	O c t	N o v	D e c																
			2 4	2 4	2 4	2 4	2 4	2 4	2 4	2 4	2 4	2 5	2 5	2 5	2 4	2 5	2 5	2 5	2 5	2 5	2 5	2 5	2 5	C 1	Q 2	C 3	C 4	Q 1	Q 2	Q 3	Q 4	C 1	C 2	C 3	C 4				
1	Resource Arrangements																																						
1.1	Establishment of Inputs Units - Nursery & Vermicompost	Aug'24 - Jun'25				Y	Y	Y	Y	Y	Y	Y	Y	Y																									
1.2	Area scoping	Aug'24 - Dec' 24				Y	Y	Y	Y	Y																													
1.3	Geographical area studies for suitability of plantation	Oct'24 - Dec'24						Y	Y	Y																													
1.4	Onboarding of teams and training on bamboo cultivation	Dec'24							Y																														
2	Pre-Plantation Activities																																						
2.1	Mobilisation of Mahila kisan	Dec'24 - Mar'25							Y	Y	Y	Y																											
2.2	Baseline data collection of mobilised Mahila kisan	Jan'25- Mar'25									Y	Y	Y																										
2.3	Placing purchase orders for bamboo saplings and inputs	Dec'24 - Jan'25	Y	Y	Y	Y	Y																																
2.4	Ownership, gender, climate-positive business training	Oct'24 - Dec'24						Y	Y	Y																													
2.5	Land Verification of demarcated land	Dec'24 - Apr'25							Y	Y	Y	Y	Y																										
2.6	Confirmation of Mahila kisan and demarcated land for plantation	Feb'25 - May'25										Y	Y	Y	Y																								
2.7	Soil sample collection and testing	Feb'25 - May'25										Y	Y	Y	Y																								

VIII. Capacity Building Plan

Industree to provide technical support using its 6C approach to build the capacity of SRLM and its functionaries. Capacity-building programs around bamboo plantation will be conducted at state, district, taluka, and cluster levels involving critical functionaries at the State Mission Management Units, District Mission Management Units, Block level, and cluster level teams.

(Target Groups - SRP - State Resource Person, SPM - State Programme Manager, DPM - District Programme Manager, BPM - Block Programme Manager, CC - Cluster Coordinator, CLF - Cluster Level Federation, CRP - Community Resource Person, HH - Household)

S.No	Training Modules	Target Groups (Trainee - SRP/ SPM/DPM/ BPM/CC/CRP/ CLF/HH)	Y0 (2024)					Y1 (2025)					Y2 (2026)				Y3 (2027)				Y4 (2028)										
			A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	Q	C	Q	C	C	Q	Q	C	C	Q	C	Q
			g	p	t	v	c	n	b	y	l	y	n	l	g	p	t	v	c	1	2	3	4	1	2	3	4	1	2	3	4
1	Module 1 - Induction																														
1.1	State level - Orientation about the Bamboo Subsector & Project Overview	SRP/ SPM	Y																												
1.2	District level - Orientation - Project Overview with Action Plan	DPM								Y																					
2	Module 2 - Inputs Management																														
2.1	Establishment of Nursery	DPM								Y																					
2.1.1	First Phase - Establishment Guidelines a. Land preparation for the nursery site b. Labour's Management c. Documentation & Record Maintenance	Nursery Team		Y																											
2.1.2	Second Phase - Management Practices a. Seed Treatment & Propagation b. Preparation of Potting mixture c. Pitting, Irrigation, and Fertigation c. Sapling Arrangement & Labelling d. Documentation & Record Maintenance e. Loading & unloading	Nursery Team				Y	Y																								

2.2	Establishment of Vermicompost Unit																		
2.2.1	Orientation on operations and establishing the vermicompost unit	DPM/BPM	Y																
2.2.2	Orientation - a. Identification of HHs b. Process of establishing vermicompost unit c. Guidelines with Dos and Don'ts d. Action Plan	CC/CLF	Y	Y															
2.2.3	First Phase - Establishment Guidelines a. Overview of the significance of vermicompost and its production b. Value of Community-owned unit c. Steps for the establishment of the Vermicompost unit d. The technical process of preparing vermicompost e. Guidelines based on PoPs	CLF/CRP/HH	Y	Y	Y	Y													
2.2.4	Second Phase - Management Practices a. Maintenance and Management of the unit b. Dos and Don'ts c. Documentation & Record Maintenance	CLF/CRP/HH				Y	Y												
3	Module 3 - Community Intervention																		
3.1	Block level - Orientation about the operations plan	BPM / CC			Y	Y													
3.2	Block / Cluster level - Orientation about the operations plan	CRP & GP stakeholder			Y	Y													
3.3	Village level - Mobilization & Orientation I	HH			Y	Y	Y	Y	Y										

4	Module 4 - Technical Knowledge Building																					
4.1	Pre-plantation Standard Operational Practices a. Land verification b. Soil Sample Collection c. Land Preparation Activities	CC/CRP			Y	Y																
4.2	Pre-Plantation & Plantation Guidelines																					
4.2.1	Mahila kisan Training on Sustainable Cultivation of Bamboo	CRP/HH				Y	Y	Y	Y													
4.2.2	Mahila kisan Training on Ownership, Gender and Climate Positive	CRP/HH		Y	Y	Y																
4.2.3	Training on Medicinal Plants Cultivation	CRP/HH							Y	Y	Y											
4.3	Post-Plantation Activities																					
4.3.1	Training of Mahila kisan on FSC, their roles & responsibilities	CC/CRP/HH							Y	Y	Y	Y										
4.3.2	Training on carbon credit assessment	CC/CRP/HH							Y	Y	Y	Y										
4.3.3	Training of all registered and planted Mahila kisan on plantation management	CC/CRP/HH										Y	Y	Y	Y	Y	Y	Y	Y	Y		
4.3.4	Training on method and technique of sustainable bamboo harvesting	CC/CRP/HH																		Y	Y	Y

IX. Convergence

Convergence with other key government departments, such as National Bamboo Mission, MGNREGA, Forest Department, SFURTI and other schemes for infrastructure, processing centres and other costs



X. Key Performance Indicators

S.No	Key Performance Indicators*	Overall Target	Y1	Y2	Y3	Y4	Y5
1	No. of hectares of private land brought under bamboo plantation	XX hectares					
2	No. of Mahila Kisan engaged in bamboo cultivation	XX Mahila Kisan					
3	No. of Mahila Kisan trained on sustainable cultivation practices	XX Mahila Kisan					
4	No. of Mahila Kisan trained on Ownership, Gender and Climate Positive Business	XX Mahila Kisan					
5	No. of Mahila Kisan collectives formed	XX Mahila Kisan Collectives					

*State level

XI. Budget



S.No	Particulars of Activity	Description	No. of Units	Unit Cost (in Rs. Lakhs)	Total Cost (in Rs. Lakhs)	From NRLM	From Convergence
1	Scoping for villages	Per Mahila Kisan Collective	1	1	2	2	
2	Mobilization of Mahila kisan & Baseline data collection	Per Mahila Kisan Collective	1	1	2	2	
3	Training and Capacity Building of staff & Mahila kisan	Per Mahila Kisan Collective	3	3	9	9	
4	Pre-plantation activities - Land Survey - Soil sample collection and testing	Per Mahila Kisan Collective	1	2.5	2.5	2.5	
5	Sourcing of inputs - Sapling & Organic manure	Per Mahila Kisan Collective (500 women)	1	37.5	37.5	37.5	
6	Land preparation and Plantation of bamboo	Per Mahila Kisan Collective (500 women)	1	30	30	30	20
7	Plantation maintenance	Per Mahila Kisan Collective (500 women)	1	60	60	20	40
8	Plantation certification	Per Mahila Kisan Collective	3	4	12	12	
9	Setting up of Mahila Kisan collective (incl office infra, registrations and operational expense)	Per Mahila Kisan Collective	60	0.75	45	90	
10	Harvest management	Per Mahila Kisan Collective	1	10	10	10	
11	Bamboo pre- processing facility	District level infra- per MKC contribution	1	15	15		15
12	Marketing support	District Level - per MKC contribution	1	10	10	10	
13	ERP, Technology, and software	Per Mahila Kisan Collective	5	1.5	7.5	7.5	
14	HR cost for FPO / PE	Per Mahila Kisan Collective	60	0.75	45	45	
15	Monitoring & Evaluation Cost	Per Mahila Kisan Collective	12	5	60	60	
16	District level team - Comprising of key technical roles such as Agronomist, Sourcing/Supply chain personnel, Training Executive	Monthly cost	60	2.25	135	135	
Sub Total				482.5		462.5	65
Grand Total				482.5		462.5	65



Moringa Subsector

Criteria for Identification of Clusters

S.No	Deciding Factors	Indicators	Probability for selection
1	Climate	Moringa does well where average temperatures are high, ranging from 25 to 30°C Annual Rain fall 800-2000 mm	High
2	Soil	Moringa does well on a wide range of soils, with pH ranging from 4.5 to 9, provided they are well-drained with good water holding capacity	
3	Land	Sandy loam soil	
4	General	No water logging No severe flooding Avoid storm prone areas Avoid saline inundation areas Avoid extreme cold condition	
5	Presence of naturally occurring moringa plants and associated	In randomly selected plot of 1 ha, if naturally occurring moringa plants number >	
		FPO/CLF/ with Rs.5 lakh corpus	
6	Institution to manage	At least having 1000 sq ft of land	
7	Farmers to do plantation	5000 sq ft or 11.5 cents	
8	Place for setting up CFC	Working experience in agro-forestry value chain initiative	
9	Community resource persons	One CRP per fifty farmers	

Key Performance Indicators

S.No	Key Performance Indicator	Target for 2024-25	Q1	Q2	Q3	Q4
1	Area under Mroinga					
2	No of Mahila Kisans					
3	No of Nurseries					
4	No of trainings					
5	No of CRPs trained and deployed					
6	No of Producer Groups formed					

Capacity Building Plan

S.No	Topics of Training	Type of Trainee (SRP/ SPM/DPM/ BPM/CRP/CLF/HH)	Duration of training	Training Month													
				Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24		
1	Nursery development	Nursery entrepreneurs	5	*	*	*	*										
2	Plantation management of Moringa	CRP/LH	2					*	*	*	*	*	*	*	*	*	*
3	Harvesting and primary value addition of different parts	SHG/HH	1					*	*	*	*	*	*	*	*	*	*
4	Secondary level processing- powder, teabag, capsule, energy bar, soup, feed, oil, production	SHG/ /entrepreneurs	5									*	*	*			
5	Marketing management-pricing, package, promotion	SHG/ /entrepreneurs	3							*	*	*	*	*	*	*	*

Suggested budget

S.No	Particulars of Activity	Description	No. of Units	Unit Cost (in Rs. Lakhs)	Total Cost (in Rs. Lakhs)	From NRLM	From Convergence
1	Baseline Planning, Cluster Identification, Beneficiary mobilisation	Visit of block, meeting with Agriculture experts, CLF. SHG, FPO representatives	42	2	84	84	
2	Training & Capacity Building of Staff and CRP	SHG/Individual	20000	.005	100	100	
		Nursery entrepreneurs	40	.005	20	20	
		Processing and value addition	80	.005	20	20	
		Marketing management-pricing, package, promotion	30	.005	15	15	
		Exposure visit	200	0.10	20	20	
3	Sourcing of Inputs						
3.1	Nursery Development	Each nursery will produce a minimum of 25,000 numbers of mandated perennial vegetatively propagated fruit plants/tree spices/plantation crops per year, aromatic plants, duly certified for its quality.	40	15	600	300	300*

3.2	Irrigation Infrastructure	Water harvesting system for individuals- for storage of water in 20mx20mx3m ponds/tube wells/dug wells @ Rs.125/- cum	800	1.5	1200	600	600*
		Community tanks/on farm ponds/on farm water reservoirs with use of plastic/ RCC lining	40	20	800	800	
		Drip irrigation*	200				
		Sprinkler system*	200				
3.3	Mechanisation/ Equipment	Land Development, tillage and seed bed preparation equipment	5000	0.30	150	112.5	37.5
3.4	Others	Sowing, planting reaping and digging equipment	5000	0.30	150	112.5	37.5
4	Plantation Activity including maintenance						
4.1	Plantation with individual member	Rs 145000/ha	400	1.5	480		
4.2	Plantation on common land	Rs.200000/ha (with vegetative fencing)	400	2	480		
5	Harvest management						
6	Setting up common facility centre for production of wellness products	Rs 20 lakh/unit under FME	40	20	800	520	280
7	Product development and Value addition activities		5	10	50	30	20
8	Marketing support	1500000/unit	8	15	120	78	42
9	Organic farming	20000/ha					160
10	Organic certification	Rs. 5 lakh for a cluster of 50 ha which will include Rs.1.50 lakh in first year, Rs. 1.50 lakh in second year and Rs. 2.00 lakh in third year.	40	5	200		200*
11	Setting up procurement infrastructure- with small dryer, weighing machine, storage	Rs 200000/unit	200	2	400	300	100
12	Certification for Good Agricultural Practices (GAP), Including infrastructure	Rs. 20,000/ha	800	.10	80		80
13	Pollination support through beekeeping	10000/ha	400	.10	40		40

Standard Expenditure details for intensive plantation model per acre

S.No	Particular	Unit	Qty	Rate	Year wise Amount				
					1st	2nd	3rd	4th	5th
1	Input cost								
1.1	Seed Cost	Kg.	6	1500	9000				
1.2	Manure and Fertilizer	Kg.	500	15	7500	7500	7500	7500	7500
1.3	Herbicides and Pesticides	Kg.	20	200	4000				
1.4	Seed treatment	Kg.	6	50	300				
1.5	Enzyme for Growth	Kg.	40	200	8000	8000	8000	8000	8000
2	Land Preparation and seed sowing cost								
2.1	Land Preparation cost-tractor	hrs	4	850	3400				
2.2	Labour cost for Bund Making	days	10	300	3000				
2.3	Labour cost for Seed Sowing	days	6	300	1800				
3	Inter-cultural operation cost								
3.1	Weeding & manuring application	days	4	300	1200	600	1200	1200	1200
3.2	Irrigation cost		16	800	12800	12800	12800	12800	12800
3.3	Labour for Leaves Harvesting	days	24	300	7200	9600	9600	9600	9600
Expenditure only for Leaf Production					58200	38500	39100	39100	39100

*Days: Person days

***Expenditure per ha: Rs1,45,000 (One lakh forty-five thousand only)**

Indicative Cost for Processing of Moringa leaves Powder - Machinery Cost/Capital Investment for reference

S.No	Particular	Unit	Qty	Rate	Amount
1	Pulveriser ISI mark	Nos	1	25000	25000
2	Storage Tank with 1000 kg capacity	Nos	5	2500	12500
3	Racks	Nos	2	1000	2000
4	Packaging Material-Box	Nos	9000	27	243000
5	Cost for Labels	Nos	9000	2	18000
6	Weighing Machine	Nos	1	4000	4000
7	Solar Drier with 100 kg/Day drying	Nos	1	100000	100000
8	Chairs	Nos	5	600	3000
9	Table	Nos	2	4500	9000
10	Fans	Nos	2	2000	4000
11	Others				10000
				Total	430500

Convergence

S.No	Key Performance Indicators*	Overall Target	Overall Target
1	National Horticulture Mission	Mission for Integrated Horticulture development	Capacity building, nursery development, irrigation infrastructure, procurement of agriculture machines, tools, setting of procurement centre, common facility centre, organic certification, marketing infrastructure Seminars conferences, workshops, exhibitions, Kisan Mela, horticulture shows, honey festivals
2	Ministry Agriculture, Cooperation and Farmer Welfare	Rashtriya Krishi Vikas Yojana	Drip, Sprinkler system
3	Ministry of Food Processing Industries	PM-Formalization of Micro Food Processing Enterprise Unit (PMFME)	Capacity building of entrepreneurs, SHG members, support for establishment of processing units, Branding and Marketing
4	Ministry of Rural Development	Mahatma Gandhi NREGS MKSP	Wage, irrigation infrastructure, Nutri-garden Agro-Cluster development, capacity building
5	Department of Animal Husbandry and Dairying- National Livestock Mission	Sub-Mission on Feed and Fodder development	This sub-mission aims towards strengthening of fodder seed chain to improve availability of certified fodder seed required for fodder production and encouraging entrepreneurs for establishment of fodder Block/Hey Bailing/Silage Making Units through incentivisation.

Coverage

Sub Sector		Bamboo			
S.No	Particulars	As on March 2023	Plan for FY 2023-24	Achievement in FY 2023-24 (as on Nov. 22)	Plan for FY 2024-25
	1	2	3	4	5
1	No. of districts				
2	No. of blocks				
3	No. of clusters				
4	No. of villages				
5	Households covered				



Honey and Beekeeping Subsector

Criteria for Identification of Clusters

Following are the criteria for identification of clusters for promotion of Honey and Beekeeping.

- Tribal areas

- Clusters where crops like Mustard, Sun flower etc are cultivated on substantial areas
- Areas with low / zero pesticides application

Activities and timeline

Activities				FY1 2023-24				FY 2 2024-25				FY 3 2025-26			
	Jan	Feb	Mar	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Commission a study for mapping flora, resources and stakeholders															
Coordination with ITDA and Forest Department															
Identification of Women for bee keeping															
Deployment of Madhu Sakhi															
Identification of Clusters															
Identification and finalisation of Collection centers															
Bee hives and equipments Distribution															
Installation Processing Machinery, Lab and other infrastructure															
Labelling /Design/ Licensing Expenditures / Brand Development activities															
Integration of National Brand on Honey															
Training and Capacity Building of MS															
Plannig for diversifies activities															
Training to beekeepers															
Depute supporting Human Resource															
Establish MIS system															
National workshop															
State level workshop															
Formation of FPOs															
Formation National level Federation/market facing company															

Capacity Building Plan

S.No	Topics of Training	Type of Trainee (SRP/ SPM/DPM/ BPM/CRP/CLF/HH)	Duration of training	Training Month													
				Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24		
1	Bee Nursery development	Nursery entrepreneurs	5	*	*	*											
2	Community Resource Person	CRP/LH	20				*	*									
3	Basic beekeeping	SHG/HH	5					*	*	*	*	*	*	*	*	*	*
4	Honey harvesting	SHG/ /entrepreneurs	2							*	*						
5	High value products like Royal jelly, pollen, Propolis Bee venom collection		5											*	*		
6	Queen Rearing		5											*			
7	Marketing management-pricing, package, promotion,	SHG/ /entrepreneurs	3								*	*	*				



Suggested Budget

for one unit contains 50 bee boxes

4.1. Unit Cost

S.No	Details of items	Unit	Unit Cost	Total cost	NRLM	Convergence (KVIC/NBB)
Fixed Cost						
1	Cost of one bee colony of 6 frames	50	2000	100000	500000	500000
2	Cost of bee box ISI 'A' Type	50	2500	125000	125000	62500
3	Cost of Apiary equipments				0	0
	a. Hive stand	50	250	12500	12500	6250
	b. Bee veil	5	200	1000	1000	500
	c. smoker & bee knife	5	400	2000	2000	1000
	d. SS Honey Extractor	1	10000	10000	10000	5000
4	Cost of honey unit and uncapping tray			15500	15500	7750
5	Bee wax sheet 1kg	50	400	20000	10000	10000
	Total Fixed Cost			266400	133200	133200
	Interest on Fixed Capital @12%			31968		
Variable Cost						
	Skilled labour	12 months	5000	60000	60000	
	Unskilled labour (laoding, un-loading etc.)	2 months	3500	7000	7000	
	Migration Charges			20000	20000	
	Feed Charges			10000	10000	
	Total			97000		
	Total Variable cost			128968		
Revenue						
	Honey Production	50 boxes@ 40kg=2000kg	150	300000		
	New Bee colony production	50 Bee colonies	2000	100000		
	Bees wax	50@.50 kg 25 kg	350	8,750		
	Bee pollen	50@.50 kg 25 kg	500	12500		
	Net Profit			2,92,282		

Key Performance Indicators

S.No	Indicators	Achievement till March 2022	Target 2022-23	Achievement till Nov 2022 against the target	% Achievement	Cumulative Achievement (3+5)	Additional target for 2023-24
1	2	3	4	5	6	7	8
1	No. of blocks covered for Honey and Beekeeping cluster						
2	No. of Honey and Beekeeping Clusters promoted						
3	No. of villages under Honey and Beekeeping clusters						
4	No. of Producer Groups formed						
5	No. of mahila kisan mobilized into PGs						
6	No. of Bee boxes provided						
7	Area under bee friendly forage in Acres						
8	No. of Processing units established						
9	Marketing of Honey in qtls						
10	Marketing of byproducts (in Kgs)						



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Spices Subsector

Cluster approach

SRLMs should adopt cluster approach for promotion of Spices. Cluster approach will help in establishing market linkages. A cluster should have 10 - 15 Gram Panchayats with about 500 -1000 farmers.

Contiguous GPs may be selected. It is advised to saturate the villages where spices are already being cultivated instead of going for new villages. DAY – NRLM is focusing on four Spice crops viz Chillies, Ginger, Turmeric and cardamom.

Marketable surplus should be the criteria for selecting the cluster. We should ensure marketable surplus of minimum 50 MTs of any selected commodity.

Implementation arrangements

SRLMs should deploy trained Krishi Sakhis for extending handholding support to Farmers. For every

100 farmers one Krishi Sakhi should be positioned.

At block level one coordinator with experience in organic farming / agriculture graduate should be positioned exclusively for promotion of spices.

Since, Spices are high value crops, market linkages and value addition play a critical role in enhancing the incomes. Producer Groups /PE/FPO promotion is an essential component in spice subsector activities.

PG / FPO / PE should establish infrastructure for primary and secondary processing. Market linkages with large scale buyers also important for realising better prices.

Activities and Time lines

SRLMs has to plan and implement various activities as described in the following table:

S.No	Activity	Time lines
1	Identification of clusters	March – April
2	Mobilisation of Farmers into PGs / FPOs / PEs	April – May
3	Training of Krishi Sakhis	April – May
4	Deployment of Krishisakhis	April – March (15 days in a month)
5	Village level trainings	June – October
6	Training on Value addition	July – August
7	Training on Marketing	September – October
8	Establishment of Bio Resource Centres	June – July
9	Marketing	End of Khari (October) and End of Rabi (March) for non – perishables. For perishable on regular basis.
10	Buyer – Seller meets	End of Khari (October) and End of Rabi (March)
11	Establishment of Primary and Secondary processing units	September – October

Capacity building plan

Following three trainings Pre -season, Mid-season and post-harvest season at state and district level:

At state level:

S.No	Training Module	No of Days	Time line	Participants
1	Production technologies	3	April – May	SRLM staff upto Block level
2	Value addition	2	July – August	SRLM staff upto Block level
3	Marketing	2	September – October	SRLM staff upto Block level

At District Level:

1	Production technologies	3	April – May	CRPs, LG leaders and Peer inspectors
2	Value addition	2	July – August	CRPs, LG leaders and Peer inspectors
3	Marketing	2	September – October	CRPs, LG leaders and Peer inspectors

Key Performance Indicators

S.No	Indicators	Achievement till March 2022	Target 2022-23	Achievement till Nov 2022 against the target	% Achievement	Cumulative Achievement (3+5)	Additional target for 2023-24
1	2	3	4	5	6	7	7
1	No. of blocks covered for spices cluster						
2	No. of Spice Clusters promoted						
3	No. of villages under Spices clusters						
4	No. of Producer Groups formed						
5	No. of mahila kisan mobilized into PGs						
6	No. of Bio-resource centre established						
7	No. of Primary Processing units established						
8	No. of Secondary Processing units established						
9	No. of Buyer Seller Meets						

Convergence

SRLMs can converge with following departments for creation of Assets, trainings and other support:

S.No	Training Module	No of Days	Time line
1	Rural Development	MGNREGS	Compost pits, green manure trees plantation
2	Agriculture	BPKVY	Trainings, demonstrations, subsidies for organic manures
		ATMA	Green manure seeds and other in puts
3	Spices Board		Marketing infrastructure

Suggested Budget

S.No	Activity	Description	No of Units	Unit cost in Rs.	Budget in Rs.
1	Capacity building at state level	Three training at state level			
2	Capacity building at district level	Three training at district level			
3	Capacity building at village level	CRPs 15 days in a month for demonstration and hand holding support			
4	Bio Resource Centres	One per cluster			
5	Buyer- Seller Meet	Two at state level			
6	Primary processing units	One per cluster			
7	Secondary Processing units	One per cluster			
Total					



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Aquatic Livelihoods Subsector

Importance of Fishery Subsector

The fisheries and aquaculture sector plays a pivotal role in bolstering rural livelihoods in India. Beyond merely contributing to food security, it serves as a cornerstone for livelihood security and creates employment opportunities, impacting not only those directly involved but also numerous individuals in ancillary sectors. Recognizing its multifaceted significance, strategic engagement with women's groups and Farmer Producer Companies (FPCs) can further amplify the benefits of this sector, acting as a catalyst for securing livelihoods and achieving the ambitious goal of doubling farmers' income.

Contributions to Food Security

Fisheries are a key source of animal protein, crucial for addressing malnutrition and ensuring food security, especially in rural areas where alternative sources of protein may be scarce. The nutritional value of fish makes it an essential component of a balanced diet, contributing to the overall health and well-being of communities.

Livelihood Security and Employment Generation

The fisheries and aquaculture industry is a major generator of livelihoods, providing employment to lakhs of individuals directly involved in fishing activities. Additionally, the sector has a ripple effect on ancillary industries such as processing, packaging, transportation, and marketing, creating a web of employment opportunities in rural areas. This not only sustains existing livelihoods but also opens avenues for entrepreneurship and skill development.

Engagement with Women's Groups

Empowering women in fisheries and aquaculture is crucial for inclusive development. Women are often active participants in activities such as fish processing and marketing. By facilitating the formation of women's groups and providing them with training and resources, we can enhance their role in the value chain. This not only strengthens their economic independence but also contributes to the overall development of rural communities.

Role of Farmer Producer Companies (FPCs)

FPCs bring farmers together, allowing for collective decision-making and resource pooling. In the context of fisheries and aquaculture, FPCs can facilitate better access to markets, technology, and credit.

Collaborative efforts through FPCs enable small-scale fishers and aquaculturists to negotiate better prices, access modern farming techniques, and collectively address challenges such as infrastructure development and market linkages.

Doubling Farmers' Income

The government's vision of doubling farmers' income can be realized through a holistic approach to fisheries and aquaculture. This involves improving productivity, enhancing market access, promoting sustainable practices, and integrating technology.

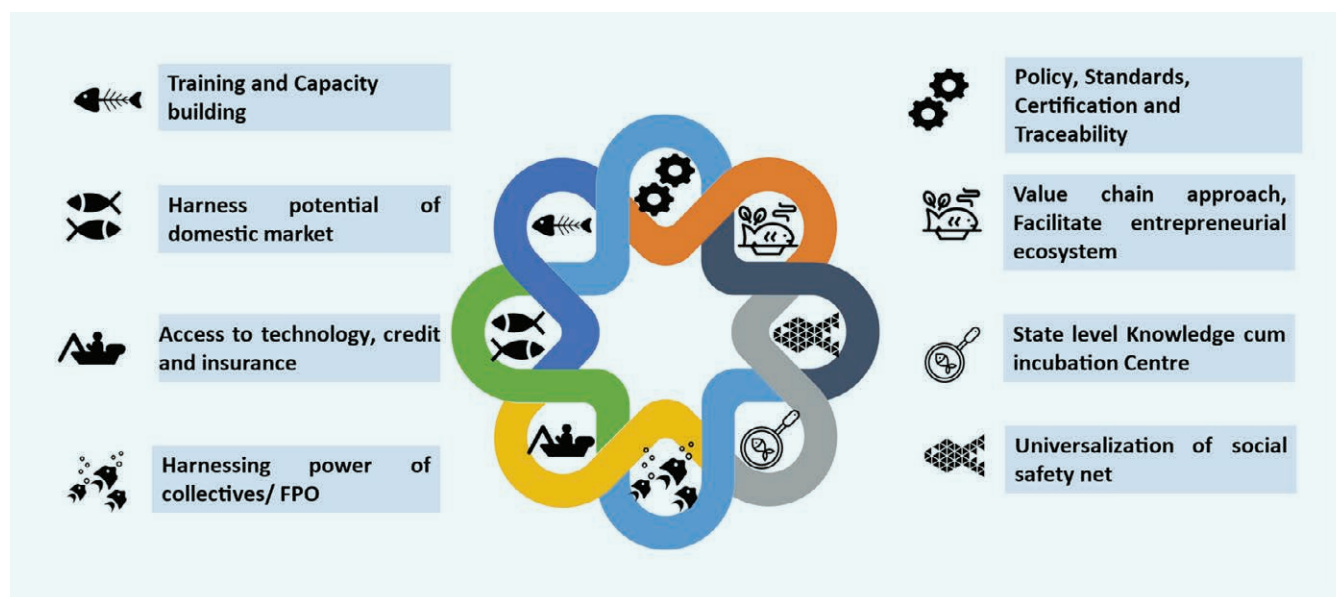
Fostering collaboration between government agencies, research institutions, and local communities will be vital in achieving this ambitious goal.

In conclusion, the fisheries and aquaculture sector is not just about fish; it's about fostering sustainable livelihoods, ensuring food and nutrition security, and empowering communities. Through targeted interventions, including engagement with women's groups and the establishment of FPCs, we can unlock the full potential of this sector, contributing significantly to the well-being of rural India and the realization of the broader agricultural vision, particularly the goal of doubling farmers' income.



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Strategies for fisheries and aquaculture sector development:



Implementation strategy

Cluster approach

SRLMs should adopt cluster approach for promotion of fisheries and aquaculture. Cluster approach will help in establishing market linkages. A cluster should have 5-10 Gram Panchayats with about 500 farmers with pond and waterbodies, wetland etc. Contiguous GPs may be selected. It is advised to saturate the villages where fish farming is already being implemented instead of going for new villages.

Cluster plan development

Using GIS based technology a cluster for entire value chain development will be development. Similar tool will be used for mapping intervention and monitoring of program.

Convergence scope with PMMSY

Untapped potential of PMMSY scheme will be leveraged to full capacity to setup enterprise and value chain development activity.

Capacity building

Focus will be on developing technical knowledge and skill among SRLM team, FPO and PG members to understand new technology prospect and follow better management practices for production enhancement.

Implementation arrangements

SRLMs should hire Technical Support Agency (TSA) / training support agency for implementation of fisheries and aquaculture.

At block level one coordinator with experience in fisheries and similar activity should be positioned exclusively for fish farming. For every 100 farmers / 4 - 5 SHG, one Matsya Sakhi should be positioned.

Value proposition of program

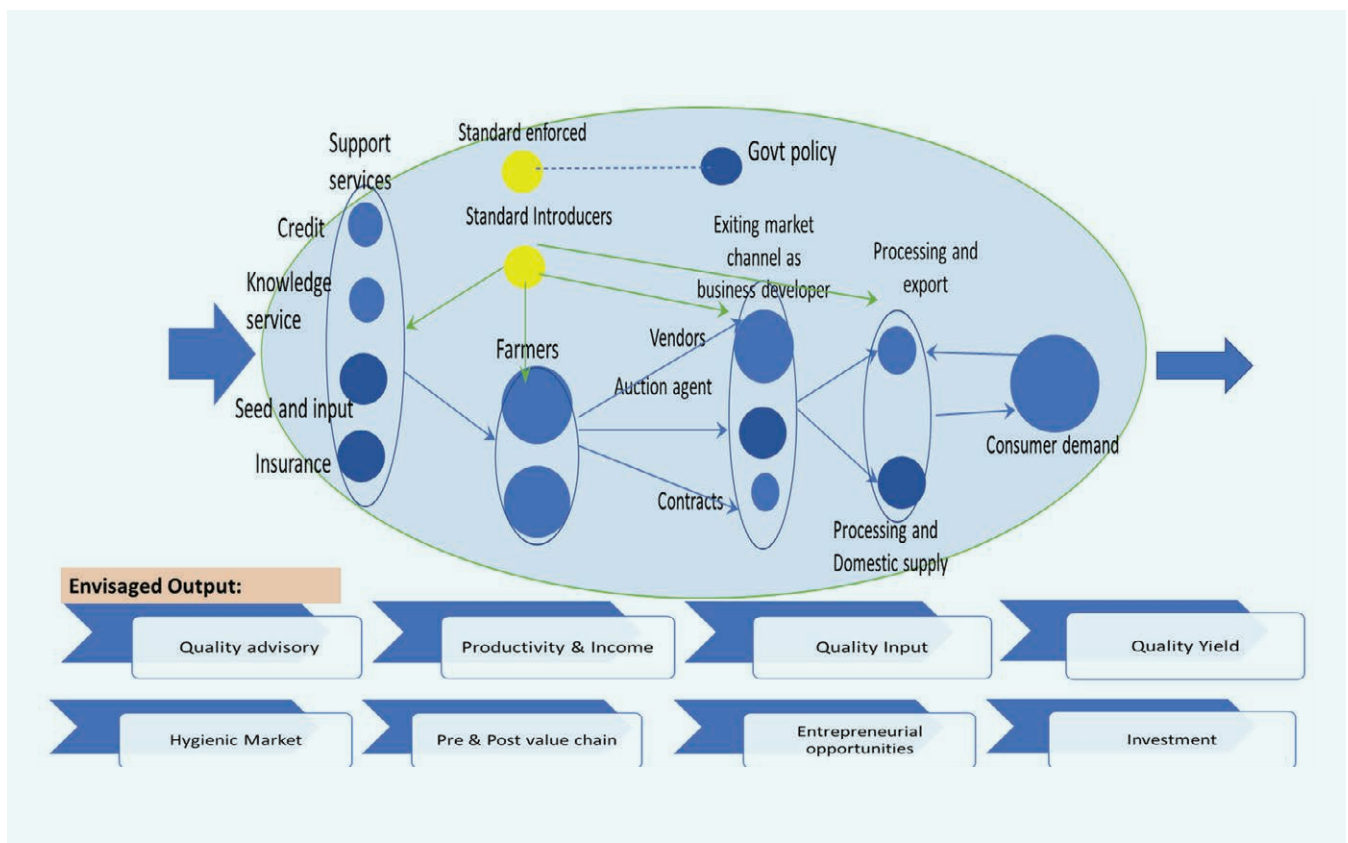
- Integrated Practices:** An integrated approach that factors in the potential of livelihood models including the catchment areas of waterbodies/ wetland is of paramount importance. Integrated livelihood models in waterbodies/wetland development areas support a variety of livelihood opportunities. This may include fish farming, aquaculture-related activities, water-based agriculture, and non-fishery enterprises. Diversification of livelihoods ensures that the community is not solely dependent on a single source of income, enhancing resilience against economic shocks.
- Inclusive market and value chain:** The development of inclusive markets and value chains in waterbodies/wetland areas is instrumental in bringing about livelihood improvements and sustainable

economic growth. Inclusive market and value chain development involve creating opportunities for all stakeholders, particularly local communities, to participate in and benefit from the various stages of production, processing, and marketing. Inclusive market and value chain development promote sustainable resource management practices.

- **Bouquet of Products:** Increasing pressure on the waterbodies/wetland production system is an important issue that impacts both the ecological and socio-economic aspects. One way to address it is the diversification of the production system beyond fishery. Live fish supplydry fish etc will be added in the proposed sites.

- **Sustainable Harvest:** One of the major issues in the fishery sector is juvenile fish catch that directly impacts the fish stock. Introducing incentives that prevent catching of juvenile fish will help in breeding and production of fish. Besides this, brood banks for high quality, genetically important and endemic fish can be established to provide for economic sustenance and conservation of wetland fish species. Like River ranching, fish seed of minor carp and local fish in waterbodies/wetland will enhance sustainable livelihood.
- **Community Ownership/ Partnership at all level:** In partnership with panchayat , local water bodies will be provided on lease system to women groups.

Strategies for fisheries and aquaculture sector development:



Scope

In the next three years, our initiative aims to reach 100,000 households, with a targeted focus on marginalized communities, including women, youth, and tribal populations. This ambitious effort involves strategic collaboration with the State Rural Livelihood Mission (SRLM) to seamlessly integrate aquatic livelihood initiatives into existing rural development programs. Concurrently, we plan to leverage bilateral programs for additional funding, technical expertise, and knowledge exchange to support our mission.

To achieve widespread impact, we will establish 25 FPO across targeted states, serving as primary units for implementing agro-ecological supported

aquaculture practices. Collaborating with existing fisheries cooperatives and Farmer Producer Organizations (FPOs) will facilitate scalability. Strengthening the role of cooperatives and FPOs in collective decision-making, resource pooling, and market access is integral. Furthermore, our initiative seeks to identify and collaborate with ICAR institutes, NABARD and startups to work alongside FPOs/PGs and aims to promote and strengthen 10,000 micro-entrepreneurs and women vendors across the supply chain, fostering the establishment of safe and hygienic produce to meet demand of domestic market. Through these comprehensive strategies, we aspire to create a robust and inclusive ecosystem for sustainable aquatic food system.

Activities and timeline for Year 1

S.No	Activity	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1.0	Training and Capacity Building												
1.1	Orientation- SRLM senior team	✓	✓				✓	✓					
1.2	Cluster identification		✓	✓				✓	✓				
1.3	Training- District/ block team		✓	✓					✓	✓			
1.4	Training on PMMSY to SRLM team		✓	✓					✓	✓			
1.4	Training to FPC and CRPs			✓						✓			
1.5	Households' identification			✓					✓				
1.6	Training of value added product and new technology intervention								✓		✓	✓	
1.7	Training for fish seed rearing enterprise		✓						✓	✓			
2.0	Training and Capacity Building												
2.2	Fish Seed Demand and stocking		✓					✓					
	Training on SoP			✓					✓				
	Monitoring and field visit		✓			✓			✓		✓		
3.0	Marketing Support for value Chain												
3.1	Micro enterprise across fisheries value chain						✓			✓		✓	
3.2	Procurement, aggregation and marketing										✓	✓	
3.3	FPC level product development						✓	✓	✓			✓	
4.0	Convergence for: Asset/ Skill/ Extension Services/ Capacity Building												
4.1	State level launching workshop			✓			✓						
4.2	District level stakeholder orientation/ coordination meeting			✓					✓		✓		

Projected Budget for three year

S.No	Particulars of Activity	Description	Physical			No. of Units	Financial			Total Cost Rs	
			No. of Units	Year-I	Year-I		Year-I	Year-I	Year-I		Year-I
1	Baseline Planning, Cluster Identification, Beneficiary mobilisation	Blocks	100000	30000	30000	40000	0.002	60	60	80	200
2	Manual and Package of practice publication	CRP and trainees	10000	3000	3000	4000	0.002	60	6	8	20
2.1	Training & Capacity Building of Staff and CRP	Blocks and Resource Agency	10000	3000	3000	4000	0.008	24	24	32	80
3											
3.1	Fish Seed demand (5000 fish seed for 1 acre of pond)	Acre of Pond	9000	1000	3000	5000	0.1	100	300	500	900
3.2	MIS and data management	Number of HH	100000	30000	30000	40000	0.002	60	60	80	200
3.3	Micro enterprise promotion	PG	8000	1000	2000	5000	1	1000	2000	5000	8000
3.4	FPC and market linkages component	FPC	25	10	10	5	3	30	30	15	75
3.5	Product development and Value addition activities	FPO level training	25	10	10	5	2	20	20	10	50
3.6	Marketing support	FPO	25	10	10	5	1	10	10	5	25
							Total	1310	2510	2510	9550

Suggested Budget: (Total farmers:1,00,000, CRPs:10,000, FPC:25, SHG: 1000 and 3-years project)

Amt. in Rs Lakh

Note: Yield Per Acre for fish : 1000 to 1500 Kgs.

Convergence

SRLMs can converge with following departments for creation of Assets, trainings and other support.

S.No	Name of the Department	Name of Scheme	Possible convergence
1	Dept of fisheries	PMMSY	Enterprise development, Pond, value added products, Retail outlets, Vehicle, Feed mill,hatchery, Biofloc
2	MoRD	MGNREGA	Farm pond development, existing pond repairing
3	Ministry of food Processing	PMFME	Value added product, fish and makhana processing

Coverage

Sub Sector		Fisheries and aquaculture based value chain development			
S.No	Particulars	As on March 2024	Plan for FY 2024-25	Achievement in FY 2023-24 (as on Nov. 23)	Plan for FY 2024-25
	1	2	3	4	5
1	No. of districts				
2	No. of blocks				
3	No. of clusters				
4	No. of villages				
5	Households covered				
6	Area in Acres				

Capacity Building Plan

S.No	Training Module	Type of Trainee (SRP/ SPM/DPM/ BPM/CRP/CLF/HH)	Duration of training	Training Month												
				Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	
1	Orientation to Fisheries aquaculture program opportunity	SRP/ SPM	2/ year	Y									Y			
2	Cluster development / value chain approached, identification of clusterst	SPM/ DPM along with SRP/ SPM	2/ year				Y			Y					Y	
3	Package of Practices	CRP + selected HH	3/ year		Y				Y					Y		
4	Advance technology (RAS,biofloc, Value added)	CRP + selected HH	4/ year		Y			Y					Y			Y
5	Ornamental and pearl production trg at CIFA , Bhubneshwar	FPCs and CRPs	3/ year		Y				Y					Y		
6	Fish Seed rearing under DAY - NRLM by selective FPCs/ PG	FPC/PG	4/ year			Y		Y				Y				Y

Key Performance Indicators

S.No	Key Performance Indicator	Target for 2024-25	Q1	Q2	Q3	Q4
1	No. of trained CRPs					
2	No. of PG adopted fisheries-based livelihood					
3	Training on PMMSY & convergence for SRLM team					
4	Number of cluster plan developed					
5	Number of DPR submitted for PMMSY and convergence scheme					
6	Fish seed stocking in (Nos.)					
7	No. of Women farmers adopted integrated farming					
8	Number of ponds/ waterbodies under coverage					
9	Annual production (MT)					
10	State level launch event					
11	No. of FPC level training					





Organic Farming Clusters

Cluster approach

SRLMs should adopt cluster approach for promotion of organic farming. Cluster approach will help in establishing market linkages. A cluster should have 10 - 15 Gram Panchayats with about 500 farmers or 25 – 30 Local Groups. Contiguous GPs may be selected. It is advised to saturate the villages where organic farming is already being implemented instead of going for new villages.

Marketable surplus should be the criteria for selecting the cluster. We should ensure marketable surplus of minimum 50 MTs of any selected commodity.

Implementation arrangements

SRLMs should hire Technical Support Agency (TSA) / Regional Council (RC) for implementation of organic farming from the beginning.

At block level one coordinator with experience in organic farming / agriculture graduate should be positioned exclusively for organic farming. For every 100 farmers / 4 - 5 LGs one Krishi Sakhi should be positioned.

Certification system

SRLMs may adopt Participatory Guarantee System (PGS) or third-party certification. It is advised that

for the first three years to implement PGS, after obtaining PGS organic the LGs can move to third party certification. SRLMs may examine the cost implications before implementation of third party certification.

Books / formats to be placed at LG level

SRLMs has to place the books recommended by National Centre of Organic and Natural Farming (NCONF), Nodal agency for implementation of PGS. The following books / formats to be placed with

LGs as per the PGS guidelines

- Local Group Registration format
- Individual Farmer Registration form
- Minutes book
- Peer inspection formats
- Non compliance guidelines
- Local Group peer appraisal Summary sheet
- Pledge
- Individual farmer application
- Agreement with Regional Council
- Attendance register for trainings



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Activities and Time lines

SRLMs has to plan and implement various activities as described in the following table:

S.No	Activity	Time lines
1	Identification of clusters	March – April
2	Mobilisation of Farmers into LGs	April – May
3	Registration of LGs	June – July
4	Placing of Books at LGs	July – August
5	Training on Organic Farming Production technologies	April – May
6	Training on PGS certification	July – August
7	Training on Marketing	September – October
8	Establishment of Bio Resource Centres	June – July
9	LG meetings	Once in a month
10	Peer appraisals	July – March
11	Retail outlets for marketing	August – October
12	Deployment of CRPs for handholding support to Mahila Kisan	April – March (15 days in a month)
13	Generation of scope certificates	End of Khari (October) and End of Rabi (March)
14	Village level trainings / demonstrations for LG leaders, Peer inspectors and Mahila Kisan	Once in a month
15	Marketing of organic produce	End of Khari (October) and End of Rabi (March) for non – perishables. For perishable on regular basis.
16	Buyer – Seller meets	End of Khari (October) and End of Rabi (March)

Capacity building plan

Following three trainings Pre -season, Mid-season and post-harvest season at state and district level:

At state level:

S.No	Training Module	No of Days	Time line	Participants
1	Organic Farming Production technologies	3	April – May	SRLM staff upto Block level
2	PGS certification	2	July – August	SRLM staff upto Block level
3	Marketing	2	September – October	SRLM staff upto Block level

At District Level:

1	Organic Farming Production technologies	3	April – May	CRPs, LG leaders and Peer inspectors
2	PGS certification	2	July – August	CRPs, LG leaders and Peer inspectors
3	Marketing	2	September – October	CRPs, LG leaders and Peer inspectors

Key Performance Indicators

S.No	Indicators	Achievement till March 2022	Target 2022-23	Achievement till Nov 2022 against the target	% Achievement	Cumulative Achievement (3+5)	Additional target for 2023-24
1	2	3	4	5	6	7	8
1	No. of blocks covered for organic cluster						
2	No. of Organic Clusters promoted						
3	No. of villages under organic clusters						
4	No. of Local Groups formed						
5	No. of mahila kisan mobilized into LG formed						
6	No. of Local Groups registered on PGS						
7	No. of Mahila Kisan as members of registered Local Group						
8	No. of Scope Certificates generated						
9	No. of Bio-resource centre established						
10	No. of retail outlets for marketing organic produce						

Convergence

SRLMs can converge with following departments for creation of Assets, trainings and other support.

S.No	Name of the Department	Name of Scheme	Possible convergence
1	Rural Development	MGNREGS	Compost pits, green manure trees plantation
2	Agriculture	BPKVY	Trainings, demonstrations, subsidies for organic manures
		ATMA	Green manure seeds and other in puts

Suggested Budget

S.No	Activity	Description	No of Units	Unit cost in Rs.	Budget in Rs.
1	Capacity building at state level	Three training at state level			
2	Capacity building at district level	Three training at district level			
3	Deployment of CRPs	15 days in a month for demonstration and hand holding support			
4	Bio Resource Centres	One per cluster			
5	Buyer- Seller Meet	Two at state level			
6	TSA hiring charges	Lumpsum			
7	Retail outlets	One per cluster			
8	Placing of books / formats at LG	10 registers / formats at each LG			
Total					



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Promotion of Natural Farming through SHGs

Cluster approach

SRLMs should adopt cluster approach for promotion of Natural farming. Cluster approach will help in establishing market linkages. A cluster should have 10 - 15 Gram Panchayats or a Cluster Level Federation (CLF) with about 500 farmers or 35 – 40 Self Help Groups (SHGs). Contiguous GPs may be selected. It is advised to saturate the villages where organic farming is already being implemented instead of going for new villages.

Marketable surplus should be the criteria for selecting the cluster. We should ensure marketable surplus of minimum 50 MTs of any selected commodity.

Implementation arrangements

Krishisakhis will be trained by the Master Trainers of Resource Agencies identified by SRLMs / MOA&FW. NCONF will train the master trainers and Master Trainers will train the Krishisakhis for five days based on the training module developed by NCONF. After training resource organisation will conduct an examination based on the performance MANAGE will issue certificate to Krishisakhis as Para Extension Worker. Krishi Sakhis will handhold the Mahila Kisan in adoption of Natural Farming Practices in Kharif and Rabi seasons. Krishisakhis may be deployed in the villages for 15 days.



Activities and Time lines

SRLMs has to plan and implement various activities as described in the following table:

S.No	Activity	Time lines
1	Identification of clusters	March – April
2	Training of Krishisakhis	March – April
3	Mobilisation of Farmers for adoption of Natural Farming	April – May
4	Training on Organic Farming Production technologies	May – June
5	Establishment of Bio Input Resource Centres	July – August
6	Village level trainings / demonstration of Botanical Inputs	May – July
7	Marketing of NF produce	End of Khari (October) and End of Rabi (March) for non – perishables. For perishable on regular basis.
8	Buyer – Seller meets	End of Khari (October) and End of Rabi (March)

Capacity building plan

Following three trainings Pre -season, Mid-season and post-harvest season at state and district level:

At state level:

S.No	Training Module	No of Days	Time line	Participants
1	Natural Farming Production technologies	2	March - April	SRLM staff upto Block level
2	Marketing	2	September - October	SRLM staff upto Block level

At District Level:

1	Natural Farming Production technologies	5	March - April	KrishiSakhis
2	Marketing	2	September - October	KrishiSakhis, CLF / PE /FPO BODs

Key Performance Indicators

S.No	Indicators	Achievement till March 2022	Target 2022-23	Achievement till Nov 2022 against the target	% Achievement	Cumulative Achievement (3+5)	Additional target for 2023-24
1	2	3	4	5	6	7	8
1	No. of blocks covered for Natural Farming cluster						
2	No. of Natural Farming Clusters promoted						
3	No. of villages under Natural Farming clusters						
4	No. of mahila kisan covered under Natural Farming						
5	No. of Bio-resource centre established						
6	No. of retail outlets for marketing NF produce						

Convergence

SRLMs can converge with following departments for creation of Assets, trainings and other support.

S.No	Name of the Department	Name of Scheme	Possible convergence
1	Rural Development	MGNREGS	Compost pits, green manure trees plantation
2	Agriculture	BPKVY	Trainings, demonstrations, subsidies for organic manures
		ATMA	Green manure seeds and other in puts

Suggested Budget

S.No	Activity	Description	No of Units	Unit cost in Rs.	Budget in Rs.
1	Capacity building at state level	Three training at state level			
2	Capacity building at district level	Three training at district level			
3	Deployment of CRPs	CRPs 15 days in a month for demonstration and hand holding support			
4	Bio Resource Centres	One per cluster			
5	Buyer- Seller Meet	Two at state level			
6	Retail outlets	One per cluster			
Total					

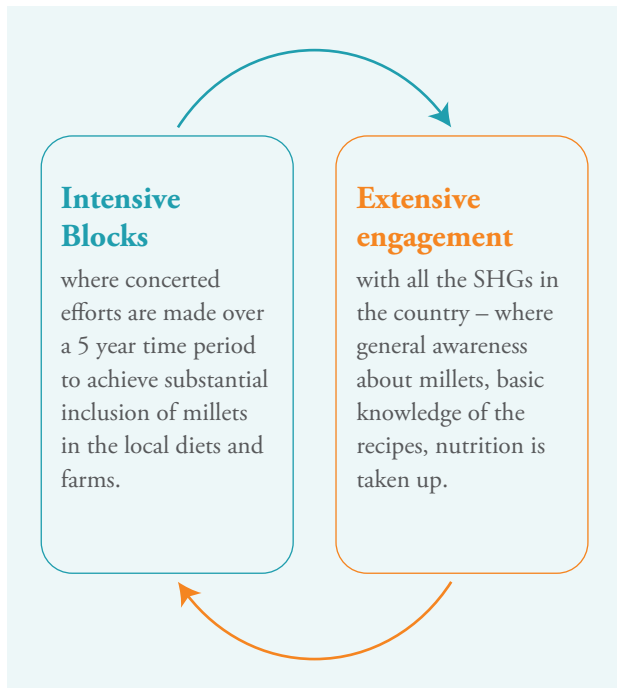




Millets Intensification Program (MIP)

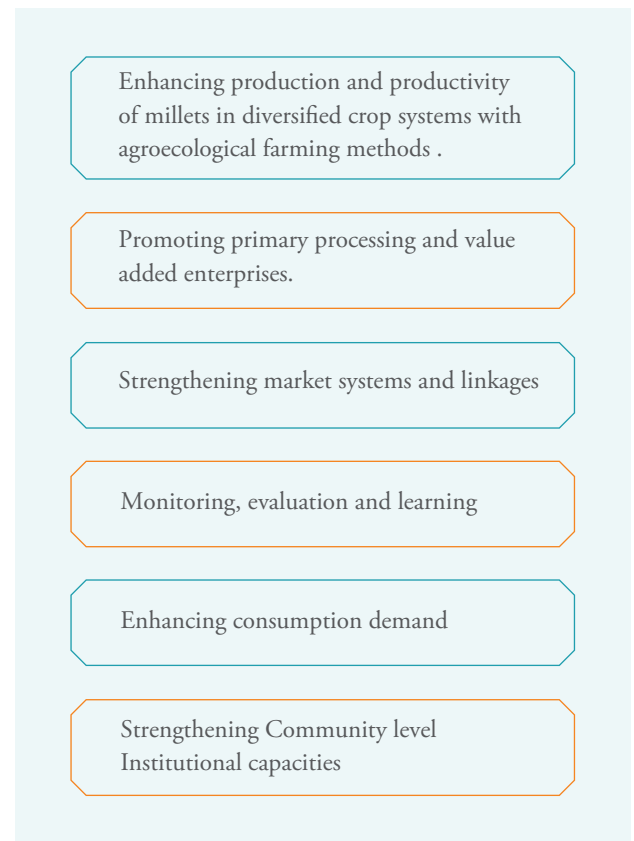
Selection Criteria for the Program Implementation Blocks

Rainfed areas and tribal areas with millet traditions are most suitable for the program to start with. Blocks that have higher incidence of upland rainfed areas, with higher current fallows may be given priority. The program may have a two pronged strategy. Marketable surplus should be the criteria for selecting the cluster. We should ensure marketable surplus of minimum 50 MTs of any selected commodity.



Program Components

The Millet Intensification Program shall have the following program components



Program Implementation Architecture

The program will be implemented by the Cluster Level Federations selected for the purpose. BMMU will support CLF in implementing the program

S.No	Level	Demand Side	Production & Marketing
1	Cluster (CLF)	<ul style="list-style-type: none"> Nutrition & food systems diversification with millets; awareness with SHGs. Engagement with ICDS Food festivals, recipe competitions. Developing local millet enterprises for local processing for consumption and value addition 	<ul style="list-style-type: none"> Identifying niches in the landscape, Promoting millets in farms for self-consumption Millets cafeteria- demos & farmers engagement with millet intensification Establishing seed systems Procurement, processing and market links
2	Block Mission Management Unit	<ul style="list-style-type: none"> Liaison with the Block level departments and programs Promotion of millet consumption in SHGs outside program CLFs (extensive engagement) Promoting millets in peri-urban/ local eateries Liaison with ICDS, MDM and other nutrition programs Support CLC in the demand side initiatives 	<ul style="list-style-type: none"> Liaison with the Block level agriculture department and programs Promotion of millets production and support seed systems in SHGs outside program CLFs (extensive engagement) Support the millet processing enterprise and their market linkages Support CLF in the establishing procurement and supply channels.
3	District Mission Management Unit	<ul style="list-style-type: none"> similar functions at the district level 	<ul style="list-style-type: none"> similar functions at the district level
		<ul style="list-style-type: none"> One data management person in the district team 	
4	District Mission Management Unit	<ul style="list-style-type: none"> similar functions at the state level 	<ul style="list-style-type: none"> similar functions at the state level

Millet Clusters for area expansion

SRLMs adopt cluster approach for promotion of Millets. Each cluster consists of 10-15 villages with about 500-800 Mahila Kisan. The basic requirement for development of cluster is to produce marketable surplus of minimum of 20 MTs. Following is the state wise action plan for area expansion under Millets.

Implementation arrangements

DAY – NRLM has signed MOU with IIMR for technical support and incubation of millet-based enterprises. DAY – NRLM under RISE hub initiative will work closely with start-ups and entrepreneurs for

promotion of Millet Value Chain activities. SRLMs may sign MoU with Indian Institute of Millet Research (IIMR), Hyderabad or any other agency which has experience in proven capacities for promotion of Millet Value Chain activities. SRLMs may deploy Krishi Sakhis for creating awareness among the Mahila kisan. SRLMs may submit value chain proposals under various funding windows available at DAY – NRLM. SRLMs may hire Technical Support Agencies (TSAs) for promotion of Millet Value Chain activities.

Key activities

SRLM may take up the following activities for effective promotion of Millet Value Chain activities.

Millet centric Producer Groups

SRLMs may promote Producer Groups with Mahila Kisan cultivating Millets and over next three years these producer groups will be emerge into Farmer Producer Organisations. Producer Groups will provide services to their member Mahila Kisans from the production to post harvest management. The services rendered by these producer Groups will include timely supply of quality seeds, primary processing and collective marketing of the produce. These Producer Groups, wherever possible, will tie up with local research stations and KVKs for sourcing of seeds and extension activities. These Producer Groups over a period of three years will emerge as Producer Enterprises / FPOs. Millet centric FPOs will render following services to it's members:

- 1. Supply of quality seed materials:** Quality seed material and supply of improved varieties play a key role in enhancing the productivity of millets.
- 2. Extension services:** FPOs will provide capacity building and advisory services to FPO members for better productivity and to reduce the cost of cultivation. Producer Organisations will organise Farmer Field Schools (FFS) on millets for capacity building.
- 3. Tool banks and custom hiring centres:** Producer Organisations will establish tool Banks and custom hiring centres to cater to requirements for millet cultivation.
- 4. Primary processing and Procurement centres:** Producer Organisations will establish primary processing centres for cleaning, grading and marketing of millets.
- 5. Millet processing units:** This unit will do cleaning, destoning, grading and dehulling. This will help farmers to get their millet produce processed for their own consumption and local sales.

Improved agronomic practices

Productivity of millets can be increased by introducing improved varieties in traditional millet growing areas. Fortified millets may also be promoted to enhance the nutritional intake by the SHG members. DAY NRLM will collaborate with ICRISAT, IARI, IIMR etc. to access improved and

fortified varieties of millets for Mahila Kisan/SHG members. In collaboration with these agencies DAY NRLM will organise capacity building program for SRLM staff and Community Resource Persons on Package of Practices for productivity enhancement, Agro ecological practices and value chain activities. Infrastructure facilities necessary for promotion of millets like Millet seed Banks and custom hiring centres / tool Banks will be promoted for timely supply of seeds and tool. Following practices may be promoted for Increasing productivity and reducing labour inputs/ costs.

Increasing Production

Landscape approach to Millets Intensification in Crop Systems: Millets are low demanding crops (in term of water and nutrients). They are best promoted in their landscape niches (uplands, fallow lands, rice-fallows etc.) and as intercrops or relay crops or border crops or pure crops where they have comparative advantage. Millets promotion can be a strategic driver for bringing greater value to upland regions. Several of the millets are early maturing and are good candidates for intercropping or diversification of crop systems. Millets can also play a potential role in reviving fallow lands to cultivation as the cost of production is low and benefits are early.

Millets Cafeteria approach – let Community Chose which millets to grow and where

It is better not to externally choose the type of millets to be promoted in specific areas; even if the choice is based on tradition. Considering the diversity of millets, introducing all types of millets in a given area in a smaller area and leaving the choices to people will be a good strategy. Diversity of millets brings in nutritional diversity and has greater strength in millets intensification. 'Millets Cafeteria' as an approach is evolved by one of the KVKs to introduce all types of millets in a plot of land in small size beds. It introduces all types of millets to the local community - in terms of familiarization of the grains, their agronomy, productivity and also their use in consumption (through food festivals).

Milletts in Rows

Encourage each farmer to Integrate millets into crop systems (about 40 to 50 rows) in their existing crop systems in an appropriate way – for their self-consumption is the best and risk free way of reviving / integrating millets into local crop systems.

Millet Root Intensification

The various experiences across the country suggest achieving higher yields through a combination of applying the principles of SRI, natural farming and local agronomic innovations. Support to farmers in progressively shifting from the current low yielding practices to high yielding natural farming methods is an important strategic element. Encourage farmers to move from mono cropping to intercropping and mixed cropping systems. Millets can also be part of Agri- Nutrition gardens.

Community Managed Seed Systems for Millets

Experience suggests that the locally adapted landraces or selections made from them are best suited for achieving higher productivity under sustainable millet intensification methods/ natural farming. Having high seed to grain multiplication ratio, millets seed systems can be established faster and the systems can be managed by SHGs. As the areas allocated to millets are generally marginal lands with varying agroecological conditions, adaptation of the varieties to specific local conditions is important. Participatory selections from the local landraces and their local multiplication is a sound

strategy for supportive seed systems. “Start with what is locally available or accessible” – is the best approach than to seek certified seed.

Intercrop models

State specific intercrop models need to be promoted to enhance the per unit land productivity. Following are the state wise targets for promotion of intercrop models.

Seed replacement with improved varieties

Seed replacement plays an important role in productivity enhancement in Millets. SRLMs may promoted improved varieties, hybrids and fortified varieties. Following are the state wise targets for seed replacement.

Primary Processing Centres

Farm gate cleaning, grading and sorting will enable the farmers to realise better prices. Producer Groups may procure sieves, graders etc for on farm primary processing. Following are the targets for primary processing centres:

Secondary Processing Centres

Producer Group members will be provided with Small Processing Units to convert millet grains into millet rice. They can also prepare ready to eat millet products for sale locally and in the nearby towns.



Activities and Time lines

S.No	Component	Activity	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Increasing Production	IEC material on Indigenous cropping systems	■	■							
		Training manual on Millet production systems		■	■						
		Seed replacement with improved varieties		■	■	■					
		Improved agronomic practices			■	■	■				
		Promotion of Indigenous cropping systems		■	■	■	■				
		Training of Krishi Sakhis		■	■						
		Deployment of Krishi Sakhis		■	■	■	■	■			
2	Seed systems	Training on Land race mapping and PVTs	■	■	■						
		Seed melas		■							
		Mapping of local varieties		■	■						
		Seed selection and Multiplication		■	■	■	■	■			
		Seed storage and sales						■	■	■	
3	Enabling easy processing	Primary processing units (CHCs)				■	■	■			
		Small Processing Facilities				■	■	■	■	■	■
4	Enterprise and Marketing Development	Mobilisation of Mahila Kisan into PGs	■	■	■						
		Scoping study for identification of potential for enterprises				■	■	■			
		Establishment of enterprises					■	■	■	■	■
5	Enhancing Consumption	Recipe Competitions and millets food festivals						■			
		Engage with local eateries / tiffin centres					■	■	■	■	■
		Engage with Anganwadis and Supplementary nutrition programs							■	■	■

Capacity building plan

At state level:

S.No	Training Module	No of Days	Time line	Participants
1	Improved agronomic Practices for Millets	2	April – May	SRLM staff upto Block level
2	Exposure visit to IIMR / KVKs etc	2	July – August	SRLM staff upto Block level
3	Processing of Millets	2	September – October	SRLM staff upto Block level

At state level:

S.No	Training Module	No of Days	Time line	Participants
1	Improved agronomic Practices for Millets	2	April – May	CRPs, LG leaders and Peer inspectors
2	Exposure visit to IIMR / KVKs etc	2	July – August	CRPs, LG leaders and Peer inspectors
3	Processing of Millets	2	September – October	CRPs, LG leaders and Peer inspectors

Convergence

SRLMs can converge with following departments for creation of Assets, trainings and other support.

S.No	Name of the Department	Name of Scheme	Possible convergence
1	MoA&FW	NFSM	Millet clusters, seeds etc
2	MOFPI	PMFME	Millet processing units

Coverage

Millets					
S.No	Particulars	As on March 2024	Plan for FY 2024-25	Achievement in FY 2023-24 (as on Nov. 22)	Plan for FY 2024-25
	1	2	3	4	5
1	No. of districts				
2	No. of blocks				
3	No. of clusters				
4	No. of villages				
5	No. of Mahila Kisan				
6	Area in Acres				

Key Performance Indicators

S.No	Key Performance Indicator	Target for 2024-25	Q1	Q2	Q3	Q4
1	Area in Acres					
2	No of PGs					
3	No of Mahila Kisan in PGs					
4	No of Mahila Kisan adopted improved agronomic practices					
5	No of Mahila Kisan adopted improved varieties					
6	No of Bio diversity blocks for Participatory Varietal Trails					
7	No of Mahila Kisan adopted intercrop models					
8	No of Primary Processing Centres established					
9	No of Secondary Processing Centres established					
10	No of Capacity Building Programs					

Suggested Budget

S.No	Activity	Description	No of Units	Unit cost in Rs.	Budget in Rs.
1	Capacity building at state level	Three training at state level			
2	Capacity building at district level	Three training at district level			
3	Capacity building at village level	CRPs 15 days in a month for demonstration and hand holding support			
4	Deployment of CRPs	15 days in a month			
5	Bio Diversity Blocks for Participatory varietal trails	One per Cluster			
6	Primary Processing Units	One per Cluster			
7	Secondary Processing units	One per Cluster			
Total					



Biofortified Grain Production (Iron Pearl Millet, Calcium Finger Millet and Zinc Wheat)

Criteria for identification of Biofortified grain production

- Clusters where both Finger and Pearl millet are already part of farmers' production practices.
- Clusters where Wheat is already in the production practices of farmers.
- Clusters where interventions or projects related to biofortified grain production are ongoing. These may be facilitated through the state seed corporation, private entities, NGOs, or other agencies. It is a prime opportunity to integrate into existing projects in these areas.
- Farmer producer companies involved in the development of consumer-based food products (such as laddus, cookies, biscuits, cakes, and other breakfast/snack items) could be engaged in the project by substituting biofortified grain as raw material for these food products.
- Farmer producer companies engaged in seed production or possessing the capacity to produce seeds could participate as an enterprise to produce biofortified seeds for State Rural Livelihood Missions (SRLMs). These SRLMs could then evolve into Biofortified Resource SRLMs (BRS) for the National Rural Livelihood Mission (NRLM).

Activities and timeline

S.No	Activity	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1.0	Training and Capacity Building												
1.1	Orientation- SRLM senior team	✓	✓				✓	✓					
1.2	Cluster identification		✓	✓				✓	✓				
1.3	Training- District/ block team		✓	✓					✓	✓			
1.4	Training to FPC and CRPs			✓						✓			
1.5	Households' identification			✓					✓				
1.6	Training of food product development								✓		✓	✓	
1.7	Training for seed development		✓						✓	✓			
2.0	Production												
2.2	Seed Demand		✓					✓					
	Training on SoP			✓					✓				
	Grain production						✓				✓	✓	
	Monitoring and field visit		✓			✓			✓		✓		✓
3.0	Marketing Support for value Chain: Product Development/ Market Research, Scoping/ Small Scale Infrastructure												
3.1	Market linkages	✓					✓			✓			✓
3.2	Procurement, aggregation and segregation of the grain						✓	✓				✓	
3.3	FPC level product development						✓	✓	✓			✓	✓
4.0	Convergence for: Asset/ Skill/ Extension Services/ Capacity Building												
4.1	State level launching workshop				✓								
4.2	District level stakeholder orientation/ coordination meeting					✓			✓		✓		

Suggested Budget

(Total farmers:2,00,000, CRPs:4,000, Seed FPC:10, Product development FPC: 50- and 3-years project

S.No	Particulars of Activity	Description	Physical				No. of Units	Financial			Total Cost Rs	From NR LM	Convergence
			No. of Units	Year-I	Year-I	Year-I		Year-I	Year-I	Year-I			
1	Baseline Planning, Cluster Identification, Beneficiary mobilisation	Blocks	200000	50000	50000	100000	0.001	50	50	100	200	200	
2	Training & Capacity Building of Staff and CRP	Blocks and Resource Agency	400000	1000	1000	2000	0.004	4	4	8	160	144	16
3	Grain Production related activities												
3.1	Seed demand (50,000 HHs seed will be developed by FPC)	Number of HH	150000	50000	50000	50000	0.0035	175	175	175	525	525	
3.2	MIS and data management	Number of HH	200000	50000	50000	100000	0.002	100	100	200	400	400	120
3.3	Harvest management	Aggregators (FPC)	200000	50000	100000	200000	0.001	50	100	200	200	200	
3.4	Seed development through FPCs (One FPC will produce seed for 5000 HHs)	FPC	10	5	10		2.5	12.5	25	0	25	17.5	7.5
3.5	Product development and Value addition activities	District campus training	50	10	20	10	0.5	5	10	5	25	25	
3.6	Marketing support	District	60	15	40	5	0.75	11.25	30	3.75	45	45	
							Total	1310	1310	1310	1310	1310	

Note: Yield Per Acre for Iron Pearl Millet Production: 800 to 1200 Kgs. And Per Acre for Wheat Production:1800 KGs

Convergence

SRLMs can converge with following departments for creation of Assets, trainings and other support.

S.No	Name of the Department	Name of Scheme	Possible convergence
1	MoA&FW	KVK, District Agriculture Office	Inputs
2	National Seed Corporation	State Agencies	Seed
3	Ministry of Consumer Affairs, Food and Public Distribution	FCI	Forward Linkages

Coverage

Sub Sector		Biofortified Grain production and Value chain			
S.No	Particulars	As on March 2024	Plan for FY 2024-25	Achievement in FY 2023-24 (as on Nov. 23)	Plan for FY 2024-25
	1	2	3	4	5
1	No. of districts				
2	No. of blocks				
3	No. of clusters				
4	No. of villages				
5	Households covered				
6	Area in Acres				

Capacity Building Plan

S.No	Topics of Training	Type of Trainee (SRP/ SPM/DPM/ BPM/CRP/CLF/HH)	Duration of training	Training Month													
				Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24		
1	Orientation to Biofortified grain and its conceptual understanding	SRP/ SPM	2/ year	Y					Y								
2	Cluster development / value chain approached, selection of clusters, steps in biofortified VCD	SPM/ DPM along with SRP/ SPM	3/ year	Y				Y				Y					
3	Package of Practices	CRP + selected HH		Y					Y					Y			
4	Post Harvest Management Practices	CRP + selected HH	3/ year		Y				Y					Y			
5	Products development	FPCs	2/Year		Y									Y			
6	Seed production under DAY - NRLM by selective FPCs	FPC/HHs and CLFs	2/Year		Y			Y			Y				Y	Y	

Key Performance Indicators

S.No	Key Performance Indicator	Target for 2024-25	Q1	Q2	Q3	Q4
1	Seed Demand in MTs					
2	No of Mahila Kisan					
3	Area coverage under Biofortification Grain production in Acres					
4	Grain Production quantity in MTs					
5	No of FPC level training					
6	State Launching Event					
7	Product development through FPCs (number)					



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K-11067/01/2020-21/NRLM(Livelihoods)/NRETP (e-374753)

Government of India
Ministry of Rural Development
Rural Livelihoods Division
DAY – National Rural Livelihoods Mission

7th Floor, NDCC II Building
Jai Singh Road, New Delhi, 1.
Dated 7th May, 2021.

To

The States Mission Director,
NRETP States.

Subject: Advisory on Environment Management Framework under NRETP.

Madam / Sir,

I am directed to say that the NRETP Environment Management Framework addresses the risk related to environment for the project activities. An advisory on the environment management framework with implementation arrangement has been approved by the Ministry (attached). It will act as a guidance note to integrate the environment safeguard requirements, good environment management practices and green opportunities/enterprises into the project supported activities.

You are requested to incorporate the plan under the EMF to the NRETP Annual Action Plan of 2021-22 as addendum and implement the activities in the NRETP areas and report compliance to the Ministry.

Yours faithfully,



(H. R. Meena)
Deputy Secretary to Govt. of India

Copy to

1. PPS to JS, RL I
2. PPS to JS, RL II
3. Director/ (RL)
4. State Anchors
5. All thematic units of NMMU

Advisory on

Environmental Safeguards and

Environmental Management Framework (EMF)

under NRETP

Contents

Contents

Section – I: About Environmental Safeguard Policies and Environmental Management Framework (EMF).....	3
1) About National Rural Economic Transformation Project (NRETP)	3
2) About the Environment Management Framework (EMF) for NRETP.....	3
3) Details of the Environment Management Framework.....	4
4) EMF Implementation Arrangements	6
Section –II: Integration of Safeguards into Farm, Non-farm, Skills Interventions.....	7
1) Sub Section I – Farm Interventions	7
2) Sub Section II – Non -Farm Interventions	8
3) Sub Section IV – Guidelines for Skill Interventions, Scope for Green Skills.....	10
4) Sub Section V – Guidelines for Infrastructure	10
ANNEXURES.....	13

Section – I: About Environmental Safeguard Policies and Environmental Management Framework (EMF)

1) About National Rural Economic Transformation Project (NRETP)

The National Rural Economic Transformation Project (NRETP) is implemented by the Ministry of Rural Development. The Project Development Objective is ‘*to establish efficient and effective institutional platforms of the rural poor that enable them to increase household income through sustainable livelihood enhancements and improved access to financial and selected public services*’. The proposed project targets increase technical assistance and investment support towards scaling up of the economic transformative initiatives. Under the component ‘State Livelihood Support’ the focus is on facilitating the uptake of economic activities under farm, non-farm and skill development interventions. Under the component Innovations and Partnerships, Food Nutrition Health and Water Sanitation (FNHW) pilots are supported.

The Farm value chain interventions focus on the promotion of producers’ collectives, viz. producers’ groups and producers’ enterprises to enable the small and marginal women farmers to access markets. The institutional structure would be based on the opportunities and existing gaps in the value chain. Besides, NRETP seeks to build on the platform under Farm Livelihoods interventions by promoting organic cultivation in select States. As part of the Non-farm initiatives, the focus is on promoting One Stop Facilities (OSF) in the blocks, strengthening the performing individual and groups enterprises from Start-up Village Entrepreneurship Program (SVEP) enterprises, and NRLM cohort and Strengthening of existing high-performing group enterprises. The FNHW interventions include behavioral change communication in health, nutrition and sanitation (with focus on kitchen gardens, 1000 days window, hand washing, usage of toilet, menstrual hygiene, solid and liquid waste management etc.).

2) About the Environment Management Framework (EMF) for NRETP

The above-mentioned project interventions/activities can have certain environmental implications (both positive and negative). Implementing the interventions envisaged under the project may trigger certain negative impacts on the surrounding environment if the appropriate safeguard measures are not integrated. It is very important to consider that all the interventions should be compliant with the laws and regulations of the country and the States, i.e., the legal and regulatory frameworks (on environment) based on Government of India, concerned States Government and the environmental safeguard policies of the World Bank. Compliance and adherence to these rules and regulations will ensure alignment of project investments with sustainable management of concerned natural resources and surrounding environment. The table below presents a snap shot of the key potential environmental implications of the proposed interventions under different sectors:

Key Interventions	Environmental Implications
Farm Interventions	<ul style="list-style-type: none"> • Mandatory Compliances where applicable • Organic clusters: possibility of positive impacts on soil, biodiversity • Need for better crop residue management (e.g.: crops like paddy, wheat) • Scope for renewable energy interventions (e.g.: solar water pumping), water conservation as best practices • Need for good practices in produce aggregation, transportation etc. for food safety • Promotion of low-cost drip in kitchen gardens as best practices

Livestock related Interventions	<ul style="list-style-type: none"> • Permissions in forest areas, vaccinations for cattle grazing in forest areas (mandatory) • Stress on fodder and water resources, animal housing and hygiene management, manure management • Green House Emissions from cattle • Wastes from Bulk Milk Chilling Units – management
Non-Farm Interventions Value Chain Interventions	<ul style="list-style-type: none"> • Permits and licenses as per legal and regulatory compliances (mandatory) • Standard Operating Procedures (SoPs) and Codes of Practices (CoPs) for enterprises • Occupational safety, health and hygiene for enterprise workers • Efficient use of resources (energy, water etc.) • Waste management (if any) • Need for special precautions under COVID scenario • Scope for promotion of green enterprises, Greening the value chains as best practices
Skills	<ul style="list-style-type: none"> • Occupational health and safety aspects • Scope for green skills promotion as best practice
Food, Nutrition, Water and Sanitation	<ul style="list-style-type: none"> • Need for maintaining safety standards and protocols for drinking water, toilets • Promotion of green toilets

To address these concerns as well as opportunities, an Environmental Management Framework (EMF) is prepared for the NRLP which is applicable for NRETP. An addendum is also developed for NRETP keeping in view the new additions/developments. These documents have captured majority of the Acts, rules, and regulations of the government of India, respective State governments and the safeguard policies of the World Bank concerning livelihood activities that are likely to be supported under NRLM/NRETP. All of the policy requirements, good environment management practices are available in NRLP EMF document (can be sourced at - https://aajeevika.gov.in/sites/default/files/resources/national_reports/NRLP-EA-EMF-Final-Main-Report.pdf) and EMF NRETP addendum (can be sourced at - https://aajeevika.gov.in/sites/default/files/resources/national_reports/NRLP-EA-EMF-Final-Main-Report.pdf).

In addition - all important policy requirements (that are applicable), environment management guidelines, mitigation measures, best practices etc. for the proposed project interventions and examples for green opportunities/enterprises etc. are attached as Annexures in the respective sections of this advisory document.

The purpose of this advisory document is to provide basic guidance to the State anchor persons (environmental safeguards) and thematic teams (Farm, Non-Farm, Food Nutrition Health and WASH) at district and block levels so as to integrate the safeguard requirements, good environment management practices and green opportunities/enterprises into the project supported activities.

3) Details of the Environment Management Framework

The EMF suggests a two-pronged approach - that is ‘do no harm’ to environment by adhering to the safeguard policies, legal regulations as well as mitigations/ guidelines and to ‘do good’ by promoting

good practices in environment management and greening value chains /enterprises and also through promotion of ‘green enterprises’.

The EMF covers the following aspects:

3.1. Safeguard Policy measures, Legal and Regulatory Requirements

The environmental safeguard policies are designed by World Bank to avoid, mitigate or minimize adverse environmental impacts of the supported projects. These are the necessary compliance requirements for the project. The NRETP interventions trigger the following safeguard policies of the World Bank:

- **Environmental Assessment (OP 4.01)** – triggered to evaluate potential environmental risks and impacts in project area and area under influence
- **Forests (OP 4.36)** – triggered to put in place the measures to avoid i) potential impacts on health and quality of the forest, ii) negative impacts on people dependent on forests or iii) changes in the management of forests
- **Natural habitats (OP 4.04)** – triggered to put in place the measures to avoid significant conversion or degradation of natural habitats directly or indirectly
- **Pest Management (OP4.09)** – triggered to avoid use of harmful pesticides (WHO classes Ia, Ib and II) and promote safety measures in activities involving use of pesticides. Non-permissible pesticide list is available in the document ‘*WHO recommended classification of pesticides by hazard and guidelines to classification*’ available at https://www.who.int/ipcs/publications/pesticides_hazard/en/. However, the project is only promoting organic farming methods; hence this policy is already complied with. The reference is cited for knowledge only.

In addition to the World Bank Safeguard Policies, the project needs to comply with the legal and regulatory requirements of Government of India and respective State governments. Wherever there is a difference in the World Bank Safeguard policies and the legal and regulatory requirements of the Government of India and the respective state governments, the Governments rules and regulations shall override World Bank’s safeguard policies. The details of legal and regulatory requirements are attached as annexures under different interventions in the following sections. All the SRLMS are to make sure the project funded activities are in compliance with the legal and regulatory requirements and none of the activities under project funding are in non-compliance.

3.2. Mitigation Measures and Environmental Guidelines/Good Practices

In addition to the safeguard policies and legal & regulatory requirements, EMF also suggests mitigation measures and best environmental management practices in managing the livelihoods.

The interventions under NRETP include promotion of farm, non-farm sectors, specifically individual and group enterprises around agri-produce, livestock & non-farm enterprises. The activity (type of livelihood activity) wise mitigation measures and best environmental management practices under different thematic areas (agriculture, value chains, livestock, fisheries, non-farm enterprises etc.) are attached as Annexures under different interventions in the following sections.

3.3. Green Opportunities

The EMF for NRLP also presented a bouquet of Green Opportunities (section 5 of NRLP EMF, page 85), which describe how organizations have addressed environmental issues by developing innovative Green Solutions that have resulted in Green enterprises and Green livelihoods.

Wherever possible, SRLMs are encouraged to promote green activities, especially green enterprises under non-farm (at least 2 per State, initially as pilot with a scale up plan) which may cover the environmental best practices around water and/or energy foot print, waste generation and disposal, worker and community safety, eco-friendly packaging, sourcing quality (organic) raw materials locally and green product certifications. In the context of the farm intervention this initiative may cover promotion of varieties suitable to the climate, manufacture and use of organic fertilizers and bio pesticides, integrated crop management practices – IPM, INM, less energy intensive transport, local markets, storage, crop residue utilization and organic certification. Additional workshops can be organized for SRLMs on this theme based on the initiatives chosen by States.

4) EMF Implementation Arrangements

4.1. EMF Implementation Plan: The approach of EMF will be to streamline the ‘safeguard measures’ and ‘good practices’ (including green interventions) into day-to-day livelihood management practices. The process for integration will be as follows:

Step 1 - Integration into Project Planning: The State annual actions plan should include a section/plan on EMF which is a detailed action plan based on the procedures described in the subsequent sections. The plan is called as Environment Action Plan (EAP). The EAP template is attached as *Annexure I*. This should be made part of AAP every year. This plan can also record the currently existing good practices, and green enterprises that are already promoted in the States. The SRLMs should issue necessary circulars/guidelines on the necessity of complying with safeguard measures and following good practices.

Step 2 - Staff Arrangements: At national, State levels the anchor persons (identified by NMMU) will have the responsibility of the EMF implementation. At the districts, cluster and federation levels the thematic teams (farm, non-farm, FNHW) with the support of the Community Resource Persons (CRPs) will play the key role in promoting the safeguard measures and best practices. Technical Support Agencies (TSAs) will be involved wherever required.

Step 3 – Implementation Arrangements: The implementation will be supported through capacity building (trainings and demonstrations). The responsibility of the anchor persons is to support in integrating the applicable safeguard and legal regulatory requirements, good environment management practices, and scope for green opportunities/enterprises into the respective training modules (farm, non-farm, FNHW), training programs etc. and make sure that these are implemented in the project activities through continuous hand-holding support to district and block teams.

Wherever possible, in addition to safeguard measure, the anchor persons are to promote green enterprises. Information Education and Communication (IEC) will be developed on each activity/commodity (e.g.: posters, films) and distributed to the PGs/PCs/POs, federation etc. As part of the organic farming interventions in NRETP areas, the guidelines of the MoA on the PGS will be applicable and the Local Groups will be registered in the PGS-Portal.

Step 4 - Monitoring: It is very important to monitor the compliance of the farm interventions (e.g.: licenses for inputs, tube wells for water use, agriculture in forest areas/natural habitats etc.) and enterprise on the adherence to the legal & regulatory requirements (e.g.: Pollution Control Board consents, FSSAI licenses, worker and consumer safety measures etc.) and tracked through internal monitoring and external monitoring (environmental audit).

The impact of EMF implementation will be measured through a ‘sustainability index’ that is developed for different activities as given in *Annexure II*. The minimum score qualifying the ‘sustainability index’ will be 7 points. The practices under sustainability index are the ‘monitoring

indicators' and data on the same should be compiled through the MIS at cluster and district levels and should be consolidated at State level without fail.

Internal monitoring: The implementation of the safeguard measures and good practices will be reported by the States through the project MIS or end line survey whichever is more suitable (the State anchor person is to take the responsibility of this integration with support from NMMU if needed). The MIS indicators are the practices mentioned in sustainability index (*Annexure II*) The CRPs are to be trained in promoting the safeguards and good practices and should play a key role in monitoring and collecting the data. The quarterly and annual progress reports will have a section on progress of EAP. The template is part of *Annexure I*.

External Monitoring: An external audit will be conducted by hiring an external agency in the 4th or 5th year of the project period. The external audit will include visits to all 13 States. The methodology will include desk review (MIS data and internal reports) and field visits. The indicators for external monitoring are given in *Annexure II* (for reference only).

Section –II: Integration of Safeguards into Farm, Non-farm, Skills Interventions

1) Sub Section I – Farm Interventions

- a. **Safeguard Requirements and Environmental Screening Procedures for Farm Enterprises:** The Farm value chain interventions would focus on the promotion of producers' collectives, viz. producers' groups and producers' enterprises to enable the small and marginal women farmers to access markets. NRETP has targeted to promote large size formal producers' collectives focusing on better price realization through value addition, market linkage, economies of scale, higher bargaining power etc. whereas the producers' groups are informal producers' collectives focusing on better price realization through majorly reduction in costs through aggregation, farm gate value addition (sorting, grading etc.), linkage to nearby large markets. The Producers Enterprises will be promoted by the SMMU whereas the Producers Groups will be promoted by CLF with the support of SRLM.
- b. **Integration of Environmental Safeguards/compliances into Farm Enterprises:** Value chain development through promotion of Producers Enterprise (PE) will be project-based implementation where SRLM will develop & submit the business plan to the Ministry in the template and the Ministry approves the project after due appraisal. Producers Enterprises supported under the NRETP shall follow all the applicable legal and regulatory compliances pertaining to the Producers Enterprises. The format for safeguard integration into the PE business plan is in *Annexure I*.

For promotion of Producers Groups, the SRLMs assist the CLF/GPLF and PGs in preparation of the business plans for the PGs and the PGs will be funded by the concerned CLF/GPLF. SRLM will support CLF/GPLF incorporation of the applicable legal and regulatory compliances in the business plan of PGs, if required based on the proposed activities of the producers' groups. Applicable environmental guidelines/ mitigations/ safeguard compliances/ good practices will be identified and will be promoted by integrating into trainings, monitoring etc. The format for the same is attached as Annexure II.

- c. **Integration of the Environmental Safeguard Requirement into Training:** Training curriculum of the PE staff, PG member and the Udyog Sakhi should include a module on environmental compliances and good environment management practices/guidelines for different farm-based enterprises based on the nature of activities covered by the collectives. SRLM is to ensure integration of the environment management practices / guidelines in the

training curriculum. Relevant IEC materials may also be developed by SRLM on the environment management practices/ guidelines circulated. *Annexure III* can be referred for guidelines.

- d. **Monitoring of Safeguard Compliance:** Safeguard compliances as planned by the Producers Enterprises will be monitored by the States who have been sanctioned with the value chain projects. The concerned CLF/ GPLF will be responsible to monitor the safeguard compliance of the Producers Groups as per the plan. Orientation and training of blocks level staff as well as the officials of CLF/ GPLF to monitor the safeguard compliances at PG level would be ensured by the SRLM. The monitoring indicators (termed as sustainability index) are in the *Annexure II* of the Section I.

2) Sub Section II – Non -Farm Interventions

- a. **Safeguard Requirements and Environmental Screening Procedures for Non-Farm Enterprises:** NRETP will be supporting individual and group-based micro enterprises in different sectors/categories. The One Stop Facility (OSF) at block level (one facility for 2-4 blocks) will play a key role in facilitating the enterprises by means of providing business development services (including funding). The main/core support from OSF includes – business plan preparation, hand holding support, market linkages and trainings. Ensuring regulatory compliances and monitoring are also the part of important support services offered by the OSFs.

For enterprises that have achieved a certain scale (annual turnover more than INR 12 lakh), the project envisages to pilot an approach of providing specialized support services through expert agencies or incubators. The incubator will support top 150 women-owned / women-led growth- oriented micro-enterprises in 3-4 States and provide them with a conducive ecosystem to scale up and create rural jobs.

NRETP identifies cluster development as a key approach for combining efforts, making use of synergies, and pooling resources to increase competitive advantage while sharing market risk. Both artisan (handloom and handicrafts) and sectoral clusters (canteens, apparel, rural tourism, etc.) can be promoted under NRETP. Each cluster supported under the project will be supported by a Technical Support Agency (TSA) to support the cluster in developing business plans, nurturing forward and backward linkages, securing commercial finance, and facilitating access to technology and market-oriented skills.

- b. **Integration of Environmental Safeguards/compliances into Non-farm Enterprises:** As part of promotion of non-farm enterprises, The OSF responsibilities should also include integrating safeguard requirements and ensuring compliances in the supported enterprises. The recommended process of integration is to as follows:

2.1. Environmental Screening and Appraisal of the Business Plan: All the enterprises should be informed that they have to follow the legal and statutory compliances.

The business plans that are prepared will be screened (environmental screening) in order to identify the applicable legal and regulatory compliances to the proposed activity. The screening will be done by Business Development Service Providers (BDSP) with support of Block Technical Coordinator (Enterprise Promotion). The OSF-MC (technical and financial appraisal) committee may vet this.

Applicable environmental guidelines/mitigations/safeguard compliances/good practices will be identified and will be promoted by integrating into trainings, monitoring etc. the format for the same is attached as *Annexure I*. The activity wise details are attached in *Annexure II*.

2.2. Integration of Environmental Safeguard Requirements into the Trainings

The BDSP training curriculum should include a module on environmental compliances and good environment management practices/guidelines for different types of enterprises. The responsibility of overseeing the integration is with State Technical Expert Enterprise Promotion (STE EP). IEC can be prepared by States in local languages (following the model disseminated by the NMMU).

Monitoring the Safeguard Compliances: The BDPS/BTC - EP, as part of the performance monitoring of the enterprises, will also monitor the compliances with safeguard requirements. The monitoring formats (if any) and MIS should include indicators on safeguard compliances. The responsibility of overseeing the integration is with State Technical Expert Enterprise Promotion (STE EP). The monitoring indicator for the safeguard compliances is 'compliance with all applicable consents/permits/' with respect to the activity as identified.

2.3. Promotion of Environmental Safeguards in different types/categories of activities and clusters

Promotion of Artisan Clusters: The scoping studies, Diagnostic Study Reports should include environmental and health related issues associated with the type of activity in the clusters (e.g.: over exploitation of natural resources for raw materials, disposal of wastes like used dyes, handling of hazardous chemicals substances etc.). The study should also list out the legal and regulatory compliances pertaining to the specific activity as suggested in the *Annexure I*. The mitigations/guidelines and good practices can also be listed using the format in *Annexure II*. The annual work plan submitted by TSAs should include a section on environmental compliances and the trainings/CB programs to the members should include a module on good practices for health, hygiene, waste management etc. in the specific cluster. The Environment guidelines can be referred for the guidance on the same (*Annexure III*). The indicative format for inclusion of safeguards in scoping study, DSR, annual work plan is given in *Annexure IV*. (Health risks, permits/licenses etc. are mentioned in templates/framework).

The monitoring activities by TSA should cover safeguard compliances, promotion of good practices. The mid-term and project completion reports should include a section on environmental safeguards covering the compliances, good practices followed etc. Scope for green production can be explored and promoted on pilot basis (examples are listed in *Annexure III*) Once the activities/technologies are chosen necessary guidance can be provided to the States.

TSA Trainings by NMMU should also include a section on safeguards. –

Promotion of Sectoral Clusters: The cluster level action plans should undergo screening process (*Annexure I*) for identifying the applicable compliance requirements and good practice guidelines. The TSA business plan, annual work plan etc. should include a section on safeguards integration.

Incubation Guidelines: All the enterprises should be informed that they have to follow the legal and statutory compliances. The proposed screening format is included in *Annexure I* which could be made part of business proposal/application. Guidelines mitigations measures, good practices can also be integrated using format in *Annexure II*. The

responsibility of overseeing the integration is with State Technical Expert Enterprise Promotion (STE EP).

Along with the screening, applicable environmental guidelines/mitigations/good practices will be identified and will be promoted by integrating into trainings, monitoring etc. The activity wise details are attached in *Annexure III*.

3) Sub Section IV – Guidelines for Skill Interventions, Scope for Green Skills

Skill Interventions may include:

- Aspects/modules on occupational health and safety, use of Personal Protective Equipment for the skill trainings.
- Consider scope for green skills while identifying the skills/sectors by the States. Some examples are:

Sector	Possible Green Skills and Green Jobs
Agriculture	Preparation of Organic Fertilizers and Pesticides
	Pest Management Practices (PMP)
	Permaculture design services
Livestock/ Agriculture/ Food Production	Waste Management (Waste Minimization, Waste recycle and reuse) through biogas plants
Energy	Solar Technicians, bio gas service providers
Masonry	Green Constructions
Forestry	Sustainable Collection, Processing and Marketing of NTFPs
	Eco Tourism
Garments with dyeing	Organic dye preparation
Handicrafts	Recycled paper products

4) Sub Section V – Guidelines for Infrastructure

Guidelines for construction works/Infrastructure

Infrastructure Compliances

- The land record should be available (lease, donation, ownership etc.)
- NOC should be obtained from forest department in forest areas where applicable
- The demolition and construction wastes should be disposed in designated area in consultation with local panchayat/municipality. Preferably used for land filling or any other alternate purposes
- No trees should be cut for construction. In case if clearance of trees is required re-plantation should be done with same or any other suitable local species. Permissions should be taken for clearance where applicable.
- If there is need to create water source (tube well), permission should be taken from ground water department.

Environment Guidelines/Mitigations/Good Practices

- Constructions should not happen in fertile agricultural lands or borrowing soil from fertile agricultural lands for construction should be avoided
- Construction site should not be prone to water logging or inundation during monsoons
- All the construction waste should be disposed into a pre identified land fill or used for construction of roads under NREGS etc. The condition of disposal should be built into the contracts
- Ensure required ventilation and natural illumination to reduce the need for energy
- Fire proof and leakage proof measures to be integrated into the building design
- Removal of mature trees should be avoided during construction. If unavoidable, compensatory tree plantation with same species or suitable local species will be carried out in consultation with Forest Department
- All buildings will be equipped with toilets and receptacles and a system should be established for collection and recycling of non-biodegradable wastes
- Wherever necessary provide ramps.
- Provide safety measures like parapet walls, and grill to stairs, balconies and roof.
- Raw materials will not be sourced illegally from nearby locations
- All raw materials (sand, stone, timber etc.) will be sourced from authentic and approved vendors, possessing valid permits. Relevant supporting documents should be presented for scrutiny on request.
- Ensure safe and covered stockpiling of the construction materials in separate place or a corner in the premises of building.
- Stockpiled materials should be covered to control dust emissions.
- Construction debris should be put to alternate uses such as land filling. If not utilized it should be disposed off in nearby safe places.

COVID Advisory/ Guidelines for Construction Works

- On day zero, before resuming/commencing the work, mandatory medical check-up should be arranged for all workers. In case of any person with symptoms such as fever or cough, an ambulance should be arranged immediately through 108 or 104, and the person should be shifted to designated hospital.
- Before commencing the work, morning briefing sessions and safety meeting should be arranged every day, to review site protocols ensuring social distancing norms. Workers should be briefed about safety guidelines and important updates.
- Mandatory thermal scanning of everyone entering and exiting a construction site should be done, and provisions for water, soap or hand wash or sanitisers should be made at all entry and exit points and common areas, and every worker and engineering staff should wash or sanitise hands while entering and exiting the premises.
- Face masks are mandatory, and hand gloves should be used by the workers handling material coming from outside.
- Strict ban should be imposed on gutka, tobacco, and paan on the site, and spitting in common areas should be strictly prohibited.
- In case of camps - Identity cards should be issued to workers and their family members, and proper record of all the workers should be maintained. All the essential items should be made available on site. No outside worker should be allowed to stay inside the premises.
- Staggered timings should be implemented to avoid congestion at the entry gates, and number of workers at a particular time or place should be reduced by making arrangements for different shifts or areas.

- Food should be consumed at designated areas following social distancing. Seating area at recommended distance should be marked if necessary.
- Entire construction site should be disinfected on daily basis and housekeeping teams should be equipped accordingly. Ban should be imposed on non-essential visitors at sites, even if it is from the same company.
- All machines or vehicles should be disinfected regularly and all construction material arriving at the site should be left untouched for three days “to ensure safe usage”.
- Reusable equipment should be thoroughly cleaned and should not be shared.
- Authorised hospitals and clinics to treat COVID-19 patients should be identified and the list should be displayed at the site. A doctor should visit periodically for any medical assistance.
- Sites should have isolation rooms to be used in case a worker exhibits symptoms of COVID-19. The worker should be kept in isolation while medical advice is sought. Apart from supervisors, sites should also have a site safety representative
- Appropriate signage should be displayed in local language/Hindi.
- Non-touch garbage bins with biodegradable garbage bag should be installed for waste collection, and proper disposal of garbage bags should be ensured. All protocol including emergency response must be laid out as per guidelines issued by government

ANNEXURES

Section –I: Environmental Safeguard Policies and Environmental Management Framework (EMF), Implementation Arrangements

Annexure 1: Template for Environmental Action Plan (EAP) in the Annual Action Plan (tentative, can be modified as per need)

A brief write-up in a separate section on EAP to be incorporated in the Annual Action Plan of the State with the table given below:

The Key Livelihood Activities/ interventions	Types of activities to be promoted/ scaled up	Key safeguard measures, mitigations and best practices that will be integrated into the Practices, Guidelines etc.	Plan for Capacity Building (number and frequency of trainings, exposures, demonstrations, IEC materials etc).	Monitoring Plan (through MIS, progress reports etc.)	Budget allocated
Farm Interventions					
Non-farm Value chains Enterprises					
FNHW					
Skills					
Any others					

Template for Progress Report

The Key Livelihood Activities/interventions	Types of activities to be promoted/ scaled up	Proposed EMF actions	Progress	Remarks if Any
Farm Interventions				
Non-farm Value chains Enterprises				
FNHW				

Annexure II: Sustainability Index

The practices to be tracked through the internal monitoring are:

Activity	Safeguard Measures and Good practices	Score	Minimum score for sustainability ^[1]
Agriculture	Deep Summer Ploughing	2	
	No use of pesticides and Non-Chemical methods of Pest Control - minimum 3	2	
	Soil Test based fertilizer/nutrient application	1	
	Use of Organic Manures only	3	

Activity	Safeguard Measures and Good practices	Score	Minimum score for sustainability ^[1]
	System of Crop Intensification (or) Drip Irrigation (or) Mulching	2	
	Total	10	7
Dairy	Keeping the locally Suitable breed as suggested in State Breeding Policy	2	
	Fodder cultivation/fodder tree cultivation/azolla	2	
	Chaffing (cutting) the fodder before feeding	1	
	Stall feeding (at least partial)	1	
	Clean, spacious and ventilated sheds with feed and water troughs	1	
	Composting of the manure	2	
	Regular vaccinations	1	
	Total	10	7
Goatary	Keeping the locally Suitable breed as suggested in State Breeding Policy	2	
	Fodder cultivation/fodder tree cultivation	1	
	Stall feeding	1	
	Chaffing (cutting) the fodder before feeding	1	
	Clean, spacious and ventilated sheds with feed and water troughs	2	
	Composting of the manure	2	
	Regular vaccinations	1	
	Total	10	7
Fisheries	Culture of locally suitable species, poly culture (no banned, invasive species like cat fish, tilapia)	2	
	Observing government regulations like ban season in natural water bodies	1	
	Application of nutrients based on soil and water testing	2	
	Application of organic manures only	2	
	Permissions from Panchayat/Department as applicable or lease agreement	2	
	Integrated fish farming practices	1	
	Total	10	7
	Non-Timber Forest Produce	Permission from the Forest Department for collection/cultivation as required by the laws	3
Collection of produce only after the maturity		2	
Sustainable method of collection - nondestructive collection leaving 25% of produce for regeneration		2	
Permission for transit		1	

Activity	Safeguard Measures and Good practices	Score	Minimum score for sustainability ^[1]
	Actions, measures for regeneration of the selected species	2	
	Total	10	7
Non-Farm Enterprises and value addition Eg: milling, drying, processing and packaging	Permission/consent from Pollution Control Board/FSSAI etc. if applicable	2	
	Water use efficiency, resource use efficiency, Use of energy efficient machinery, tools etc.	1	
	Good working conditions - space, ventilation, basic amenities	2	
	Hygiene in processing/value addition, packaging etc.	3	
	Use of natural/safe/quality/permissible ingredients, raw materials	2	
	Total	10	7

The key sustainability indicators (tentative) for external monitoring are:

Commodity/sector	Sustainability indicators
NTFP	Percentage of beneficiaries doing NTFP collection following sustainable methods
Agriculture, Horticulture	Percentage of area under Non chemical pest management methods Percentage of area under micro irrigation methods Percentage of area under use of organic manures
Dairy	Percentage of farmers growing fodder Percentage of farmers implementing <ul style="list-style-type: none"> • stall feeding • clean sheds • composting the manure
Fishery	Percentage of farmers following the recommended fertilizers and organic manures Percentage of farmers following native species selection, poly culture and recommended stocking density Percentage of farmers following integrated farming
Goatery	Percentage of farmers opting for locally suitable breeds (recommended in State breeding policy) Percentage of farmers growing fodder/fodder trees Percentage of farmers implementing <ul style="list-style-type: none"> • stall feeding • clean sheds • composting the manure

<i>Commodity/sector</i>	<i>Sustainability indicators</i>
Non-farm enterprises and value addition	<ul style="list-style-type: none"> Percentage of the enterprises that have obtained the required permissions, licenses etc. Percentage of enterprises using renewable energy/following energy efficiency and water efficiency Percentage of enterprises following hygienic practices Percentage of enterprises using natural/safe/quality/permissible ingredients, raw materials

By the time of the external audit (year 4/5) the minimum area/percentage of activities under sustainable practices in each State in the intervened villages / enterprises should be a minimum of 50%. The SRLMs should be encouraged to meet the criteria detailed in the index and internal monitoring must be done through MIS tracking.

Section –II: Integration of Safeguards into Farm, Non-farm, Skills Interventions.

Sub Section I – Farm Interventions

Annexure I: Integration of Environmental Safeguards into the Producer Enterprise Business Plans (refer to Annexure II and III for compliances and mitigation measures/guidelines)

The key activities proposed in PE Business Plans	Legal and Regulatory Compliances if any	Mitigation Measures/Good Practices/Environmental Guidelines	Remarks

Annexure II: Integration of Environmental Safeguards into the Business Plans of PG under farm interventions.

Compliances:

S. No	Safeguard Compliances	Applicability		Present status on compliance		Remarks if any (plan, support required etc.)
		Yes	No	Yes	No	
1	<i>Agriculture</i> <ul style="list-style-type: none"> Purchase, stock, sale, distribution or exhibition of the following pesticides will not be supported 					

S. No	Safeguard Compliances	Applicability		Present status on compliance		Remarks if any (plan, support required etc.)
		Yes	No	Yes	No	
	<ul style="list-style-type: none"> ○ Pesticides classified in Class Ia, Ib and II of WHO classification; • ○ Pesticides banned by the Government of India, ○ Pesticides banned by the State Government. • Purchase, stock, sale, distribution or exhibition of pesticides and chemical fertilizers will not be supported without the requisite licenses. 					
2	<p><i>Livestock</i></p> <ul style="list-style-type: none"> • Grazing of livestock in forest areas without taking required permission from the Forest Department should not be done. • Grazing of livestock that have not been vaccinated in forest areas is not permitted • Use of antibiotics, hormones etc. for growth promotion or use of substances like oxytocin for easy milking etc. are not permitted • The Artificial Insemination activities promoted by the project should be in compliance with the State breeding policy 					
3	<p><i>Fisheries</i></p> <ul style="list-style-type: none"> • Fishing in the Government declared prohibited/closed season is not allowed. • Fishing using nets with mesh size smaller than the 					

S. No	Safeguard Compliances	Applicability		Present status on compliance		Remarks if any (plan, support required etc.)
		Yes	No	Yes	No	
	<p>permissible size (1 inch in fresh water and half inch in marine fisheries) should not be done.</p> <ul style="list-style-type: none"> Fishing using destructive fishing practices (use of poison, explosives, etc.) should not be followed. Culture of invasive species (e.g., African Catfish, Tilapia) will not be encouraged. 					
4	<p><i>Non-Timber Forest Produce</i></p> <ul style="list-style-type: none"> Activities that involve use of forest land for non-forest purposes without the permission of the Forest Department should not be supported wherever such permission is required by law. Extraction, transport, processing, sale of forest produce including non-timber forest produce without taking required permission from the Forest Department should not be done. Wherever such permission is required by law. Activities that involve destruction of wildlife or of wildlife habitat will not be supported Clearing, kindling fire, damaging trees (felling, girdling, lopping, topping, burning and stripping bark), quarrying stone, etc., in reserved and protected forests will not be supported. 					

S. No	Safeguard Compliances	Applicability		Present status on compliance		Remarks if any (plan, support required etc.)
		Yes	No	Yes	No	
5	<p><i>Infrastructure</i></p> <ul style="list-style-type: none"> • The land record should be available (lease, donation, ownership etc.) • NOC should be obtained from forest depart in forest areas where applicable • The demolition and construction wastes should be disposed in designated area in consultation with local panchayat/municipality. Preferably used for land filling or any other alternate purposes • No trees should be cut for construction. In case if clearance of trees is required re-plantation should be done with same or any other suitable local species. Permissions should be taken for clearance where applicable. • If there is need to create water source (tube well), permission should be taken from ground water department. 					

Key Activity in the PG Business Plan	Mitigation Measures/ Environmental Guidelines/ Good practices	Remarks (plan of action, support needed etc.)

Annexure III: Environmental Guidelines/Mitigation Measures/Good Practices for Farm Interventions

Agriculture

Activity	Possible Environmental Impacts	Environment Guidelines / Mitigation Measures / Good practices
Crop Selection	<p>Selected crop may lead to consumption of more water</p> <p>Selected cropping pattern may lead to nutrient depletion.</p> <p>Traditional and nutritious crops may disappear</p> <p>Encroachment of common lands for crop commercialization.</p>	<p>Selection of crop will be promoted matching with availability of water.</p> <p>Crop should be rotated to ensure that crops with different root zones, different demands on nutrients and different pests and diseases. Prefer traditional crops.</p> <p>Strengthening of Village level organizations to restrict such incidences.</p>
Selection of the variety	Variety may not be suitable to the area or preferred by the farmers.	Well adapted and high-yielding varieties as suggested for the region by ICAR institutes, KVKs, Agricultural Universities, Agricultural Department etc. with resistance to biotic stresses and improved nutritional quality should be chosen. Or traditional varieties may be chosen.
Seed treatment	Sowing of untreated seed may lead to pest and disease infestation	Use of treated seed preferably with botanicals.
Irrigation	<p>Excess use of water for intensive cropping depleting the surface water resource.</p> <p>Lack of information on weather updates may lead to untimely operations, especially irrigation leading to crop loss due to unexpected dry spells or rains.</p>	<p>Use water efficient methods of irrigation like drip especially for horticultural crops.</p> <p>The farmers can be linked with SMS based weather update systems to avoid untimely operations.</p>
Pest Management	Increased use of pesticides in more quantities than desired leading to runoff into water bodies and polluting them and polluting environment, negative effects on health etc.	Restrict to non-chemical methods of pest management. In any case, avoid use of pesticides banned and restricted by World Health Organisation (WHO) and the local laws.
Soil Health & Nutrient Management	Soil degradation due to fertilizer use in more quantities and high uptake of nutrients due to high responding varieties.	Adopt organic manuring practices to the extent possible. Any chemical fertilizer application should preferably be based on soil testing.

Activity	Possible Environmental Impacts	Environment Guidelines / Mitigation Measures / Good practices
Storage & Handling of Agri-inputs	<p>Poor storage, handling can lead to spills and leaks of fertilizers and pesticides leading to contamination of soil and water</p> <p>Poor storage may lead to pest and disease infestation of seeds</p>	<p>Safety measures are required that in storing agriculture inputs like fertilizer and other chemicals that leads to infect other input.</p> <p>Clean storage areas daily or after each use</p>
Drying	<p>Storage of grains and products like turmeric, ginger etc. needs drying to attain prescribed moisture level to avoid pest and disease infestation which may call for chemical use for management.</p> <p>Drying on open grounds may contaminate the produce with dirt, microbes etc. which will reduce the quality of produce will have an impact on health.</p>	<p>Dry the product to attain prescribed moisture level.</p> <p>Drying on cement platforms, mats etc. will protect the produce from contamination. Use solar dries wherever possible.</p>

Collection, aggregation, handling and transport of agricultural produce

Activity	Possible Environmental Impacts	Environment Guidelines / Mitigation Measures / Good practices
Sorting and grading	<p>Doing the operations like sorting and grading on unclean surfaces/platforms may contaminate the produce because of pathogen load.</p> <p>Absence of water facility/source may hamper the cleaning process.</p> <p>Produce from field, if not clean may contaminate the other produce.</p> <p>Re use of the crates and sacks may lead to spread of microbial infections.</p>	<p>Sanitation of the grading, packaging facility is very important for avoiding microbial/pathogen contamination.</p> <p>The sorting/grading platforms, containers etc. should be kept clean, washed and allowed dry after every operation or on daily basis.</p> <p>Water facility at the facility becomes important for the cleaning purposes.</p> <p>Bleaching powder can be sprinkled in the premises once in a while.</p> <p>Remove as much dirt and mud from fresh produce before it arrives the facility.</p> <p>Clean and sanitize crates, sacks before using to transport fresh produce, especially ready-to-eat produce like fruits.</p>

Activity	Possible Environmental Impacts	Environment Guidelines / Mitigation Measures / Good practices
	<p>The sorting, weighing equipment also can spread infestations on continuous reuse.</p> <p>There is chance of presence of pests in the produce. Pests can spread disease and damage produce. There is also chance of rodents at the facility due to continuous availability of food.</p>	<p>The equipment used in sorting, grading, washing and packing fresh produce should be cleanable.</p> <p>An integrated pest management program should be established to include sanitation and separation of infested produce.</p> <p>The facility should be kept free of rodents, pests etc. use of light traps is recommended at nights. Use fly traps, natural baits etc.</p>
Packaging	Use of unclean bags, crates etc. may lead to contamination and quick spoilage of the produce.	The bags should be kept clean; crates should be washed and dried. Disinfectants can be sprayed if required for high value produce.
Transport	There is chance of hiring/using the trucks that also transport chemical fertilizers, cattle/animals etc. which may lead to contamination of organic produce.	The trucks should be kept clean and make sure the trucks that simultaneously transport chemicals (fertilizers, pesticides etc.) or animals/poultry birds etc. are not used for the purpose. Spray the vehicles with disinfectants if possible.
Separation of damaged/contaminated produce	The waste products separated because of pest, rots etc might encourage the breeding of pests, diseases and may contaminate the fresh produce in the facility.	The infested product should be separated and disposed of away from the facility or composted at a safe distance.

Livestock: Dairy

Activity	Possible Environmental Impacts	Environment Guidelines / Mitigation Measures / Good practices
Grazing, feeding	Continuous open grazing may result in stress on common lands.	Fodder /fodder tree cultivation and stall feeding should be followed to the extent possible.
Housing	Congested spaces and unhygienic conditions due to manure, wastes etc. may lead to disease spread	Sheds should be well ventilated and kept clean. Manure should be composted in pit.
Interventions for improving milk yield	Injecting hormonal substances like oxytocin under misconception that it increases milk yield will have negative impact on animal health and will make the animal go dry early.	Practice of injecting hormones should be strictly avoided.

Activity	Possible Environmental Impacts	Environment Guidelines / Mitigation Measures / Good practices
Milking	Unhygienic milking practices - milking without washing hands. Not addressing any injuries or disease of the animal will contaminate the milk	Beneficiaries should be trained on hygienic milking practices – clean milk production. Botanical/herbal medicines can be used for injuries.
Disposal of dead animals	The dead bodies of calves or small ruminants that are dead due to epidemics will further spread the infection when disposed openly.	The carcasses should be properly buried or burned, after bio security measures (sprinkling disinfectants like bleaching powder). The personnel also need to disinfect themselves.
<i>Environment Issues and Measures in Bulk Milk Cooling Units</i>		
Cleaning and maintenance of equipment in bulk milk cooling units	The chemical and acids used in cleaning the unit pollute the soil and water when discharged without being treated	Waste water after cleaning should not be released into the gutters leading to agriculture fields, or to the open area nearby. Drying ponds (with cement lining) can be constructed where water can be evaporated and residue can be collected and disposed of safely.

Livestock: Small Ruminants

Activity	Possible Environmental Impacts	Environment guidelines / Mitigation Measures / Good practices
Breed selection	Selection of breeds that cannot adapt to the local climatic conditions will lead to loss of animals or results in low productivity and health issues.	Selection of breeds suitable to local climatic conditions and up gradation with the improved breeds suitable or acclimatized to local climate should be done under technical guidance (with reference to State breeding policy).
Grazing	Continuous over grazing will lead to degradation of grazing lands. In case of sheep as they graze close to the ground surface vegetation is removed exposing the soil for erosion.	Growing fodder trees, regulated grazing and stall feeding (partly or completely) will reduce pressure on grazing lands. Rotational grazing will be followed and pasture land development initiatives will be taken up in convergence with NREGS.
Lopping trees for fodder	Regeneration of the trees will be affected if lopping is done extensively.	Only small twigs should be extracted, fodder trees can be grown in house premises as well.

Activity	Possible Environmental Impacts	Environment guidelines / Mitigation Measures / Good practices
Shed spacing	Congested, less ventilated sheds will lead to quick spread of diseases and affects animal health due to less scope for movement.	The sheds must have sufficient space and well ventilated and offer protection from heat, rain etc.
Stall feeding	Stall feeding with green fodder without chopping may lead to wastage.	Fodder should be properly chopped before feeding.
Disease Management	Spread of contagious diseases	The animals should be vaccinated as per the schedule and herbal remedies can be used where feasible.
Shed cleaning and waste management	Open disposal of shed cleanings and feed waste create unhygienic conditions and leads to loss of manurial value.	Wastes should be composted as pit, or heap covered with leaves and lined with bricks to avoid leaching or evaporation losses.
Measures during drought	Lack of drought management strategy may lead to loss of herds or poor performance.	Management of commons and pasture lands, improved grazing practices like rotational grazing, protection of shrubs and trees. Fodder conservation through community fodder banks. Harvest and use the failed crop as fodder. Management of common pasture lands.
Disposal of dead animals	The dead bodies of calves or small ruminants that are dead due to epidemics will further spread the infection when disposed openly.	The carcasses should be properly buried or burned, after bio security measures (sprinkling disinfectants like bleaching powder). The personnel also need to disinfect themselves.

Piggery

Activity	Possible Environmental Impacts	Environment Guidelines / Mitigation Measures / Good practices
Breed selection	Selection of breeds that cannot adapt to the local climatic conditions will lead to loss of livestock or results in low productivity and might have health issues.	Selection of suitable species in order to have increased adaptability. Indigenous species should be promoted to the extent possible.
Use of growth promoters	Use of growth promoters for gaining weight may have implications on health	Prohibition of use of hormones for gaining mass, farmers should be made aware of the ill effects.

Activity	Possible Environmental Impacts	Environment Guidelines / Mitigation Measures / Good practices
Shed construction and maintenance	Congested, less ventilated shed results in disease outbreaks.	Sheds should be well ventilated and spacious enough to provide healthy environment. Sheds should be cleaned every day and the liquid waste should not be let into any water bodies.
Feed and manure management	Over feeding results in wastage. Pig manure could be an environmental hazard when it is not disposed/stored in proper manner (storing it openly)	Recommended dosages of feed to be followed. Feed waste to be collected and disposed properly. The manure should be stored in a lined pit to avoid any leachates and properly covered (to be opened and stirred once in a while allow the heat to escape). Integrated farming practices (with fisheries) should be encouraged so as to promote effective use of feed waste and manure.
Disease outbreaks	Improper disposal of manure, carcasses may result in quick spread of diseases and will lead heavy losses.	An awareness program to farmer on precaution measures that needs to be adopted during epidemic/ spreading of infectious diseases in pig should be made available. Knowledge on the possible diseases that could be transmitted from pig to humans should be provided (with support of Animal Husbandry department, KVKs etc).
Disposal of dead animals	The dead bodies of calves or small ruminants that are dead due to epidemics will further spread the infection when disposed openly.	The carcasses should be properly buried or burned, after bio security measures (sprinkling disinfectants like bleaching powder). The personnel also need to disinfect themselves.

Fisheries

Activity	Possible Environmental Impacts	Environment Guidelines / Mitigation Measures / Good practices
<i>Culture fisheries</i>		
Preparation of the tank	Culturing fish without soil and water testing decrease its productivity and may lead to increase inputs, or decline in water quality thus harming environment.	Soil and water testing should be done prior to stocking the fingerlings and the recommended corrective measures to be taken.
Fertilizer application	Excess fertilizer application for high productivity will lead to algal blooms and	Follow the recommended dosage for fertilizer application. Organic and synthetic chemicals should be applied alternatively once in 15 days. Water quality testing should be done for algal bloom, PH etc

Activity	Possible Environmental Impacts	Environment Guidelines / Mitigation Measures / Good practices										
	loss of fish due to depleted oxygen.	. members can be trained and ICAR developed kits can be provided.										
Stocking density	Effective space utilization will not be there if recommended stocking density is not followed.	Recommended stocking density should be followed: <ul style="list-style-type: none"> • 3000 – 5000 per ha for grass carps and silver carps • 4000-5000 per ha for Catla, Rohu and Mrigal 										
Mono culture	Monoculture will not ensure effective space utilization and productivity per unit area	Poly culture of the 2-3 species in recommended ratios will ensure optimum space utilization and production. The recommended ratio is: <table border="1"> <thead> <tr> <th>Species</th> <th>Density</th> </tr> </thead> <tbody> <tr> <td>Catla+ Rohu+ Mrigal</td> <td>2:4:4</td> </tr> <tr> <td>Silver carp+ Grass carp</td> <td>1:1</td> </tr> <tr> <td>Catla+ Rohu+ Grass carp+ Mrigal</td> <td>4:3: 1.5: 1.5</td> </tr> <tr> <td>Silver carp+Grasscarp+Commoncarp+Rohu</td> <td>3: 1.5: 2.5: 3</td> </tr> </tbody> </table>	Species	Density	Catla+ Rohu+ Mrigal	2:4:4	Silver carp+ Grass carp	1:1	Catla+ Rohu+ Grass carp+ Mrigal	4:3: 1.5: 1.5	Silver carp+Grasscarp+Commoncarp+Rohu	3: 1.5: 2.5: 3
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<i>Capture fisheries</i>		
Use of small size nets than permitted.	Use of small mesh size nets collects eggs and fingerlings of marine life and causes loss to bio diversity	Use nets with mesh size more than 1 inch in inland fisheries and more than half inch in marine fishing Release small fingerlings back into the water.
Fishing methods	Harmful fishing practices (dynamiting, electrocuting, poisoning) harm all aquatic species	Sustainable methods of fishing in prescribed seasons with prescribed size fish net should be followed.
Fishing season	Fishing in breeding season of fish results in capture of breeding population and affects future populations of fish	Fishing should not be done in closed season: July to 31 st August for inland fisheries. The seasons may be specific to States in some cases.
Disposal of nets	Improper disposal of fishing nets made up of nylon results in habitat destruction when disposed in water or shore.	Reuse the nets for alternate purposes like fencing kitchen garden, etc.
Disposal of extra catch	Extra catch such as snails, crabs etc. are usually disposed on the shore leading to loss of aquatic diversity	Extra unwanted catch should be disposed back into the water.

Use of antibiotics/growth promoters in livestock rearing (piggery, poultry, fishery):

Use of antibiotics as growth promoters (eg: tylosin, quinolone, tetracycline, gentamicin, amantadine) is one of the issues in livestock rearing especially in intensive farming. These antibiotics are used in low doses which are believed to improve the quality of the meat with low fat and high protein content. However, there are ill effects associated with this and one of them is imposing selection pressure for bacterial strains that are resistant to antibiotics (eg: *Escherichia coli*, *Salmonella spp*). Over time the residues of antibiotics in the meat also affects human health leading to side effects. There are also chances of resistance build up in human pathogens. The project should create awareness among the beneficiaries on the side effects of using antibiotics along with food and water for growth promotion.

Sub Section II – Non -Farm Interventions

Annexure I: Integration of Environmental Guidelines/Mitigations/Good Practices/safeguard compliances into the Enterprise Activity (refer to Annexure II for the guidelines)

Compliances:

S. No	Safeguard Compliances	Applicability		Present status on compliance		Remarks if any (status, action plan, support required etc.)
		Yes	No	Yes	No	
1	Consent from State Pollution Control Board (procedures available on websites of State Pollution Control Boards) for Establishment and Operation of <i>Red, Orange and Green Category Industries</i>					
2	License from Food Safety Standards Authority of India (FSSAI) as per The Food Safety and Standards (Food Products Standard and Food Additives) Regulations 2011 is required for food preparation /processing /packaging units. Only permitted food colours should be used.					
3	Non-Use of prohibited azo dyes and colours in weaving and any other activities that involve dyeing. #1					
4	As per Plastics Wastes Rules, 2016 Sale and use of recycled and coloured plastic carry bags less than 50 microns in thickness for single use for wrapping food or packaging is not permitted.					
5	Fire safety precautions (fire extinguisher, emergency exits and					

S. No	Safeguard Compliances	Applicability		Present status on compliance		Remarks if any (status, action plan, support required etc.)
		Yes	No	Yes	No	
	fire alarms) are required at work spaces as per Fire Safety Rules, National Building Code, State Specific Fire safety Acts and Rules, and Disaster Management Acts					
6	Creation of ground water source for use by any enterprise should comply with the State Ground Water Acts and Rules and necessary permissions should be taken					
7	Fertiliser shops require license - Purchase, stock, sale, distribution or exhibition of pesticides and chemical fertilizers will require license as per The Fertilizer (Control) Order, 1985					
8	Collection of any Non Timber Forest Produce (NTFP) or fuel wood etc. from forest areas should comply with State forest Acts/Transit rules and necessary permits should be taken for collection and transport from concerned authorities (District Forest officers -DFOs) except in case of traditional forest dwellers have access as per the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006					
9	Activities that involve destruction of wildlife or of wildlife habitat should not be done under the project (e.g.: clearing, kindling fire, damaging trees (<i>felling, girdling, lopping, topping, burning, stripping bark and leaves</i>), quarrying stone, etc., in reserved and protected forests will not be supported.					
10	In case of use of chemical and minerals in soap, detergent, phenyl making, Registration of unit under					

S. No	Safeguard Compliances	Applicability		Present status on compliance		Remarks if any (status, action plan, support required etc.)
		Yes	No	Yes	No	
	DIC and chemical license and testing for toxic material is required.					
11	Land/building details - Ownership/lease/rental/donation documents should be available.					
12	Hiring of child labor (below 14 years) should be avoided					
13	Fair / equal wages that will be paid to all workers for equal work.					

#1						
Acid Orange	45 22195	Acid Red 4	14710	Developer 14 = Oxidation Base 20		
Acid Red	85 22245	Acid Red 5	14905	76035		
Acid Black	29	Acid Red 24	16140	Direct Yellow 48	23660	
Acid Black	94 30336	Acid Red 26	16150	Direct Orange 6	23375	
Azoic Diazo Compo.	112 37225	Acid Red 73	27290	Direct Orange 7	23380	
Direct Yellow 1	22250	Acid Red 114	23635	Direct Orange 10	23370	
Direct Yellow 24	22010	Acid Red 115	27200	Direct Orange 108	29173	
Direct Orange 1	22370	Acid Red 116	26660	Direct Red 2	23500	
Direct Orange 8	22130	Acid Red 128	24125	Direct Red 7	24100	
Direct Red 1	22310	Acid Red 148	26665	Direct Red 21	23560	
Direct Red 10	22145	Acid Red 150	27190	Direct Red 22	23565	
Direct Red 13	22153	Acid Red 158	20530	Direct Red 24	29185	
Direct Red 17	22150	Acid Red		Direct Red 26	29190	
Direct Red 28	22120	167		Direct Red 39	23630	
Direct Red 37	22240	Acid Red 264	18133	Direct Red 46	23050	
Direct Red 44	22500	Acid Red 265	18129	Direct Red 62	29175	
Direct Violet 1	22570	Acid Red 420		Direct Red 67	23505	
Direct Violet 12	22550	Acid Violet 12	18075	Direct Red 72	29200	
Direct Violet 22	22480	Acid Brown 415		Direct Violet 21	23520	
Direct Blue 2	22590	Acid Black 131		Direct Blue 1	24410	
Direct Blue 6	22610	Acid Black 132		Direct Blue 3	23705	
Direct Green 1	30280	Acid Black 209		Direct Blue 8	24140	
Direct Green 6	30295	Basic Red 111		Direct Blue 9	24155	
Direct Green 8	30315	Basic Red 42		Direct Blue 10	24340	
Direct Green 8:1 --		Basic Brown 4	21010	Direct Blue 14	23850	
Direct Brown 1	30045			Direct Blue 15	24400	
Direct Brown 1:2	30110			Direct Blue 22	24280	
Direct Brown 2	22311			Direct Blue 25	23790	
Direct Brown 6	30140			Direct Blue 35	24145	
Direct Brown 25	36030			Direct Blue 53	23860	
Direct Brown 27	31725			Direct Blue 76	24411	
Direct Brown 31	35660			Direct Blue 151	24175	
Direct Brown 33	35520			Direct Blue 160	--	
Direct Brown 51	31710			Direct Blue 173	--	
Direct Brown 59	22345			Direct Blue 192	-	
Direct Brown 79	30056			Direct Blue 201		
Direct Brown 95	30145			Direct Blue 215	24115	

Direct Brown 101 31740		Direct Blue 295 23820
Direct Brown 154 30120		Direct Green 85 30387
Direct Black 4 30245		Direct Blue 222 30368
Direct Black 29 22580		Direct Black 91 30400
Direct Black 38 30235		Direct Black 154 -
		Disperse Yellow 7 26090
		Disperse Yellow 23 26070
		Disperse Yellow 56
		Disperse Orange 149
		Disperse Red 151 26130

Annexure II: Environmental Guidelines/Mitigation Measures/Good Practices for Non-Farm Enterprises

Food and food product preparation (including catering, canteens, snacks, sweets, pickles, spice mixes, bakery, papad, etc.)

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Registration and licenses	Manufacturing and selling of food products need license depending on the scale of activity.	License should be acquired as per Food Safety and Standards Act (FSSAI) 2011 if required.
Drying the raw materials, products (e.g.: papads, grains)	Drying on unclean floors/surfaces will contaminate the produce by inducing microbial growth.	Clean and dry cement floor or mats should be used for drying. Solar dryers can be used depending on feasibility.
Use of machinery (for grinding ginger, masala and ingredients for pickle)	Use of unclean machinery for grinding raw materials may contaminate food.	Machinery (small mills and grinders) used for grinding ingredients should be cleaned and dried regularly.
Use of cook stoves (in snacks, sweet and milk products)	Use of LPG or fuel wood will lead to degradation of the resource and increase the fuel costs	Fuel efficient cook stoves or bio gas/solar energy can be considered.
Use of preservatives, colour and flavour agents	Use of synthetic agents may have adverse effects.	Natural agents and permitted agents should only be used. Details of permitted agents is provided in compliance requirements
Handling and packing	Handling the food products with bare hands or un washed hands will contaminate the products through microbial growth.	Personnel involved in processing, packing etc. should wash hands with soap before and after work and use aprons, gloves, hair caps for handling, packing etc. Use of eye goggles and nose masks is recommended while handling pungent items like spices.
Packing and labeling	Edible products beyond the shelf life may lead to illness when consumed.	The product labelling should include the expiry date and should be marked with in the shelf life period.
Use of plastic	Use on non-recyclable plastic leads to issues in disposal	Use the plastic above 50 microns for packaging.

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Storage of raw materials and finished products	Storage in improper conditions like moist, dusty floor, walls etc. will spoil the produce due to mold infestation.	Raw materials and finished products should be stored in clean and dry conditions.
Facilities at processing centre	Poor facilities will have impact on worker's health	The place should be well ventilated, should have drinking water and sanitation facilities. Kitchens should be equipped with exhaust fans.
Waste management	Open disposal of waste from food processing unit will give bad odour and create unhygienic environment due to decomposition.	Any waste or waste water should be disposed properly by composting or diverting to waste water drains.
Fire safety, accidents	Possibility of fire and other accidents	Provide fire extinguishers, first aid kit and mention emergency numbers
Child labor Health and hygiene	Hiring of child labor Workers with health issues (chronic, temporary)	Do not hire children below 14 years of age. The workers involved in food processing should be free from infectious diseases and should be refrained from work when ill.
Fair and equal wages	Possibility of discrimination in the wages	Fair / equal wages that will be paid to all workers for equal work
Land/building details	Absence of documentation may result in disputes	Ownership/lease/rental/donation documents should be available.
Green Interventions:		
<ul style="list-style-type: none"> • Use of renewable energy (solar, biomass) • Use of organic raw materials 		

Oil Extractions: groundnut, coconut etc.

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Registration and licenses	Manufacturing and selling of food products need license depending on the scale of activity.	License should be acquired as per Food Safety and Standards Act (FSSAI) 2011 if required.
Selection of raw materials	Pest or mold infested oil grains might contaminate the whole lot/batch of produce.	Screen the raw materials for infested grains with pest, aflatoxins etc. and separate. Dry the grains/seeds before processing, if needed to maintain appropriate moisture level.

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Use of machine for grinding	Machinery handling should be clean and dry.	Machinery should be cleaned and maintained well. Care should be taken while handling machinery to avoid injuries.
Handling and packing	Handling the raw material and oil with bare hands or un washed hands will contaminate the products through microbial attack.	Personnel involved in processing, packing etc. should clean hands before and after work and use aprons, gloves, hair caps for handling, packing etc.
Facilities at processing centre	Poor facilities will have impact on worker's health.	The place should be well ventilated, should have drinking water and sanitation facilities.
Fire safety, accidents	Possibility of fire and other accidents	Provide fire extinguishers, first aid kit and mention emergency numbers
Child labor Health and hygiene	Hiring of child labor Workers with health issues (chronic, temporary)	Do not hire children below 14 years of age. The workers involved in food processing should be free from infectious diseases and should be refrained from work when ill.
Fair and equal wages	Possibility of discrimination in the wages	Fair / equal wages that will be paid to all workers for equal work
Land/building details	Absence of documentation may result in disputes	Ownership/lease/rental/donation documents should be available.
<p>Green Interventions:</p> <ul style="list-style-type: none"> • Use of renewable energy (solar, biomass) • Use of organic raw materials 		

Muri Production

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Use of conventional ovens	Use of inefficient conventional ovens and hazardous conventional fuels results in environmental and indoor air pollution (due to carbon monoxide, particulate matter) leading to respiratory illnesses.	Use energy efficient ovens/furnaces and clean fuels to avoid long term health hazards to the workers involved and people living in surrounding area.
Working conditions	Cramped space, low ventilation, exposure to heat and particulate matter etc. causes health hazards	Provide better work spaces, well ventilated spaces.
Child labor	Hiring of child labor	Do not hire children below 14 years of age.

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Facilities at processing centre	Poor facilities will have impact on worker's health.	The place should be well ventilated, should have drinking water and sanitation facilities.
Fire safety, accidents	Possibility of fire and other accidents	Provide fire extinguishers, first aid kit and mention emergency numbers.
Fair and equal wages	Possibility of discrimination in the wages	Fair / equal wages that will be paid to all workers for equal work
Green Interventions:		
<ul style="list-style-type: none"> • Use of renewable energy (solar, biomass) • Use of organic raw materials 		

Rice, dal and flour mills

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures /Good Practices
Storage	Fumigation of storage godowns and storage spaces with Methyl bromide and phosphine in order to control store product pests may cause damage to human health.	Clean rice/dal barn, warehouse or storehouse before storing the produce. The regular cleaning of the storage is recommended. Spray plant extract, such as Bitter bush or Siam weed (<i>Eupatorium odoratum</i> L.) to kill insects on the floor, wall and vacant space in the storage. Mix seeds with plant extracts such as Neem (<i>Azadirachta indica</i> A.), dried Long pepper flower (<i>Piper longum</i>) and Sweet flag (<i>Acorus calamus</i> L.) Fumigate the storage structures with carbon dioxide gas.
Transportation	Contamination is possible during package and transport.	Containers and sacks used for packing, as well as vehicle for transporting organic rice/dal/flour, should be clean and free from any contamination of chemical substances and other rice. It is not recommended to use vehicle that has been loaded with soil, animals, manures, fertilizers or chemicals that may cause contamination of pathogenic and toxic substances, unless such vehicle has been properly cleaned before use. Separate Carrier or vehicle should be allotted to handle organic grains. Organic rice shall not be commingled with non-organic commodity and other prohibited materials or substances for organic agriculture during transportation from production site to distribution center.
Milling	Water used for soaking the paddy, especially for parboiled rice production, if not properly	Good and adequately maintained drainage to facilitate run-off and minimize the likelihood of flooding

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures /Good Practices
	<p>erly treated could result in water pollution and odour nuisance to local community.</p> <p>Air pollution both on site and in the surrounding locality due to release of dust to the atmosphere from handling of paddy or processing of the paddy or its by-products is a major environmental concern for rice mills.</p>	<p>Regular inspection of bulk storage tanks to minimize the risk of surface water pollution.</p> <p>Installation of interceptor traps for solids, oil and fuel to reduce the control release of contaminated water via the surface drains. Separation of milling areas from all other areas of operation. Water proofing of mill floor and all other floors.</p> <p>Adequate ventilation should be provided to prevent dust pollution and reduce heat. Prevention of dusts on machinery and in the building by timely cleaning operations. Design of chimney and vents of sufficient height and appropriate technology to avoid causing local nuisance of dust and smoke emissions. Walls should be designed in a way to prevent accumulation of dust and entry of rodents, birds, or pests.</p>
Energy usage (paddy)	Different operations in paddy processing require considerable energy for parboiling, mechanical drying and milling.	Hulling of rice before parboiling process is also a possible option to reduce energy consumption for rice parboiling. It would save 40% of energy however this process is susceptible to contamination if the processing equipment is not as per food grade quality and it needs shade drying. Instead of open floor drying under sunshine as in traditional practices.
Waste management (paddy)	<p>Disposal of solid wastes, particularly unused rice husk occupies space and creates inconvenience.</p> <p>Effluent produced during cleaning of equipment will pose a problem to surrounding environment.</p>	<p>Paddy husk can be reused as fuel for paddy drying, to run steam generator or gassifier.</p> <p>Charcoal briquetting units can be set up which use paddy husk as raw material. The dal chaff can be sent for alternate use like cattle feed.</p> <p>Treatment of effluent and wastewater before release as per the standards of Pollution Control Board.</p>
Facilities at processing centre	Poor facilities will have impact on worker's health.	The place should be well ventilated, should have drinking water and sanitation facilities.
Fire safety, accidents	Possibility of fire and other accidents	Provide fire extinguishers, first aid kit and mention emergency numbers
Child labor	Hiring of child labor	Do not hire children below 14 years of age.
Health and hygiene	Workers with health issues (chronic, temporary)	The workers involved in food commodities should be free from infectious diseases and should be refrained from work when ill.
Fair and equal wages	Possibility of discrimination in the wages	Fair / equal wages that will be paid to all workers for equal work
Green Interventions:		
<ul style="list-style-type: none"> Use of renewable energy (solar, biomass) 		

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures /Good Practices
		<ul style="list-style-type: none"> Use of organic raw materials

Cashew processing

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Drying / Roasting	<p>The traditional practice in south India is to spread the nuts out on flat rocks in the sun, so as to allow them to dry until the shell becomes brittle. The kernel could then be removed from the shell by striking the nut with a wooden batten to split the shell along the natural line of cleavage.</p> <p>Open roasting: The roasting is done in an open circular mild steel dish, measuring 600 to 675 mm (2 to 2.5 feet) in diameter, supported over an open fire. Between 1 and 1.5 kg of raw nuts are placed on to the heated pan at a time. The nuts are heated on the pan, with constant stirring, in order to prevent burning. As the nuts heat up, the Cashew Nut Shell Liquid (CNSL) is exuded onto the pan and eventually ignites, producing clouds of thick black smoke. After heating and burning for about two minutes (judged by experience) the pan is doused in water and the nuts are thrown off and allowed to cool, during which the shells become brittle and can be readily removed from the nut.</p> <p>Drum roasting: In this process the nuts (without any conditioning) are fed into a rotating drum, which is heated initially to red hot sufficiently to allow the shell portion of the nut to ignite and burn. Once ignition starts no further heating is necessary and the drum maintains the temperature on its own because of the burning of oil, which oozes out of the nuts. The shell becomes very brittle.</p> <p>The roasting generally takes about 3-5 minutes and the drum is rotated by hand.</p> <p>The roasted nuts, which are still burning are removed from the discharge end and immediately covered by ash to absorb the oil that is found on the surface. Kernels obtained in this process have a better color than in the other processes.</p>	<p>Rotating the drum with bare hands might cause burns, and shelling might cause injury to hands. Power drive can be fitted for rotating the drum.</p> <p>Inhaling the smoke is harmful for the health, precautions to be taken like using masks.</p>

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Shelling	<p>Steam Roasting: In this method, the raw cashew nuts are treated in a cooker filled with steam at 100-110 Kg/Cm² for about 15 minutes. The treated raw nuts are spread out on the floor for cooling and then sent to the shelling section the next day. The turnout and appearance of whole kernels from raw nuts treated in this method are said to be better than in any other method. The cashew nut shell liquid (CNSL) obtained in this method from the shells is very clear and command a premium price. About 75% of the CNSL can be extracted from the shells.</p> <p>Shelling is the removal of dry roasted shell. By striking the head of the nut, the natural line of cleavage is broken. It is important when shelling the nut that the kernel is not broken as whole nuts command a higher price in the market. This operation is done manually mostly by skilled women.</p> <p>Wood ash is applied to the hands to prevent damage to the hands and kernel.</p>	<p>No environmental issues in this method.</p> <p>Precautions to avoid injuries and keeping first aid kit available. It is advised to wear gloves as a preventive measure depending on convenience.</p>
Storage	<p>Organo halogen taint gives off flavor to cashew nuts if not stored and transported properly. This usually happened due to chemicals, fertilizers or irrigation water with high chlorine.</p>	<p>Drying yards should not be cleaned with halogen containing cleaning agents (such a bleaching powder etc.). Farmers should be advised properly on the standard storage practices for nuts and the dangers of using halogen based chemicals and fertilizers.</p> <p>The separated nuts are dried for 2-3 days to bring the moisture content down to 8 % and stored in tins or gunny bags. Should be stored only in jute bags which are not treated chemically. Avoid plastic bags.</p> <p>Chemicals / pesticides / weedicides / fertilizers should not be stored along with raw nuts.</p>

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
		Vehicles used for transport for chemicals should not be used for transport of nuts. The vehicle should be cleaned and dried before transport
Waste management	From cashew apple drinks can be made (non-alcoholic). Jam, chutney and pickles are also prepared. The left-over pulp is disposed openly leading breeding of flies etc.	The left over fruit pulp should be composted.
Facilities at processing centre	Poor facilities will have impact on worker's health.	The place should be well ventilated, should have drinking water and sanitation facilities.
Fire safety, accidents	Possibility of fire and other accidents	Provide fire extinguishers, first aid kit and mention emergency numbers
Child labor Health and hygiene	Hiring of child labor Workers with health issues (chronic, temporary)	Do not hire children below 14 years of age. The workers involved in food processing should be free from infectious diseases and should be refrained from work when ill.
Fair and equal wages	Possibility of discrimination in the wages	Fair / equal wages that will be paid to all workers for equal work
Green Interventions:		
<ul style="list-style-type: none"> • Use of renewable energy (solar, biomass) • Use of organic raw materials 		

Cow-dung and organic compost production

Activity/Steps	Possible Environmental Impacts	Mitigations/Guidelines/Good practices
Storage, mixing of ingredients	Uncovered, open heaps might attract and encourage mosquito breeding	The raw materials should be stored with covers. Use bleaching powder for disinfection of premises frequently.

Chemical and mineral products (detergents, soaps, phenols etc.)

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Registration and licenses	Manufacturing and selling of chemical products without registration and license is illegal.	Registration of unit under DIC and chemical license and testing for toxic material is required.
Raw material	Poor quality raw material lead to burning of hands, breathing problems etc. during preparation and end use of the product.	Authentic source of raw material and suppliers and training on proportion of raw material to be mixed up can be given so that entrepreneurs will

		come to know the possible acid base reactions. Hand gloves, nose masks and goggles should be used while handling the raw materials or finished products.
Preparation (handling raw material in chalk piece, detergents etc.)	Inhalation of dust and handling the chemical and mineral based raw material for long time may be detrimental for health.	Hand gloves, nose masks and goggles should be used.
Detergent use	Due to varied quantity of raw material, clothes generally lose their actual colour.	Before packaging it can be ensured through proper testing and possible effects on fabrics.
Storage of ingredients	Improper storage of ingredients will pollute the air and cause health risks to the workers.	Air tight containers should be used for storage and storage should be as per the guidelines.
Energy consumption	Preparation and packing require lot of energy consumption so permanent source of energy is needed	Green energy sources can be promoted.
Packaging	Use of un decomposable packaging material further cause the soil pollution	Bio degraded able ingredients and re-useable packaging should be promoted
<i>Detergents</i>		
Use of raw materials	Non-essential detergent ingredients like perfumes, colour brighteners leave toxic residues after use	Avoiding these ingredients will make the detergent more environment friendly
Surfactants	Synthetic surfactants like Alkyl benzene Sulfonates, diethanolamines etc. are slow to degrade and residues are highly toxic and carcinogenic. Causes skin and eye irritations.	Synthetic surfactants may be replaced by non-petrochemical surfactants or vegetable oil soaps.
Builder material	The builder material in detergent 'phosphate' when released into water after detergent use leads to eutrophication of water bodies affecting water quality and aquatic biodiversity	Builders like phosphates can be replaced by sodium citrate and sodium bicarbonate.
Optical brightners and artificial fragrances	Optical brightners like Chlorine and sodium hypochlorite causes skin and eye irritation and are dangerous to aquatic life.	Optical brighteners and perfumes can be avoided are their function is not very important in cleaning.
Storage of raw materials	The chemicals tend to react when not stored in prescribed conditions.	The chemicals should be stored in proper conditions
Mixing the raw materials in detergent making	The chemicals are harmful to skin and causes irritation on contact with skin.	Gloves and nose masks should be used while mixing the chemicals to prepare detergent.

Waste disposal	Wastage during mixing and washing after work leaves residues in the surrounding accumulated in soil and water.	Utmost care should be taken to avoid wastage or spillage while mixing, so that there is less waste to clean.
Packing	Package in small sachets needs more plastic	Package in larger sachets to the extent possible.
Labeling	The product may be considered as safe and precautions not taken if not labeled properly.	According to the labeling requirements laid down by BIS, each packet of detergent powder should carry information on the name/grade of the material used, the source of manufacture, and a caution statement which reads: Detergent solutions can be skin irritants. Avoid prolonged contact. Rinse garments and hands thoroughly. The label should also carry information about the critical ingredients used in the formulations.

Phenyle

Storage of raw materials	Improperly stored raw materials leads to low quality products or contaminate the environment leading to health hazards.	The raw materials should be stored properly according prescribed standards.
Mixing raw materials	Handling with bare hands lead to skin irritations and inhalation on long term to respiratory issues.	Gloves and masks should be used while mixing ingredients.
Waste disposal	Wastage and disposal of wastes lead to residues in soil and water.	Wastage should be avoided and any waste should be cleaned regularly.
Preparation of ingredients	In cases where ingredients are also prepared, accidents are possible while mixing oils (castor oil, pine oil) and caustic soda and boiling.	Care should be taken to avoid any fore accidents.
Facilities at processing centre	Poor facilities will have impact on worker's health.	The place should be well ventilated, should have drinking water and sanitation facilities.
Fire safety, accidents	Possibility of fire and other accidents	Provide fire extinguishers, first aid kit and mention emergency numbers
Child labor	Hiring of child labor	Do not hire children below 14 years of age.
Fair and equal wages	Possibility of discrimination in the wages	Fair / equal wages that will be paid to all workers for equal work
Land/building details	Absence of documentation may result in disputes	Ownership/lease/rental/donation documents should be available.

Green Interventions:

- Use of natural ingredients

- Use of solar energy

Textiles, artisans and handicrafts

Products: Textiles, handlooms, tie&dye, handicrafts, carpet weaving, jute bags, embroidery, leather products, basket making, paper plates, paper products, toys.

Activity /steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Work space	Poor facilities will have impact on worker's health.	The work space should be well ventilated, provided with drinking water and toilet facilities.
Use of machinery and tools	Use of machines and tools may lead to injuries at times.	Members should be aware of safety precautions during use of machines and tools. First aid kit should be kept handy.
Energy use	Use of electricity in stitching, paper cup and plate manufacturing units is associated with carbon emission.	Possibility of solar energy run based machinery can be explored.
Use of dyes (textiles, handicrafts, handlooms)	Handling chemical dyes leads to skin and respiratory related problems.	Natural dyes must be preferred over chemical dyes. Gloves and masks should be used for handling dyes. Wastes should be disposed off safely. The workers should wash their hands properly with soap after dyeing.
Worker health, occupational hazards	Continuous operations of sewing machines, looms etc. will result in health issues (eye sight problems, back pains etc.) in long run	Frequent health check-ups need to be organized in clusters and taking small breaks and exercises can be followed. Workers should be aware of safety precautions during use of machines and tools. First aid kit should be kept handy.
Waste disposal	Open disposal of waste like cloth rags, leather etc. from textiles, dyes, handicraft and foot wear units will create unpleasant sight.	The waste should be sold for reuse, put to alternate use or disposed properly.
Facilities at work station	Poor facilities will have impact on worker's health.	The place should be well ventilated, should have drinking water and sanitation facilities.
Fire safety, accidents	Possibility of fire and other accidents	Provide fire extinguishers, first aid kit and mention emergency numbers
Child labor	Hiring of child labor	Do not hire children below 14 years of age.
Fair and equal wages	Possibility of discrimination in the wages	Fair / equal wages that will be paid to all workers for equal work

Activity /steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Land/building details	Absence of documentation may result in disputes	Ownership/lease/rental/donation documents should be available.
Green Interventions:		
<ul style="list-style-type: none"> • Use of natural dyes, colors • Use of LED lighting, solar energy is applicable 		

Garments and stitching related activities

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Registration, licenses and permissions	Manufacturing and selling of garments / stitched garments which involve engagement of child labour; children at risk – street children; youth;	As per scale of operations; registration of unit under DIC is required. Local Gram Panchayat / Municipality to be intimated about operations. Follow Labour Act and Rules; Follow Shops and Commercial Establishment Acts (1961); Follow Licenses/Registration under the Factories Act, 1948, Proper payments; salaries; PFs; bank accounts; insurance; holidays; pay rolls; entitlements etc. to be maintained of workers.
Storage of raw materials and finished stitched products. Risk reduction – workers and machinery	Improper storage of raw materials i.e. in moist, humid unclean, unventilated conditions leads to spoilage of the garment/ raw materials. Poses health risks to the workers. Garment materials – especially polyester materials are at risk of fire hazards when not stored / handled in required manner. Non-insurance of worker lives and unit/ machinery may trigger severe financial stress during emergency scenarios. Hence insurance required.	Raw materials should be properly stored in containers with lids in clean and dry place (prescribed standards are to be followed for each material). Finished products should be properly labeled with manufacture and stored in clean and dry place. Keep fire safety equipments handy and have emergency exit and fire handling operation procedures / drills periodically. Insure all machinery, materials and workers against natural hazards or other emergency situations like fire etc. Workers to have bank accounts and insurance.
Production and worker health working space.	Machinery used in the production /process must be kept clean and maintained periodically.	The machinery should be kept clean and the workers should follow the prescribed standards of hygiene such as bathing,

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
	<p>Electrical wiring should be done properly in a risk proof manner.</p> <p>Seating arrangements and working conditions should be such that there is no noise pollution and comfortable / appropriate seating arrangements.</p>	<p>hand washing, using gloves, masks and hair caps etc.</p> <p>Introduce appropriate exercises to counter stress related issues – e.g. long working hours in sitting or standing position; prevention of back ache; chronic pain due to faulty posture; working posture. Introduce stress relieving exercises for better health and productivity.</p> <p>Use face masks to prevent inhalation of fine thread pieces and dust. Introduce noise reducing equipments / gadgets.</p>
Energy use	Energy is required for running the machines; ironing; heating, ventilation-fan.	<p>Solar energy may be used and power saving mode / good practices in energy conservation adopted.</p> <p>Install solar panels and LED lighting to reduce dependency on non-renewable energy. Premises may be designed for sufficient ventilation. Roofing material and walls may be such that it does not lead to excessive thermal heat and humid working conditions.</p>
Waste disposal	Rags and cut cloth pieces during garment stitching may be collected and re-used / sold.	Rags and cut cloths pieces during production may be re-sold or re-used to make specific cloths, mops, door mats etc.
Workers safety Fire safety	Lack of proper facilities to workers may result in health issues. Lack of proper facilities at work place (drinking water, toilet etc.) may cause inconvenience to workers.	<p>Decent working condition should be provided.</p> <p>Fire safety measure should be present at the work stations.</p>
Possibility of using child labour	There is a risk of hiring child labour	Engagement of children below 14 years will be avoided
Fair and equal wages	Possibility of discrimination in the wages	Fair / equal wages that will be paid to all workers for equal work
Women Participation	Exclusion of women workers	Increase the participation of women, especially those from the poor families; strengthen women in decision making
Including disabled beneficiaries	Exclusion of disabled beneficiaries	Enabling the possibility of involving disabled beneficiaries wherever they can.
<p>Green Interventions:</p> <ul style="list-style-type: none"> • Use of solar energy, LED lighting 		

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
		<ul style="list-style-type: none"> Re-use of cloth wastes for door mats, mops etc.

Candle making and bangle making

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
<u>Candle making:</u> Fuel use, heating	Wax over heated above 150 ⁰ gives dangerous fumes and hence fuel source is important. Conventional stoves require high quantities of fuel and cause air pollution. Handling hot wax may lead to accidental spill and cause boils.	Avoid overheating, and use efficient fuel. Wax should not be allowed to spill into flame as it leads to fire hazard. This can be avoided by using water jacket (a vessel with water around the wax container while heating). Use fuel efficient, smoke less cook stoves. Cotton gloves or similar preventive measures should be used while handling wax in candle making.
<u>Bangle making:</u> Work space	Congested work spaces will have an impact on health in long run due to inhalation of smoke and exposure to heat.	The work space should be well ventilated.
Fuel use, heating (traditional method).	Conventional stoves require high quantities of fuel and cause air pollution to the workers.	Use fuel efficient, smoke less cook stoves. Motorised machine can be used for making bangles, wherever viable
Facilities at processing centre	Poor facilities will have impact on worker's health.	The place should be well ventilated, should have drinking water and sanitation facilities.
Fire safety, accidents	Possibility of fire and other accidents	Provide fire extinguishers, first aid kit and mention emergency numbers
Child labor	Hiring of child labor	Do not hire children below 14 years of age.
Fair and equal wages	Possibility of discrimination in the wages	Fair / equal wages that will be paid to all workers for equal work
Land/building details	Absence of documentation may result in disputes	Ownership/lease/rental/donation documents should be available.

Agarbathi and coir rope making

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Work space	Congested work spaces will have an impact on health in long run due to inhalation of charcoal dust in	The work space should be well ventilated and should have basic facilities like drinking water, toilets etc.

	agarbathi and coir dust in coir making units.	
Agarbathi rolling and coir extraction, processing	Inhalation of charcoal dust and handling gigat and charcoal with bare hands will have impact on health. Inhalation of coir dust leads to respiratory disorders	Nose masks and hand gloves should be used while rolling agarbathis and processing coir.
Facilities at processing centre	Poor facilities will have impact on worker's health.	The place should be well ventilated, should have drinking water and sanitation facilities.
Fire safety, accidents	Possibility of fire and other accidents	Provide fire extinguishers, first aid kit and mention emergency numbers
Child labor	Hiring of child labor	Do not hire children below 14 years of age.
Fair and equal wages	Possibility of discrimination in the wages	Fair / equal wages that will be paid to all workers for equal work
Green Interventions:		
<ul style="list-style-type: none"> • Use of coir dust for coir blocks, geo textiles etc. 		

Bamboo products, brooms, mats

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Bamboo, broom grass extraction	Over-extraction of forest produce that is raw material for agarbatti production	If local bamboo resources are used sustainable extraction methods should be followed. Social forestry should be encouraged that focuses on improving the raw material availability for the agarbatti industry will ease pressure on natural sources
Work space	Poor facilities will have impact on worker's health.	The work space should be well ventilated, provided with drinking water and toilet facilities.
Use of machinery and tools	Use of machines and tools may lead to injuries at times.	Members should be aware of safety precautions during use of machines and tools. First aid kit should be kept handy.
Use of dyes	Handling chemical dyes leads to skin and respiratory related problems.	Natural dyes must be preferred over chemical dyes. Gloves and masks should be used for handling dyes. Wastes should be disposed off safely. The workers should wash their hands properly with soap after dyeing.

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Worker health, occupational hazards	Continuous operations of sewing machines, looms etc. will result in health issues (eye sight problems, back pains etc.) in long run	Frequent health check-ups need to be organized in clusters and taking small breaks and exercises can be followed. Workers should be aware of safety precautions during use of machines and tools.
Fire safety, accidents	Possibility of fire and other accidents	Provide fire extinguishers and mention emergency numbers
Child labor	Hiring of child labor	Do not hire children below 14 years of age.
Fair and equal wages	Possibility of discrimination in the wages	Fair / equal wages that will be paid to all workers for equal work
Land/building details	Absence of documentation may result in disputes	Ownership/lease/rental/donation documents should be available.
<p>Green Interventions:</p> <ul style="list-style-type: none"> • Use of natural dyes, colors • Re-plantation of bamboo, broom grass etc. in common lands 		

Non Timber Forest Produce

Activity / steps in the process	Possible Environmental Impacts	Environment guidelines / Mitigation Measures / Good practices
Permissions for collection of NTFP, or cultivation near forest areas	Issues regarding use of forest land, ownership rights, regulations from forest departments.	Required permission should be taken from Forest Department (differs from produce to produce) for collection and cultivation near forest areas (wherever applicable)
Harvesting of NTFP	NTFP are precious resources and unsustainable harvesting lead to loss of biodiversity.	<p>Training on sustainable harvesting will check the loss of biodiversity.</p> <ul style="list-style-type: none"> • For seed and pod collection, pods should be allowed to ripen on the tree until the outer shell is dry and can be separated from the pulp easily • Pods should be harvested by shaking the branches or climbing the tree or using sickles. They should not be beaten down with sticks as this injures the blossoms and buds of future leaves • All the pods/seeds should not be harvested, at least 25% should be left for natural regeneration

Activity / steps in the process	Possible Environmental Impacts	Environment guidelines / Mitigation Measures / Good practices
Method of Collection of Raw material.	Destructive methods of collection such as cutting the branches, uprooting the plants, etc. damages the resource. Unscientific methods of collection may affect the quality of product there by leading to less revenue and thus over exploitation. Each forest product has some prescribed norms for collection.	Collection period and season of harvesting and tools used for collection should be as per standards prescribed. Trainings on these will help the communities to follow sustainable harvesting methods.
Processing of forest produce, preparation of herbal products.	Improper drying (drying on bare earth) and storage may contaminate the produce. Processing using machinery for grinding, mixing, boiling etc. may lead to injuries. Energy use in boiling, drying etc. will required fuel wood. Sometimes due to lack of knowledge on mixing of different ingredient led to health issues. Wastes from processing should not be let into open.	Drying of produce should be done on cemented platform. Care to be taken while processing using machinery to avoid injuries and members to be trained on use of machinery. Energy efficient devices should be promoted. The members should be trained in preparation and use (to offer guidance to retailers or consumers). Date of processing and use and precautions of final products should be mentioned on the packets. Waste disposal should be as per the prescribed methods.

Cement product making

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Storage, handling and mixing of raw materials	Uncovered storage might lead to dust pollution.	The raw materials should be stored properly covered. The workers should wear rubber gloves, masks while mixing, molding etc. Dust can be sprinkled for controlling dust.
Child labor	Hiring of child labor	Do not hire children below 14 years of age.
Fair and equal wages	Possibility of discrimination in the wages	Fair / equal wages that will be paid to all workers for equal work
Green Interventions:		

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
<ul style="list-style-type: none"> Use of fly ash in manufacture, promotion of cement blocks 		

Chicken, mutton shops

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Cleaning, cutting and vending	The materials like manure, blood, feathers, gut contents etc. can create unhygienic environment if done in premises. Presence of flies in the premises.	Do the process in separate, distant location if possible and clean the premises with disinfectants. The unwanted material wastes should be burnt or buried in pits, but not to be disposed openly or in water bodies. Use fly traps to control flies.
Child labor Health and hygiene	Hiring of child labor Workers with health issues (chronic, temporary)	Do not hire children below 14 years of age. The workers involved in processing and vending should be free from infectious diseases and should be refrained from work when ill.

Black smith, welding, carpenter

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Worker health, occupational hazards	Blacksmith, welding: Continuous exposure to flame without protective gear may lead to dis-comfort, unwanted events. Carpentry: Use of tools at times may lead to accidents. Exposure to dust may lead to respiratory issues in long run.	Appropriate protective wear like face shields, goggles etc. should be used by blacksmiths and welders. First aid box should be kept available. Nose masks should be used.
Fire safety, accidents	Possibility of fire and other accidents	Provide fire extinguishers and mention emergency numbers
Child labor Health and hygiene	Hiring of child labor	Do not hire children below 14 years of age.
Fair and equal wages	Possibility of discrimination in the wages	Fair / equal wages that will be paid to all workers for equal work

Painter

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Worker health, occupational hazards	Exposure to chemicals may lead to health issues in long run.	Appropriate protective wear like face masks, gloves, goggles etc. should be used.

Child labor	Hiring of child labor	Do not hire children below 14 years of age.
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Beauty Salon

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Registrations	Operating without permits is illegal (where applicable)	All units should be registered with local councils where applicable
Surfaces	Unclean, slippery surfaces may result in unwanted impacts	All the surfaces should be non-slippery and easy to clean
Building, ventilation etc. , other facilities	Absence of light, ventilation might lead to inefficiency Absence of hand wash facilities	Adequate light and ventilation should be provided. Hand wash facilities, hand dryers etc. are recommended.
Reuse of tools and equipment Gloves, aprons	Non-sanitized/non-dis infected tools may spread infections, skin diseases etc. Re-use of unclean gloves, aprons might spread infections	All the equipment, tools etc, should be sanitized/dis-infected/sterilized after every use for maintaining hygiene standards. Disposable gloves are preferable. Aprons should be kept clean. Keep first aid kit handy.
Use of products	Possibility of use of unsafe products resulting in harmful reactions	Only certified products within the expiry date should be used
Waste	Dis-infected waste may result in disease spread. Use of common bins for all types of wastes	The wastes should be dis-infected as applicable, before disposals. Separate bins for infectious and non-infectious materials are preferable.
Hygiene standards of workers	Absence of standards	Hand wash, disinfection and use of clean aprons, gloves for every users is necessary.
Child labor	Hiring of child labor	Do not hire children below 14 years of age.
Green Interventions:		
<ul style="list-style-type: none"> • Use of LED lights, solar lamps etc. 		

Bore well digging

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
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Necessary permits to dig bore wells	<p>Digging bore wells without permission and technical expertise is illegal and may result in failures.</p> <p>Sites close to septic tanks (in case of use for domestic purpose) may contaminate water.</p> <p>Presence of air gaps, boulders etc.</p>	<p>The availability of permits needs to be verified before taking up the drilling. The point, depth etc. should be decided based on scientific methods but not on traditional methods.</p> <p>The sites should preferably away from storage or septic tanks so as to avoid contamination. In case of drinking water, quality check should be done.</p> <p>Do complete camera scan to avoid air gaps, boulders etc.</p>
Covering the bore well pits	Uncovered bore well holes (in case of failures) may leads to accidents such as children falling into the pits	Provide complete cover to the failed bore holes.
Child labor Health and hygiene	Hiring of child labor	Do not hire children below 14 years of age.
<p>Green Interventions:</p> <ul style="list-style-type: none"> Promotion of recharge structures, advocacy for solar water pumping 		

Kirana/grocery stores, petty shops

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Shop/ mart structure	Poor ventilation, possibility of moisture seepage etc. will favor the pest and mold growth.	The marts should be well ventilated, moisture proof.
Storage of provisions	<p>The large scale storage of provisions attracts pests and offers scope for fast multiplication necessitating the chemical use for pest control which may contaminate the products posing health risks. Contact with moisture will lead to fungal growth, off flavors etc.</p> <p>Consumable items when stored with products of chemical nature may contaminate the product or give unfavorable odors.</p>	<p>The provisions should be stored in air tight packed conditions to the extent possible and should be placed on a cement or wooden platform.</p> <p>Natural precautions like adding neem leaves, spraying the container and floor with neem seed kernel extract etc. should be followed.</p> <p>Consumable items should not be stored with goods of chemical nature such as mosquito coils, pest repellent liquids or tobacco products.</p> <p>The unpacked ready to consume items should be stored in clean containers with lids.</p>

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
	Flammable, toxic products (mosquito killers) can lead to unwanted impacts	Flammable, toxic products should be stored separately.
Product durability, labeling	Out dated products or products that are stored for long time will lead to health issues when consumed.	Each product packed and sold by the shops should have mention of expiry date. Any pest or mold infested or outdated products should be cleared and disposed safely on regular basis.
Package material	Use of plastic bags under thickness of 50 microns is not allowed for packaging due to their non recyclable nature and potential negative impact on environment.	Use news paper wrapping or cloth bags for supplying the provision to the consumer. Encourage the consumers to bring cloth bags.
Adoption of environment guidelines	Lack of awareness may lead to non adoption of the guidelines	Awareness and training programmes need to be organized for community and involved stakeholders from the village.
Green Interventions:		
<ul style="list-style-type: none"> • Use of cloth, paper bags for packaging • Use of solar lamps, LED bulbs • Sale of organic products 		

Pottery

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Collection of soil, fuel wood, water (raw materials)	Collection of soil from fertile agricultural lands affects soil fertility. Collection from streams etc. where it is prohibited is not permitted. Fuel wood collection from forests or by cutting certain tree species that are protected is illegal. Water from drinking water sources may cause shortage.	Soil/silt from tank beds or water bodies can be collected after testing for suitability. Fuel wood should be purchased from authentic vendors or permitted tree felling should be followed with due permissions. Water should be collected from non-drinking sources.
Location of the kiln	The kilns close to the residences may cause inconvenience due to pollution and might lead to fire accidents.	The kilns should be located away from the residential areas. Energy efficient kilns should be use for efficient use of fuel wood and reduction of emissions.
Waste disposal	The wastes such as ash, broken pieces etc. may lead to discomfort if disposed close to residences.	Use ash, broken pieces etc. for alternate purposes like land filling. Ash can be used in agricultural fields.

Activity /Steps	Possible Environmental Impacts	Environmental Guidelines/Mitigation measures/Good Practices
Worker health, occupational hazards	Continuous working on the wheel may lead to health issues like back pains and exposure to dust may lead to respiratory issues in long run.	Intermittent breaks should be taken and masks can be used to avoid smoke and dust pollution.
Fire safety, accidents	Possibility of fire and other accidents	Keep available some fire extinguishers (sand buckets, water etc.)
Child labor	Hiring of child labor	Do not hire children below 14 years of age.
Fair and equal wages	Possibility of discrimination in the wages	Fair / equal wages that will be paid to all workers for equal work
Green Interventions:		
<ul style="list-style-type: none"> • Use of energy efficient, improved pottery kilns 		

Annexure IV: Format for Inclusion of Environmental Safeguards into scoping studies by SRLMs and DSR by TSAs (Indicative format, can be changed as necessary)

S. No	Type of Activity Identified	Applicable Compliances	Mitigations/good practices	Plan of Action (training, monitoring, handholding etc.)

^[1] In cases where certain measures are not applicable the points are counted as the measures followed (or) the observed measures and good practices should weigh 70% of the applicable measures and practices

File No: J-11060/50/2016(351142)

Government of India
Ministry of Rural Development
(DAY-NRLM Division)

7th Floor, NDCC-II Building
Jai Singh Marg
New Delhi-110001
Date-15th April 2019

To,
The SMDs/CEOs of NRETP States

Subject: NRETP Human Resource Advisory

Madam/Sir,

As part of National Rural Economic Transformation Project (NRETP), the Mission seeks to implement higher order interventions in the areas of Institution Building, Digital Finance, Insurance/Pensions, Farm Livelihoods and Enterprise promotion at scale.

2. In order to successfully achieve the stated objectives of the project, it is critical that the State Missions position the dedicated high-quality human resources at all levels of the Mission Architecture (State/District/Block). The selected staff should have proven sectoral expertise, extensive experience and demonstrated ability to liaise with public and private sector partners.
3. Support of NMMU thematics and National Resource Persons (NRP) would also be available to support the State Missions in customization of HR Advisory, recruitment of staff and their induction cum immersion to ensure time bound implementation of NRETP.
4. An advisory indicating the details of HR requirements under NRETP is enclosed herewith which may be customized by the state mission. The recruitment, induction cum immersion and taking staff on board should be completed by 30th September, 2019.

Copy of advisory enclosed

Yours faithfully,



(Leena Johri)

Joint Secretary the Govt. of the India

National Rural Economic Transformation Project (NRETP)

Human Resource Advisory

1. The Ministry of Rural Development with support of the World Bank has proposed “National Rural Economic Transformation Project (NRETP)” with a total outlay of USD 500 million for a period of 5 years. It is the next phase of the National Rural Livelihoods Project (NRLP) which was implemented from July 2011 to June 2018 in 13 high poverty states¹.
2. NRETP proposes to implement higher order economic activities which are cross cutting in nature, for instance, the project design envisages that there will be an organic link between the model Cluster Level Federation (CLFs) and financial inclusion strategies, insurance and pension schemes, producer groups and organisations, product marketing and enterprise development. The financial inclusion strategy will also have a key role in financing of farm and non-farm enterprises.
3. In this context, it is critical to deploy dedicated human resources of required technical competence at the State, District and Block level to lead the proposed activities under NRETP. In addition, the professional support is also expected to establish a link between government and private enterprises which is essential for the project to achieve its stated objectives.
4. The recruitment of the proposed staff is a prerequisite for initiating implementation under NRETP.
5. It is imperative for SRLMs to complete the recruitment and staff on board latest **by 30th September 2019**
6. **NRETP Staffing**

Table 1: SMMU Level Positions

SNo.	Level	Number	Qualification	Experience	Remuneration per month (in Rs.)
A	Social Development & Institution Building				
1	Senior Technical Expert-Social Management Framework & Gender	01	Post-Graduate degree or Diploma (equivalent)	Minimum 7 years post qualification relevant experience	Rs. 1.10-1.70 lakh

¹ Assam, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, West Bengal, Uttar Pradesh

SNo.	Level	Number	Qualification	Experience	Remuneration per month (in Rs.)
2	Technical Expert-Capacity Building of Community Institutions	01	Post-Graduate degree or Diploma (equivalent)	Minimum 5 years post qualification relevant experience	Rs. 0.70-1.20 lakh
3	Technical Expert-Model CLF strengthening	01	Post-Graduate degree or Diploma (equivalent)	Minimum 5 years post qualification relevant experience	Rs. 0.70-1.20 lakh
B	Financial Inclusion				
4	Senior Technical Expert-Digital Finance	01	Post-Graduate degree or Diploma (equivalent)	Minimum 5 years post qualification relevant experience	Rs. 1.10-1.70 lakh
5	Technical Expert-Insurance/ pension	01	Post-Graduate degree or Diploma (equivalent)	Minimum 5 years post qualification relevant experience	Rs. 0.70-1.20 lakh
C	Farm Livelihoods				
6	Senior Technical Expert-Value chain and forward linkage	01	Post-Graduate degree or Diploma (equivalent)	Minimum 5 years post qualification relevant experience	Rs. 1.10-1.70 lakh
7	Project Manager-Organic Village Cluster	01	Post-Graduate degree or Diploma (equivalent)	Minimum 5 years post qualification relevant experience	Rs. 0.70-1.20 lakh
8	Project Manager-Livelihoods Training and Capacity Building	01	Post-Graduate degree or Diploma (equivalent)	Minimum 5 years post qualification relevant experience	Rs. 0.70-1.20 lakh
9	Technical Expert-Forward Linkage	01	Post-Graduate degree or Diploma (equivalent)	Minimum 3 years post qualification relevant experience	Rs. 0.70-1.20 lakh
D	Non-Farm Livelihoods				
10	Senior Technical Expert-Enterprise Promotion	01	Post-Graduate degree or Diploma (equivalent)	5+ years post qualification relevant experience	Rs. 1.10-1.70 lakh
11	Technical Expert-Enterprise Promotion	01	Post-Graduate degree or Diploma (equivalent)	3+ years post qualification relevant	Rs. 0.70-1.20 lakh

SNo.	Level	Number	Qualification	Experience	Remuneration per month (in Rs.)
				experience	
12	Young Professional – 1. Model Cluster Level Federation Strengthening- 01 2. Capacity Building of Community Institution- 01 3. Social Management Framework & Gender– 01 4. FNHW- 01 5. Farm Livelihoods-05 6. Non-Farm Livelihoods- 01	10	Post-Graduate degree or Diploma	0-2 years post qualification experience	Rs. 35,000 - 55,000
	Total	21			
District Level					
1	District Technical Expert – Non-Farm	01	Post-Graduate degree or Diploma (equivalent)	3+ years post qualification relevant experience	Rs. 45,000 – 65,000
	Total	01			
Block Level					
A	Financial Inclusion				
1	Block Technical Coordinator- Financial Inclusion	01	Post Graduate degree or Diploma	0-2 years of experience in relevant field	Rs. 35,000 - 50,000
B	Farm Livelihoods				
2	Block Technical Coordinator- Forward Linkage	01	UG (4 years course) in Agri. Science, Forestry, and /or PG in Rural Development/Rural Management/social sciences	1+ years of experience in relevant field	Rs. 35,000 - 50,000
3	Block Technical Coordinator- Organic Farming	01	UG (4 years course) in Ag Science, Forestry or PG in Rural Development/Rural Management/social sciences	1+ years of experience in relevant field	Rs. 35,000 - 50,000
4	Cluster Technical Coordinator-	02	Diploma in Agriculture from AICTC approved	1+ years of experience in	Rs. 20,000 – 25,000

SNo.	Level	Number	Qualification	Experience	Remuneration per month (in Rs.)
	Organic Farming (2 per cluster)		college or UG (4 years course) in Ag Science, Forestry, and /or PG in Rural Development/Rural Management/social sciences	relevant field	
C	Non-Farm Livelihoods				
5	Block Technical Coordinator-Enterprise promotion	01	Post Graduate degree or Diploma	1+ years of experience in relevant field	Rs. 35,000 - 50,000
D	CLF Strengthening				
6	Young Professional/NFs (1 per Model CLF)	01	Post Graduate degree or Diploma	0-2 years of experience	Rs. 35,000 - 50,000
	Total	7			

Note: State can change the designation, may be distinct from existing positions of the SRLM.

7. Other Terms and Conditions-

- i. The positions proposed under NRETP are over and above the already approved positions under DAY-NRLM. Considering the required technical competency, the states are advised to avoid fitment or placing professionals as in-charge for these positions.
- ii. Sourcing of staff is up to the SRLMs; either internal recruitment process or from human resource recruitment agency. NMMU participation in the selection of Senior Technical Expert, Technical Expert/Project Manager positions is mandatory.
- iii. Staff Engagement and Appointment- Selected candidate will be engaged for the project period, subject to annual renewal based on satisfactory performance.
- iv. Staff proposed under NRETP should work as an integrator and work in close coordination with all thematic of DAY-NRLM.
- v. Remaining benefits and other conditions are applicable as per the existing SRLM HR policy.

8. Staff Induction

- i. SRLM has to complete induction cum immersion of NRETP staff within 2 months of joining. The period of induction cum immersion shall be at least for 2-3 weeks.
- ii. New staff have to be oriented on NRLM's Vision, Mission, Core Values and Non-negotiable Principles, NRLM Framework, NRETP Project, Processes, Protocols, Community Operational Manuals and field reality/situation.
- iii. Induction Module may be customized for each category of staff or individual staff

- member. The basic project documents i.e. manuals, reports, training materials etc. are to be provided in print form or e-form as **Induction Kit** to the new staff members.
- iv. Staff has to be trained on the technical aspects of the vertical they have recruited for. So that s/he will have clarity on roles and responsibilities, job description, Key Result Areas and Key Performance Indicators therein.
 - v. During the induction process, the participants are observed closely and graded on various indicators like their active participation, unlearning and learning, approach towards working with poor, and other necessary attributes for a development professional. Participants, who fail to obtain at least the minimum score on the above requirements during the induction, are **de-selected** forthwith.

9. Support Mechanism-

- i. NMMU will provide necessary support in customization of NRETP HR Advisory, recruitment process, induction and immersion of staff.
- ii. The States may take technical support from NIRDPR Resource Cell as and when required.

Job Descriptions (indicative)

A. Social Management Framework

1. Senior Technical Expert- SMF & Gender

Location	SMMU office, State Level
Roles	To provide guidance for the implementation of SMF & Gender interventions
Reporting	CEO/Addl. CEO/Any Other Official designated by CEO
Key Responsibilities	<ul style="list-style-type: none"> • Develop and mainstream Social Management Framework and gender operational strategy, policies, protocols, guidelines, AAP and budget etc. • Develop pool of resource persons at state, district, block level. Also develop pool of community resource persons and community master trainers. • Develop an institutional mechanism for implementation, capacity building and monitoring of SMF and Gender intervention. • Capacity building of all mission staff on SMF and Gender. • Develop Behaviour Change Communication (BCC) strategies and resource materials for Capacity Building of community institutions and mission staff. • Represent SMMU at different forums and liaison with different line departments and NMMU related to the mission activities and reports. • Partnership management related to SMF and Gender. • Development, implementation and monitoring of MIS related to SMF and Gender. • Preparation & submission of progress reports, Best Practices, success stories, Case Studies and any other report required by the management. • Any other task assigned by reporting officer
Qualification	<ul style="list-style-type: none"> • Post Graduate degree or diploma (equivalent) preferably in Rural Development/Rural Management, Master in Social work, Women Studies and relevant academic qualification
Experience	<ul style="list-style-type: none"> • Minimum 7 years of relevant experience in social development, Gender, SHG Federations in rural context with experience of designing, planning and implementation in large scale social development projects of government/non-government organization at state level

- Proven track record in working with SHGs and their federations

2. Technical Expert - Capacity Building of Community Institutions

Location	SMMU office, State Level
Roles	To support and coordinate capacity building of SHGs and their federations, community cadres and establishment of Community Managed Training centers
Reporting	SPM-IB&CB or Social Mobilization /Any Other Official designated by CEO
Key Responsibilities	<ul style="list-style-type: none"> • Develop Capacity building strategies for strengthening of Institution's, advisories, protocols, policies and AAPs • Support in development of capacity building strategies, protocols, policies, annual action plans and necessary advisories and guidelines for capacity building of community institutions • Develop pool of Resource Persons/Community Trainers at State/District /block level • Support in the development of mechanisms, structures and systems, for Training Needs assessment, Induction and Capacity Building of state, district, block and field teams, Community Cadres and Community Institutions • Develop protocol, advisories and guidelines for establishment of Community Managed Training centers in selected Model CLFs or Regional training centers and support Communities in its management and development of systems • Develop monitoring mechanisms for tracking the performance of Capacity building activities, community cadres, Resource pools and training centers and regular monitoring. • Support in the development of Behaviour Change Communication (BCC) strategies and materials, and Capacity Building materials for community institutions. • Documentation and preparation of case studies, best practices/ success stories etc. • Develop Customized modules and protocols shared by NMMU and if required develop state specific modules and materials • Preparation, analysis and submission of MIS and reports to state and NMMU • Any other task assigned by reporting officer
Qualification	<ul style="list-style-type: none"> • Post Graduate degree or diploma (equivalent) preferably in Rural Development/Rural Management, Master in Social work

Experience	<ul style="list-style-type: none"> • Minimum 05 years of relevant experience in development sector in designing, planning and working in large scale social development projects of government/non-government organisation at state level • Proven track record in working with SHGs and their federations
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3. Technical Expert - Model CLF Strengthening

Location	SMMU office, State Level
Roles	To support in the implementation of Model CLF strategy
Reporting	SPM- IB& CB or Social Mobilization/ Any Other Official designated by CEO
Key Responsibilities	<ul style="list-style-type: none"> • Support in development of strategies, policies, advisories, AAPs and roll out of the same for implementation of model CLF strategy • Support in conducting state, district and block level core committee meetings • Support in coordinating with National Resource persons or Technical Support Agencies designated for the state and also developing necessary linkages and ensure on-time completion of all activities planned in model CLF strategy viz., Collection & compilation of current status of CLFs data, Vision building, Business plan development, action plans etc., • Coordinate with other thematic for integration of all activities at CLF level • Regular field visits and reviewing the performance of Model CLF for ensuring proper implementation and integration of all thematic interventions • Support in preparation of Bye-laws, registration and compliance by SHG federations • With support of Technical Expert - CB, develop pool of community master trainers/ Resource Persons at state, District and block level and CLF level and regularly coordinating and monitoring their performance • Plan, design and conduct capacity building activities for members of SHG federations, CBO staff and community cadre • Customized modules and protocols shared by NMMU and if required develop state specific modules and materials • Regularly Mentoring/monitoring/guiding concerned staff at state, district and block teams to ensure effective rollout of Model CLF strategy • Provide support in development and operationlization of Governance,

	<p>financial and HR management systems</p> <ul style="list-style-type: none"> • Identify and document of best practices, case studies and success stories etc. • Preparation, analysis and submission of MIS and reports to state and NMMU • Any other task assigned by reporting officer
Qualification	<ul style="list-style-type: none"> • Post Graduate degree or diploma (equivalent) preferably in Rural Development/Rural Management, Master in Social work
Experience	<ul style="list-style-type: none"> • Minimum 05 years of relevant experience in development sector with experience of design, planning and working in large scale social development projects of government/non-government organisation at state level • Proven track record in working with SHG, VO and CLF

4. Young Professional - Model CLF Strengthening at State Level

Location	<ul style="list-style-type: none"> • SMMU office, State Level
Roles	<ul style="list-style-type: none"> • To support in the implementation of model CLF strategy
Reporting	<ul style="list-style-type: none"> • SPM - IB&CB or Social Mobilisation /Technical Expert- Model CLF strengthening/ Any Other Official designated by CEO
Key Responsibilities	<ul style="list-style-type: none"> • Support in implementation of Model CLF strategy • Support in coordination with NRPs, SRPs, TSAs and concerned district and block level staff • Support in development of pool of community master trainers at state/district/block level and coordinating with them • Conduct training for community Institutions and cadre and participating in state, district and block level core committee meeting • Mentor/monitor/guide staff and community cadre to ensure effective rollout of Model CLF strategy • Support in development training modules, reporting mechanism, data analysis, documentation and reports • Documentation of best practices, case studies and success stories • Any other task assigned by reporting officer
Qualification	<ul style="list-style-type: none"> • Post Graduate degree or diploma preferably in Rural Development/Rural Management, Master in Social work
Experience	<ul style="list-style-type: none"> • Fresh Graduate from management institute • Preferably 1 year experience in rural development

5. Young Professional - Capacity Building of Community Institutions at State Level

Location	<ul style="list-style-type: none"> • SMMU office, State Level
Roles	<ul style="list-style-type: none"> • To support in implementation of Capacity Building activities in NRETP blocks and development of Community Managed Training centers
Reporting	<ul style="list-style-type: none"> • SPM-IB&CB or Social Mobilization/Technical Expert - CB /Any Other Official designated by CEO
Key Responsibilities	<ul style="list-style-type: none"> • Support in implementation of Capacity Building of SHGs and their federations and Community cadres • Support in development and operationalization of policies, structure's, systems, plans, protocols, modules etc., for development of Community Managed Training centers • Support in coordination with pool of community master trainers and resource persons at state/district/block level and ensuring the completion of capacity building activities • Support in identification, grooming and deployment of cadres • Support in documentation and reporting • Support in MIS data collection and analysis and reviewing the performance of Community Managed Training centres • Any other task assigned by reporting officer
Qualification	<ul style="list-style-type: none"> • Post Graduate degree or diploma preferably in Rural Development/Rural Management, Master in Social work
Experience	<ul style="list-style-type: none"> • Fresh Graduate from management institute • Preferably 1year experience in rural development

6. Young Professional - Social Management framework and Gender at State Level

Location	<ul style="list-style-type: none"> • SMMU office, State Level
Roles	<ul style="list-style-type: none"> • To support in implementation of Social Management framework and gender interventions
Reporting	<ul style="list-style-type: none"> • Senior Technical Expert - SMF & Gender/Any Other Official designated by CEO
Key Responsibilities	<ul style="list-style-type: none"> • Support in development and mainstreaming of Social Management Framework and gender operational strategy, policies, protocols, guidelines, AAP and budget etc. • Support in development and coordination with resource persons at state, district, block level. • Support in rolling out of institutional mechanisms for implementation, capacity building and monitoring of SMF and Gender interventions. • Capacity building of all mission staff on SMF and Gender. • Support in partnership management related to SMF and Gender. • Support in development, implementation and monitoring of MIS related

	<p>to SMF and Gender.</p> <ul style="list-style-type: none"> • Support in preparation & submission of progress reports, Case Studies and any other reports required by management. • Any other task assigned by reporting officer
Qualification	<ul style="list-style-type: none"> • Post Graduate degree or diploma preferably in Rural Development /Rural Management, Master in Social work
Experience	<ul style="list-style-type: none"> • Fresh Graduate from management institute • Preferably 1year experience in gender / rural development / social development issues

7. Young Professional - FNHW at State Level

Location	<ul style="list-style-type: none"> • SMMU office, State Level
Roles	<ul style="list-style-type: none"> • To support in implementation of FNHW interventions
Reporting	<ul style="list-style-type: none"> • SPM- IB&CB or SI&SD or FNHW Anchor person/Any Other Official designated by CEO
Key Responsibilities	<ul style="list-style-type: none"> • Support in development and mainstreaming of FNHW operational strategy, policies, protocols, guidelines, AAP and budget etc. • Support in development and coordination with resource persons at state, district, block level. • Support in rolling out of institutional mechanisms for implementation, capacity building and monitoring of FNHW interventions. • Capacity building of mission staff and SHGs and their federations on FNHW. • Support in partnership management related to FNHW. • Support in development, implementation and monitoring of MIS related to FNHW. • Support in preparation and submission of progress reports, Case Studies and any other reports required by management. • Any other task assigned by reporting officer
Qualification	<ul style="list-style-type: none"> • Post Graduate degree or diploma preferably in Public Health, Nutrition, extension, Rural Development/Rural Management, Master in Social work
Experience	<ul style="list-style-type: none"> • Fresh Graduate from management institute • Preferably 1year experience in health/ sanitation / rural development

8. Young Professional at Block Level

Location	<ul style="list-style-type: none"> • Block office, Block Level
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Roles	<ul style="list-style-type: none"> • To implement Model CLF strategy
Reporting	<ul style="list-style-type: none"> • Direct Reporting to Block Project Manager (BPM) and lateral reporting to Technical Expert- Model CLF strengthening /Any Other Official designated by CEO
Key Responsibilities	<ul style="list-style-type: none"> • Development and rolling out of strategies, customization of VO& CLF SOPs, CLF AAPs, systems for implementation of model CLF strategy • Development and training of Community Spearhead Team and CLFs • Facilitation of activities as planned model CLF strategy viz., Collection of current status of CLFs data, Vision building, Business plan development, action plans etc., • Regular field visits and reviewing the performance of Model CLF for ensuring proper implementation and integration of all thematic interventions • Preparation of Bye-laws, registration and compliance by SHG federations • Plan, design and conduct capacity building activities for members of SHG federations, CBO staff and community cadre • Customized modules and protocols shared by State and if required develop CLF specific modules and materials • Attending CLF meetings regularly and mentoring/monitoring/guiding concerned CLF EC and staff to ensure effective rollout of Model CLF strategy • Development and operationlisation of Governance, financial and HR management systems • Identify and document of best practices, case studies and success stories etc. • Preparation, analysis and submission of MIS and reports to state • Any other task assigned by reporting officer
Qualification	<ul style="list-style-type: none"> • Post Graduate degree or diploma preferably in Rural Development Management, Master in Social work
Experience	<ul style="list-style-type: none"> • Fresh Graduate from management institute • Preferably 1year experience in rural development / community works

B. Digital Finance

1. Senior Technical Expert - Digital Finance Initiative

Location	SMMU ofsfice, State Level
Roles	To Provide guidance to the Mission Team for the implementation of Digital Finance Initiative
Reporting	CEO/Add. CEO/Any Other Official designated by CEO
Key Responsibilities	<ul style="list-style-type: none"> • Support in strengthening of Digital Finance Initiatives • Support in the development of mechanisms, structures and systems, for Induction and Capacity Building of state, district, block and field teams, Community Cadres and Community Institutions • Develop pool of community cadre/master trainers-training, deployment and management • Customized modules and protocols shared by NMMU and if required develop state specific modules and materials • Mentor/monitor/guide staff at state, district and block team to ensure effective rollout of the activities • Represent at different forums and liaison with different line departments and NMMU related to the mission activities and reports • Facilitate planning, managing and budgeting at various levels • Provide support in programme, systems, data and fund management activities in the state • Coordinate with Corporate BC and Banks for data sharing for monitoring of Digital Finance initiatives • Any other task assigned by reporting officer
Qualification	<ul style="list-style-type: none"> • Post Graduate degree or diploma (equivalent) preferably in Rural Development Management, Master in Social work, Financial Management
Experience	<ul style="list-style-type: none"> • Minimum 05 years of relevant experience in related sector with experience of design, planning and working in large scale projects of government/non-government organisation at state/national Level

2. Technical Expert - insurance/pension initiatives

Location	SMMU office, State Level
Roles	To Provide guidance to the Mission Team for the implementation of insurance/pension initiatives
Reporting	CEO/Add. CEO/Any Other Official designated by CEO
Key Responsibilities	<ul style="list-style-type: none"> • Support in mainstreaming of insurance and pension initiatives • Develop pool of community cadre/master trainers-training, deployment and management • Customized modules and protocols shared by NMMU and if required develop state specific modules and materials • Mentor/monitor/guide staff at state, district and block team to ensure effective rollout of the activities • Represent at different forums and liaison with different line departments and NMMU related to the mission activities and reports • Facilitate planning, managing and budgeting at various levels • Provide support in programme, systems, data and fund management activities in the state • Any other task assigned by reporting officer
Qualification	<ul style="list-style-type: none"> • Post Graduate degree or diploma (equivalent) preferably in Rural Development Management, Master in Social work, Financial Management
Experience	<ul style="list-style-type: none"> • Minimum 05 years of relevant experience in related sector with experience of design, planning and working in large scale projects of government/non-government organisation at state/national level

3. Block Technical Coordinator- Financial Inclusion

Location	<ul style="list-style-type: none"> • Block Office, Block Level
Roles	<ul style="list-style-type: none"> • To Provide guidance to community institution/cadre for the implementation of Financial Inclusion Initiative
Reporting	<ul style="list-style-type: none"> • BPM/Any Other Official designated by CEO
Key Responsibilities	<ul style="list-style-type: none"> • Support in strengthening of Alternate Banking Solution and Micro Insurance • Support in the identification of cadre and their trainings and deployment • Conduct training for community Institutions and cadre • Attend BLBC meeting and share the progress report, constraints (if any any) in SHG bank linkage • Support in conducting of training of Branch managers and others

	<ul style="list-style-type: none"> • Mentor/monitor/guide staff and community cadre to ensure effective rollout of financial inclusion activities of the Mission • Provide support in programme, systems, data and fund management and anchor Financial inclusion activities in the block • Coordinate with Bank and Corporate BC to provide technical solution to BC Sakhi • Any other task assigned by reporting officer
Qualification	<ul style="list-style-type: none"> • Post Graduate degree or diploma preferably in Rural Development Management, Master in Social work/Financial Management
Experience	<ul style="list-style-type: none"> • Fresh Graduate from management institute • Comfortable with computer/MS Office and latest android based platform

C. Livelihoods- Farm

Advisory for placement of relevant and qualified human resource in the Farm Livelihoods team of SRLMs for the implementation of National Rural Economic Transformation Project

1. Context

Ensuring sustainable access to markets and remunerative prices for their produce by smallholder and marginal farmers is an essential part of the Livelihoods promotion strategy under DAY-NRLM. DAY-NRLM has been organizing the primary producers into livelihoods collectives around specific livelihood activities like agriculture, livestock, NTFP collection etc. As these livelihoods collectives are basically the collectives of primary producers they would be more appropriately called producers' collectives.

Producers' Collectives are important means of linking producers with markets, as well as sourcing inputs, technology, information, and services. Producers' Collectives, viz. producers' groups and producers' enterprises, are being promoted as member based organizations under various interventions of Farm Livelihoods under DAY-NRLM such as Mahila Kisan Sashaktikaran Pariyojana (MKSP), MKSP Annual Action Plan, World Bank Dedicated Fund for value chain development and other Farm Livelihoods initiatives. To build on these experiences, the National Rural Economic Transformation Project (NRETP) has been designed to continue to strengthen women led producer organizations to increase market access and value addition for farm produce. Value chain interventions will be taken up to leverage the economies of scale and reduction in transaction cost and necessary investments will be made to support promotion of producer groups and formal producer enterprises. Therefore, farm value chain interventions would focus on the promotion of producers' collectives, viz. producers' groups and producers' enterprises to enable the small and marginal women farmers to access markets for their produce at a remunerative price.

This advisory is aimed towards providing guidance to the State Rural Livelihoods Missions on the Human Resource architecture that is to be placed at the State, block and cluster level for the effective implementation of the objectives under NRETP.

1.1 Need of qualified professionals for NRETP

The key deliverables of NRETP under Farm Livelihoods are –

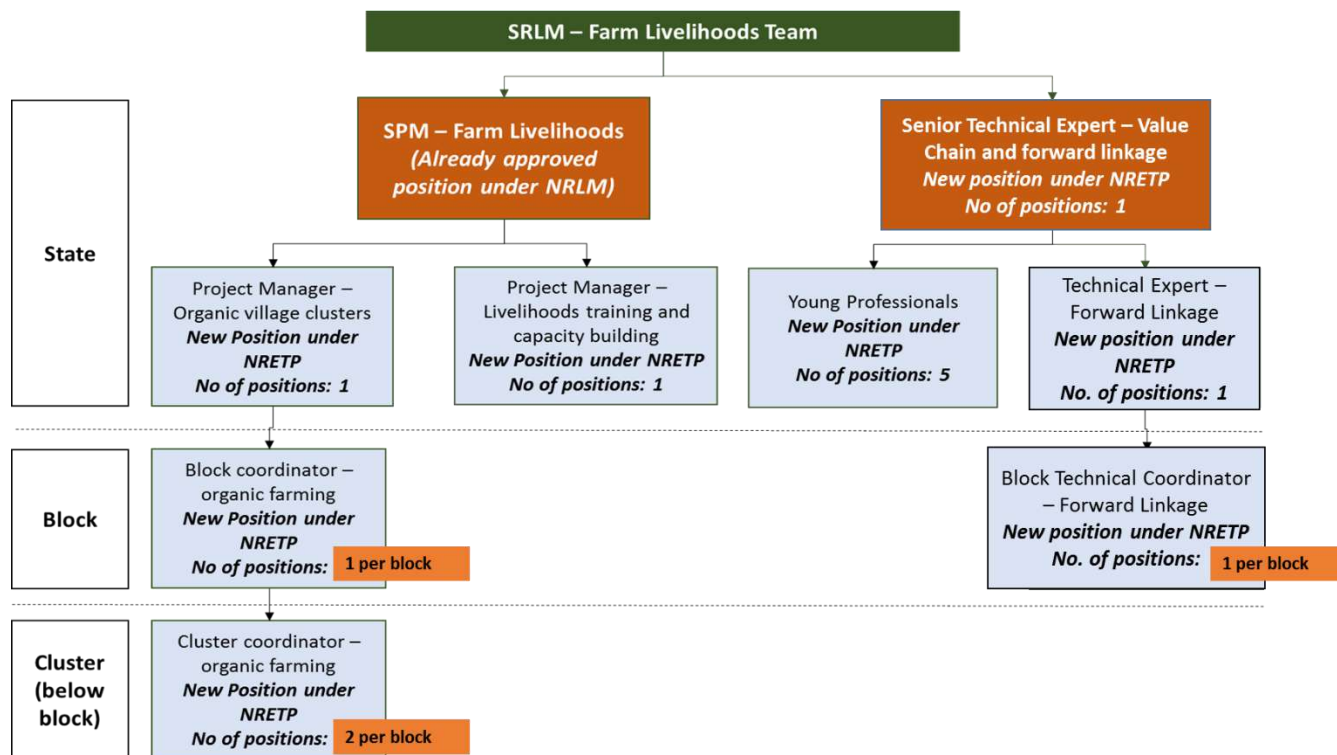
- Scaling up of Value Chain Initiatives – promotion of Producer Groups and Producer Enterprises
- Development of community-based livelihoods extension service (forward linkage)
- Promotion of Organic village Clusters

The producer collectives (PGs and PEs) are business entities and the economic viability of the entity is essential for the collective to provide benefits to the small and marginal farmers in a sustainable manner. Therefore, to enable scaling up of value chain interventions and to promote Producers Enterprises, there is a specific need to place specialized human resource with demonstrated techno-managerial skill sets at the SRLMs, who would be fully dedicated to handle the business complexities of farm produce mostly agro-commodities in a multi-tasking

environment. This team would be responsible to spearhead the value chain development initiatives and the promotion of Producers' Enterprises.

The development of organic village clusters requires that there is human resource with relevant educational qualification and demonstrated experiences in the areas of Organic Cultivation & Certification, value addition and market linkage.

The structure and the specific requirements for each of the positions at the State, block and cluster level, as proposed under NRETP, are given below. Appropriate budgetary provisions have also been made for these positions.



It is expected that prior to the approval of Annual Action Plan under NRETP, the SRLMs would put the team in place and the placement of the full structure would be a prerequisite for approval of any proposal for value chain development through promotion of Producer Enterprise in the State.

2. Job Responsibilities and Eligibility

2.1 Senior Technical Expert - Value Chain and forward linkage

Role	Promote economically sustainable producer based organizations to ensure better price realization for the produce of small and marginal producers
Responsibilities	<p>Specific tasks of the Senior Technical Expert – Value Chain and forward linkage would include:</p> <ol style="list-style-type: none"> a. Development of new proposals in value chain development - Development of intervention strategy, business plan and execution plans for Value Chain development interventions

	<ul style="list-style-type: none"> b. Facilitating partnership with institutional buyers / local buyers, conducting buyer seller meets c. Planning, execution and monitoring of the sanctioned value chain development projects / SRLM interventions through regular field visit and review d. Develop appropriate institutional strategy to exploit opportunities for value chain development e. Develop -Mapping of value chains, Analyzing value chain competitiveness, project strategy, business plans, and standard operating processes for Producer Enterprises and Producer Groups. f. Maintain information regarding produce being handled by PG / PE, markets (prices and trends), commodity-wise details. g. Close handholding, capacity building and support to Producer Enterprise staff. h. Regular review of the performance of all Producer Enterprises and Producer Groups promoted by the SRLM i. Developing and executing capacity building plans for the project staff and community members on value chain development j. Develop manuals and guidelines to facilitate implementation of value chain development. Also, facilitate workshops, consultations necessary for developing the same. k. Identify and document best practices in value chain development interventions. l. Co-ordination with the Technical Support Agencies for development and implementation of value chain development proposals. m. Review of concerned staff at all levels n. Development of modules in MIS for monitoring and evaluation of value chain interventions
Qualifications	<ul style="list-style-type: none"> a. Should be a Post Graduate in Agri-business management / Rural Management / Rural Marketing or MBA in Marketing from a reputed university/institute. Candidate with UG/PG in agriculture or veterinary science is desirable.
Experience	<ul style="list-style-type: none"> a. Should have an experience of minimum 5 years in handling value chain development/ market linkage for agriculture produce. She/he should have experience of procurement and marketing of specific agri commodity in large scale. b. Candidates with experience in managing agriculture commodity supply chain in companies engaged in agri-business, P&L handling experience in a corporate environment would be preferred. c. Candidate with experience in enterprise promotion, business advisory services, forward and backward linkages for large agriculture based businesses would be given priority. d. Should have handled procurement / marketing / supply chain for business line / enterprise promotion of at least INR 10 crores turnover annually. e. Proven experience of leading professional staff and building their initiative and enable them to function as members of efficient and

	<p>effective teams</p> <p>f. Developed and managed partnerships in market side, supply side, better technologies</p> <p>g. Demonstrable experience of project management, ensuring the delivery of high quality program</p> <p>h. Managed a team of at least 10 members</p>
Job Related Competencies	<p>a. Setting up a business / vertical in corporate agribusiness company/ start-up environment.</p> <p>b. Setting up systems and processes to increase efficiency, profitability of the business Knowledge, skills and ability to use a variety of communication methods, tools and media</p> <p>c. Knowledge of supply chain management, designing procurement operations, project management.</p> <p>d. Familiarity with mutual assistance principles, functioning of cooperatives or other community based business enterprises, governance mechanisms for Producer Companies would be preferred.</p> <p>e. Good data analysis and conceptualization skills</p> <p>f. Ability to write concept notes, proposals etc., and make effective presentations</p> <p>g. Ability to build and sustain effective partnerships with Government Agencies and private sector organizations</p> <p>h. Proven ability to coordinate the work of others and to work as part of a team and share knowledge with others</p> <p>i. Effective Teamwork with conflict resolution skills</p> <p>j. Demonstrated openness to change and ability to manage complex situations</p>

2.2 Technical Expert – Forward Linkage

Role	<p>Technical Expert - Forward linkage would work under the guidance of the Senior Technical Expert – Forward Linkage to promote economically sustainable producer based organizations to ensure better price realization for the produce of small and marginal producers</p>
Responsibilities	<p>Specific tasks of the Technical Expert - Forward linkage would include:</p> <p>a. Planning, execution and monitoring of the sanctioned value chain development projects / SRLM interventions through regular field visit and review</p> <p>b. Mapping of value chains, analyzing value chain competitiveness, project strategy, business plans, and standard operating processes for Producer Enterprises and Producer Groups.</p> <p>c. Maintain information regarding produce of the SHG members, markets (prices and trends), and commodity-wise details.</p> <p>d. Identifying institutional buyers / local buyers, conducting buyer seller meets</p> <p>e. Development of new proposals in value chain development - Development of intervention strategy, business plan and execution plans for Value Chain development interventions</p>

	<ul style="list-style-type: none"> f. Close handholding, capacity building and support to Producer Enterprise staff. g. Timely review of the performance of all Producer Enterprises and Producer Groups promoted by the SRLM h. Developing and executing capacity building plans for the project staff and community members on farm livelihoods and value chain development i. Develop manuals and guidelines to facilitate implementation of value chain development. Also, facilitate workshops, consultations necessary for developing the same. j. Identify and document best practices in value chain development under farm livelihoods initiatives k. Co-ordination with the Technical Support Agencies for development and implementation of value chain development proposals. l. Ensuring data collection and entry into MIS for monitoring and evaluation of value chain interventions
Qualifications	<ul style="list-style-type: none"> a. Should be a Post Graduate in Agri-business management / Rural Management / Rural Marketing or MBA in Marketing from a reputed university/institute. Candidate with UG/PG in agriculture or veterinary science is desirable.
Experience	<ul style="list-style-type: none"> a. Should have an experience of minimum 3 years in handling value chain development/ market linkage for agriculture produce. She/he should have experience of procurement and marketing of specific agri-commodity in large scale b. Candidate with experience in managing agriculture commodity supply chain in companies engaged in agribusiness, P&L handling experience in a corporate environment would be preferred. c. Candidate with experience in enterprise promotion, business advisory services, forward and backward linkages for large agriculture based businesses would be given priority. d. Should have handled procurement / marketing / supply chain for vertical of at least INR 2 crores turnover annually. e. P&L handling experience for the vertical / business / product line. f. Experience of starting a business / vertical within a corporate environment would be preferred. g. Proven experience of leading professional staff and builds their initiative and enables them to function as members of efficient and effective teams h. Developed and managed partnerships in market side, supply side, better technologies i. Demonstrable experience of project management, ensuring the delivery of high quality programmes as well as managing internal learning processes across virtual teams j. Managed a team of at least 5 members
Job Related Competencies	<ul style="list-style-type: none"> a. Experience in setting up a business / vertical in corporate agribusiness company/ start-up environment. b. Experience in setting up systems and processes to increase

	<p>efficiency, profitability of the business Knowledge, skills and ability to use a variety of communication methods, tools and media</p> <ul style="list-style-type: none"> c. Knowledge of supply chain management, designing procurement operations, project management. d. Familiarity with mutual assistance principles, functioning of cooperatives or other community based business enterprises, governance mechanisms for Producer Companies would be preferred. e. Good data analysis and conceptualization skills f. Ability to write concept notes, proposals etc., and make effective presentations g. Ability to build and sustain effective partnerships with Government Agencies and private sector organizations h. Proven ability to coordinate the work of others and to work as part of a team and share knowledge with others i. Effective Teamwork with conflict resolution skills j. Demonstrated openness to change and ability to manage complex situations
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2.3 Project Manager – Organic village clusters

Role	PM-organic village clusters would work under the guidance of the SPM – Farm Livelihoods to roll-out organic farming and certification in the States
Roles and Responsibilities	<ul style="list-style-type: none"> a. Planning, execution and monitoring of the sanctioned organic village cluster projects through regular field visit and review b. Cluster level planning and roll out of organic village cluster development activities c. Rolling out certification in the clusters d. Support the SRLMs in development of value addition and market linkage strategies for organic produce e. Development of protocols, package of practices for organic farming. Also, facilitate workshops, consultations necessary for developing the same. f. Mapping of value chains, analyzing value chain competitiveness, project strategy, business plans, and standard operating processes for Producer Enterprises and Producer Groups taking up marketing of organic produce g. Maintain information regarding produce of the SHG members, markets (prices and trends), commodity-wise details. h. Identifying institutional buyers / local buyers, conducting buyer seller meets i. Development of new proposals in organic village cluster development j. Developing and executing capacity building plans for the project staff and community members on farm livelihoods and value chain development k. Develop manuals and guidelines to facilitate implementation of value chain development.

	<ul style="list-style-type: none"> l. Identify and document best practices m. Co-ordination with the Technical Support Agencies for development and implementation of organic village clusters n. Ensuring data collection and entry into MIS for monitoring and evaluation
Qualifications	<ul style="list-style-type: none"> a. Candidate should be a Post-Graduate in Agriculture / Agri-business management/Rural Management/Rural Marketing / social sciences from a reputed university/institute
Experience	<ul style="list-style-type: none"> a. 5+ years in a large size livelihood development project or in reputed industry at middle management level, responsible for promotion of organic agriculture practices and allied activities based livelihoods or managing commodity business in scale, certification, sourcing, value addition, marketing etc. b. Candidate should also have minimum 3 years of experience working in any part of the value chains of organic produce. c. Should have handled procurement / marketing / supply chain for organic agricultural produce d. Experience of developing a business / vertical for promotion of organic farming, practices within an organization / corporate institution would be preferred. e. Experience of roll-out of PGS or Third party certification with at least 500 farmers. f. Proven experience of leading professional staff and builds their initiative and enables them to function as members of efficient and effective teams g. Developed and managed partnerships in market side, supply side, for technical know-how of implementation of organic farming h. Demonstrable experience of project management, ensuring the delivery of high quality programmes as well as managing internal learning processes across virtual teams i. Managed a team of at least 5 members
Job Related Competencies	<ul style="list-style-type: none"> a. Knowledge of organic certification standards – both third party and PGS certification systems b. Knowledge of compliances for both export and domestic markets for organic produce. c. Knowledge of organic farming methods, agro-ecological practices d. Experience in setting up systems and processes to roll-out organic farming in the States e. Good data analysis and conceptualization skills f. Ability to write concept notes, proposals etc., and make effective presentations g. Ability to build and sustain effective partnerships with Government Agencies and private sector organizations h. Proven ability to coordinate the work of others and to work as part of a team and share knowledge with others i. Demonstrated openness to change and ability to manage complex situations

2.4 Project Manager – Livelihoods training and capacity building

Role	PM- Livelihoods training and capacity building would work under the guidance of the SPM – Farm Livelihoods to manage the training and capacity building activities and requirements for staff, community resource persons and community.
Roles and Responsibilities	<ul style="list-style-type: none"> a. Developing and executing capacity building plans for the project staff and community members on farm livelihoods b. Co-ordinate with Sustainable Agriculture, Livestock, NTFP, Value Chain and organic farming teams of Farm Livelihoods to develop the training and capacity building strategy for staff, CRPs and community and identification of training needs for staff, CRP and community c. Co-ordinate development of modules / training material (print and video) with the support of NRPs / Expert organizations. d. Identify best practice sites to be developed as immersion sites / exposure visits e. Support the teams under Farm Livelihoods in development of protocols, package of practices for organic farming. Also, facilitate workshops, consultations necessary for developing the same. f. Regular documentation and publication of best practices g. Partnerships with academic institutions, capacity building agencies for providing trainings. h. Ensuring data collection and entry into MIS for monitoring and evaluation of training and capacity building activities
Qualifications	<ul style="list-style-type: none"> a. Candidate should be a Post-Graduate in Agriculture / Agri-business management/Rural Management/Rural Marketing / social sciences from a reputed university/institute
Experience	<ul style="list-style-type: none"> a. 5+ years in a large size livelihood development project or in reputed industry at middle management level, responsible for development of training materials, manuals for Staff, community resource persons and community for livelihoods activities. b. Candidate should also have minimum 3 years of experience working in development and implementation of training and capacity building programs c. Experience of designing and implementing large scale training programs at the State level for a large scale for a farm livelihoods based program d. Experience of developing training material (flipcharts, documents, posters, video etc) on sustainable agriculture, livestock, NTFP or value chain for various types of recipients (community resource persons, community, Staff). e. Experience of using innovative technologies for delivery of training f. Experience of building robust training architecture. g. Proven experience of leading professional staff and builds their initiative and enables them to function as members of efficient and effective teams h. Developed and managed partnerships with academic institutions,

	<p>training agencies for implementation of training at various levels</p> <p>i. Managed a team of at least 5 members</p>
Job Related Competencies	<p>j. Knowledge of training needs at various level - community resource persons, community, Staff, etc</p> <p>k. Knowledge of training techniques, methodologies and use of technology for training delivery</p> <p>l. Experience in setting up systems and processes to roll-out training on various in the States</p> <p>m. Good data analysis and conceptualization skills</p> <p>n. Ability to write concept notes, proposals etc., and make effective presentations</p> <p>o. Ability to build and sustain effective partnerships with Government Agencies, academic institutions, training agencies etc.</p> <p>p. Proven ability to coordinate the work of others and to work as part of a team and share knowledge with others</p> <p>q. Demonstrated openness to change and ability to manage complex situations</p>

2.5 Young Professionals

Role	Young professionals would work under the guidance of the SPM – Forward Linkage to implement value chain development interventions in the States
Roles and Responsibilities	<p>a. Execution and monitoring of the sanctioned value chain development projects / SRLM interventions through regular field visit and review</p> <p>b. Analyzing value chain competitiveness, and business plans for Producer Enterprises and Producer Groups.</p> <p>c. Maintain information regarding produce of the SHG members, markets (prices and trends), commodity-wise details.</p> <p>d. Identifying institutional buyers / local buyers, conducting buyer seller meets</p> <p>e. Support in collection of information / data for development of new proposals in value chain development</p> <p>f. Support in execution of capacity building plans for the project staff and community members on farm livelihoods and value chain development</p> <p>g. Facilitate workshops, consultations necessary for developing manuals and guidelines to facilitate implementation of value chain development.</p> <p>h. Identify and document best practices in value chain development under farm livelihoods initiatives</p> <p>i. Ensuring data collection and entry into MIS for monitoring and evaluation of value chain interventions</p>
Qualifications	a. Education - Post Graduate in Agri-business management / Rural Management / Rural Marketing or MBA in Marketing from a from a reputed university/institute
Experience	<p>a. 0-2 years' experience in livelihoods promotion</p> <p>b. Experience of working in marketing / supply chain within a</p>

	<p>corporate environment would be preferred.</p> <p>c. Field experience of working in a large scale livelihoods promotion program</p>
Job Related Competencies	<p>a. Knowledge of supply chain management, designing procurement operations, project management.</p> <p>b. Knowledge of mutual assistance principles, functioning of cooperatives or other community based business enterprises, governance mechanisms for Producer Companies would be preferred.</p> <p>c. Good data analysis and conceptualization skills</p> <p>d. Ability to write concept notes, proposals etc., and make effective presentations</p> <p>e. Demonstrated openness to change and ability to manage complex situations</p>

2.6 Block Technical coordinator – Forward Linkage

Role	Block Technical coordinator – Forward Linkage would work under the guidance of the SPM – Value Chain and Forward Linkage to implement value chain development interventions in the blocks
Roles and Responsibilities	<p>a. Responsible for execution and monitoring of the sanctioned value chain development projects at the block level</p> <p>b. Continuously scout for opportunities by analyzing potential for developing value chain interventions for existing commodities being produced in the block</p> <p>c. Facilitate the technical support agencies in implementation of the sanctioned projects.</p> <p>d. Maintain information regarding produce of the SHG members, markets (prices and trends), commodity-wise details of local and block level markets.</p> <p>e. Identifying local buyers / local buyers, facilitating buyer seller meets at the block level</p> <p>f. Collection of information / data for development of new proposals in value chain development</p> <p>g. Execution of capacity building plans for the project staff, udyog mitra and community members on farm livelihoods and value chain development</p> <p>h. Facilitate workshops, consultations necessary for developing manuals and guidelines to facilitate implementation of value chain development.</p> <p>i. Identify and document best practices in value chain development under farm livelihoods initiatives in the block</p> <p>j. Ensuring data collection and entry into MIS for monitoring and evaluation of value chain interventions</p>
Qualifications	<p>a. UG (4 years course) in Ag Science, Forestry, and /or PG in Rural Development/Rural Management/social sciences</p>

Experience	<ul style="list-style-type: none"> a. 1-2 years of experience of procurement and marketing of specific agri commodity in large scale, experience in managing agriculture commodity supply chain in companies engaged in agri business b. P&L handling experience for an area / product line within an agri-commodity focused corporate environment. c. Experience in procurement / marketing of agriculture commodities. d. Experience of setting up field level procurement centers e. Proven experience of leading professional staff and builds their initiative and enables them to function as members of efficient and effective teams f. Demonstrable experience of project management, ensuring the delivery of high quality programmes as well as managing internal learning processes across virtual teams g. Managed a team of at least 5 field staff
Job Related Competencies	<ul style="list-style-type: none"> a. Knowledge of supply chain management, execution of procurement operations, project management. b. Familiarity with mutual assistance principles, functioning of cooperatives or other community based business enterprises, governance mechanisms for Producer Companies would be preferred. c. Ability to work with government agencies, technical support partners at the block level d. Ability to work effectively with community resource persons, community and field staff to deliver results e. Effective Teamwork with conflict resolution skills f. Demonstrated openness to change and ability to manage complex situations

2.7 Block coordinator – organic farming

Role	Block coordinator – organic farming would work under the guidance of the SPM – Farm Livelihoods and be responsible for the implementation of organic farming and certification in the blocks
Roles and Responsibilities	<ul style="list-style-type: none"> a. Execution and monitoring of the sanctioned organic village cluster projects through regular field visit and review b. Cluster level planning and roll out of organic village cluster development activities c. Rolling out certification in the clusters and facilitate technical support agencies in implementation d. Continuously scout for opportunities by analyzing potential for developing value chain interventions for existing commodities being produced in the block e. Maintain information regarding produce of the SHG members, markets (prices and trends), commodity-wise details. f. Identifying local buyers, conducting buyer seller meets g. Executing capacity building plans for the project staff and community members on farm livelihoods and value chain development

	<ul style="list-style-type: none"> h. Identify and document best practices i. Ensuring data collection and entry into MIS for monitoring and evaluation
Qualifications	<ul style="list-style-type: none"> a. UG (4 years course) in Ag Science, Forestry, and /or PG in Rural Development/Rural Management/social sciences
Experience	<ul style="list-style-type: none"> a. 1-2 years in a livelihood development project responsible for promotion of organic production systems and allied activities based livelihoods b. Should have handled procurement / marketing / supply chain for organic agricultural produce c. Experience of roll-out of PGS or Third party certification with at least 100 farmers. d. Experience in setting up systems and processes to roll-out organic farming e. Demonstrable experience of project management, ensuring the delivery of high quality programmes as well as managing internal learning processes across virtual teams f. Managed a team of at least 5 field staff
Job Related Competencies	<ul style="list-style-type: none"> r. Knowledge of organic certification standards – both third party and PGS certification systems s. Knowledge of compliances for both export and domestic markets for organic produce. t. Knowledge of organic farming methods, agro-ecological practices u. Ability to work effectively with community resource persons, community and field staff to deliver results v. Good data analysis and conceptualization skills w. Ability to build and sustain effective partnerships with Government departments, technical support agencies and capacity building agencies x. Demonstrated openness to change and ability to manage complex situations

2.8 Cluster coordinator – organic farming

Role	Cluster coordinator – organic farming would work under the guidance of the Block coordinator – organic farming and be responsible for the implementation of organic farming and certification at the cluster level
Roles and Responsibilities	<ul style="list-style-type: none"> a. Cluster level planning and roll out of organic village cluster development activities b. Rolling out certification in the clusters and facilitate technical support agencies in implementation c. Maintain information regarding produce of the SHG members, markets (prices and trends), commodity-wise details. d. Executing capacity building plans for the project staff and community members on farm livelihoods and value chain development e. Identify best practices and communicate the same to the block level

	f. Ensuring data collection and entry into MIS for monitoring and evaluation
Qualifications	a. Diploma in agriculture from a AICTE recognized institute or UG (4 years course) in Ag Science, Forestry
Experience	<p>a. 1+ years in a livelihood development project responsible for promotion of organic production systems and allied activities based livelihoods. In case of Diploma Agriculture, fresh graduates may be considered.</p> <p>b. Experience of roll-out of PGS or Third party certification would be preferred</p> <p>c. Experience of working with community and community mobilization for livelihoods interventions</p> <p>d. Experience in executing training and capacity building programs at the field level with community resource persons and community</p>
Job Related Competencies	<p>a. Knowledge of organic certification standards – both third party and PGS certification systems would be preferred</p> <p>b. Knowledge of organic farming methods, agro-ecological practices</p> <p>c. Ability to work effectively with community resource persons, community and field staff to deliver results</p>

D. Non-farm Livelihoods Positions

The non-farm livelihoods component has provision for the following positions at various levels:

<i>Positions</i>	<i>Level</i>
Senior Technical Expert- Enterprise Promotion	SMMU
Technical Expert- Enterprise Promotion	SMMU
Position: District Technical Expert – Enterprise Promotion	DMMU
Position: Block Technical Coordinator – Enterprise Promotion	BMMU

The details of the various positions are provided below

<i>Position: Senior Technical Expert- Enterprise Promotion</i>
Job Responsibilities
<p>Role: The State Technical Expert (Enterprise Promotion) shall be the nodal person in the state for implementing the NRETP components including One Stop Facility (OSF) Centres, Incubators and Clusters. S/he will lead technical and field-based activities including enterprise development, business support services and capacity building support and ensure that both the quantitative and qualitative targets are met.</p> <p>The responsibilities include:</p> <ol style="list-style-type: none">1. Prepare annual action plan for non-farm livelihoods component of NRETP.2. Prepare and evaluate project proposals to be submitted to the NRLM for funding under the NRETP.3. Develop partnerships with Government/private sector/technical institutions on various aspects like capacity building of various stakeholders (community cadre, entrepreneurs), market support, technical assistance, technology support, enterprise management etc.4. Work with Technical Support Agencies to meet project objectives5. Develop an eco-system of human resources comprising of functional experts and mentors in the state for supporting enterprises development6. Support the teams at block and district level for effective and timely implementation of the programme; conduct regular review meeting at various levels7. Ensure that the enterprises supported under the program are sustainably financially viable within the defined timelines of the project.8. Facilitate forward and backward linkages for the enterprises set up under the programme.9. Facilitate and monitor the creation of competitive advantages for the enterprises supported by the SRLM, like creation of brand, compliance with statutory compliances, reaching economies of scale, access to various government schemes, convergence etc.10. Monitor progress of the entrepreneurship development component, analyse MIS and project performance data and take necessary corrective action11. Ensure deployment of technology platform for enterprise and cluster support and use of data analytics for performance tracking and decision making at enterprise and SRLM level12. Develop SOPs, manuals and guidelines for various components of the programme13. Ensure documentation of case studies, best practices, and learning notes throughout project implementation14. Comply with necessary administrative processes to ensure smooth implementation of entrepreneurship development component in the field15. Review the performance of the non-farm livelihoods team at all levels in the state and support them in the successful fulfilment of their responsibilities16. Co-ordinate with the other thematic leads in the SRLM and ensure that the SRLM evolves a robust ecosystem that supports the growth of community owned and managed growth enterprises and value chains

Qualifications required

1. MBA in Finance/Rural Management/Marketing/supply chain management from an institution of repute **or** CA **or** ICWA.
2. At least 5 years of experience (after graduation) of working in non-farm livelihoods sector like micro-enterprises development, Collectives and Producer Companies **or** in the private sector in a business leadership /management role
3. Experience of providing business advisory services, developing forward and backward linkages for businesses in the non-farm livelihoods sector
4. Experience of managing /starting business and managing them for growth and profitability will be given preference
5. Demonstrable experience of project management and team management ensuring the delivery of high-quality program
6. Should have managed a team of at least 10 members

Skills and Competencies

1. Ability to plan, organize, and control resources, procedures to achieve specific goals.
2. Ability to handle several different projects/tasks at one time, successfully complete tasks assigned, and meet deadlines
3. Ability to scan the horizon and identify approaches and initiatives to bring into policy and programme design
4. Ability to engage with other agencies, donors, and other development stakeholders and forge productive working relationships
5. Ability to generate commitment, excitement and excellence in others
6. Ability to get things done while exercising good judgement
7. Sound Business knowledge and skills. Specially In business analytics and management
8. Strong in communication and negotiation skills
9. Data driven, open to learning and adaptable, should be willing to adapt to ground realities
10. Ability to network with agencies and have experience of working for developing market linkages
11. Skill of managing a business, preparing business plans, evaluating financial viability and business plans, are key skills that are critical for this role.
12. Ability to think out of the box and come up with innovative solutions to business challenges and problems.
13. Should be interested to work with the rural poor to create a more inclusive society.
14. Honest, fair and objective in work
15. A Self-starter and a target-oriented person
16. Willing to travel extensively in the field for 10-15 days a month

Position: Technical Expert- Enterprise Promotion**Job Responsibilities**

The Technical Expert – The Technical Expert will serve as one of the core team members of the organization. He/she will supervise technical and field-based activities

including market linkages, business plan development (clusters and higher order enterprises) and non-farm value chain development. Key activities include:

1. Facilitate the promotion of linkages among entrepreneurs, larger businesses and govt. agencies.
2. Support the activities pertaining to development of clusters
3. Identify new business and cluster opportunities and markets for setting up enterprises
4. Maintain a database of products manufactured and services rendered by SHG-entrepreneurs along with key enterprise details and identify products / services with a larger market demand
5. Identify and on-board partners to enhance quality and standardize SHG business / cluster products (in terms of legal requirements, quality, packaging, etc.) and services as per market standards / customer demand
6. Explore different avenues for marketing products and services, including but not limited to government e-marketplace, online platforms, and other remunerative market channels
7. Explore possibilities and convene development of a brand for marketing SHG-entrepreneur products
8. Ensure business data collection, analyses, and preparation of status reports of all initiatives implemented by her / him on a monthly basis
9. Document case studies, best practices, and learning notes throughout project implementation
10. Comply with necessary administrative processes to ensure smooth implementation of entrepreneurship development component in the field
11. Ensure that the enterprises supported under the program are sustainably financially viable within the defined timelines of the project.
12. Facilitate forward and backward linkages for the enterprises set up under the programme.
13. Ensure that both the quantitative and qualitative targets are met.

Qualifications required

1. MBA in Finance/Rural Management/Marketing from an institution of repute **or** CA **or** ICWA
2. Minimum of 3 years of experience working on sales/marketing support to clusters/micro and small enterprises. Preference will be provided to candidates with experience in private sector.
3. Experience of working in teams and managing relationships with all stakeholders

Skills and Competencies

1. Strong in numeracy, analytical, and business skills
2. Good team player with strong ability to work in teams and with people with no direct reporting relationships
3. Strong in communication and negotiation skills
4. Data driven, open to learning and adaptable, should be willing to adapt to ground realities
5. Compassionate for the poor and willing to look at issues from their lens
6. Honest, fair and objective in work
7. A Self-starter and a target-oriented person.
8. Willing to travel extensively in the field for 10-15 days a month

Position: District Technical Expert – Enterprise Promotion

Job Responsibilities

The District Technical Expert shall be responsible for overseeing all enterprise development activities in the allocated district. The specific responsibilities of the District Technical Expert are:

1. Ensure roll-out and functioning of entrepreneurship promotion activities within the district
2. Identify new business opportunities and markets for setting up enterprises
3. Coordinate with functional experts in the district for seeking their advice and services for promoting, enhancing, and improving performance of enterprises
4. Coordinate with the other domain teams in the district for effective implementation of enterprise activities
5. Ensure regular data-collection and analysis of supported enterprises (through software application, or manually, as the case may be)
6. Ensure regular monitoring and reporting of entrepreneurship development activities in the block
7. Document and share experiences of entrepreneurs and innovative practices undertaken in the field
8. Coordinate with the technical support agency cluster development activities in the district
9. Monitor the work of the Block teams and the TSAs under the program in his/her district
10. Ensure that the enterprises supported under the program are sustainably financially viable within the defined timelines of the project.
11. Facilitate forward and backward linkages for the enterprises set up under the programme.
12. Facilitate and do capacity building of the CRPs and the staff of the cluster enterprises in the district.
13. Review the financial and business parameters of the cluster and larger group enterprises in the district on a regular basis
14. Facilitate and build the capacities of the block teams, CRPs and community members in the OSF in business plan appraisal, evaluation and approvals.
15. Ensure that financial requirements of enterprises are met, both from CEF and through Formal Financial Institutions in co-ordination with the District FI team.
16. Assist the incubator appointed by the SRLM in identifying SHG women-run enterprises for incubation support
17. Provide data-driven market intelligence, support market linkages, scout for new business opportunities, and facilitate access to technology and skills
18. Ensure that both the quantitative and qualitative targets are met.
19. Roll out of technology platform for enterprise promotion, monitoring the enterprise development activities in the district, and identification and coordination with the pool of functional experts.

Qualifications required

1. MBA in Finance/Business/Rural Management/Marketing from an institution of repute **or** CA **or** ICWA.
2. Minimum of 2 years of experience of working in non-farm livelihoods promotion or in a business organisation preferably in rural based value chains.
3. Experience of working in teams and managing relationships with all stakeholders

Skills and Competencies

1. Strong in numeracy, analytical, and business skills
2. Good team player with strong ability to work in teams and with people with no direct reporting relationships
3. Strong in communication skills
4. Data driven, open to learning and adaptable, should be willing to adapt to ground realities
5. Compassionate for the poor and willing to look at issues from their lens
6. Honest, fair and objective in work
7. A Self-starter and a target-oriented person
8. Willing to travel extensively in the field and stay in a village for 15 days a month

Position: Block Technical Coordinator – Enterprise Promotion

Job Responsibilities

The Block Manager – Entrepreneurship has the responsibility of operations of the One Stop Facility (OSF) centre. She/he has to ensure that entrepreneurs in the blocks are provided the required services. The specific role is

1. Ensure provision of Business Support Services by OSF to all the entrepreneurs in the block
2. Ensure that OSF has the required technical information (information about schemes etc) for the services that need to be rendered
3. Create various data sets of enterprise and entrepreneurs in the block including the baseline survey of existing enterprises; ensure that this data is updated at regular intervals
4. Assist in preparing the necessary content for training and capacity building of various stakeholders
5. Ensure that financial requirements of enterprises are met, both from CEF and through Formal Financial Institutions
6. Coordinate amongst TSA, OSF, CBOs and project staff for effective implementation
7. Assist in identification and selection of Community Cadre and Mentors for OSF
8. Institutionalise OSF and governance mechanisms (infrastructure, opening bank-account, appointment and rotation of signatories, etc.) as per norms
9. Support the CBOs in operationalising the various activities under the programme and in building their capacities to take over all the programme elements at the end of the project period
10. Identify new business opportunities and markets for setting up enterprises
11. Ensure regular monitoring and reporting of entrepreneurship development activities in the block
12. Ensure that both the quantitative and qualitative targets are met
13. Ensure MIS and monitoring reports are submitted as per the defined timelines.
14. Provide handholding and business management support to the clusters /incubated enterprises being supported in the block.

Qualifications required

1. Post graduate in management / commerce / engineering background from an institution of repute.
2. Minimum of 0-1 years of experience of working in non-farm livelihoods promotion or in a business organisation preferably in rural based value chains.

Skills and Competencies

1. Strong in numeracy, analytical, and business skills
2. Good team player with strong ability to work in teams and with people with no direct reporting relationships
3. Data driven, open to learning and adaptable, should be willing to adapt to ground realities
4. Compassionate for the poor and willing to look at issues from their lens
5. Honest, fair and objective in work
6. A Self-starter and a target oriented person.
7. Willing to travel extensively in the field and stay in a village for 15 days a month

K-11038/02/2019-20/MKSP/Mis (367783)

Government of India
Ministry of Rural Development
Department of Rural Development
Rural Livelihood Division

7th floor, NDCCII,
Jai Singh Marg, New Delhi
Dated 9th August, 2021.

To

The State Mission Director,
All States

Sub: - Guidelines on Master CRP-Agro-ecological practices

Sir,

I am directed to share the guidelines on master CRP-Agro-ecological practices under farm livelihoods. You are requested to adopt the guidelines for scaling up agro-ecological practices under farm livelihoods intervention of DAY-NRLM.

Enclose;- As above.

Yours faithfully,



(H. R. Meena)
Deputy Secretary to the Govt. of India

Roll out Plan of Master CRPs-AEP (National Pool)

1. Introduction

Proper training is of paramount importance in improving the quality of agriculture and rural development. In an ever-changing environment, wherein technology keeps on changing rapidly, the existing skills become redundant, and newer skills are constantly felt. Professionalism in training calls for different sensitivity, besides subject matter knowledge, to deal with adult clientele. With this context, Ministry of Rural Development (MoRD) developed a training and capacity building architecture under the farm livelihoods component of Deendayal Antyodaya Yojana -National Rural Livelihoods Mission (DAY-NRLM). Under this architecture, training is provided to the Community Resource Persons (CRPs), the last mile extension worker. These CRPs are trained by State Resource Persons (SRPs) who are trained by National Resource Persons (NRPs) who are specialists in their field. All the pieces of training are conducted through structured training modules. During the evolution of training and capacity building architecture, the need has been realised.

1.1. Proper Hand-holding of the CRPs (Krishi Sakhi) at the field level The training in agro-ecological practices require constant support and handholding at the field level to enhance the skills of Krishi Sakhi. SRPs by their number can't handhold every Krishi Sakhi at ground level. Therefore, it was decided to create a cadre who can support these Krishi Sakhi at ground level

1.2. Scaling up strategy: With the increase in the number of beneficiaries under the farm livelihood component of (DAY-NRLM), the need was felt to support the scaling up of farm-based livelihood practices, including agro-ecological practices.

A need assessment was carried out with State Rural Livelihood Missions (SRLMs) representatives and the NRPs, and it was felt that a cadre of Master CRPs with expertise in agro-ecological practices would go a long way in achieving the project goals.

Keeping this in view and based on the need assessment and deliberations with SRLMs, it was proposed to create a cadre of Master CRPs on agro-ecological practices who are practising CRPs, well versed in subject matter as well as in training methodology and management. The outlines for the roll-out of Master CRP are as follows

- a.
 - a. Creation of a pool of Master CRPs at the national level; who are chosen amongst the experienced agriculture CRPs (*Krishi Sakhi*) from various States through a well-defined process.
 - b. Respective SRLMs shortlist these Master CRPs (*Krishi Sakhi*) as per the defined process and protocol described later in this document.
 - c. These shortlisted CRPs will be trained directly by the NRPs with a structured module.

- d. The CRPs, who will complete the training and evaluation process, would be empanelled nationally as Master CRPs to support the promotion of agro-ecological practices on demand.
- e. This pool of empanelled Master CRPs will be deployed as per the need, requirement and demand generated from various user States.
- f. In addition to the Master CRPs who will be deployed as per the need, a person (SRLM staff / Professional Resource Person- PRPs) well versed in agro-ecological practices should be stationed at cluster/block level to support in the implementation of farm livelihoods activity during pre/post Master CRP round

2. Objectives of promotion of Master CRP-AEP (National pool)

The objective behind engaging such Master CRPs is to create awareness, provide knowledge, skills, and technological support for the *Mahila Kisans*. The task at the hands of the Master CRP is of delivering experiential learning and provision of continuous on-field support to the *Mahila Kisans* of the user States on Agro Ecological Practices (AEPs). The primary purpose is to promote agro-ecological practices and help in the dissemination of best of the practices. The support through Master CRP aims at increased agricultural production, income generation, enhanced carrying capacity of the natural resources, promotion of climate-resilient farming practices, increased food and nutritional security, reduced cost of cultivation for the *Mahila Kisan*. All these will ensure livelihood security and poverty reduction at a scale.

3. Role envisaged for Master CRPs

The role of Master CRP is critical for the scaling up of agro-ecological practices and making them credible and sustainable. Master CRPs are Mahila Kisans, who have worked as CRP for a considerable time and have been practising AEPs in her farm and have successfully demonstrated its benefits and adaptability to fellow farmers. Each Master CRP shall work in allotted villages in the user/own State to provide support in training and capacity building on AEPs. These CRPs will be working for a minimum of 91 days a year in these allotted villages. These Master CRPs will also help identify and groom new Internal CRPs (i-CRPs) from the assigned villages in the user/own State. These new CRPs then start working with a new group of farmers, expanding the network. This practice will lead to rapid scaling up of the programme at lower transaction costs.

4. CRP Round

CRPs will be visiting the villages regularly as per the schedule throughout the year. They will be staying in the villages where they will be operating based on seasonality during every round. The CRPs will be spending a total of 91 days throughout the year.

5. Process of selection and grooming of Master CRP

Basic criteria for shortlisting of the Master CRPs by the SRLMs are -

6.1 *The Master CRP should be*

- a. Working as a CRP for at least two years
- b. Cluster Level Federation (CLF)/ Village Organisation (VO) certifies that the CRP has demonstrated the ability of a good trainer/ has extensive field knowledge of agricultural operations, and has shown results in the field
- c. Have passed at least 8th standard
- d. Age between 30 years to 55 years

6.2 Technical knowledge

- a. Practitioner (Farmer) of AEP for at least two years/four crop seasons. The farmer should have practised agro-ecological practices in their field for at least four seasons, including Rabi and Kharif crops.
- b. Have received relevant training for CRPs imparted by the States, as per the SRLM guidelines under the Farm Livelihoods theme.
- c. Feedback from trainers and fellow trainees (peers) are credible
- d. Work performance as i-CRP is satisfactory.

6.3 Behavioural and attitudinal aspect

The attitude and temperament of CRP are essential. In this regard, the following points need to be observed before short listing i-CRPs as potential Master CRP.

- a. Willing for travel outside the home State and have extended stays during training in the User States (if required)
- b. Willing to adapt to new environment
- c. Willingness to work in a team
- d. Have demonstrated discipline, volunteerism and leadership
- e. Have good articulation and narration skills
- f. Willingness to learn and be humble to the traditional wisdom
- g. Willingness to participate in trainings as and when required
- h. Should continue Agro ecological practices in their own fields even after working as Master CRP

6.4 Selection Process

- a. **Written test** Questionnaires for the written test will be prepared by the State Mission Management Unit (SMMU)
- b. The written test will be conducted by Block Mission Management Unit (BMMU) for shortlisting.
- c. Shortlisted CRPs will be sent to the State office for orientation cum final screening by SMMU with the help of NRPs
- d. All finally, shortlisted potential Master CRPs will be given training as per the structured module.
- e. After training, their performance will be evaluated with grades "Selected" and "Not Selected".

6. Grooming and evaluation process for Master CRPs

All Master CRPs should be working as i-CRPs (Krishi Sakhi) and should have completed the training modules (8 modules) of Krishi Sakhi. Master CRPs need constant training and evaluation to keep them updated on AEPs training. The training will consist of both theories as well as practical. Initially, they will be provided with nine days of structured training (6 days of theory and 3 days practical inputs). Details of this 9-day's module are attached in Annexure I.

The performance of these Master CRPs will be reviewed at each debriefing meeting. Based on the feedback received during it, a two-day, need based (needs identified during debriefing meeting) training shall be provided to them post each CRP round. The format for the briefing and debriefing meeting is attached as Annexure II and III.

The Master CRPs will be evaluated initially on knowledge and skills each of them acquired / possessed and will be based on their performance / result in both theoretical knowledge and practical skills.

The training/grooming process of Master CRPs consists of the following broad aspects

- a. Perspective building in rural livelihoods in general (generic)
- b. Preparatory training (In multiple phases) – focusing on 'linking practices to theory
- c. Modular based training
- d. Basic communication skills concept and practices
- e. Adult learning principles (orientation)
- f. State-specific customisation Customised orientation specific to the condition/requirement of the User State (Rainfed, irrigated, paddy, wheat, hilly terrain, among others)
- g. On-field handholding support in the first few rounds by designated NRPs.

7. Professional resource person (PRP) or block staff of SRLM

The Professional Resource person/block staff is a person who will be stationed at cluster/block level by representative SRLM and will support in the implementation of farm livelihoods activity during pre/during/post Master CRP round.

8.1 Who should be a PRP?

A. The PRP should be

- a. Graduate with some computer knowledge.
- b. Age should be more than 20 years
- c. Familiar with regional language/Hindi. English in case of North-eastern States

B. Technical knowledge

- a. Practitioner for at least four crop seasons. Preferably working as i-CRPs
- b. Relevant training imparted by States as per the SRLM guidelines under Farm Livelihoods.
- c. Feedback about them from trainers and trainees
- d. Work performance as i-CRP

C. Behavioural and attitudinal aspect

The attitude and temperament of PRP are important. In this regard following points need to be observed before the final selection of PRPs

- a. Ready to adapt to new environment
- b. Desire to work in team spirit
- c. Discipline, volunteerism and leadership
- d. Good articulation and narration skill

8. Roles and Responsibilities of Krishi Sakhi (i-CRP)

Internal CRP (*Krishi Sakhi*) are active women among the Mahila Kisan in identified villages who are keen to implement agro-ecological practices in their own fields over two to three crop seasons. PRPs / Block Project Managers (BPMs) will identify *Krishi Sakhi*. They will assist the Master CRPs in their work in the village and will also undertake activity in the duration between the two CRP rounds. CRPs will assist Master CRPs in maintaining formats, collecting data and developing action plans. In addition, CRPs should attend trainings organised at various levels to improve their knowledge and skills. The engagement of i-CRP would be as per guidelines issued by this Ministry.

- i. **Adopting agro-ecological practices in their own fields,:** *Krishi Sakhis* should implement agro-ecological practices in their own fields. In addition, they should demonstrate agro-ecological practices to other farmers in the village.
- ii. **Support Master CRPs:** CRPs should mobilise farmers for various activities organised by Master CRPs viz. Farmer Field Schools, demonstrations, trainings etc. CRPs also extend their support to Master CRPs in data collection, preparation of action plans, individual farmer field visits, documentation of various activities and report preparation.
- iii. **Establishment of NPM (Non Pesticide Management) shops and Custom Hiring Centres (CHCs):** CRPs should identify entrepreneurs for establishing NPM shops and tools and equipment to establish Custom Hiring Centres. CRP is responsible for assisting village organisations in managing Custom Hiring Centres. In addition, CRP is accountable for extending handholding support to NPM shop owners.
- iv. **Participation in training programs:** CRPs should participate in various training programs organised by Master CRPs, PRPs and District Project Managers (DPMs). They should improve their skills and knowledge regularly.
- v. **Participation in Self Help Groups (SHG) /Village Organisation (VO) meetings :** CRP should participate in SHG and VO meetings and share farm livelihood activities. CRP should also identify the needs of SHG members for strengthening their livelihood activities.

- vi. **Establishing Nutritional Gardens / Poshan Vatika at the household level,** CRPs should create awareness among the SHG members and ensure the grounding of nutri gardens / Poshan Vatika at the Household level.
- vii. **Mahila Kisan card:** CRP should fill Mahila Kisan cards for Mahila Kisan implementing agro-ecological practices in the village.
- viii. **Attending briefing and debriefing sessions:** CRP should participate in briefing and debriefing sessions along with Master CRP conducted by PRP/Block Project Manager (BPM).
- ix. **Maintaining mahila kisan profiles and other required data**

9. Roles and responsibilities of Master CRPs

Master CRPs will extend handholding support to *Krishi Sakhis* in higher-order technical and extension activities. Master CRPs will nurture *Krishi Sakhis* in effectively delivering extension services. Master CRPs are responsible for identifying critical gaps in productivity enhancement and improving the adoption rates of agro-ecological practices.

- i. **Organising frontline demonstrations:** Master CRPs are responsible for conducting frontline demonstrations on the selected technological interventions that can increase productivity and reduce cost. In addition, Master CRPs are responsible for adopting the technological interventions with the majority of Mahila Kisan in their area.
- ii. **Capacity building of *Krishi Sakhis* and Mahila Kisan:** Master CRPs will work with Block Resource Person on capacity building needs assessment and develop a capacity building plan for the year. Based on the capacity building plan Master CRPs conduct village level trainings for Mahila Kisan on AEP and train *Krishi Sakhis* on AEP.
- iii. **Facilitating Farmer Field Schools (FFS):** Master CRPs with support from *Krishi Sakhi* establish Farmer Field Schools in the village. In consultation with BPM Master CRP will develop a curriculum for the identified crop for Farmer Field School. Master CRP will conduct season-long sessions in Farmer Field Schools. In addition, Master CRPs are responsible for preparing insect zoos and disease herbariums in Farmer Field Schools.
- iv. **Handholding support to *Krishi Sakhis* :** Support *Krishi Sakhis* in facilitating Farmer Field Schools (FFS). Handhold *Krishi Sakhis* in establishing NPM shops, custom hiring centres. Helps *Krishi Sakhis* in preparation of action plans for implementing Agro-ecological practices with identified Mahila Kisan. At the end of season-long FFS, Master-CRPs will conduct field day and Crop Cutting Experiments (CCEs). Maintain all the documents and records of FFS.
- v. **Establishing Nutritional Gardens / Poshan Vatika at household level :** Master CRPs should create awareness among the SHG members and ensure the grounding of nutri gardens / Poshan Vatika at the Household level.
- vi. **Establishment of NPM shops and Custom Hiring Centres :** Master CRPs will identify the entrepreneur (SHG members) to establish NPM shop and Custom Hiring centre. Master CRPs will train the NPM shop owner and *Krishi Sakhi* to prepare various botanical extracts, organic manures, nursery establishment, etc.

Master CRPs will identify appropriate tools and machines for the establishment of a Custom Hiring Centre. Master CRP will work with Professional Resource Person (PRP)/ project staff at block level to establish NPM shops and Custom Hiring Centres.

- vii. **Attend briefing and debriefing sessions:** Master CRPs should attend briefing and debriefing sessions conducted by PRPs/ BPMs/DPMs.

10 Roles and Responsibilities of Professional resource person (PRP) or block staff of SRLM

The Professional Resource person/block level staff is a person who will be stationed at cluster/block level by SRLM and will support in the implementation of farm livelihoods activity during pre/during/post Master CRP round. PRP is responsible for guiding Master CRPs and *Krishi Sakhis* in implementing farm livelihood activities. In addition, PRPs are responsible for the smooth release of funds required to establish NPM shops, custom hiring centres and implementing other farm livelihood activities.

- i. **Identification and nurturing of *Krishi Sakhis*** : PRP are responsible for the identification of **Krishi Sakhi** in the Block or cluster. PRP are also responsible for mentoring *Krishi Sakhis*. PRP should regularly visit the *Krishi Sakhi* own fields and guide them in adopting agro-ecological practices.
- ii. **Briefing and debriefing of Master CRPs** : PRP should conduct briefing meeting on the first day of CRP round to Master CRPs and *Krishi Sakhi*. PRP should brief Master CRPs and *Krishi Sakhis* on the action plan for the CRP round. Share the reporting formats with Master CRPs. On the last day of the CRP round PRP should conduct debriefing sessions with Master CRPs and *Krishi Sakhis* and review the targets and achievements. PRP should collect all the required documents from Master CRPs and process resource fees to Master CRPs.
- iii. **Handholding support to Master CRPs:** *PRPs* should extend handholding support in higher-end technical and extension activities to Master CRPs. PRP should visit the field during the CRP round and participate in FFS, frontline demonstrations and capacity building programs.
- iv. **Convergence with other line departments** PRPs should liaise with other departments and leverage various schemes available with other departments to Mahila Kisans and the schemes/programs to build community assets and conserve natural resources at the village level.
- v. **Development of intervention plans** **PRP** should work with SHGs and their federations and develop suitable intervention plans to strengthen the SHG members' farm livelihoods.
- vi. **Implementation of farm livelihood activities** PRP should roll out the intervention plan and ensure smooth farm livelihood activities.

11 Hierarchy

At block level

At village level

At cluster level

At village level

From SPM-LH to BPM-LH are staff of SRLM

At State level

At district level

From PRP to Internal CRP are managed by CBOs

12 Deployment protocol of Master CRPs

- i. Before requesting support for Master CRPs, User States will be ready with required homework/preparation (described later). For example, identification of clusters of villages for the deployment of Master CRPs, developing farm-based livelihood promotion perspective for the identified cluster, identification of i-CRPs and SRPs to be engaged with Master CRPs etc.
- ii. Once ready, the User State will send their requirement for Master CRPs to National Mission Management Unit (NMMU). The NMMU will coordinate the deployment of Master CRPs in consultation with the Resource and User States before the Master CRP round. An Memorandum of Understanding (MoU) will be drawn between the Resource and User States before the deployment of Master CRPs. (Draft copy of MoU attached as Annexure-IV)
- iii. The Resource State will send the list of empanelled Master CRPs ready to give their time to the User State before sending them.
- iv. The engagement of Master CRP in a cluster (4 hamlets to be allotted to a team of 2 Master CRPs) will be a for a total period of 91 days in a year

with six rounds synchronising with different agricultural crop seasons (Annexure V)

- v. During the Master CRP round, the User State will deploy its own SRPs and i-CRPs along with the Master CRPs.
- vi. The deployment plan of Master CRPs, i-CRPs, NRP, and SRP is summarised in Annexure VI.

13 Continuous skill up-gradation of Master CRPs

- i. User SRLM shall conduct briefing and debriefing meetings with all Master CRPs at the State level before and after completing every Master CRPs round to plan and review the progress.
- ii. The review meeting will be participated by representatives of NMMU/ NRP
- iii. SRPs deployed by the User State for the Master CRP rounds shall also be part of the meeting
- iv. The State shall circulate the feedback and the minutes of the review meeting containing the details of training requirements to the NMMU and The National Institute of Rural Development and Panchayati Raj, (NIRD&PR), based on which further training of Master CRPs will be planned.

14 Roles and Responsibilities of NMMU

The NMMU will play the following roles and responsibilities to steer the process

- i. Communication and guidance to the SRLMs to identify the experienced CRPs who can be empanelled in the National Pool
- ii. Enlisting the shortlisted CRPs received from the SRLMs
- iii. Finalisation of training module for the training of the shortlisted CRPs
- iv. Training of the shortlisted CRPs with support of NRPs and NRLM Resource Cell, NIRD&PR
- v. Grading of Master CRPs based on evaluation results on their knowledge, skill and attitude (behaviour as a trainer).
- vi. Coordination between User and Resource States for the deployment of Master CRPs. Facilitation in the execution of an MoU between Resource and User States.
- vii. Upgradation / refresher training with support from NRPs and NRLM Resource Cell, NIRD&PR
- viii. Allocation of NRPs in grooming and providing on-field handholding support during Master CRPs rounds.

15 Roles and Responsibilities of Resource SRLM

SRLM, who will provide Master CRPs (Resource SRLM), will have the following responsibilities

- i. Identification and shortlisting of potential Master CRPs. Supply of the list to NMMU for training and capacity building through NRPs.
- ii. Executing an MoU (A draft is annexed as Annexure-III for guidance) with the User State facilitated by the NMMU.
- iii. The trained Master CRPs to be placed in user States based on the MoU on facilitation by NMMU
- iv. Conduct Training/Immersion and exposure to the State Level/District Level/Block Level team members / community cadres and any other stakeholders of User SRLMs for at least 3 to 15 days.
- v. Deployment of Master CRPs in different rounds as mentioned earlier.
- vi. Assisting and guiding User SRLMs for conducting start-up/briefing and debriefing/feedback meetings of Master CRPs teams to assess their work and achieve the outcomes
- vii. Participate in joint review meetings conducted by User SRLMs once in three months when requested.
- viii. Ensure payment of honorarium/ resource fee, reimbursement of travel expenses to Master CRPs through the respective VOs of the Master CRPs by raising the bills based on MoU.
- ix. Depute Experienced Professional Resource Persons (PRPs) to the SRLM to work in each of the selected clusters in the selected Resource Blocks to promote Farm livelihoods.

16 Roles and Responsibilities of User SRLMs

The User SRLM will have the following roles and responsibilities

- i. Enter into an MoU with the Resource SRLM facilitated by NMMU
- ii. Identify blocks for rolling out of plans
- iii. Identify a cluster of villages where Master CRPs round will be conducted.
- iv. Prepare a perspective plan of interventions for the cluster before starting the Master CRPs round and share the same with the Resource SRLM and NMMU.
- v. Identify and engage i-CRPs with Master CRPs
- vi. Engage NRPs with NMMU and NIRD&PR and deploy SRPs during each of the Master CRPs rounds.
- vii. Recruit and position team of livelihoods professional in State, districts and block level in SRLM
- viii. Arrange an exposure visit for the project staff and impart training at Resource SRLM
- ix. Designate one dedicated State Project Manager (SPM) for anchoring the Master CRPs rounds related to farm-based livelihoods theme, e.g. SPM (LH) /SPM (Mahila Kisan Shasaktikaran Pariyojana-MKSP) / SPM (Agri or farms)
- x. User SRLMs will translate and print training materials, which will be provided to the field functionaries of the targeted blocks/clusters.
- xi. The SRLM representative/s will regularly visit the clusters when the Master CRP round is in progress.

- xii. Conduct both briefing and debriefing meetings after every round involving others, as mentioned earlier.
- xiii. Will send the briefing and debriefing report of the Master CRPs round to resource SRLM and NMMU team immediately after the completion of each round.
- xiv. Work done report of Master CRPs will be certified by the concerned anchor person at State/District and recommend releasing their Resource persons fees, food charges and bus/train fare etc.
- xv. With the support of NMMU, the SRLM will develop an MIS for monitoring the program regularly and measuring output and outcomes on the deployment of Master CRPs.
- xvi. Procure and provide Pico projectors for Master CRPs.
- xvii. Release necessary CIF/RF and other funds for grounding livelihood assets like rainwater harvesting structures, custom hiring centres, and bio input enterprises, among others

17 Role of District Manager(LH)/ District Program manager

The role of the District Manager in the roll-out of Master CRPs is as per below

They will be responsible for-

- i. Selection of Blocks and clusters of villages in consultation with the Block Managers as per potential of the area and the guidance of the SMMU
- ii. Participate with block teams in developing intervention plans in the promotion of AEP in identified clusters well before starting the Master CRPs rounds.
- iii. Coordinate with the State team on Master CRPs rounds.
- iv. Detailed planning for Master CRPs rounds.
- v. Coordinate with block teams for logistic arrangements, CRP kit and training kits etc
- vi. Coordinate with the agriculture department for convergence
- vii. Ensure regular holding of Farmer Field School (Krishi Path Shala), participate in school, and crop planning exercises.
- viii. Exchange of technical know-how to and from Master CRPs in the field by regular field visits.
- ix. Consolidation of Rabi, Zaid and Kharif action plan according to CRP Round timeline
- x. Engagement of SRPs with Master CRPs.
- xi. Attending briefing and debriefing session before and after each Master CRPs round.
- xii. Submission of report on briefing and debriefings
- xiii. Ensure follow up actions after each Master CRPs round
- xiv. Identify training needs of i-CRPs and Master CRPs.
- xv. Documentation of Master CRPs rounds and case studies around Master CRPs rounds (effectiveness, outcome, impacts etc.)

- xvi. Support in preparation of MIP/MCP and distribution of CIF aligning with the action points after each Master CRPs round.
- xvii. Facilitate in preparation of IEC material
- xviii. Ensure release and proper utilisation of CIF as per plan on livelihood promotion.

18 Block Manager (LH)/ Block Program Manager

Roles of block manager are mentioned below

- i. Identification of a cluster of villages for Master CRPs rounds
- ii. Building perspective on livelihood promotion in those identified clusters and sharing the same with the District Manager.
- iii. Orient SHG members around livelihood perspective and plan for Master CRPs rounds, roles and responsibilities of SHG members, VOs before, during and after Master CRPs rounds.
- iv. Planning for Master CRPs rounds
- v. Identification of i-CRPs to engage with Master CRPs
- vi. Conducting orientation, briefing and debriefing meetings with Master CRPs. Submission of such reports to District Manager.
- vii. Organising different steps of farm livelihoods implementation
- viii. Regular field visits to villages where Master CRP rounds are going on.
- ix. All preparations (material and logistics) before each Master CRPs round.
- x. Facilitating preparation of IEC and training materials

19 Preparation required at User SRLM

- i. Selection of blocks and cluster of villages and orientation meetings at village level on livelihood perspective, plan for Master CRPs to promote AEPs.
- ii. Develop a perspective around farm livelihood promotion / AEP in the identified cluster of villages, identifying need for Master CRPs support.
- iii. Preparation of tentative list of farmers and filling up of farmers profile of initially interested SHG members
- iv. Procurement of CRP kit (utensils, cylinder, torch etc.) for CRPs, and First aid medical kit for each Master CRPs team
- v. Staying arrangements and other required logistics for Master CRPs at the village level.
- vi. Identification and engagement of i-CRPs with Master CRPs
- vii. Identification of SRPs to engage with Master CRPs.
- viii. Procurement of required stationery materials
- ix. Letter to different government, non-government, PRI, CBOs and other village institutions regarding Master CRP rounds.
- x. Planning for VO meeting
- xi. Provision of Picco projector
- xii. Preparation of day-wise action plans for implementation after each round.

- xiii. User SRLM shall conduct briefing and debriefing meetings with all Master CRPs at the State level before and after completion

20 CRP monitoring and review

It will be the Block Manager, District Manager, and the State unit of the User SRLM to review and monitor the activities of the Master CRPs as per the plan.

- i. Attend both briefing and debriefing meetings
- ii. Review the work done report of Master CRPs round submitted by the Master CRPs and ensures the follow-up actions.

21 Resource Fee, Food Charges, Travel Costs and Institutional Charges of Master CRP - Agricultures

Sl	Designation	Particular	Per Day (Rs.)
1	Master CRP	Honorarium per day	800
		Food Charges per day (Including Travel Days)	200
		Travel from home town (Bus fare/ Train Sleeper Class/3rd AC for more than 500 kms or 12 hours travel)	Actual
		Institutional Charges per day per person	50
		Lodging in Village	Supported by Recipient State
		Local Travel	Supported by Recipient State
		CRP Training Kit (Per CRP)	1500
2	Professional Resource Person (PRP)	Honorarium per Month	27000
		Institutional Charges per month per person	1000
		Lodging in Village	
		Local travel per month	2000
		PRP Training Kit (Per PRP)	3000

Each CRP and PRP is eligible for resource fee, food charges, bus fares/train fare as indicated above.

Annexure I Master CRP- Agro-ecological Practices Training Schedule

Time	day1	day2	day3	day4	day5	day6	day7	day8	day9
Session	Classroom	Fieldwork	Classroom	Classroom	Classroom	Classroom	Classroom	Fieldwork	Fieldwork
9 00 - 10 00	Introduction The objective of the Training DAY-NRLM Livelihoods Framework	Interaction with SHG Members, understanding of various cropping systems, sequences, challenges, seeds, weeds etc	Seeds and Planting Materials	Properties of good soil	Irrigation- stage of crop, method, schedule, structure, source	Agri- Nutrition Garden and CHC . introduction to organic farming and certification	Major Pests in Agricultural Crops	Recap- Non-Chemical Methods of Plant Protection	Trichoderma mass multiplication and application- Theory and practical
10 00 - 12 00	Factors of Agri-production and introduction to their management . SWOT- Seed, soil, water, light etc . crop protection, harvest, post-harvest; market		Seed Treatment, priming and germination	Soil Fertility Management	In situ (mulching) moisture conservation	summer ploughing, land preparation, methods of sowing, spacing, intercultural operation (crop specific), the system of crop intensification maintain the cropping, sequence/ pattern, crop rotation, and intercropping water conservation adopting better sowing method (D SR for rice), direct-seeded crops	Major Insects Type Beneficial Insects	Botanical and Bio Pesticides	Preparation of vermicompost/Ghanjeevamrit/ Dravya jeevamrit
			Farm-saved Seeds Seeds Storage	Plant Nutrition	Classroom exercise in situ water conservation		Classification of Diseases	Preparation of Neemastram/ Beejamrit	Preparation of Amrit pani and Amrit Khad
12 00 - 13 00	Challenges of Present-Day Agriculture	Developing Village Resource Map with S	Practical - Seed Treatment	Organic Sources - Green Manure, Compost	Ex-situ (farm ponds, corner pits etc.)		Significant Symptoms of Pest Attack	Preparation of Brahmastram, Angest	Preparation of liquid bio-fertilisers

	ure	HG Women		t, Biofertilizers	water conservation			ram	
14 00 - 15 00	Introduction to Agroecology	HH Interview on assessing Livelihoods as sets, SWOT	Fundamentals of Soil Sciences	Preparation of N ADEP Compost, Vermicompost	Classroom exercise on ex-situ water conservation	Harvesting - Selection of plants for seed scientific harvesting proper storage of harvesting reduction of waste through proper handling	Traditional Crop Protection Practices and Challenges	Do	Azolla production
15 00 - 16 00	Principles of Agro-ecology	Presentation of SWOT of each HH/village	Physical, Chemical and Biological Properties of Soil	Preparation of Jeevamrit, Ghanajeevamrit	Rainfed Farming and Water Harvesting	Agro-ecological Practices of Pest Control	Nutrient Sensitive Agriculture		green fodder technology
16 00 - 17 00	Weather, Climate, Major Soil Types in India Cropping System		Maintaining the soil properties (minimum tillage, organic matter, moisture)	Problemaic Soil and Reclamation	Efficient Irrigation Techniques (field structure etc.)	Maintaining the storage parameters	Mechanical and Agronomic Control Methods	Do	Final exam
17 00 - 18 00	Cropping Pattern, Crop Rotation, Weeds and Biodiversity	Analysing MIP from Livelihoods Lens	Soil Moisture	Soil Sampling for Soil Testing, Interpreting Soil Test Results	Soil and Water Erosion and Conservation Structures	Agro-forestry	Biological Control	Do	Valedictory session

Annexure-II Master CRP-AEP briefing format

Briefing Format	
During briefing meeting following will be provided to the Master CRP-AEP	
S. No.	Particulars
1	List of 2 villages along with village profile
2	List of SHGs with details
3	List of Selected Mahila Kisan along with their baseline / Kisan Card
4	Name and Contact numbers of Key persons of the village (Pradhan, School Teacher, Ang Anwari Worker etc.)
5	Name and Contact numbers of internal i-CRP and Master CRP
6	Copy of Letter to Village Pradhan, Local Police Station, Women and Child Development Department and other line Departments regarding Master CRP Drive
7	Details of place of lodging of Master CRP
8	Demonstration Material (Seed, Vegetable Mini Kit etc.) if required

Annexure-III Master CRP-AEP reporting format during debriefing

Master CRP-AEP Reporting Format during debriefing

	Distri ct	..... ....	Bloc k	..... ....	Villag e	..... ....	Number of SHGs	..... .....	
S. No	Name of SH G	Name of Ma hila Kisaa n	Land Holdi ng (A cre)	Soil S ample Collec tion fo r Soil Testin g	Sum mer D eep Pl oughi ng	Compost ing (NA DEP, B HU-NA DEP, Ve rmi Com post)	Seed Tre atment/ Priming/ Seed Ger mination test	System of Cro p Inten sificati on	Integr ated N utrient Mana gemen t (Gre en Ma nuring , Amri t Pani)	Integrate d Pest M anageme nt (Bio P esticide)
1	2	3	4	5	6	7	8	9	10	11

	Name of Master C RP										
Irrigatio n Manag ement	Inter Cr opping/ Mix Cr opping/ Multi-L ayer cro pping	Use of Fa rm Imple ments (W eeding, Pl anting, H arvesting, Threshin g)	Crop Cutti ng M ethod	Com merci al Ve getabl e Cult ivatio n	Scienti fic Gra in Stor age	Hortic ulture Planta tion	Fodde r Dev elopm ent	Az olla Pit	Aajeev ika Pos han Va tika	Sign ature	
12	13	14	15	16	17	18	19	20	21	22	

Annexure-IV Memorandum of Understanding (MoU)

This MoU for providing technical assistance and implementation support in the area of Agro-ecological practices with a special focus on capacity building of community, project staff , community cadre and other stakeholders is entered into and made effective as ofday of20...

BETWEEN

The State Rural Livelihoods Missionrepresented by State Mission Director, which shall mean and include its successors and permitted assigns) shall be known as First Party.

AND

State Rural Livelihood Mission, represented by State Mission Director, shall be known as Second Party.

.....SRLM and SRLM are hereinafter collectively referred to as "Parties" and individually as "Party"

WHEREAS

The objective of the MoU is to strengthen the implementation capacity ofSRLM by arranging technical assistance and implementation support fromSRLM, which has significant experience and expertise in promoting Agro-ecological Practices (AEPs). The MoU is expected to facilitate flow of experienced Master CRP (Master Community Resource Person) and Professional Resource Persons (PRP).

NOW THIS MEMORANDUM OF UNDERSTANDING WITNESSES AS FOLLOWS

1. Scope of the Memorandum of Understanding (MoU)

The broad scopes of MoU include;

a. Training and developing capacity of..... SRLM staff, Community Professionals and other stakeholders like district officials etc. on agro-ecological practices.

I. Induction trainings and Immersion,

II. Learning and exposure visits,

III. Interaction with community institutions, community cadres, CRPs and Livelihood Experts,

IV. Any other method deemed fit by both the parties.

b. Developing/improvising knowledge management and learning system ofSRLM which includes,

I. Training needs assessment and formulating training plans,

II. Capacity building tool kits including training modules, case studies, training materials etc.

III. Training of trainers and other resource persons.

c. Developing best practice sites and immersion locations withinSRLM intervention areas

d. Implementation support in specific activities/locations

I. Mobilization of SHG member in Farmer Field School.

II. Livelihood intervention, Formation of Livelihood collectives, etc.

III. Deployment of at least one PRP per Block

2. Key activities / tasks of the MoU.

As indicated in the scope of MoU following are the key activities envisage as under

a) Immersion, induction and training ofSRLM (User State) project staff (all levels) in SRLM (Resource State) project area.

b) Training needs assessment for cadres/staff and execution with the help of teams.

c) Deployment of experienced Master CRP teams and livelihood Experts.

d) Assistance in designing customised training modules forSRLM (User State) staff.

e) Developing demonstration plots for agricultural intervention

f) Identification and training of i-CRPs.

g) Other activities/services as per mutual consent and requirement of SRLM (User State)

h) Demonstrating the Non Pesticide Management and other technical protocols.

3. Implementation arrangement

Both the SRLM will nominate SPM- Livelihood as Nodal Person for execution of the MoU.

4. Roles and responsibility of each SRLM

4.1 SRLM (Resource State)

a. Conduct Training/Immersion and exposure to the State Level/District Level/Block Level team, Community Cadres and any other stakeholder ofSRLM (User State) for at least 3 to 15 days (as per requirement/module) to familiarise them with new techniques and approaches of agriculture.

b. Deployment of Professional Resource Person at least one per Block.

c. Deployment of Master Community Resource Person (Master CRP) team in Blocks @ 2 Master CRPs / 4 villages

d. SRLM will conduct start-up/briefing and debriefing/feedback meetings of Master CRP teams before and after rounds to assess their work and train them for the next round to achieve the outcomes. Provide schedule and calendar for Master CRP drives with day wise action plan.

- e. Attend joint review meetings conducted bySRLM (User State) once in three months/ when requested.
- f. Assist in monitoring the block progress and assess the outputs on the agricultural productivity and Master CRP strategy.
- g. Designated CLF/VO shall make payments to the Master CRPs as per the approved rates after completion of each round.

4.2SRLM (User State)

- a.SRLM (User State) will provide facilitation support in identified Blocks/ clusters.
- b.SRLM (User State) will send the officials/staff/Community Cadre to SRLM (Resource State) for immersion/training and exposure as per the Calendar (agreed action Plan and schedule).
- c. SRLM (User State) will provide/share the travel plan, list of trainees/participants (State level/District/Block level staff/Community cadre/and other stakeholders if any) for Village immersion/training and exposure as required (on 3-15 day module as applicable).
- d.SRLM in consultation with SRLM (Resource State) will divide the Blocks into clusters for operational convenience. Each such cluster will be termed as 'Operational Area' and conduct the preliminary scoping of the area for social mobilisation and fix the village for Master CRP mobilisation and share the scoping report with SRLM (Resource State).
- e. The..... SRLM will ensure a dedicated livelihood staff to support Master CRPs at the block level during the entire drives and shall also ensure suitable lodging arrangements for Master CRPs in the same village/or within walking range where social mobilisation has to be conducted. If the same has not been provided the suitable transportation facility must be ensured.
- f. The..... SRLM shall recruit a dedicated staff/YP at State level to monitor Master CRP drive and coordinate the activities between two SRLMs.
- g. The..... SRLM shall comply with the entire prerequisite preparation before initiating an Master CRP drive at concern Operation Area i.e. Scoping, staff deployment and designating special official for specific Block.
- h. TheSRLM shall conduct one start-up/briefing session with all Master CRPs, before entering the Block.
- i. TheSRLM shall conduct feedback meetings/debriefing session with all Master CRPs after every round for review of work by Master CRPs to monitor outputs as planned.
- j. TheSRLM will arrange for monthly payment of Honorarium and allowances/Emoluments/ Benefits to PRPs in consultation withSRLM (Resource State)
- k. TheSRLM shall make all logistics arrangements for the trainings to cadres/staff through Livelihood Experts.
- l. TheSRLM shall not divert the deployed staff and CRPs working in the Selected Blocks for any other purposes and areas.
- m. SRLM to prepare an overall action plan for the targeted Block.

Expected Outputs of 12 Months in Block

1	Number of districts and Blocks covered	.....Districts.....Blocks
	Number of Clusters covered	.....clusters
2	Immersion and training of staff	.....Block staff, district staff and State Mission Staffs
3	Number of Mahila Kisan (Households) mobilised who are already SHG members	.....Mahila Kisan/Household
4	Number of Villages identified, scoped by .....SRLM and intervened by Master CRP team.	..... Villages
5	Number of Krishi Path Shala to be formed	..... Krishi Path Shala
6	Immersion and exposure to community cadres	..... Mahila Kisans
7	Number of Active Mahila Kisan/Pragati Sheel Mahila Kisan identified and trained to become CPRs	..... Mahila Kisan
8	Demonstration plots for various Agro-ecological practices.	..... units.
9	Yield assessment of those demonstration sites	.....units
10	Support in filling of the Mahila Kisan card and their profiling	..... Mahila Kisan
11	Establishing Nutritional Gardens / Poshan Vatika at household level	.....units
12	Orientation to Mahila Kisan on water Conservation measures	All identified households

6 . Duration of MoU

The outputs of this MoU are calculated for 12 months starting from till Any possible extension of the MoU period/assignment will be based on the field requirement and achievement of the expected outputs and subject toSRLM (User State) Annual Action Plan approval by Government of India. Any Extension under this MoU may be amended by mutual consent/written agreement by both the parties through exchange of letters and that shall be treated as part of the MoU.

7. Review and reporting mechanism

a. SRLM andSRLM will jointly review the performance quarterly as per the indicators of the expected output. The performance of the Master CRPs has to be measured at the end of each round jointly by both SRLMs .A committee or official will be nominated by State Mission Director (SMD)/Chief Executive Officer (CEO) of both the SRLMs for the review program.

- a. The SRLM (Resource State) shall submit to theSRLM (User State) the following reports

- I. Half yearly/quarterly action plan with detailed calendar of activities and implementation arrangements.
 - II. Activity Completion Report will be submitted on quarterly basis with proposed detailed plan and changes for the next quarter if any.
- b. State Mission Director ofSRLM (User State) shall be responsible for review and monitoring of progress. The Review committee may be constituted at various levels to monitor the progress and interact with SRLM (Resource State). The State Mission Director ...SRLM or his nominee will be the Chairperson of the committee and the committee will include State/district team leader and other experts from NMMU.
 - c. There will be Joint reviews by the State Mission Director of SRLMs on yearly basis at a location mutually decided. Any deviation in the programme under MoU implementation will be identified in the joint review meeting and suitable action may be taken up by each partner to rectify the deviation.

8. Payment Condition/norms

a. The total tentative cost of project under MoU betweenSRLM andSRLM for a period of twelve months is RsThe detailed costs estimates/Budget is attached in the "*Annexure-1*".

The budget has been worked out on an assumption of the activities as proposed in expected output, it may increase based on the actual activities conducted on mutual consent of the parties. In that case the prescribed unit cost of the budget would be considered for adjustment/payment.

- a. TheSRLM (User State) will pay all the cost to ...SRLM (Resource State) or to an agency nominated / approved bySRLM (Resource State) as per the agreed budgets. This will broadly include
 - I. Honorarium to Master CRPs
 - II. Honorarium of Professional Resource Person
 - III. Travel, lodging, boarding expenses etc. incurred as per the agreed budgets/norms.
 - IV. Other expenses like training, Immersion, exposure, material development, etc. as per the agreed budget and norms.
- b. Payment against the support of Livelihood expert will be paid fromSRLM after reviewing their work.
- c. Payment Mechanism
 - I. Payments will be made to SRLM or to an agency nominated / approved bySRLM (Resource State) as per the agreed budgets, based on the invoices raised by them supported by detailed Statements showing the resources (including Human Resource Costs, etc.) deployed and the actual expenses incurred.
 - II. Before claiming the final instalment, DAY-SRLM will ensure Submission of all financial documents like Utilisation Certificates (UCs), Audit Reports issued by the Chartered Accountant (CA), etc.
- d. Accounts and Audit

- I.SRLM will provide an audit certificate by the Chartered Accountants each year and/or before the release of the final instalment confirming the actual expenditures charged under the MoU.

9. Force Majeure

Definition

For the purposes of this MoU, "Force Majeure" means an event which is beyond the reasonable control of a party, is not foreseeable, is unavoidable, and makes a party's performance of its obligation hereunder impossible or so impractical as reasonably to be considered impossible under the circumstances, and subject to those requirements, includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather condition, strikes, lockouts or other industrial action, confiscation or any other action by Government agencies.

Force Majeure shall not include

- i. any event which is caused by the negligence or intentional action of a party or such party's Experts, Sub-consultants, agents or employees, nor
- ii. any event that a diligent party could reasonably have been expected to both consider at the time of the conclusion of this MoU and avoid or overcome in the carrying out of its obligations.
- iii. Force Majeure shall not include insufficiency of funds or failure to make any payment required.

No Breach of MoU

The failure of a party to fulfil any of its obligations shall not be considered to be a breach of, or default under, this MoU in so far as such inability arises from an event of Force Majeure, provided that the party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and Conditions of the MoU.

Measures to be taken

- a. A Party affected by an event of force Majeure shall continue to perform its obligations under the MoU in so far as reasonably practical, and shall take all reasonable measures to minimise the consequences of any event of Force Majeure.
- b. A Party affected by an event of Force Majeure shall notify the other party of such event as soon as possible, and in any cases not later than fourteen (14) calendar days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give written notice of the restoration of normal conditions as soon as possible.
- c. Any period within which a party shall, pursuant to this MoU, complete any action or task, shall be extended for a period equal to the time during which such party was unable to perform such action as a result of Force Majeure.

- d. During the period of their inability to perform the Services as a result of an event of Force Majeure, the partner, upon instructions by the SRLM shall either
 - i. Demobilise, in which case the Partner shall be reimbursed for additional costs they reasonably and necessarily incurred, and , if required by the SRLM, in reactivating the Services; or
 - ii. Continue with the Services to the extent reasonably possible, in which case the partner shall continue to be paid under the terms of this MoU and be reimbursed for additional costs reasonably and necessarily incurred on mutual agreement.

10. Termination

- a. Either Party may terminate this MoU with serving a written notice of 30 days subject to provisions as below
- b. Payment upon Termination Upon termination of this MoU, theSRLM shall make the following payments -
 - I. Payment bySRLM toSRLM for all such services satisfactorily performed prior to the effective date of termination, and reimbursable expenditures for expenditures actually incurred prior to the effective date of termination and
 - II. Payment bySRLM to all the deployed staff/cadre providing services
 - III. SRLM (Resource State) to settle all accounts that may be treated as advances before termination of the agreement.

11. Amendments

- a. The conditions under this MoU may be amended by mutual consent/written agreement by both the parties through exchange of letters and that shall be treated as part of the MoU. Any amendment will be without prejudice to any rights or obligation incurred under this MoU or supplementary agreement there to be reached pursuant prior to the effective date of such amendment.
- b. For any other services required and which is beyond the mentioned conditions in the present MoU may be availed by mutual consent/written agreement by both the parties through exchange of letters.

13. Dispute Resolution

Any dispute over the interpretation or applicable of any provisions herein contained will be settled amicably through consultation.

This deed of Memorandum of Understanding is being executed and signed by the respective parties at on this, 20.... in the presence of the witness here in under

For theSRLM for theSRLM

Signature

1. Witness 1. Witness

2. Witness 2. Witness

Annexure V Master CRP-AEPs practice schedule of 91 days

Engagement Protocol	Date	Days per year	Day		Activity / Process	Output
Pre-Season (Kharif)	15 May - 4 June	21	1	Village/ GP-1	Briefing of CRPs, Village Entry and interaction with CBOs	Familiarity with the community
			2		Meeting with SHGs/VO, Farm visit and Interaction with Mahila Kisan and farmers	Preparation of seasonal activity Calendar
			3		Awareness generation on Soil Health Management Soil sample collection.	Soil sample collection of at least 50 HH per Village
			4		Awareness generation on Soil Health Management Soil testing- ATMA, Agri Dept, Kit, KVK etc, Interpretation of test result Green Manuring etc.	At least 50 HH per village adopted practice at the end of one year
			5		Discussion/ on-field demonstration on advantages of Summer Deep Ploughing.	At least 50 HH per village adopted practice at the end of one year
			6		Discussion on usefulness on custom hiring Centre	Enhanced demand for farm machineries from CHC
			7		Discussion on need for seed priming and seed treatment; on-field demonstration of Seed treatment, Seed germination test	At least 50 HH per village will adopt practice of seed priming and seed treatment in Kharif.
			8		On-field discussion and demonstration on organic Composting	At least 50 HH per village will adopt practice of organic composting
			9		Discussion on various field practice based tips on critical inputs on seasonal crops	At least 50 HH per village adopted some of the tips.
			10		Discussion and on-field demonstration on various agricultural practice/models to increase cash income per unit land	At least 50 HH per village adopted at least one of the models.
			11		On-field discussion and demonstration of Nutritional Garden (kitchen garden)	Establishment of at least 50 kitchen / nutrition garden in each village
			12	Village/ GP-2	Briefing of CRPs, Village Entry and interaction with CBOs	Familiarity with the community
			13		Meeting with SHGs/VO, Farm visit and Interaction with Mahila Kisan and farmers	Preparation of seasonal activity Calendar
			14		Awareness generation on Soil Health Management Soil sample collection.	Soil sample collection of at least 50 HH per Village

			15		Awareness generation on Soil Health Management Soil testing- ATMA, Agri Dept, Kit, KVK etc, Interpretation of test result Green Manuring etc.	At least 50 HH per village adopted practice at the end of one year
			16		Discussion/ on-field demonstration on advantages of Summer Deep Ploughing.	At least 50 HH per village adopted practice at the end of one year
			17		Discussion on usefulness on custom hiring Centre	Enhanced demand for farm machineries from CHC
			18		Discussion on need for seed priming and seed treatment; on-field demonstration of Seed treatment, Seed germination test	At least 50 HH per village will adopt practice of seed priming and seed treatment in Kharif.
			19		On-field discussion and demonstration on organic Composting	At least 50 HH per village will adopt practice of organic composting
			20		Discussion on various field practice based tips on critical inputs on seasonal crops, on field demonstration of nutrition garden, demonstration of various models to increase income from unit area of land.	At least 50 HH per village adopted some of the tips, establish nutrition garden and adopt the model to increase income.
			21		Consolidation recap, action plan for i-CRPs, SRPs and farmers	Action plan will be carried out by the i-CRPs, farmers with support from SRPs.
Mid-Season (Kharif)	15th Aug to 30th Aug	15	22	Village/ GP-1	Interaction with i-CRPs and farmers on last drive activities, Feed Back, Farmer Field Visit.	Will visit at least 50 farm fields per village
					On field interaction on Insect pest surveillance, threshold limit.	At least 50 farmer per village will be able to identify pests and will be able to take decision based of thresh hold limits.
					On field Identification of beneficial insects their beneficial activities.	At least 50 farmer per village will be able to identify beneficial insects and understand their role in pest control.
					Training and demonstration on preparation of Botanical extracts/ Bio Pesticides.	At least 50 farmers per village will be able to prepare botanical extracts of her own.
					Field Demonstration on use of Botanical extracts/ Bio Pesticides.	At least 50 HH per village will start use of extracts and reduce use of chemicals in disease
			23			
			24			
			25			
			26			

					pest management.		
			27		Use of Pheromone Traps, Light Traps, Yellow and Blue sticky traps.	At least 10 farmer per village will use in her crop field.	
			28		On field demonstration of agricultural implements for inter cultural operations	At least 25 HH per village will start using the implements. More demand for such implements from CHC.	
			29	Village/ GP-2	Interaction with i-CRPs and farmers on last drive activities, Feed Back, Farmer Field Visit.	Will visit at least 50 farm fields per village	
			30		On field interaction on Insect pest surveillance, threshold limit.	At least 50 farmer per village will be able to identify pests and will be able to take decision based of thresh hold limits.	
			31		On field Identification of beneficial insects their beneficial activities.	At least 50 farmer per village will be able to identify beneficial insects and understand their role in pest control.	
			32		Training and demonstration on preparation of Botanical extracts/ Bio Pesticides.	At least 50 farmers per village will be able to prepare botanical extracts of her own.	
			33		Field Demonstration on use of Botanical extracts/ Bio Pesticides.	At least 50 HH per village will start use of extracts and reduce use of chemicals in disease pest management.	
			34		Use of Pheromone Traps, Light Traps, Yellow and Blue sticky traps.	At least 10 farmer per village will use in her crop field.	
			35		On field demonstration of agricultural implements for inter cultural operations	At least 25 HH per village will start using the implements. More demand for such implements from CHC.	
			36		Consolidation recap, action plan for i-CRPs, SRPs and farmers	Action plan will be carried out by the i-CRPs, farmers with support from SRPs.	
Pre Rabi	15 Oct- 25 Oct	10	37		Village/ GP-1	Interaction with i-CRPs and farmers on last drive activities, Feed Back, Farmer Field Visit.	Will visit at least 50 farm fields per village
			38			Discussion on critical inputs of season crops and some tips on practices.	At least 50 HH per village adopted at least one tip.

			39		Soil Moisture Management on field demonstration on field lay-outs, Irrigation methods (drip, sprinkles, pipeline), frequency, depth etc.	Ensure better layout and efficient method of irrigation with at least 25 HH per village
			40		Discussion and on-field demonstration on soil moisture management particularly, Mulching (different methods and materials used etc.)	At least 25 HH per village adopt one of the methods of mulching.
			41	Village/ GP-2	Interaction with i-CRPs and farmers on last drive activities, Feed Back, Farmer Field Visit.	Will visit at least 50 farm fields per village
			42		Discussion on critical inputs of season crops and some tips on practices.	At least 50 HH per village adopted at least one tip.
			43		Soil Moisture Management on field demonstration on field lay-outs, Irrigation methods (drip, sprinkles, pipeline), frequency, depth etc.	Ensure better layout and efficient method of irrigation with at least 25 HH per village
			44		Discussion and on-field demonstration on soil moisture management particularly, Mulching (different methods and materials used etc.)	At least 25 HH per village adopt one of the methods of mulching.
			45		Consolidation recap, action plan for i-CRPs, SRPs and farmers	Action plan will be carried out by the i-CRPs, farmers with support from SRPs.
			46		Attending review meeting, receiving feedback from district office	
Mid Rabi	25 Dec 8 Jan	15	47	Village/ GP-1	Interaction with i-CRPs and farmers on last drive activities, Feed Back, Farmer Field Visit.	Will visit at least 50 farm fields per village
			48		Kisan Path Shala on field interaction on Insect pest surveillance, threshold limit, identification of beneficial insect	At least 40 farmer per village will be able to identify beneficial as well as harmful insect pests and diseases.
			49		Demonstration on preparation of various botanical extracts and bio-pesticides.	At least 40 farmer per village will be able to prepare organic decoctions of her own along with its uses.
			50		Field Demonstration on use of Botanical extracts/ Bio Pesticides.	At least 40 farmer per village will be using at least one of the organic decoctions of her own field and reduce the use of chemicals.
			51		Use of Pheromone Traps, Light Traps, Yellow and Blue sticky traps, bird's perch etc.	At least 50 farmer per village will be using at least one of the practices.

			52		Field demonstration on layout and selection of crops for nutritional Garden.	At least 50 HH per village will establish nutrition garden.
			53	Village/ GP-2	Interaction with i-CRPs and farmers on last drive activities, Feed Back, Farmer Field Visit.	Will visit at least 50 farm fields per village
			54		Kisan Path Shala on field interaction on Insect pest surveillance, threshold limit, identification of beneficial insect	At least 40 farmer per village will be able to identify beneficial as well as harmful insect pests and diseases.
			55		Demonstration on preparation of various botanical extracts and bio-pesticides.	At least 40 farmer per village will be able to prepare organic decoctions of her own along with its uses.
			56		Field Demonstration on use of Botanical extracts/ Bio Pesticides.	At least 40 farmer per village will be using at least one of the organic decoctions of her own field and reduce the use of chemicals.
			57		Use of Pheromone Traps, Light Traps, Yellow and Blue sticky traps, bird's perch etc.	At least 50 farmer per village will be using at least one of the practices.
			58		Field demonstration on layout and selection of crops for nutritional Garden.	At least 50 HH per village will establish nutrition garden.
			59		Organise a recap meeting with the participating farmers and deciding on the follow up plans.	Action plan will be carried out by the i-CRPs, farmers with support from SRPs.
			60		Framing action plan for the i-CRPs, SRPs.	
			61		Preparation of reports and Submission, receiving feedbacks	
Pre Zaid	15 Mar 29 Mar	15	62	Village/ GP-1	Interaction with i-CRPs and farmers on last drive activities, Feed Back, Farmer Field Visit.	Will visit at least 50 farm fields per village
			63		Interaction and discussion on various tips on cultivation of summer crops.	At least 40 HH per village will try at least of the tips in her field.
			64		Discussion and demonstration on various methods of vegetable seedling production - individual / community	At least 50 HH per village will try at least one of the methods of vegetable seedling production.
			65		Discussion and demonstration on vegetable nursery management practices	At least 20 HH per village will establish her own nursery for vegetables.

			66		Discussion and on-field demonstration of multilayer Vegetable Cultivation	At least 50 HH per village will establish multi-tiered vegetable cultivation.
			67		Field Demonstration on field layout, irrigation methods, inter-cultural and Mulching.	At least 50 HH per village will follow proper layout, improved method of irrigation and mulching.
			68	Village/ GP-2	Interaction with i-CRPs and farmers on last drive activities, Feed Back, Farmer Field Visit.	Will visit at least 50 farm fields per village
			69		Interaction and discussion on various tips on cultivation of summer crops.	At least 40 HH per village will try at least of the tips in her field.
			70		Discussion and demonstration on various methods of vegetable seedling production - individual / community	At least 50 HH per village will try at least one of the methods of vegetable seedling production.
			71		Discussion and demonstration on vegetable nursery management practices	At least 20 HH per village will establish her own nursery for vegetables.
			72		Discussion and on-field demonstration of multilayer Vegetable Cultivation	At least 50 HH per village will establish multi-tiered vegetable cultivation.
			73		Field Demonstration on field layout, irrigation methods.	At least 50 HH per village will follow proper layout, improved method of irrigation.
			74		Field Demonstration on inter-cultural and Mulching.	At least 50 HH per village will follow inter-cultural and mulching.
			75		Consolidation of learning, interaction with farmers and i-CRPs.	Action plan will be carried out by the i-CRPs, farmers with support from SRPs.
			76		Framing action plan for the i-CRPs, preparation of reports.	Reports will submitted on time.
Mid-Season (Zaid)	15 April to 29 April	15	77		Village/ GP-1	Interaction with i-CRPs and farmers on last drive activities, Feed Back, Farmer Field Visit.	Will visit at least 50 farm fields per village
			78	Interaction and discussion on various tips on management of standing summer.		At least 40 HH per village will try at least of the tips in her field.
			79	On field discussion on soil moisture management and different improved methods of Irrigation (drip, sprinkles, pipeline), frequency, depth and field lay out		At least 50 HH per village will adopt improved method of irrigation with proper field layouts.

			80		Discussion and on-field demonstration of various methods and mulching using different materials, advantages and disadvantages.	At least 50 HH per Village adopted the practice of mulching.
			81		Discussion and demonstration of green manuring crops for the next crop (Paddy), its benefits etc	At least 50 HH per Village will cultivate green manuring crop.
			82	Village/ GP-2	Interaction with i-CRPs and farmers on last drive activities, Feed Back, Farmer Field Visit.	Will visit at least 50 farm fields per village
			83		Interaction and discussion on various tips on management of standing summer.	At least 40 HH per village will try at least of the tips in her field.
			84		On field discussion on soil moisture management and different improved methods of Irrigation (drip, sprinkles, pipeline), frequency, depth and field lay out	At least 50 HH per village will adopt improved method of irrigation with proper field layouts.
			85		Discussion and on-field demonstration of various methods and mulching using different materials, advantages and disadvantages.	At least 50 HH per Village adopted the practice of mulching.
			86		Discussion and demonstration of green manuring crops for the next crop (Paddy), its benefits etc	At least 50 HH per Village will cultivate green manuring crop.
			87		Interaction with farmers,i-CRPs, preparation of action plan for farmers and i-CRPs.	Farmers and i-CRPs will have complete action plan to follow.
			88		Consolidation of yield data of demonstration field (all crops), analysis and presentation before the farmers, linking the impact (qualitative and quantitative) with the practices introduced.	Majority of the farmers will be convinced with the efficacy of AEPs.
			89		Sharing of all information related to impacts with VOs, block team and district team.	Majority of the farmers will adopt the practices in their field and will advocate to follow the same to her fellow farmers.
			90		Sharing of all information related to impacts with block team.	Block team will be convinced with the eCRP round and AEP.
			91		Sharing of all information related to impacts with district team.	District team will be convinced with the eCRP round and AEP.

Annexure VI Deployment plan of Master CRPs, i-CRPs, NRP, and SRP

Resource State				User State		
Engagement Protocol	Dates / duration	Days	Engagement Protocol	Dates / duration	Days	
Master CRPs			Internal CRP			
Pre-Season (Kharif)	15th May to 4 th June	21	Pre-Season (Kharif)	15th May to 4 th June	21	
Mid Kharif	15th August to 30 th August	15	Mid Kharif	15th August to 30 th August	15	
Pre Rabi	15th October to 25 th October	10	Pre Rabi	15th October to 25 th October	10	
Mid-Season (Rabi)	From 25th December to 8 th January	15	Mid-Season (Rabi)	From 25th December to 8 th January	15	
Pre-Season (Zaid)	15th March to 29 th March	15	Pre-Season (Zaid)	15th March to 29 th March	15	
Mid-Season (Zaid)	15 th April to 29 th April	15	Mid-Season (Zaid)	15 th April to 29 th April	15	
Total		91	Total		91	
2 SRP			SRP /PRP (During CRP drive)			
Round 1	Before and after drive	2+2	Pre-Season (Kharif)	15th May to 4 th June	5	
Round 2	Before and after drive	2+2	Mid Kharif	15th August to 30 th August	5	
Round 3	Before and after drive	2+2	Pre Rabi	15th October to 25 th October	5	
Round 4	Before and after drive	2+2	Mid-Season (Rabi)	From 25th December to 8 th January	5	
Round 5	Before and after drive	2+2	Pre-Season (Zaid)	15th March to 29 th March	5	
Round 6	Before and after drive	2+2	Mid-Season (Zaid)	15 th April to 29 th April	5	

Total			24	Total		30
3	NRP (Grooming of CRPs)			NRP (On-field handholding supports)		
	Round 1	Master CRP Training	8	Pre-Season (Kharif)	15th May to 4 th June	7
	Round 2	SRP Training	8	Mid Kharif	15th August to 30 th August	
	Round 3	Refresher training of Master CRPs	4	Pre Rabi	15th October to 25 th October	
	Round 4	Refresher of SRPs	4	Mid-Season (Rabi)	From 25th December to 8 th January	5
				Pre-Season (Zaid)	15th March to 29 th March	
				Mid-season (Zaid)	15 th April to 29 th April	5
Total			24	Total		17

In short, the engagement for a Master CRP and i-CRP is of 91 days each



ATAL DULLOO
Joint Secretary
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☎ - 24104386
@ - jsrl-mord@gov.in

ग्रामीण विकास मंत्रालय
ग्रामीण विकास विभाग
भारत सरकार
कृषि भवन, नई दिल्ली-110114
Ministry of Rural Development
Deptt. of Rural Development
Government of India
Krishi Bhavan, New Delhi-110114

DO.No. K-11062/10/2016/NRLM (Livelihoods)

Dated 23rd November, 2016

Dear *Madam / Sir,*

An orientation cum sensitization workshop of State project Manager Livelihoods of all states was organized on 10/11/2016 to sensitize them about the livelihoods training structure. As per the inputs received in the meeting it has been decided that the SRLMs willing to conduct the training of SRPs in their states are allowed to do so and the schedule of conducting the same can be decided by the SRLMs in consultation with NMMU and NIRD so that the NRPs can be deputed for the trainings. The respective states where SRP training is scheduled will make necessary arrangements for the smooth conduct of the training.

There is also a need for an "evaluation system" for the SRPs. The purpose of the evaluation is to identify the best trainers from the available resource pool and also to have continuous system of capacity building and evaluation to upgrade the level of those at lower level. The evaluation process will also help to motivate the SRPs.

The evaluation process comprises a daily evaluation, of 30 minutes covering objective and subjective questions based on topics covered previous day and a comprehensive test on the final day covering the entire course content. Based on the final evaluation four grades are being proposed, "A", "B", "C" and "Fail".

Grade	% score
A	90 and above
B	75 to 89
C	50-74
F (Fail)	Below 50%

NRLM Resource Cell, NIRD will issue a certificate based on the assessment report.

With regards,

Yours Sincerely,

(Atal Dulloo)

To,

ALL State Mission Director/CEOs -SRLMs

Guidelines for the selection for State Resource Person

The Government of India has launched Aajeevika-National Rural Livelihoods Mission (NRLM) in June 2011 under the Ministry of Rural Development (MoRD). The mission aims at creating efficient and effective institutional platforms of the rural poor enabling them to increase household incomes through sustainable livelihoods and improved access to financial and public services. The NRLM functions in a mission mode for target based time bound delivery of outcomes following a demand driven approach which would allow the states to formulate their own poverty alleviation plans on the basis of available allocation, resources and skills.

As per the scaling up action plan of Livelihoods, National Rural Livelihoods Mission (NRLM) plans to create a pool of Livelihoods Community Resource Persons (CRPs) in order to capacitate the community in Livelihoods interventions specifically on sustainable agriculture, livestock and Non Timber Forest Produce. This would require a very strong capacity building architecture so that the CRPs are well trained in the concepts and practices so as to enable them spreading the best practices without any transmission loss. Towards this NRLM would build a pool of National Livelihoods Resource Persons (NLRP) in these thematic areas who in turn would help to develop a pool of State Livelihoods Resource Persons (SLRP) under SRLMs. The SLRPs with support from NLRPs would, in a continuous manner, train the CRPs to build their capacity over time. These CRPs will in turn train the Mahila Kisan / farmers/ households and would become a key component in skilling community in livelihoods initiatives.

As per the directive of Joint Secretary, Ministry of Rural development, GoI vide D.O. No. K-11062/08/2016/NRLM (Livelihoods)-Part-1 dated August 04, 2016, SRLMs need to identify experienced state level livelihoods trainers/resource persons (SRP) by August 2016. SRP team would consist of 30-40 members. [Sustainable Agriculture -20 members, and Livestock/ Animal husbandry 5-10 members, and NTFP (If required) 3-5 members]. The potential SRPs could be SMMU and DMMU personnel: livelihood anchor from BMMU, Agriculture expert from MKSP partners/other reputed NGOs and Agriculture/Livelihoods experts (Individual consultant). State Livelihoods Resource Persons (SLRP) will conduct the training to train CRPs, block staff and CBO leaders as planned at the state level. SPMs will anchor these trainings at various levels and prepare a training calendar for CRP training.

SLRPs will be rolling out training programs on themes (i) sustainable agriculture (ii) livestock/animal husbandry (iii) NTFP specifically for CRPs and Block level livelihoods staff/CBO functionaries. State Mission has an important role as follows:

- a. Identify prospective SLRP
- b. House the SLRPs after the successful completion of their training at NIRD by NLRP
- c. Prepare CRP training calendar after identifying the CRPs (SRLM has to upload the CRP profiles in the NRLM MIS)
- d. Arrange the training venue, logistics etc.
- e. Translate the training materials and tools etc. in local language
- f. Organize training programs as per the calendar
- g. Prepare training reports

The respective CRPs would be training the community on the thematic issues like sustainable agriculture, livestock and NTFP.

Essential Criteria for selection of SLRP:

- ❖ Bachelor or Master's Degree or equivalent in Social Science, Science, Agriculture Science, Veterinary, Forestry, Horticulture, Agri. Engineering with minimum 5 years of relevant work experience.
- ❖ Good participatory training and facilitation skills with proven ability and experience in delivering trainings in Hindi/ English/other local languages, development of modules, manuals and kit etc.,
- ❖ Proven skills on going and mentoring trainers as well as field staff
- ❖ Excellent reading, writing and communication skills
- ❖ Having experience of designing participatory trainings and capacity building modules and materials in the areas notified
- ❖ Having a clear understanding on NRLM processes and activities
- ❖ Willing to travel extensively
- ❖ Desirable to spend at least 50 days in a year in training

Process of selection:

Two day orientation of the shortlisted SLRPs can be conducted jointly by livelihoods team and NMMU. Based on the performance of the SLRPs during the orientation program, list of SLRPs can be generated. The performance of the SLRPs during the orientation can be judged on the basis of:

1. Case studies prepared by the SRPs on the basis of their field experiences
2. The presentation of the case studies in form of ppt and
3. Interview

The SLRPs nominated by SRLMs will have to undertake a test after the completion of their training at NIRD to qualify as SLRPs.

NB. Please ensure that the selection of SRPs is completed by August 2016.

फाइल संख्या/ File No. K- K-11060/14/2022-23/FL (e-381225)

भारत सरकार/Government of India
ग्रामीण विकास मंत्रालय/Ministry of Rural Development
ग्रामीण विकास विभाग/Department of Rural Development
ग्रामीण आजीविका विभाग/ Rural Livelihoods Division
(<https://rural.nic.in>)

सातवीं मंजिल, एन.डी.सी.सी-॥ भवन/7th Floor, N.D.C.C -II Building
जय सिंह मार्ग, नई दिल्ली-01/Jai Singh Road, New Delhi-01
दिनांक/ Dated: 13th December, 2022

To

The SMDs/ CEOs
State Rural Livelihoods Missions,
All the States and UTs.

Subject: Convergence with Ministry of Fisheries

Dear Madam /Sir,

Deendayal Antyodaya Yojana- National Rural Livelihoods Mission (DAY-NRLM), Ministry of Rural Development has mobilized over 80 million rural poor households through women SHGs across India. Multiple programs and sub-schemes have been launched for strengthening livelihoods of women members through value chain, organic farming clusters, producer enterprise, and a large community cadre have been created to support these efforts.

DAY - NRLM has adopted sub-sector interventions and identified Fishery sector as one of the important sub-sectors for creating Million Livelihoods with an aspirational income of Rs.1 Lakh/annum. In this regard, DAY - NRLM has been collaborating with various Ministries and Departments for leveraging their schemes to create sustainable livelihoods.

In the light of the above, Department of Fisheries, Government of India has issued guidelines for convergence between Ministry of Fisheries and DAY - NRLM. The guidelines are attached herewith for kind perusal and further necessary action.

Encl.: As above

Yours faithfully,


रमन वाधवा/ (Raman Wadhwa)
उप-निदेशक (प्रशासन)/Deputy Director (Admin)

F.No. J-17001/63/2021-Fy
Government of India
Ministry of Fisheries, Animal Husbandry & Dairying
Department of Fisheries

Krishi Bhawan, New Delhi
Dated the 6th December, 2022

To,
The Chief Secretaries
All States/UTs

Subject: Convergence of Deendayal Antyodaya Yojana- National Rural Livelihoods Mission (DAY-NRLM), Department of Rural Development and Department of Fisheries-reg.

Madam/Sir,

Fisheries sector plays a vital role in the rural economy in generation of incomes and employment. First of all, it aims to harness the potential of water bodies such as rivers, ponds, lakes, reservoirs, estuaries, bays and seas where agriculture and other forms of economic activity are not possible. Secondly, it provides protein rich food and essential vitamins such as vitamin A, B, and D. The sector is growing at 8-10% in last 10 years and can become a major driver of rural growth just like China and South East Asia. To give necessary impetus to the sector, Department of Fisheries (DoF) is implementing Pradhan Mantri Matsya Sampada Yojana (PMMSY) to address the critical gaps in both inland and marine fishery sectors. Through PMMSY DoF seeks to generate gainful employment both in coastal areas as well as in other rural areas particularly among the small and marginal farmers and women by supporting the fishery-based income opportunities through various schemes. At the same time Department of Rural Development (DoRD) through its DAY-NRLM programme is working with rural communities with focus on women to enhance the livelihoods of the associated households and those engaged in fishery-based activity. As both DoF and NRLM are working towards improving the income opportunities from fish resources, there is tremendous opportunity for dovetailing and for building synergy between programs of the DoF and the DoRD to strengthen this sector by leveraging on the strength of each other.

2. (a) Department of Fisheries through its Pradhan Mantri Matsya Sampada Yojana (PMMSY) seeks to enhance production and productivity of fisheries and aquaculture, strengthen infrastructure and post-harvest management, develop market and marketing infrastructure, improve safety and security of Fishermen and provide necessary extension and support services to those working in fishery sector.

(b) Department of Rural Development (DoRD) under its DAY- NRLM program has an outreach of about 8.65 crore women SHG members mobilized into more than 80 lakh Self-Help Groups across country, out of which almost 1 lakh households are into Fisheries activity.

Further, DAY-NRLM has developed a cadre of approximately 2,012 village-based community cadre (Matsya Sakhi) specifically to provide 24*7 extension services at the doorstep of fishers and fish farmers whose services can be utilized for extending the reach of PMMSY scheme.

Accordingly, a joint plan of action has been worked-out between DoF & DoRD to take forward PMMSY into the rural areas in convergence mode wherein in DoF will provide technology guidance and financial resources while DAY-NRLM will provide the organizational frame work to take the scheme forward to benefit small and marginal farmers and women through practice of fisheries and aquaculture.

3. The activity-wise plan of action is detailed below: -

3.1 Enhancement of production and productivity

DOF has launched PMMSY under which there is provision for:

- a. Establishment of New Fresh Water Finfish hatchery/rearing ponds for producing fingerlings
- b. Construction of new grow out pond / renovation of existing public/ private ponds for aquaculture
- c. Identifications of clusters of small ponds for aquaculture where NRLM structure will play the role of aggregator, the Matsya Sakhi already in place/to be placed will rear fingerlings out of spawns and supply the same to fish grower members and give necessary extension and other support services.
- d. Identification of existing private ponds/such other water bodies can be taken up for aquaculture its renovation, further operation, in these items:-
 - (i) DAY-NRLM with its strong institutional capacity will undertake identification of individual beneficiaries/CBOs/Producer Groups: SRLMs will identify the SHG members/CBOs/producer groups involved in fish rearing and share the same with the respective State directorates for inclusion in their annual plans.
 - (ii) DOF State directorates will support these individual beneficiaries/CBOs/Producer Groups in establishment, construction and inputs as per the PMMSY guidelines.
 - (iii) MGNREGA scheme may be accessed for construction, repair, maintenance and renovation of ponds where PMMSY guidelines do not permit this or PMMSY funds are not sufficient.
- e. Establishment of small bio-floc units in clusters to take advantage of scale in import, supply, extension and marketing of their produce.
- f. Establishment of cage culture in lakes/reservoirs/rivers/canals.
- g. Ornamental fishing on cluster-based approach

DoF will support in establishment and training of DAY-NRLM, SHGs, PGs and CBOs involved or willing to undertake activities under bio-floc units, cage culture and ornamental fishery as per the guidelines.

3.2 Development of Marine Fisheries including mariculture and seaweed cultivation:

a. Seaweed cultivation: DAY-NRLM through its SHG members of coastal area can support DOF by:

(i) Identification of beneficiaries: DAY-NRLM may support DOF in identification of beneficiaries whereas training and input (technical & financial) support may come from Department of Fisheries.

(ii) Matsya Sakhi developed under DAY-NRLM may be utilized as trainer for fish farmers. These Matsya Sakhi may be trained by DOF on sea weed cultivation and they may serve as interface between fish farmer and Department. In lieu of their services, they may be provided admissible remuneration as per the guidelines

b. Cage culture in estuaries

c. Mariculture such as bivalve/crab fattening

In these items, DoF will provide support to individual beneficiaries as per PMMSY norms and train Matsya Sakhis to act as trainers. DAY-NRLM will help in identifying beneficiaries, in identifying sites and help access MGNREGS funds wherever PMMSY funding is not permissible/inadequate. Matsya Sakhis will act as extension workers/aggregators and will receive incentives-based payment. Certain services such as seed preparations/fingerlings rearing can also be routed through them to enable them to earn livelihood.

3.3 Infrastructure and Post Harvest management including marketing:

The activities identified under this component are:

a. Fish feed mill and feed preparation

b. Fish marketing through cycle/two-wheeler/three-wheeler and ice-boxes

c. Fish processing such as preparations of dry fish, fish pickles etc.

SHGs can take up these activities either through their individual members or as a group in their respective clusters. DAY-NRLM will identify SHGs interested in taking up these activities and share the list with DoF with Self-Contained Proposals. DOF on its part will provide support in establishment of fish feed mill and establishment of supply chain as per the guidelines. DoRD may supplement with MGNREGS funds wherever necessary for construction of marketing yards/drying yards.

3.4 Strengthening of safety and security of fishermen and insurance of fishing vessels and fishermen:

The activities identified under this component are:

a. Support for safety kits and Potential Fishing Zone Devices for fishermen of traditional and motorized fishing vessel

b. Providing boats(replacement)and Nets for traditional fishermen

- c. Insurance premium for fishers.
- d. DAY-NRLM may support the DoF in identification of beneficiaries for safety kits and devices and for accident insurance.

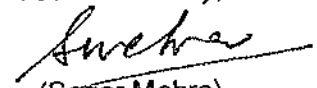
3.5 Fishery extension and support services:

The activities identified under this component are:

- a. Multipurpose Support Services–Sagar Mitra
- b. Fish Farmer Producer Organization(FFPO): DAY-NRLM will share the list of CBOs/ Producer Groups under DAY-NRLM involved in fish rearing and willing to be part of FFPO with DOF. DOF will support these CBOs/Producer Groups in establishment, construction and inputs as per the PMMSY guidelines. The DOF may even support in the formation of the new FFPO.
- c. Extension and Support Services centres: DAY-NRLM may propose for enrolment as Sagar Mitra/extension and support services control (Matsya Kendra). DAY-NRLM will share the village wise list of Matsya Sakhi with the DOF based on the demand of DOF. These identified Matsya Sakhi will be trained as per the curriculum of SagarMitra of DOF and their services utilized by Fishery Department.

4. Wherever activities are taken up under central sector component, DoF and NRLM will jointly set targets on annual basis. In case, activities are under CSS component, SRLM and DOF of respective States will hold consultations for implementation of aforementioned activities and jointly set targets for each of these activities. Periodic monitoring of the progress of the convergence initiatives may be taken up at State, district and block level. The convergence plan and progress may also be shared by the States regularly with DAY-NRLM, Ministry of Rural Development and Ministry of Fisheries, Government of India, New Delhi.

Yours Sincerely,



(Sagar Mehra)

Joint Secretary

Email: js-inland@dof.gov.in

Copy to:

1. Principal Secretary(Rural Development & Panchayati Raj), All States/UTs
2. Principal Secretary (Department of Fisheries), All States/UTs
- ✓ 3. Principal Private Secretary to Secretary(Rural Development), Department of Rural Development, Ministry of Rural Development 7th Floor, :NDCC-II Building, Jai Singh Road, New Delhi-110001,
4. Principal Private Secretary to Additional Secretary (Rural Development), Department of Rural Development, Ministry of Rural Development 7th Floor, :NDCC-II Building, Jai Singh Road, New Delhi-110001,

No. L-13060/03/2020-RE-VII
Government of India
Ministry of Rural Development
Department of Rural Development
(Mahatma Gandhi NREGA Division)

Krishi Bhawan, New Delhi
Dated: 04th May 2020

To,

The Additional Chief Secretaries/ Principal Secretaries/ Commissioners
Rural Development Department,
All State/UTs

Sub: - Guidelines for promoting Nutri-Garden for individual beneficiaries and community in convergence with State Schemes and NRLM.

Madam / Sir,

You are aware that of the many proven interventions towards reduction of malnutrition, one of the most effective ways is ensuring household food security and dietary diversity on a sustained basis. Promoting Nutri-Gardens and household consumption of its produce led to decrease of illness and malnutrition. A well developed nutrition garden for an individual and community has the potential of fulfilling the daily dietary requirements of a family.

2. Supporting region specific Nutri-Gardens in the State/UTs will help malnourished children by providing year round dietary diversity. As such the development of Nutri-Garden is not a permissible activity under Mahatma Gandhi NREGS. However, some of the permissible works under Mahatma Gandhi NREGS may help establish such Nutri-Garden for individuals and communities. They are as follows:

a. Permissible works for individual Nutri-Garden

- i. Leveling /shaping of wasteland/fallow land for individuals
- ii. Construction of irrigation open well for individuals
- iii. Block plantation of horticulture trees in fields for individuals
- iv. Wasteland block plantation of horticulture trees for individuals
- v. Construction of recharge pits for individuals
- vi. Construction of soak pit for individuals

- vii. Construction of cattle shelter, goat shelter, piggery shelter and poultry livestock shelter for individuals
- viii. Construction of infrastructure for azola cultivation for individual
- ix. Construction of compost pit, vermi-compost structure, NADEP compost structure and Berkeley compost pit for individual

b. Permissible works for community Nutri-Garden

- i. Development of fallow land for community
- ii. Construction of irrigation open well for community
- iii. Boundary line plantation of horticulture trees for community
- iv. Block plantation of horticulture trees in government building premises for community
- v. Live fencing for the protection of Block Plantations, supported with ditch-cum-bund and for protection of Individual plants, tree guards prepared from locally available plant material like Bamboo etc.
- vi. Fields block plantation of horticulture trees for community
- vii. Raising of nursery for community
- viii. Construction of fishery pond for community
- ix. Construction of recharge pits for community
- x. Construction of soak pit for community
- xi. Construction of cattle shelter, goat shelter, piggery shelter and poultry livestock shelter for community
- xii. Construction of infrastructure for azola cultivation for community
- xiii. Construction of compost pit, vermi-compost structure, NADEP compost structure and Berkeley compost pit for community

3. Beneficiaries of the ICDS Programme of the Department of Women & Child Development, should be prioritized for Nutri-Garden related activities keeping in mind relevant provisions mentioned in Paragraph- 5 of the Schedule – I of the Act as below:-

As per Paragraph 5 of the Schedule – I of the Act, works creating individual assets shall be prioritized on land or homestead owned households belonging to SC, ST, nomadic tribes, de-notified tribes, other families below the poverty line, women-headed households, physically handicapped headed households, beneficiaries of land reforms, the beneficiaries under PMAY(G), beneficiaries under ST and other traditional forest dwellers and on after exhausting above categories, on lands of the small and marginal farmers.

4. Above works can be taken up individually or in combinations for complementing nutritional gardens. However, necessary dovetailing with related Departments is needed for assured supply of vegetable seeds, fingerlings, poultry etc. for supporting these

interventions. Any consumable item of repetitive nature will not be taken from the Scheme. Necessary convergent planning has to be ensured for effective implementation of nutritional gardens. SHG members, who have already taken up Nutri-Garden under DAY-NRLM, may be given priority

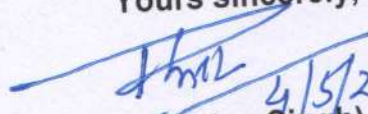
5. The priority should be given for community Nutri-Gardens in Government run schools including residential schools, Anganwadi Centers, Gram Panchayat land where the benefits can be easily provided to children, women and poor households of the villages. The guidelines for management of Nutri-Gardens and distributing the produce amongst beneficiaries should be devised at State /UT level. It should be ensured that only perennial plant species are selected under horticulture plantations which provide high nutritional and medicinal value. Right selection of these species can play a vital role in eradication of malnutrition.

6. An advisory has been issued by Rural Livelihood Division, Department of Rural Development, MoRD vide letter number K-11060/02/2019/NRLM (Livelihoods) Part 1 dated 10th December, 2019. The same can be referred while complimenting Nutri-Gardens in convergence with Mahatma Gandhi NREGA.

7. Works not permissible under Mahatma Gandhi NREGA, will not be taken up under Mahatma Gandhi NREGA, while complementing Nutri-Gardens initiatives.

This issues with the approval of competent authority.

Yours sincerely,


(Raghvendra Pratap Singh)

Director (Mahatma Gandhi NREGA)

Tel: 011 23384933

Encl: Rural Livelihood Division Advisory dated 10th December, 2019

Copy to:

1. The Secretary, Ministry of Women and Child development, GOI for information.
2. The Joint Secretary NRLM, MoRD, GOI

(367798)

File No. K-11060/02/2019/NRLM (Livelihoods)/Part1
Government of India
Ministry of Rural Development
Department of Rural Development
(RL Division)

7th Floor, NDCC – II Building
Jai Singh Road, New Delhi – 110001
Date: 10th December, 2019

To,

The SMD/CEO,
All State Rural Livelihoods Mission

Subject; Advisory on Agri-nutrition garden

Dear All,

I am directed to say that DAY-NRLM has come up with an advisory on agri-nutrition garden which is an important constituent of farm livelihoods intervention. One of the integral component of farm livelihood intervention under DAY- NRLM, is assuring year-round household-level food and nutritional security by optimally using the resources available to the poor smallholders. Mahila Kisan Shasaktikaran Pariyojana (MKSP), launched in 2010-11 under DAY-NRLM has a stated objective of securing health and nutrition at the household level and more particularly for women and children. DAY-NRLM under its farm livelihoods intervention works with women farmers for the promotion of Agri-nutrition garden by involving them and thus increases the success rate manifolds.

Till September 2019, 28.71 lakhs households have been supported in promotion of Agri-nutrition garden across the country through DAY-NRLM, Farm livelihoods interventions. In these years, we have seen many good practices emerging across the country in Agri-nutrition garden. In this context it is being felt that an advisory on Agri-nutrition garden outlining its element will be useful.

This advisory will serve as a reference document for rolling out kitchen gardens (Hereafter the Agri-Nutri gardens) in the respective State Rural Livelihood Missions (SRLMs).

Enclosure: Advisory on Agri-nutrition garden

Yours faithfully



(HR Meena)

Deputy Secretary in Govt. Of India

Advisory on promotion of Agri Nutri Garden under farm livelihoods

DAY-NRLM recognizes that the poor have multiple livelihood activities, and therefore, the mission focuses on enhancing and expanding the existing livelihoods of the rural poor. More than 70% of the rural poor are dependent on agriculture either as farmers or as agricultural labourers. Livestock rearing is the complementary activity in agriculture as another significant livelihood activity of the poor with small ruminants and poultry forming the major chunk of the livelihood basket. In forest fringe areas, the forest dwellers depend on the collection, value addition, and sale of Non-Timber Forest Produce (NTFP). Along with it, DAY-NRLM has been actively involved in promoting fishery and allied activities for livelihoods promotion. One of the integral component of farm livelihood intervention under DAY- NRLM, is assuring year-round household-level food and nutritional security by optimally using the resources available to the poor smallholders. Mahila Kisan Shasaktikaran Pariyojana (MKSP), launched in 2010-11 under DAY-NRLM has a stated objective of securing health and nutrition at the household level and more particularly for women and children. DAY-NRLM under its farm livelihoods intervention works with women farmers for the promotion of agri-nutrition garden by involving them and thus increases the success rate manifolds.

Till September 2019, 28.71 lakhs households have been supported in promotion of agri-nutrition garden across the country through DAY-NRLM, Farm livelihoods interventions. In these years, we have seen many good practices emerging across the country in agri-nutrition garden. In this context it is being felt that an advisory on agri-nutrition garden outlining its element will be useful.

1. Why is Nutrition Garden required?

The centrality to the actions of DAY-NRLM are women coming from marginalised sections of the socioeconomic strata. The biggest issue affecting them related to poverty is food security and malnutrition. As mothers, they carry on the legacy of malnutrition, hunger, and therefore unhealthy current and future generations. The cycle of malnutrition is cyclic and affects generations. For example, if an adolescent girl is malnourished, then after marriage, there is a certainty that the girl will also become a malnourished pregnant woman. Generally, a malnourished child is born to such a mother. The child, even after growing up does not escape the cycle of malnutrition. The malnourished girl born from such a mother repeats the cycle of malnutrition. Though, the livelihood interventions are targeted towards income enhancement and food security it leaves out the crucial missing link of proper nutrition at the household level.

According to the World Health Organisation (WHO), having low dietary diversity at the household level is one of the reasons for malnutrition. Therefore, ensuring dietary diversity at the household level would help people to come out of the malnutrition cycle. One of the crucial components, thus, is to raise a nutrition garden in the backyard of each of the

household. At DAY-NRLM, the combination of fruits and vegetables, which are locally consumed and grown. This advisory will serve as a reference document for rolling out kitchen gardens (hereafter the Agri-Nutri gardens) in the respective State Rural Livelihood Missions (SRLMs).

Figure 1 Requirements for proper nutrition

Carbohydrates: Provides energy in terms of glucose to perform daily tasks (rice, wheat, ragi, maize, other cereals and starch-based food)

Fats: Other sources of energy and maintain the lubrication (animal fat, vegetable oil, egg yolk, meat, fish, cashew among others)

Protein: Primary role of protein in the diet is for healing injured tissue and for growth and development in the body (poultry, meat, eggs and fish, and plant proteins such as nuts, seeds, beans and legumes)

Vitamins and Minerals: Help perform bodily functions adequately and help the body fight diseases and immune system (fresh fruit and vegetables)

The purpose of the establishment of nutrition garden is to grow fruits and vegetables suited to the local agro-climatic condition for tackling malnutrition. Apart from growing the vegetables and fruits, rearing livestock, supplies the required animal protein in terms of milk, eggs, and meat for complete nutritional needs of the household. The Agri-nutri gardens are designed as such that, while ensuring food for the house, it does provide some additional income, as and when needed. According to a report published in 2010-11, the Food and Agriculture Organization has reported that about 70% reduction in complications related to deficiency of Vitamin-A is possible by the promotion of nutrition gardens.

2. Objectives of promotion of Agri-nutri garden

- 2.1. Ensuring adequate nutrition available in the household to avert malnutrition among family members (especially women and children)
- 2.2. Providing round the year availability of nutritious fruits, vegetables, milk, egg, and meat and reduce dependence on the market. Bringing food diversity at household level.
- 2.3. Availability of quality food material free from chemical substances, reducing toxicity and enhancing nutrition
- 2.4. Reduction of expenditure on food items and expenses related to health; therefore, increasing cash flow for an improved socio-economic condition

3. Agri-Nutri garden under DAY-NRLM

To promote supplemental food production among the underprivileged and poor people in rural areas, DAY- NRLM supports the Agri-Nutrition garden model to improve nutrition security and supplement household income. The primary objective behind this model is to

help improve the nutrition status of small and marginal farmers and their families, providing them with an assorted mix of fruits and vegetables for most time of the year. Communities, which are appreciable to the idea of rearing poultry birds and small ruminants are encouraged to rear animals on a low scale, which fulfils dietary requirements and provides an income as and when needed.

Agri-Nutri gardens can be established and maintained on a small patch of land with minimum technical inputs; hence, these gardens provide the rural resource-poor communities with a platform for innovations in supplementary food production as well as an opportunity to improve their livelihoods. Family labours, especially the efforts of women, becomes particularly important in the management of these gardens. Empowered with a reasonable minimum amount of skills and knowledge, these women members of rural families can easily fight crop losses and other negative implications, thereby making Nutrition gardening a successful initiative. Besides, the significant use of organic farming practices makes these garden environment-friendly as well.

Nutrition gardens are cost-effective, practical and efficiently meet the balanced dietary requirements of rural households as well as add substantially to the family income. Crops are selected considering the everyday food habits and climatic conditions of the implementation areas, and with the larger goal of ensuring availability of wholesome and nutritious food.

4. Pre-implementation phase for Agri-nutrition Garden

- 4.1. **Exposure:** The Livelihoods teams of the SRLMs along with CRPs should go on exposure to see successful models on Agri-nutri gardens in their vicinity. The exposure should be arranged to a location where various models are on display.
- 4.2. **Situational Analysis:** The livelihood team can quantify and assess the situation of the homestead land of each of the beneficiaries. The team then would prepare a database containing information about: the soil type, water availability at the homestead, number of animals/ birds reared by the household to ascertain the amount of bio-manure availability, and the food and nutrition security condition of the family if the need may be the date of Anganwadi Centres on status nutrition of the children and women of the house. It would be wise to record the PDS availability, Midday Meal available to the children, and the availability of nutritious food for the pregnant and lactating women. A matrix may be developed to understand the calendar of food and nutrient availability (as per the box above detailing requirements for proper nutrition) for the household and to identify lean months in the terms of availability.
- 4.3. **Information and knowledge dissemination:** At the monthly meeting of the VO, the livelihood subcommittee along with the SRLM staff shall discuss the importance of the Agri - nutri garden. In this meeting, the presence of CRP is essential, as they will

be the ones helping the beneficiaries in setting up Agri-nutri gardens and growing vegetables and crops. This discussion must happen at the CLF and SHG level to ensure the importance of the initiative to provide food and nutrition security.

5. Agri-nutri garden design for different types of beneficiaries

The livelihood team, in consultation with experts (practitioners, NRPs, scientists from KVK/ agricultural universities, leading CSOs), should design appropriate Agri-nutri gardens suitable to the geography and landholding of the farmers. In bigger states, where there are different agro-ecological zones and altered food habits, multiple designs should be prepared before implementation.

Various designs and models are provided in the guideline, for example. The state teams must compile a ready reckoner of different models of the Agri-Nutri garden. If there is an aberration (land and water availability), common sense may be applied for designing a particular intervention, with the approval of the concerned beneficiary. The Krishi Sakhi after analysing the data on land and water availability of the specific beneficiary should suggest the model that the beneficiary should adopt. This list created at each of the SHG should generate metadata, indicating the number of different models under implementation at various levels (SHG, CLF, VO, Block, SRLM, NRLM).

5.1 The Design principle of Nutrition Garden

The basic design principle is to establish a year-round supply of seasonal fruits and vegetables, including leafy greens in the homestead by using household-level wastewater and food waste (for manure).

- 5.1.1. A multi-tier design principle may be adopted to get the maximum from the same area. The principle behind the multi-tier design is photo-tropism i.e. different plants require different light, so multi-tier structure is best suited to harvest maximum sunlight.

Example:

First-tier: Root or tuber crops such as carrot, beetroot, ginger, etc. comes under this category. These plants require minimal sunlight.

Second-tier: Creepers, which cover the soil such as bottle gourd, cucumber etc. Creepers will act as live mulch.

Third tier: Leafy vegetables such as spinach, coriander, Amaranthus etc.

Fourth tier: Vegetables such as Brinjal, Tomato, chillies etc.

Fifth tier: Perennial Castor and Perennial Red gram etc.

Sixth tier: Papaya, drumstick, clustered apple, guava etc.

Seventh-tier: Fruit crops such as Mango, cashew, etc. These plants require maximum sunlight.

- 5.1.2. Perennial plants such as a drumstick, banana, papaya, curry leaf, gooseberry,

- mango, guava, custard apple, and sapota etc., should be located on one side of the garden. Usually, they should be planted at the rear end of the garden, so that they may not put a shadow over other crops.
- 5.1.3. Small spaces can be utilised for growing different short-duration varieties such as coriander, Amaranthus, fenugreek, mint, etc. These crops can be cultivated in different seasons.
 - 5.1.4. The fence surrounding the garden can be utilised for growing creepers and gourds such as sponge gourd, bitter gourd, snake gourd, cowpea etc.
 - 5.1.5. The inclusion of trellis in for creepers and shade-loving under the trellis-like broccoli, spinach etc.
 - 5.1.6. The compost pits should be placed in the corner of the garden.
 - 5.1.7. There should be corner pits to collect the utilised household water (bathing water, Nutrition waste etc.)
 - 5.1.8. The garden should be divided into small plots with raised bunds. In the bunds, one can grow root crops such as onion, turmeric, ginger etc.
 - 5.1.9. Medicinal plants should be integrated into this nutritional Garden like Tulasi, Kalmegh, aloe vera etc.
 - 5.1.10. Monocot – Dicot crop combination to maintain equilibrium for soil fertility
 - 5.1.11. Companion crops: Companion planting in gardening and agriculture is the planting of different crops in proximity for any of some various reasons, including pest control, pollination, providing habitat for beneficial creatures, maximising use of space, and to otherwise increase crop productivity. A list is given in Annexure.
 - 5.1.12. Crop diversity to manage pests
 - 5.1.13. The inclusion of livestock (backyard poultry and goat rearing) in the household nutritional security system.
 - 5.1.14. Planting vegetables in the gunny bags for the poorest households who do not have land for a nutritional garden.

5.2 Major Intervention for Nutritional Garden

In agro-ecological practices in farm livelihoods under DAY- NRLM emphasis is on the following significant areas:

5.2.1 Seed

- 5.2.1.1 Use of only native quality seeds, in some cases, high yielding varieties can be taken up.
- 5.2.1.2 In no case, HYV or GM seeds should be promoted.
- 5.2.1.3 While purchasing the seeds from the market, expiry date and % of germination should be checked.
- 5.2.1.4 All the seeds and seedlings should be treated with Bijamrut/ cow urine before sowing.
- 5.2.1.5 Seed selection should be carried out with either plain water or brine solution
- 5.2.1.6 Mahila Kisans may be trained in the preparation of good quality seeds from their

garden.

5.2.1.7 Every year seed production should be promoted at each household to avoid dependency on external sources.

5.2.1.8 Seeds should be selected from a healthy plant/ healthy, disease-free fruits.

5.2.2 Soil

Usage of mulching, green manure to increase the soil moisture and organic matter.

5.2.3 Plant nutrient management

5.2.3.1 No chemical fertilisers or chemical pesticides should be used.

5.2.3.2 Kitchen waste should be used for the preparation of compost.

5.2.3.3 Small FYM pits/ corner should be promoted to prepare compost from kitchen waste/ leaf litters. The landless farmers can also do the FYM in the earthen pots/ plastic drums.

5.2.3.4 All households, including the landless family, should have a practice of vermicomposting in a small earthen pot/ plastic drum or any old big sized utensils.

5.2.3.5 Ghan Jeevamrut or jeevamrut can also be applied to the plant for better & healthy growth.

5.2.3.6 Small Bhu-Nadep should be promoted to prepare compost from farm waste/ leaf litters

5.2.3.7 Green manures: Sowing seeds of green manure help to protect the soil and gives extra fertility and more production.

5.2.3.8 Other sources: Ash, oilseed cake, hair etc. are all resources which can be added to the soil to increase fertility as well as helping to prevent pests and diseases.

5.2.4 Water management

5.2.4.1 All the household wastewater (bath/ kitchen) can be collected through a ditch/ pit in the garden. It can do the watering of the plants.

5.2.4.2 At the time of land preparation of the agri-nutrition garden, the small irrigation and drainage channels should be made for better management of available water.

5.2.4.3 Pitch irrigation or drip irrigation should be adapted to avoid excess use of water/ for optimal use of water

5.2.4.4 Small dug well/ drums may be used to store water.

5.2.4.5 Mulching: It prevents the sun and wind from drying the bare soil.

5.2.4.6 Green Manures: Also cover the soil, and so help in conserving water.

5.2.4.7 Windbreak: Wind will dry out the soil, so stopping the wind helps to conserve soil moisture.

5.2.4.8 Provide shade: In the hot season, trees can provide shade to the Agri-nutrition garden. A few small trees, such as Leucaena, mulberry, moringa (drum stick), Persian lilac, or even fruit trees in the fence or within the garden can be used for this. As well as giving shades, these trees can also provide other benefits such as

firewood, fodder or mulch materials.

5.2.4.9 Mist collection; Mist collects on the leaves of the trees around and within the agri-nutrition garden and drips onto the soil for conserving the moisture.

5.2.4.10 Irrigation: By only putting a little water over a wide area, only the surface will be kept moist. This can cause roots to stay near the soil surface, and in intense sun, they can dry out quickly. So, it's much better to irrigate less area with more water, so the moisture goes more in-depth in the soil. Then this area will not need watering for a long time during the hot season, water in the evening or at night and not in the daytime. Collecting and using wastewater from the kitchen can be enough to water the garden. Also, direct water from the communal tap stand can be used in Agri-nutrition garden.

5.2.5 Plant protection

The Agri-nutrition garden needs protection from the very start. It should not be possible for livestock to enter the area. A permanent fence should be made. Thorny plants can be cut and used to create a fence, but the best method is to plant a living fence to protect the garden.

The crop within the garden will also need protection from any damage by pest and diseases. There are many ways to do the same as mixed cropping, rotations, liquid manure, bio-pesticides etc. For that:

5.2.5.1 The weeds should be uprooted as and when seen in the garden.

5.2.5.2 Each household should adopt the preparation and use of Pot Manure (Matka Khad), which acts as both manure and bio-pesticide.

5.2.5.3 Biopesticides like neemastra, brahmastra, and agneyastra should be applied in case of pest/disease attack.

5.2.5.4 All the seed materials should be treated through Bijamrut or with cow urine

5.2.5.5 Light trap, yellow sticky trap or water trap or pheromone trap may be used to trap insects.

5.2.5.6 Plantation of Marigold around the border will help in trapping insects.

5.2.5.7 A detailed list is given in Annexure

5.3 Agronomic practices

5.3.1 Site selection for agri-nutrition garden

If there is already an agri-nutrition garden then there is a need to improve rather than search for a new site

The following factors need to be considered for a new site:

5.3.1.1 How to protect the garden from livestock, who can graze?

5.3.1.2 How can you bring water to the site and irrigate it?

5.3.1.3 The quality and fertility of soil needs to be managed.

5.3.1.4 How can the site be easily accessed from the house?

5.3.2 Land preparation

5.3.2.1 The raised nursery bed should be promoted to avoid damage of the nursery from the rain.

5.3.2.2 Nursery beds may be covered with locally available materials like paddy straw or broad leaves

5.3.2.3 Adequate FYM/ Vermicompost/ NADEP compost should be added to the field during land preparation.

5.3.2.4 Ridges and furrow method should be adopted to check the excess use of water, manure and to avoid soil erosion.

5.3.2.5 Irrigation and drainage channel should be given in between the sub-plots.

5.3.2.6 The landless farmers can use gunny bags to grow crops. The central opening at the top can be used for non- creeper vegetables. Some holes can be made in the gunny bags. In these side holes, the creeper plants can be planted for optimum use of the gunny bags. The gunny bags should be filled with soil and bio manures like FYM/ Compost/ Matka Khad/ vermicompost.

5.3.3 Sowing and planting

5.3.3.1 Line sowing with proper spacing will increase productivity.

5.3.3.2 All the plantation crops like banana/ papaya/ lemon/ custard apple should be planted in the border of the agri-nutrition garden

5.3.3.3 All the creeper plants should be planted near to the plantation crops/ trees/ near to the hedges

5.3.3.4 Proper spacing should be maintained between the plants and between the rows.

5.3.3.5 Mulching may be promoted to conserve the soil moisture.

5.3.4 Selection of crops

5.3.4.1 There should be at least three to five plantation crops to be planted in the garden.

5.3.4.2 The plantation crops are Papaya, Drumstick, Lemon, Custard apple, guava, pomegranate, curry leaf etc.

5.3.4.3 There should be at least three creepers/ climbers to be planted in the garden. Example: Pumpkin, bitter gourd, bottle gourd, ridge gourd, pointed gourd, small gourd, spine gourd. Tomato, Malabar spinach etc.

5.3.4.4 The common leafy vegetables like Amaranthus (both dark and green) & Malabar spinach, vegetables like brinjal, okra and spices like chilli should be cultivated round the year.

5.3.4.5 Each agri-nutrition garden should have plants representing from legume crops

5.3.4.6 At least two to three tuber crops should be planted in the garden. Example: Yam, Radish, elephant foot yam, taro, sweet potato etc.

5.3.4.7 Minimum one to two beans should be planted. Example: cluster bean, broad

bean, common bean, kidney bean, French bean, cowpea, lima bean, sword bean, ridge bean, field beans, lablab beans, runner beans etc.

5.3.4.8 A detailed list is given in Annexure.

6. Models for Agri-nutri garden

If seeds and seedlings are planted too wide, the interspace will go waste, and this space will be used by weeds to grow. Weeds use precious water and compost, and also wastes labour in their removal. Besides the water and compost lost, needs to be replaced. This is why it is better to plant vegetable plants densely. But if only one variety is grown, it will compete with itself for space above and below the ground, and so will not be beneficial. It is better to plant a mix of small and large types, to make different layers of crops on the same bed. These will also have different layers of roots in the soil. This means many plants can be grown in a small space, but there is no competition between crops for space, water and nutrients. As small vegetables are harvested for food, this makes space for the long lasting vegetables, while in between new seedlings can be planted. Some of the models in use for the agri-nutrition gardens are as followed:

6.1 Rectangular model

Seven parallel raised bed plots of 10-20 ft. Length and 3-4 ft. Width to be prepared across the yard. At the four corners four circular mounds to be dug. Around the garden, fruit plants which are lesser in height and are less shrubby should be planted, e.g. papaya, lemon, and guava among others to be planted.

It should be noted that plants like banana or papaya should be planted on the eastern or southeastern side of the garden. This will allow appropriate sunshine to fall on the garden. Plants with larger canopy, i.e. drumstick, guava, custard apple need to be planted on the west or northwestern direction.

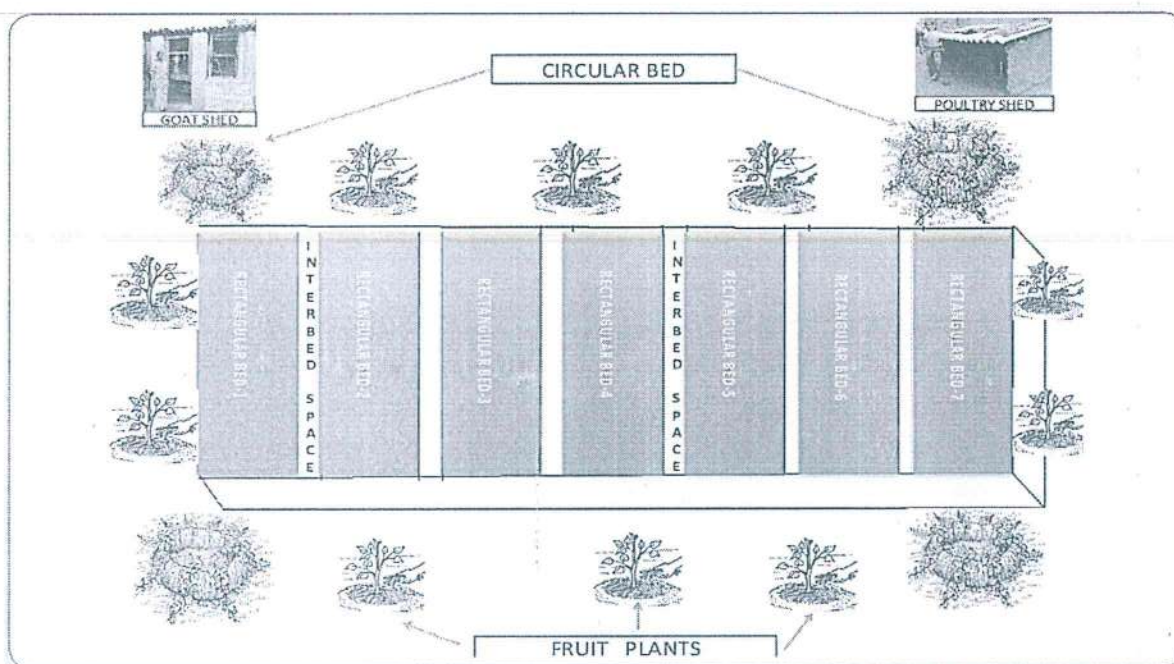
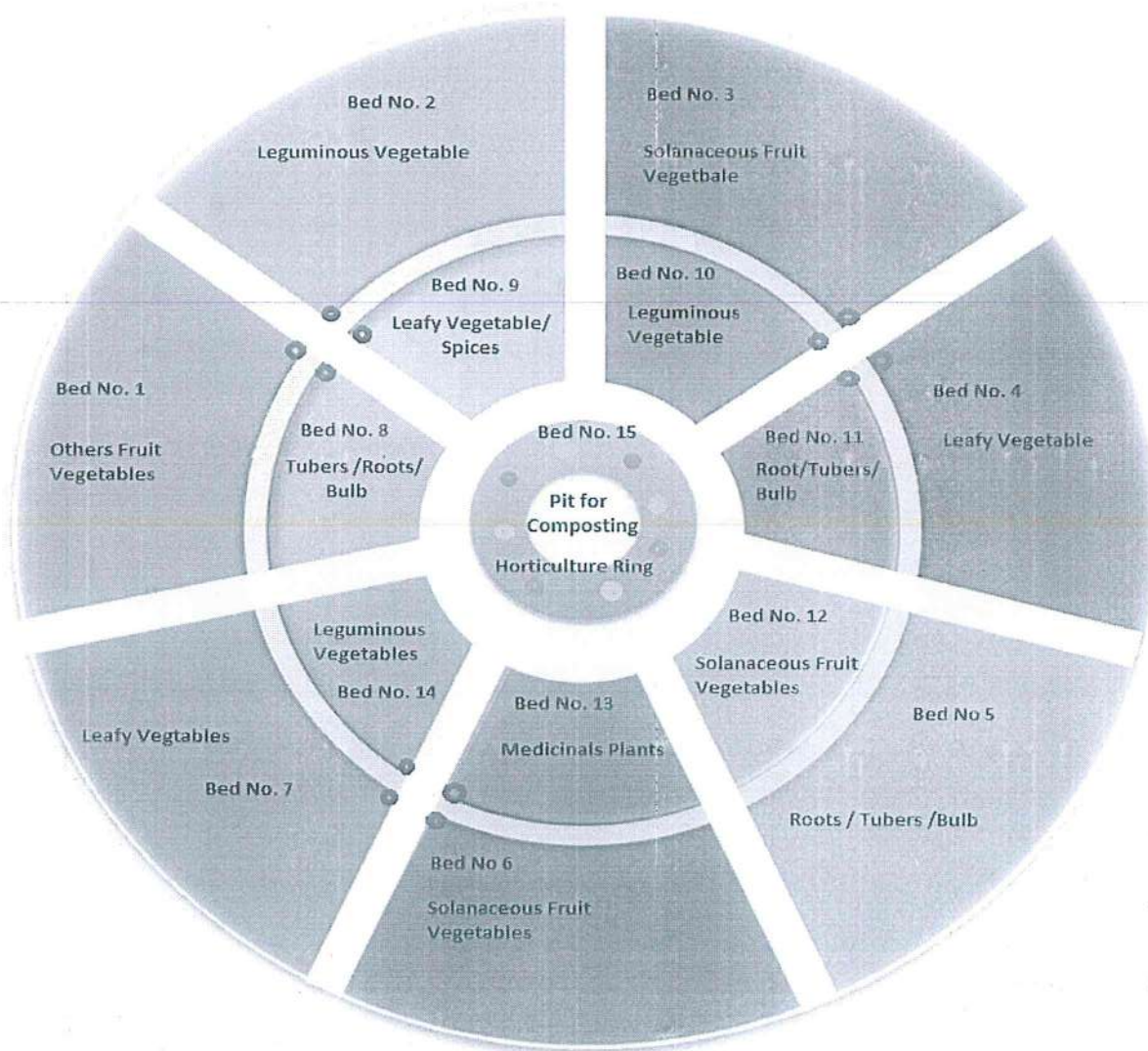


Figure: Rectangular model for Aqri-nutrition garden

6.2 Circular model

In this model a circle would be made, and four mounds at the four corners will be made. Around the garden, fruit plans which are lesser in height and are less shrubby should be planted, e.g. papaya, lemon, and guava among others to be planted. It should be noted that plants like banana or papaya should be planted on the eastern or southeastern side of the garden. This will allow appropriate sunshine to fall on the garden. Plants with larger canopy, i.e. drumstick, guava, custard apple need to be planted on the west or northwestern direction.

1. The diameter of the garden should be 1 meter.
2. With a 0.5-meter tape should be used with a centre point and a circle should be marked around it
3. Pulverize the soil with hoe/ plough.
4. The plots should be prepared against the direction of the hoe.
5. Farmyard manure/ Compost should be mixed, and mound should be made around the circle



*Figure: Circular model for agri-nutrition garden***6.3 Nutrition Garden for landless**

Raised Garden	Creepers (bitter gourd, cucumber, ridge gourd, long beans, beans, ivy gourd, and spike gourd, Amaranthus, and spinach can also be grown	In an earthen pot or polythene soil, rice bran, FYM/ Compost in the ratio of 3:1:2 The creepers can be supported with tape, wire, or bamboo sticks
Hanging garden	Vegetable and other leafy vegetables	Pots can be hanged from the roof with the same composition of soil mixture. Is beneficial to keep off cattle
Drum garden	All vegetables	A drum is cut into 2 equal halves where soil mixture is kept for the growth of vegetables

6.4 Nutri garden with a Gunny bag

- 6.4.1. Select a sunlit place
- 6.4.2. Fill the gunny bag with clay loam soil and FYM/ compost
- 6.4.3. Mark 4 holes around the gunny bag at equal distances, the holes should be above 1 foot off the ground level.
- 6.4.4. Put a Bamboo stick in the middle of the bag to facilitate irrigation and drainage of excess water.
- 6.4.5. To settle the soil, pour water for 2 to 3 days
- 6.4.6. Put 4 seeds of 2 different types of creeper in each hole
- 6.4.7. At the top of the gunny bad 2 plants of either tomato/ chilli/ or brinjal can be put.
- 6.4.8. Irrigate the bag in every 2 days to keep the bag moist
- 6.4.9. Keep it off limits from animals and children
- 6.4.10. For the creepers make the facility for trellis, the creepers will start fruiting after 45 days and continue fruiting for 45 days
- 6.4.11. A household would be able to get adequate amounts of vegetables from 2-3 gunny bags

7. Importance of animal protein and its benefits

For growing children and the pregnant and lactating mothers, there is a significant need to provide in terms of milk, egg, and meat to fight malnutrition. From eggs, 12 essential vitamins and minerals are sourced apart from choline, which helps in the development of the brain and more so among the children. Eggs are a great source of protein, which aids in the formation of new tissues and repairing of old tissues. One egg has equal amount of protein as with 30 grams of animal meat. In a week, one should consume about 3 to 4 eggs. Pregnant women should not consume raw or half cooked eggs. Poultry meat is also a good source of protein which is white meat. According to the estimates, one normal human should consume 180 eggs and 12 kgs of animal meat. The faeces and droppings of poultry and goat act as a good source of fertilizers for the Agri-nutrition garden and also help in recycling of roughages.

Recommended consumption of egg for growing children and women

Category of special need	Egg requirement (weekly)	Egg requirement (annual)
Children (6 months to 3 years)	3	156
Children (3 years to 6 years)	5	260
Adolescent girl (10 years to 19 years)	4	208
Pregnant and lactating women	3	156

Therefore, the intervention at the household should be such that each member (children and women), should at least have 120 eggs a year (every 3 days) and have chicken twice a month (26 birds) and sell 12 birds in the market to earn additional income.

7.1 Backyard poultry for household nutrition

The basic tenets of backyard poultry are

- 7.1.1. Secure the birds by the construction of a shed from predators, heat, and rain, while having a litter to soak up the bird droppings (can be sold as manure rich in phosphorous)
- 7.1.2. Apart from scavenging give the birds some balanced feed.
- 7.1.3. Each bird should at least have 200 ml of fresh water per day.
- 7.1.4. Deworming in every 3 months (i.e. 4 times year)
- 7.1.5. 4 times the vaccination of Ranikhet/LaSota, and 2 times vaccination of bird flu. The estimated cost for all the vaccination and deworming per year is about Rs.10.

The scale and operation of backyard poultry

- 7.1.6. Each female bird gives about 50 eggs per year, while giving 3 to 4 eggs at a time.
- 7.1.7. If a household rears 4 birds, the household will get 200 eggs per year.
- 7.1.8. The household should consume 120 eggs and use the rest 80 for hatching.
- 7.1.9. With an 80 % success in hatching, there will be 64 chicks.

- 7.1.10. Out of the 64 chicks, 60% will become full-size birds at the age of 6 to 8 months; i.e. 38 full-size birds.
- 7.1.11. The household should consume 26 birds, and sell the rest 12 birds. The birds will at least fetch a price of Rs.300 providing an income of Rs. 3,600 in the household. The expenses on balanced feed are about Rs.500, and the cost on deworming and vaccination is about Rs. 500. Therefore, the net income from poultry is about Rs. 2,600.

7.2 Improved goat rearing for household nutrition

The basic tenets of improved goat rearing are

- 7.2.1 Secure the goat shed from predators, heat, and rain, with proper drainage (the goat dung can be composted and used as high manure, the market price of the manure is very high with proven bio-availability)
- 7.2.2 Balanced feed for the animals.
- 7.3.3 Each goat should have fresh water.
- 7.3.4 Deworming in every 4 months (i.e. 3 times year)
- 7.3.6 Vaccination against 4 deadly diseases (PPR, Goat Pox, Enterotoxemia, and Foot and Mouth Disease)

The scale and operation of improved goat rearing

- 7.3.7 In 24 months (at an interval of 8 months), one female goat gives birth to 5 kids, while there is a chance that 2 kids might die due to complications/ natural sequences.
- 7.3.8 The sale price of the three goats in the 24 month cycle is approximately Rs. 9,000 (kids: in the first birth - 16 months, second birth- 8 months, and the third birth- 0 to 1 month).
- 7.3.9 If a household rears 2 goats, the income is Rs. 9,000 per annum. The cost of deworming and vaccination is Rs.120 per year per goat (includes the cost of Krishi Sakhi). Therefore, the price of the whole herd is Rs.480-Rs.500 per annum for the household. Apart from it, the cost of balanced feed per year is about Rs.300.
- 7.3.4 Therefore, the net income from the enterprise is Rs. 8,200

8. Funding and Convergence

Funding for Agri-nutrition garden: The budgetary requirement of formation of Agri-nutrition garden is low which can be taken as a loan by Mahila Kisan from the SHG. There is no need to keep a separate budget for the promotion of the same.

Different schemes are under implementation, which supplies inputs and planting materials for agriculture. The SRLF block team may arrange such linkages for procurement of inputs. If needed personal assets for in-situ soil and water conservation may be created under the MGNREGS.

Annexure

1. Crop combination in nutrition garden

Plot	Season	Main Vegetable	Supplementary vegetable		
Raised beds	Kharif/ Rainy	Brinjal/ Eggplant	Radish, Amaranth Leaf		
		Chilli	Marigold, Coriander		
			Okra	Long beans/ Okra	
			Pumpkin/ ash gourd, bottle gourd, pointed gourd, bitter gourd, ridge gourd, Snake gourd, cucumber	Water spinach	
			Rabi/ Winter	Tomato, Onion	Spinach
				Beans	Coriander, Mint
	Carrot	Fenugreek			
	Zaid/Summer	Cabbage/ Cauliflower	Radish		
		Okra	Long bean		
		Brinjal/ chilli	Guar bean		
Circular bed	Kharif/ Rainy	Brinjal + Long beans + Bitter Gourd/ Snake Gourd			
		Chili + Long beans + cucumber/ pumpkin			
			Okra + Long bean + Ridge gourd / Malabar Spinach		
			Brinjal + Scarlet gourd/ Ivy gourd +Water spinach		
			Rabi/ Winter	Tomato + Bean + Spinach	
	Zaid/Summer		Ivy gourd + Water spinach + Coriander / mint / fenugreek		
			Okra + Malabar spinach		
			Guar Bean + Amaranth leaf		
			Brinjal + Bean		

2. Examples of good co-crop

Crop name	Companion crop	Enemy crop
Beans, Green peas	Almost all vegetables	Onion and garlic
Brinjal, chilli, tomato	Onion, pulses, radish, carrot, coriander, Holy Basil, and marigold	Mustard and Rapeseed
Pumpkin	Pulses, Onion, and marigold	Coriander and Holy Basil

3. Examples of better intercropping

Cabbage	Radish, carrot, turnip, beetroot
Potato	Amaranthus, carrot, radish, wild spinach
Tomato	Radish, carrot, and Amaranthus
Onion	Amaranthus and wild spinach
Garlic	Coriander and other leafy vegetables
Pumpkin	Kharif radish
Maize	Cucumber, pumpkin, Long beans, and watermelon

4. Planting distance (plant to plant and row to row) in cms

Vegetable	Row to row	Plant to plant
Brinjal	75	60
Chili	60	45

Vegetable	Row to row	Plant to plant
Tomato	75	60
Bean	45	30
Long beans	45	30
Water spinach	25	20
Radish	25	20
Carrot	25	20
Guar bean	60	45
Okra	75	60
Pumpkin/ bottle gourd	150	120
Ridge gourd/ snake gourd/ cucumber/ ivy gourd/ bitter gourd/ Malabar spinach	120	90
Tree based fruits		
Drumstick	700	600
Lemon	500	400
Mango	1000	800
Papaya	300	250
Banana	300	250
Custard apple	700	600
Guava	800	600

5. Vitamin information

Type	Vegetables	Vitamins and Minerals
Leafy vegetables	Amaranthus, spinach, Malabar spinach, water spinach, pumpkin leaves, drumstick leaves	Vitamin A, C, and K, Folate, and Iron+ Dietary Fibres
Red coloured vegetables	Pumpkin, Tomato, carrot, among others	Vitamin A
Other	Brinjal, bottle gourd, snake gourd, bitter gourd, and cucumber	Vitamin A and C + Potassium
	Beans, flat green beans, drumstick	Protein, iron, calcium, Folate, Phosphorous
Tuber	Potato, sweet potato, turnip	Carbohydrates, Potassium, and fibre

6. Planting time and period

Vegetable	Months	Days
Bottle gourd	February- March, May-June	140-150
Beans	November-January	90-130
Bitter gourd	March-May	90-125
Ridge gourd	February- March, May-June	120-150
Brinjal	May-June, October-November, January-February	120-150
Chili	February-May	210-240
Long bean	June- September	90-105
Coriander	June-September, October-November	30-40
Cucumber	June-October, January-February	90-100

Vegetable	Months	Days
Carrot	September-November	90-100
Okra	Round the year except the cold winter months	100-110
Pumpkin	February- March, May-June	90-125
Snake gourd	February- March, May-June	135-180
Radish	September-January	45-60
Tomato	October-November, January-February	90-145
White Amaranthus (Kharif)	March-April, October-November	40-100
Red Amaranthus (Rabi)	March-April, October-November	40-100
Amaranthus (White and red)	October-January	30-40
	March-October	40-100

7. Cultivation techniques of common vegetables

Vegetable	Season	Method of planting	Spacing	Seed rate	Pit size	Fertilizer management (for 1 cent area)	Duration of crop	Duration of crop
Amaranthus viridis	All	Seeds should be mixed with sand and broadcast in beds	-	10-15 gms/cent	-	Farm Yard manure 100 kgs or compost 50 kgs with 2 kgs of neem cake	-	Varies according to variety
Ash gourd hispida	July-Nov April	Seeds to be dibbled in pits	2.5 x 2 mts	3-4 seeds/pit	30 x 30 cms	1 kg of FYM and 100 gms neem cake	Compost or vermicompost 250-500 gms / plant	140-150 days
Beans Phaseolus vulgaris	July- January	Seeds to be dibbled in pits	2 x 2.5 mts	3-5 seeds/pit	30 x 30 cms	1 kg of FYM and 100 gms of Neem cake per pit	Vermicompost- 500 gms / pit	6-7 months
Bitter gourd Momordica charantia	Dec – Mar	Seeds to be dibbled in pits	2 x 2 mts	3-5 seeds/pit	0.5 x 0.5 x 0.5 feet	1 kg of FYM and 100 gms of Neem cake per pit	Vermicompost – 500 gms/pit	90-125 days
Bottle gourd Lagenaria siceraria	July-Aug Nov	Seeds to be dibbled in pits	2 x 2.5 mts	3-5 seeds/pit	1 x 1 x 1 feet	1 kg of FYM and 100 gms of Neem cake per pit	Vermicompost- 500 gms/pit	120-150 days
Brinjal Solanum melongena	Dec-Jan	Sown in nursery and transplanted after 28-30 days	75 x 60 cms	2 gms/cent	-	100 kgs of FYM and 1-1.5 kgs of Neem cake	Groundnut cake – 1 kg/cent	165-180 days
Carrot Daucus carota	July-Feb	Seeds to be sown in ridges	30 x 10 cm	16 gms/cent	-	100 kgs of FYM and 1-1.5 kgs of Neem cake	Vermicompost 10 kg /cent	100-120 days
Chilli Capsicum annuum	Nov-April	Sown in nursery and transplanted after 40-45 days	30 x 30 cms	5-6 gms/cent	-	Farm Yard manure 100 kgs or compost 50 kgs with 2 kgs of neem cake	25 kgs vermicompost with 4 kgs of well decomposed poultry manure	210-240 days
Cluster beans- Cyamopsis tetragonoloba	July-Aug Dec	Seeds to be sown in the ridges	45 x 30 cms	40-50 gms/cent	-	Farm Yard manure 100 kgs or compost 50 kgs with 2 kgs of neem cake	-	90-105 days
Coriander Coriandrum sativum	June-July Nov	Seeds to be sown in ridges	20 x 15 cm	50-100 gms/cent	-	100 kgs of FYM and 1-1.5 kgs of Neem cake	Vermicompost 10 kg /cent	30-40 days
Cucumber Cucumis sativus	June-July April	Seeds to be sown in ridges	60-90 cms	4 gm/cent	-	100 kgs of FYM and 1-1.5 kgs of Neem cake	Neem cake – 1 kg/cent	90 – 100 days

Curry leaf <i>Murraya koenigii</i>	June-July	Seedlings to be raised in the nursery. One year old seedlings to be transplanted in the main yield	10-12 feet	-	1.5 x 1.5 x 1.5 feet	3 kgs of FYM and 300 gms Neem cake before planting	-	20 years
Drumstick <i>Moringa oleifera</i>	June-July	Cuttings to be planted in pits	10-12 feet	-	1.5 x 1.5 x 1.5 feet	3 kgs of FYM and 300 gms Neem cake before planting	-	10 years
Lady's finger <i>Abelmoschus esculentus</i>	Jan-Feb July-August	Direct sowing in the main field	30 x 30 cms	40 gm/cent	-	100 kgs of FYM and 1-1.5 kgs of Neem cake	Neem cake -- 1 kg/cent	100-110 days
Pumpkin <i>Cucurbita maxima</i>	July-Jan April	Seeds to be dibbled in pits	2 x 2.5 mts	3-5 seeds/pit	1 x 1 x 1 feet	1 kg of FYM and 100 gms of Neem cake per pit.	Compost or vermicompost 250-500 gms / plant	Varies according to variety
Radish <i>Raphanus sativus</i>	June-July Plains	Seeds to be sown in ridges	15 x 10 cm	40 gm/cent	-	100 kgs of FYM and 1-1.5 kgs of Neem cake	Vermicompost 10 kg /cent	45-60 days
Ribbed gourd <i>Luffa acutangula</i>	July-Dec April	Seeds to be dibbled in pits	2 mts between pits	3-4 seeds/pit	-	1 kg of FYM and 100 gms of Neem cake per pit	Vermicompost- 500 gms/pit	125 days
Snake gourd <i>Trichosanthes cucumerina</i>	July-Dec April	Seeds to be dibbled in pits	2 x 2.5 mts	3-5 seeds/pit	30 x 30 cms	1 kg of FYM and 100 gms of Neem cake per pit	Vermicompost- 500 gms/pit	135-180 days
Tomato <i>Lycopersicon esculentum</i>	Dec-Jan June Oct-Nov	Sown in nursery and transplanted after 28-30 days	60 x 75 cms	2 gm/cent	-	100 kgs of FYM and 1-1.5 kgs of Neem cake	Groundnut cake -- 1 kg/cent	125-145 days
Vegetable cowpea <i>Vigna unguiculata</i>	June-July Mar	Seeds to be sown in ridges	45 x 15cm x 30 cm	80 gm/cent	-	1 kg of FYM and 100 gms of Neem cake per pit	Vermicompost- 500 gms/pit	75-90 days
Watermelon: <i>Citrullus lanatus</i>	Dec-May	Seeds to be dibbled in pits	2 x 2mts	3-4 seeds/pit	30 x 30 cms	1 kg of FYM and 100 gms of Neem cake per pit.	Compost or vermicompost 250-500 gms / plant	120 days

8. List of plants to be planted based on nutrition

Nutrition	Vegetable/ fruit
Proteins	Broccoli, Spinach, Banana , Strawberry, Water melon
Calcium	Almond, Broccoli, Chinese cabbage, Kale, Orange
Iron	Dark leafy greens , carrot
Vitamin A	Asparagus, Cauliflower, Cabbage, Carrot, Lettuce, Mango, Sweet potato
Thiamin	Green leafy vegetables (Asparagus, Avocados, Broccoli, Cabbage)
Riboflavin	Mushroom, Plantain, Spinach , Apple, Tamarind
Niacin	Asparagus, Broccoli, Mushrooms, Pea nuts
Vitamin C	Grape fruit, Guava, Lemon, Sweet potato, Tomato , Water melon , Drum stick leaves, spinach
Total Folate	Asparagus, Broccoli, Lettuce, Spinach , Strawberries , Beets
Vitamin B Complex	Amaranth
Copper	Yam and radish
Zinc	Sweet Potato
Iodine	Tapioca

9. Companion crops

Vegetable	Companion Plant	Don't Plant Together
Asparagus	Tomatoes	None
Beans (Bush or Pole)	Celery, corn, cucumbers, radish, strawberries and summer savory	Garlic and onion
Beets	Bush beans (not pole beans), cabbage, broccoli, kale, lettuce, onions, garlic	Pole beans
Cabbage Family (cabbage, broccoli, kale, Brussels sprouts)	Beets, celery, dill, Swiss chard, lettuce, spinach, onions, potatoes	Pole beans
Carrots	Beans, tomatoes	None
Celery	Beans, tomatoes, cabbages	None
Corn	Cucumber, melons, squash, peas, beans, pumpkin	Tomatoes
Cucumber	Beans, corn, peas, cabbage	None
Eggplant	Beans, pepper	None
Melons	Corn, pumpkin, radish, squash	None
Onions	Beets, carrots, Swiss chard, lettuce, peppers	All beans and peas
Peas	Beans, carrots, corn, cucumbers, radish, turnip	Garlic, onions
Potatoes	Beans, corn, peas	Tomatoes
Squash	Corn, melons, pumpkins	None
Tomatoes	Carrots, celery, cucumbers, onions, peppers	Corn, potatoes, kohlrabi

10. Care of poultry birds

1. The birds can be fed with maize, broken rice, bajra, jowar, ragi, and rice bran
2. Mix the feed with little bit water for making a mash before giving it to the birds
3. For getting more and bigger eggs the birds should be fed with dried fish powder, scallop/snail powder, earthworm, and termites.
4. Waste food items in the house should be given to the birds.
5. It is advisable to keep the birds in a secured space free from predators while letting them gain weight in the confined space.
6. The chicks up to the age of 21 days, can be kept in bamboo baskets for protection and safekeeping.
7. The birds can be kept inside a bamboo made enclosure or a separate shed according to the financial condition of the rearer.
8. The shed can be made with locally available raw material (timber and bamboo), each bird needs a space of 1 sq ft, and the shed must not be overcrowded.
9. The shed should be well lit with ventilation. There must be facility to clean the shed on a timely manner
10. Nearby shrubs should be cleared to check snakes. Application of ash and lime keeps the lice and ticks in check.
11. MGNREGS has the provision of creation of individual livelihood asset (here the poultry shed) with the following estimates
 - a. 14 female birds, with the sole purpose of eggs: 44 sq ft. = Rs. 30,000
 - b. 48 large indigenous birds: 70 sq ft. = Rs. 36,000
 - c. 48 large indigenous birds: 118 sq ft. = Rs. 52,000
12. Market: The birds should always be sold by weighing and not by mere estimation of weight.

11. Care of goats

1. Each adult goat consumes about 2 to 3 kgs of green leaves/ fodder
2. *Ficus racemosa*, *Acacia nilotica*, *Ficus spp.*, *Azolla*, *Stylo hemata*, *Napier grass*, *gliricidia*, *Ficus spp.*, *radish leaves*, *jackfruit leaves*, *moringa leaves*, *mango leaves*, *maize leaves* are nutritious fodder for the goats. The leaves can be dried to give during the lean season.
3. The cover of legumes is a good source of protein and can be given to the goats.
4. Use of mineral mixture for the goats will increase the shine on the animal, increase milk yield, help in pregnancy, increase urea content in the dung, and helps to avoid the animal drinking its urine.
5. Black salt can be given to animals who have improper digestion and is underweight. It helps lactating animals.
6. Urea Molasses Block should be given to animals having mostly dry fodder.
7. The newborn kid should be wiped off at the nose and mouth portions.
8. The umbilical cord should be cut at a distance of 4.6 cms with a new blade with the application of iodine for 5 days.
9. The newborn should always be fed with colostrum for immunity.
10. The tits of the lactating animal should be washed with Dettol or potassium permanganate.
11. The goat is a very adaptable animal for accommodation. However, it is good to have a separate goat shed if reared for an economic purpose as it protects the animal from predators and nature. It keeps the animal clean and hygienic, hence less susceptible to diseases. This helps the animal to rest and recuperate.
 - a. The shed should have a proper roof to a height of 8 to 9 feet to protect from sun, heat, and rains,
 - b. The floor should have a slope for easy drainage
 - c. The walls should not have any opening to protect from snakes
 - d. Every day, the shed should be cleaned and the dung and urine to be used for making compost
 - e. An enclosure could be made to keep the goats during daytime and deworming and vaccination.
 - f. A water pane and a feeder can be kept for the animals
12. MGNREGS has the provision for the creation of individual livelihood asset (here the goat shed) with the following estimates
 - a. 3 does and 6 other goats: 45 sq ft. = Rs. 34,000
 - b. 5 does and 10 other goats: 97 sq ft. = Rs. 43,000
13. Market:
 - a. The castrated bucks should be sold within the age of 2 years.
 - b. Goats with growth issues, old female and diseased goats should be sold off immediately
 - c. Healthy Does should be bought at the age of one year
 - d. The buck should have equal testicles and should not be aggressive while mating
 - e. Inbreeding should be avoided at any cost.

F.No. K- 11060/05/2021/LH/Moringa
Government of India
Ministry of Rural Development
Department of Rural Development
Rural Livelihoods Division

7th Floor, NDCC-II Building,
Jai Singh Marg, New Delhi
Dated 30th September, 2021

To,

CEO/SMDs of SRLMs,
All states and Union Territories

Subject: Joint Advisory for promotion of Moringa/Drum Stick in convergence with DAY-NRLM/SRLMs.

Sir/Ma'am,

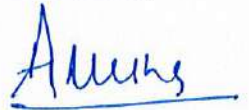
I am directed to refer to MGNREGA Division's Letter No. K-11060/05/21-22/Moringa dated 27th Sept., 2021 on the subject mentioned above and to say that a joint advisory has been issued by Joint Secretary (RL) and Joint Secretary (RE) for promotion of Moringa/Dum Stick by converging strengths of MGNREGA and DAY – NRLM. A copy of advisory is enclosed herewith for further necessary action.

Enclosure: As above

Copy to :-

1. PPS to AS(RD)
2. PS to JS(RL-I)

Yours' faithfully,



(H. R. Meena)

Deputy Secretary to the Govt. of India

F.No. K-11060/05/2021-22/4/Moringa

Government of India

Ministry of Rural Development
Department of Rural Development
(Mahatma Gandhi NREGA Division)

Krishi Bhawan, New Delhi

Dated 27th September, 2021

To,

The Additional Chief Secretaries/ Principal Secretaries/ Commissioners

(in charge of Mahatma Gandhi NREGS)

Rural Development Department,

All State/UTs

Sub: - Joint Advisory for promotion of Moringa/Drum Stick in convergence with DAY-NRLM/SRLMs.

Madam / Sir,

You are aware that Moringa/Drum Stick (*Moringa oleifera Lam.*) plantation is a permitted horticulture activity as Community Asset or Individual Asset (for vulnerable sections for households under Paragraph 5 of the Schedule of the Act) and as Public Works. The Ministry has issued guidelines on 04th May, 2020 for promoting nutri-garden for individual beneficiaries and community in convergence with State Schemes and NRLM.

DAY-NRLM is promoting Moringa plantation through its various initiatives. Some of the SRLMs have raised Moringa nurseries for distribution among SHG members. DAY-NRLM has also trained and deployed a large number of Krishi Sakhi who are well versed with plantation and agri-nutri garden promotion. DAY-NRLM has established a large number of Producer Groups (PGs) with women farmer members for introduction of agro-ecological practices and forward linkages.

In order to promote Moringa plantation activity under Mahatma Gandhi NREGA this advisory has been formulated.

2. Role of National Rural Livelihoods Mission/ State Rural Livelihood Missions:

- i. Integrate Moringa plantation as an essential component of agri-nutri garden initiative of farm livelihoods interventions.
- ii. Identifying Cluster Level Federations (CLFs) for implementation of the project – Promotion of Moringa / drumstick under the individual lands of SHG members.
- iii. Train livelihoods staff, CLFs, PGs, Krishi Sakhi and SHG members for training on promotion of Moringa / Drumsticks and taking up plantation works.



- iv. Providing hand-holding support to CLFs, SHGs, PGs, Krishi Sakhi, and individual beneficiaries in implementation of promotion of Moringa/drum stick.
- v. Identifying the suitable SHG members (as per Para 5 of the Schedule-I of Mahatma Gandhi NREGA) for promotion of Moringa / Drumstick in individual lands in a cluster of villages to ensure marketable surplus and in each village block approach may be adopted to ensure marketable surplus.
- vi. Forward linkages for sale of Moringa / drumstick products in the market.
- vii. Providing advice to the plantation beneficiaries about the inter – cropping activities that could be taken up to generate additional streams of income, which sustain the interest of beneficiaries till plantation starts bearing fruit.
- viii. Will set up a communications network for advisories and support for disease and growth monitoring.
- ix. NRLM and SRLMs will obtain appropriate package of practices for Moringa / Drumstick from State Agriculture Universities.
- x. Each SHG member may be provided five plants from the nursery raised by CLFs.
- xi. DAY – NRLM is promoting Integrated Farming Clusters (IFC) – Moringa can be an important component of these also.
- xii. DAY – NRLM and SRLMs should promote value addition of Moringa products viz leaf, pods and seeds to realise more income by the SHG members.
- xiii. CLF wherein it is an agency for implementation, will be responsible for non-negotiable like quality of works, Geotagging, maintenance and all other non-negotiable of Mahatma Gandhi NREGS in the States.
- xiv. No contractor will be allowed for the execution of nursery raising/ Moringa Plantation as per this advisory.

3. Role of Mahatma Gandhi NREGA:

It should be ensured that only permissible works under Mahatma Gandhi NREGA are taken up after following due process. Therefore, following points need to be adhered:

- i. All non-negotiables (Social Audit for all works etc.) under Mahatma Gandhi NREGA will be followed while taking up activities for promotion of horticulture plants like creation of shelf of works for the promotion of Moringa / Drumstick.
- ii. The cost of material component including the wages of the skilled and semi-skilled workers shall not exceed forty percent at the district level.
- iii. The relevant provisions mentioned in Paragraphs -5 of the Schedule – I of the Act need to be adhered to in selection and prioritising individual beneficiaries.
- iv. The estimate prepared for plantation activities should include the maintenance period for 3-5years(depending on the species). All costs should form part of one estimate.

4. Monitoring & Coordination:

- i. The monitoring of progress should be done at the State/UT level under Chairmanship of state Secretary(in charge of SRLM and Mahatma Gandhi NREGS) alongwith State Mission Director, SRLM and Commissioner, Mahatma Gandhi NREGS.

- ii. At district level, the monitoring should be done by District Level Coordination Committee (DLCC) for convergence headed by the Collector / DPC alongwith District Programme Manager (DPM), SRLM and Additional DPC (ADPC).

5. Miscellaneous:

- i. For durability and productivity of plantation, it is necessary that month wise schedule of activities for tree plantation and responsibility of stake holders is worked out by the SRLM which will vary from State to State.
- ii. For enhanced participation of women in Mahatma Gandhi NREGA implementation, efforts should be made to progressively engage Federation of women Self Help groups as Project Implementing Agencies (PIAs) at the Gram Panchayat/ Block/District level.
- iii. The Cluster Level Federations (CLFs) constituted under the National Rural Livelihoods Mission could also act as the Programme Implementing Agencies (PIAs). This could be especially helpful for promotion of livelihood enhancing category B (Individual) assets.
- iv. For all such works (individual/ Community) of nursery raising and Moringa plantation where CLF, as identified by SRLM, is the programme implementing Agency, this will be the duty of SRLM to propose/place the works to Panchayat at intermediate level (Block Level) to be included and finalized in the Annual Action Plan . The decision of Block Panchayat will be final.
- v. For all such works (individual/ Community) of nursery raising and Moringa plantation where Gram Panchayat is the Programme Implementing Agency, this will be the duty of SRLM to propose/place the works to Gram Panchayat to be included in the Annual Action Plan of Gram Panchayat and will be finalized by the Gram Sabha. The decision of Gram Sabha will be final.

The State / Union Territories are requested to promote Moringa/Drumstick plantation activities after following due process in accordance with guidelines of the concerned scheme.


Joint Secretary (RL)
चरणजीत सिंह / CHARANJIT SINGH
संयुक्त सचिव / Joint Secretary
भारत सरकार / Govt. of India
ग्रामीण विकास मंत्रालय / M/o Rural Development
कृषि भवन, नई दिल्ली / Krishi Bhawan, New Delhi


Joint Secretary (RE)
रोहित कुमार / ROHIT KUMAR
संयुक्त सचिव / Joint Secretary
भारत सरकार / Govt. of India
ग्रामीण विकास मंत्रालय / M/o Rural Development
कृषि भवन, नई दिल्ली / Krishi Bhawan, New Delhi

555621/2020/AS(RD)



अपर सचिव एवं महानिदेशक (एन आर आई डी ए)

Alka Upadhyaya

Additional Secretary & DG (NRIDA)

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भारत सरकार
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ग्रामीण विकास विभाग
कृषि भवन, नई दिल्ली-110001
Government of India
Ministry of Rural Development
Department of Rural Development
Krishi Bhawan, New Delhi-110001

No. K-11060/01/2019/NRLM(Livelihoods)

Dated: 24.7.2020

Subject: Preparation and submission of proposal to promote Farmers Producers Organization (FPO) - Regarding.

Dear Sir / Madam

DAY NRLM has been promoting value chain development interventions through formation of Producer Groups and Producer Enterprises with women SHG members for value addition and marketing of farm produce. A further impetus is now being given to strengthen and expand this initiative to impact the livelihoods of the poor.

2. Several schemes have been launched very recently under various Ministries to boost the rural economy through value addition, processing and market linkages for farm produce.. Three of similar schemes has been mentioned below for your reference:

- a. The Department of Agriculture, Co-operation and Farmers' Welfare under Ministry of Agriculture and Farmers' Welfare has brought out a dedicated Central Sector Scheme, 'Formation and Promotion of 10,000 Farmers Producers Organization'. : operational guidelines as Annexure -1
- b. Scheme for Agro-Marine Processing and Development of Agro-Marine Clusters (SAMPADA): Brief details of the scheme and sub-schemes is attached as annexure-2.
- c. Pradhan Mantri Matsya Sampada Yojana (PMMSY): An operational guideline is attached as annexure-3.
- d. Agri-infrastructure Fund: An operational guideline on this is attached as annexure-4.

3. These schemes offer a huge opportunity for convergence with the value chain initiatives taken up under DAY NRLM and to leverage resources from these scheme to strengthen existing FPOs and to promote new FPOs.

4. SRLMs may go through the schemes guidelines and come out with at least two proposals each on 'Formation and Promotion of FPOs' through convergence involving SHG women. This will help the SHG women to participate in value chain and get better price of their produces.

With warm regards.

Encl-a/a

The Principal Secretary (RD)
All States /UTs.

Yours Sincerely,

Alka
(Alka Upadhyaya)



FORMATION AND PROMOTION OF 10,000 FARMER PRODUCER ORGANIZATIONS (FPOs)

OPERATIONAL GUIDELINES



Government of India
Department of Agriculture, Co-operation & Farmers' Welfare
Ministry of Agriculture & Farmers' Welfare



Formation and Promotion of 10,000 Farmer Producer Organizations (FPOs)

Operational Guidelines

Government of India

Ministry of Agriculture & Farmers' Welfare

Department of Agriculture, Cooperation & Farmers' Welfare

नरेन्द्र सिंह तोमर
NARENDRA SINGH TOMAR



कृषि एवं किसान कल्याण,
ग्रामीण विकास और पंचायती राज मंत्री
भारत सरकार
कृषि भवन, नई दिल्ली
MINISTER OF AGRICULTURE & FARMERS WELFARE,
RURAL DEVELOPMENT AND PANCHAYATI RAJ
GOVERNMENT OF INDIA
KRISHI BHAWAN, NEW DELHI

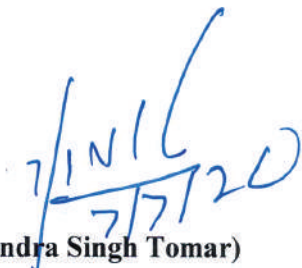


MESSAGE

Agricultural land holding in the country is dominated by small and marginal farmers with average size of less than 1 hectare. These Small and Marginal Farmers (SMFs) face some challenges both in production and post-production stages like access to production technology, quality inputs at reasonable prices, credit, custom hiring, seed production, value addition, processing, investments and most importantly market access.

Collectivization of such small and marginal farmers to form their organizations as Farmer Producer Organizations (FPOs) has been recognized as the most effective and appropriate institutional mechanism to reduce cost of production, increase per unit productivity and facilitate better market linkages so as to enhance their net income. This will not only help in augmenting income of the farmers but also considerably improve rural economy and create job opportunities for rural youths in villages itself.

Realizing the significance of FPOs, Government had announced in Union Budget formation of 10,000 new FPOs by 2023-24. I hope this dedicated new Central Sector Scheme "Formation and Promotion of 10,000 Farmer Producer Organizations (FPOs)" will serve its objective fully and farm economy will get further boost.


(Narender Singh Tomar)

परशोत्तम रूपाला
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D.O. No.....MOS(A&FW)/VIP/2019-20/

FOREWARD

Over the years, farm holding size has reduced, which makes it difficult to adopt farm mechanization and apply the scientific practices of production. Further, these small holding farmers face challenge and difficulty in accessing the market and realise remunerative prices for their produce.

In order to address such constraints of small farm holders in production and marketing, collectivization of these farmers to leverage economy of scale through formation of their group/association leading to formation of in the form of Farmer Producer Organization (FPO), is a trajectory to achieve the target of doubling the farmers' income.

I appreciate the department for bringing out a dedicated Central Sector Scheme "Formation and Promotion of 10,000 Farmer Producer Organizations (FPOs)". I hope that this Operational Guidelines will help all stakeholders to draw the benefit from the Scheme.


(Parshottam Rupala)

Dated: the 7th July, 2020.

553926/2020/NRLPS

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FOREWARD

Our small and marginal farmers face challenges both in production and post-production stages in terms of access to production technology, credit and market linkages etc.

Over the years, it is felt that collectivization of such farmers to form their organizations as Farmer Producer Organizations (FPOs) is critical to reduce cost of production and facilitate better market linkages so as to enhance their net income.

I hope launching of this Central Sector Scheme "Formation and Promotion of 10,000 Farmer Producer Organizations (FPOs)" will help small and marginal farmers to form FPOs on sustainable basis.

(Kailash Choudhary)

Dated: the 7th July, 2020

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PREFACE

Government of India realizing indispensable role of collectivization of farmers particularly small and marginal farmers into their groups to leverage the economies of scale in production and marketing, Department of Agriculture, Cooperation & Farmers' Welfare (DAC&FW), Ministry of Agriculture & Farmers' Welfare (MoA&FW), launched a pilot programme for promoting Farmer Producer Organizations (FPOs) during 2011-12 itself under two sub-schemes of the Rashtriya Krishi Vikas Yojana (RKVY), namely the National Vegetable Initiative for Urban Clusters and the Programme for Pulses Development for 60,000 rain-fed villages. The initiative got real momentum after Department issued a national policy and process guidelines for FPOs in 2013.

However, FPOs continue to face challenges like lack of market access & credit linkages, inadequate financial support and lack of managerial skill etc. To address these challenges, Department has formulated a dedicated central sector scheme "Formation and Promotion of 10,000 Farmer Producer Organizations (hereinafter "FPOs") for implementation across the country. Under the scheme, FPOs can be registered either under Part IXA of Companies Act, 1956 (as made applicable by Section 465(1) of Companies Act, 2013), or Under Cooperative Societies Act of the States and handholding is to be done for five years by professionally managed and run 'Cluster - Based Business Organizations (CBBOs). Issues of marketing and institutional credit linkages have also been addressed. In addition, provision has been made for assistance to existing FPOs as well as to promote formation of FPOs by Agri-Value Chain organization/ Industry.

I am confident that this scheme will meet the need and aspirations of FPOs and create a supportive ecosystem for them; and thus FPOs will be viable and economically sustainable.


 (Sanjay Agarwal)

Dated: the 7th July, 2020.

CONTENTS

Sl. No.	ITEMS	Page
1	Aims and Objectives of the Scheme	1
2	Farmer Producer Organization(FPO)	1
3	Broad Services and Activities to be undertaken by FPOs	1
4	Strategy for Formation of FPO and Identification of Cluster Area	2
5	National Project Management Agency (NPMA)	5
6	Implementing Agencies	7
7	Cluster- Based Business Organizations (CBBOs)	9
8	Budgetary Provisions	14
9	FPO Formation & Incubation Cost including CBBOs Cost and Cost of Monitoring & Data Management/MIS Portal including Cost of NPMA	15
10	FPO Management Cost	16
11	Provision for Equity Grant	17
12	Credit Guarantee Facility	22
13	Training and Capacity Building for Promotion of FPOs	29
14	Implementation & Monitoring Mechanism	31
15	Evaluation of the Scheme	36
16	Integrated Portal	37
17	Miscellaneous	37
18	Annexure I to II	40

- 1.1 To provide holistic and broad based supportive ecosystem to form new 10,000 FPOs to facilitate development of vibrant and sustainable income oriented farming and for overall socio-economic development and wellbeing of agrarian communities.
- 1.2 To enhance productivity through efficient, cost-effective and sustainable resource use and realize higher returns through better liquidity and market linkages for their produce and become sustainable through collective action.
- 1.3 To provide handholding and support to new FPOs up to 5 years from the year of creation in all aspects of management of FPO, inputs, production, processing and value addition, market linkages, credit linkages and use of technology etc.
- 1.4 To provide effective capacity building to FPOs to develop agriculture-entrepreneurship skills to become economically viable and self-sustaining beyond the period of support from government.

2.0 Farmer Producer Organization (FPO)

FPO is a generic name, which means and includes farmer- producers' organization incorporated/ registered either under Part IXA of Companies Act or under Co-operative Societies Act of the concerned States and formed for the purpose of leveraging collectives through economies of scale in production and marketing of agricultural and allied sector. However, FPOs registered under Co-operative Societies Act of the State (including Mutually Aided or Self-reliant Cooperative Societies Act by whatever name it is called) for the purpose of this Scheme, is to be insulated from all kinds of interference including in election process and day today management through suitable provisioning in their Memorandum of Association and Bye-laws with a view to encourage healthy growth and development of FPO.

3.0 Broad Services and Activities to be undertaken by FPOs

The FPOs may provide and undertake following relevant major services and activities for their development as may be necessary:-

- (i) Supply quality production inputs like seed, fertilizer, pesticides and such other inputs at reasonably lower wholesale rates.
- (ii) Make available need based production and post-production machinery and equipment like cultivator, tiller, sprinkler set, combine harvester and such other machinery and equipment on custom hiring basis for members to reduce the per

- (iii) Make available value addition like cleaning, assaying, sorting, grading, packing and also farm level processing facilities at user charge basis on reasonably cheaper rate. Storage and transportation facilities may also be made available.
- (iv) Undertake higher income generating activities like seed production, bee keeping, mushroom cultivation etc.
- (v) Undertake aggregation of smaller lots of farmer-members' produce; add value to make them more marketable.
- (vi) Facilitate market information about the produce for judicious decision in production and marketing.
- (vii) Facilitate logistics services such as storage, transportation, loading/un-loading etc. on shared cost basis.
- (viii) Market the aggregated produce with better negotiation strength to the buyers and in the marketing channels offering better and remunerative prices.

❖ A Business Plan Linked development in both medium and long-term will be the hallmark of strong business growth for FPO.

4.0 Strategy for Formation of FPO and Identification of Cluster Area

4.1 Formation and promotion of FPO is based on Produce Cluster Area, which is broadly defined as:

“Produce Cluster Area” for purpose of FPO formation and management herein means a geographical area wherein agricultural and allied produce such as horticultural produce of similar or of almost similar nature is grown / cultivated; therefore, an FPO can be formed for leveraging economies of scale in production and marketing. This will also cover Organic Produce and Natural Farming.

4.2 Produce cluster area is to be identified with the input of District Level Monitoring Committee (D-MC), State Level Consultative Committee (SLCC), other Ministries/Departments of Government of India and the States as well as with recommendations of Implementing Agencies with input from Cluster- Based Business Organization (CBBO) and suggestions of relevant Government of India Organizations.

4.3 CBBOs will undertake Feasibility Study in assigned clusters which will include the following:

- (i) **Diagnostic study including Baseline survey** to find out produce and socio-

553926/2020/NRLPS cultural similarity, existing gap and potential activity, interventions in terms of infrastructure, services, etc. required in the value chain of agricultural and horticultural produce including post-harvest management and marketing. Baseline survey should also identify current situation of farming, small, marginal and landless farmers for aggregation, to identify minimum geographical area for potential interventions etc.

- (ii) **Prospective Business Plan** in order to establish a fit case for formation of an economically sustainable FPO.

4.4 FPO with a minimum farmer-members' size of 300 shall be eligible under the scheme in plains, while in North-Eastern and Hilly areas* (including such other areas of UTs), size of 100 shall be eligible. Farmer-members cohesively located with almost same interest are to be mobilized to form a group of 15-20 Members, calling the group as Farmer Interest Group (FIG) or Self Help Group (SHG), Farmers Club (FC), Joint Liability Group (JLG) , Rythu Mitra Group. Such 20 or more groups from a produce cluster area or a village/ cluster of neighboring villages based on certain commonalities are to be put together to form an FPO with a minimum farmer-members size of 300 to be eligible under this scheme in plains while in Hilly and North Eastern regions, 7-8 are to be put together to form an FPO with a minimum farmer-members size of 100. It may provide special focus to include small, marginal and women farmers/women SHGs, SC/ST farmers and other economically weaker categories etc. as members to make FPOs more effective and inclusive.

* - *Hilly area means area at a height of 1000 metre or above MSL*

4.5 However, efforts will be made to achieve an average membership size of 500 farmers in plain areas and 200 farmers in Hilly and North-Eastern regions to make them sizable for economic sustainability and profitability. Based on experience/ need, Department of Agriculture, Cooperation and Farmers Welfare (DAC&FW) may revise the minimum membership norm per FPO, with the approval of Union Agriculture Minister. Efforts will be made to form on an average two FPOs in at least each of potential 5,000 blocks out of existing about 7,000 blocks. However, efforts will be made to cover all blocks in the country.

4.6 The FPOs can federate at district level and State level based on their need of processing, branding and marketing of produce/trading of commodities, which are essential for scaling up for survivability and growth in an era of competition.

Based on their need, success and product, they can federate at the National level also to promote packaging/branding and domestic/international trading of quality produce. Such Federation may avail advisory of National Project Management Agency (NPMA) as well as will be eligible for Credit Guarantee facility under the Scheme to strengthen their activities relating to setting up of infrastructure and supply chain for value addition and marketing.

- 4.7 While adopting cluster-based approach for produce or produce mix, formation of FPOs will also focus on “One District One Product” approach for development of product specialization, in case the focused agriculture produce has been declared for that district, whereby FPOs will be encouraged for promoting processing, branding, marketing and export of the product for better value realization. There may be more than one cluster for one product in one district and a cluster also may extend beyond a district. However, to be an FPO economically sustainable and diversify risk & enhance returns, the FPO will also have additional product and service mix; so that there are enough activities and engagements with the members throughout the year. Furthermore, FPOs can federate at district level, State level & National level for the product identified as per their requirement of processing, branding and marketing.
- 4.8 Concerted efforts will be made to prioritize formation of FPOs in aspirational districts through intense awareness programmes and making FPOs economically sustainable through adequate support, handholding, training & skill development. However, intensive efforts will be made to form & promote at least 15% of the total targeted 10,000 FPOs (i.e. 1,500 FPOs) in next 5 years in aspirational districts with at least one FPO in each block of aspirational districts of the country for their development. In order to promote the forest and minor forest produce by the tribal communities, intensive efforts will be made by the implementing agencies to prioritize formation and promotion of FPOs in the notified tribal areas in the country. The benefits of quality input, technology, credit and value addition and processing as well as better market access should reach the tribal community and North-East Region through the Scheme in co-operation with Tribal Affairs Ministry, DONER and North Eastern Council (NEC).
- 4.9 Existing FPOs will also be allowed to avail relevant benefits, if not earlier availed in any scheme of Government of India, such as Credit Guarantee Fund and advisory services from National Project Management Agency (NPMA) under the

Scheme. The FPOs which are already registered but have not been provided funds under any other schemes and have not yet started operation will also be covered under the Scheme.

5.0 National Project Management Agency (NPMA)

- 5.1 At national level, a National Project Management Agency (NPMA) will be set up by SFAC through transparent manner for providing overall project guidance, data maintenance through integrated portal and information management and monitoring. The NPMA will be equipped with the technical team with five categories of specialisation in Agriculture / Horticulture, Marketing and Processing, Incubation Service Provider, IT/MIS and Law & Accounting to provide overall guidance at all India level.

5.2 Criteria for Identification of NPMA:

The NPMA will be expected to provide hand holding support and mentoring support to CBBOs, and need to have extensive experience in performing strategic roles, preferably in the agricultural domain at the national and state level. SFAC may, while formulating the criteria for selection of NPMA, take into account the appropriate qualifications and experience of requisite experts, relevant experience of organization/entity in guiding both companies and co-operative organizations as reasonably required for discharge of role envisaged for NPMA under the Scheme including the minimum net worth for suitability. The strength and experience may include strategic inputs around organizational management, processing, value addition, marketing & market linkage in agriculture/horticulture, accounting & auditing, compliance issues, ICT & MIS experience, incubation services and providing project management support to central and state governments, transaction and post transaction management support, and qualification of experts proposed for the work. The period of engagement of NPMA is to be decided suitably.

5.3 Duties and Responsibilities of NPMA :

The role of the NPMA shall, *inter alia*, include those given as under-

- **Drawing contours of the program including structuring of clusters:-**

NPMA would start the assignment by chalking out program with detailed SOPs for each stakeholder in the value chain. Identification of target value chains required would be steppingstone for development of the road map. Once the

Value chains are established, it defines clusters to be chosen for FPO formation. Here, NPMA would draft out detailed SOP for CBBO for further action. Value chain analysis would also identify both forward/backward linkage mechanism.

- **Transaction Advisory for selection of CBBOs:-**

NPMA would provide Transaction Advisory services to Implementing Agencies (those who seek their support) for selection of CBBOs. After preparation of action plan for project execution, NPMA may assist Implementation Agencies in carrying out transaction for engagement of CBBOs for said clusters. Alternately, Implementing Agencies may carry out the selection process on their own. Such step requires delineating detailed scope, team requirement with relevant qualifications & experience.

- **Post transaction support for effective project/programme implementation:-**

After selecting CBBOs as per the requirements, NPMA will be responsible to support SFAC, NCDC & NABARD and other Implementing Agencies including State nominated Implementing Agencies in effective implementation and monitoring of the project execution. Key Performance Indicators (KPIs) based monitoring of CBBOs would be conducted regularly by NPMA. NPMA in turn will appraise N-PMAFSC regarding the performance of CBBOs, formation of FPOs, handholding support provided by CBBOs etc. through detailed MIS submitted on monthly basis for which ICT based MIS Integrated Portal will also be developed. Further, NPMA may also handhold CBBOs in effective delivery of the project. NPMA should work in tandem with CBBOs and Professional Agencies, if any, and ensure that adequate support is extended to States of North-East and hilly regions to offset deficiency in specialized manpower and expertise available in such areas including even extending support directly to FPOs/Federation of FPOs for their promotion wherever required. It will assist DAC&FW in formation and promotion of FPOs in the State(s) where there are unavailability of experts. It will also provide suitable professional advisory to existing FPOs who approach for advice. It may also provide professional advisory to new FPOs being promoted by Value Chain Organisations under the Scheme when required.

- **Assist in structured interface with stakeholders like Ministries, Financial Institutions, Training and Research & Development Institutions:-**

- (i) NPMA is desired to bring in specific capabilities into the system. NPMA may also act as extended arm with specific output to N-PMAFSC while interacting with various stakeholders like Central/State Departments, Financial Institutions,

Training, Research & Development Institutions or such forum at large. NPMA would help N-PMAFSC to structure the approach, create outreach materials, organize and structure discussions & partnerships etc.

- (ii) To function as National level data repository and will maintain the integrated portal, serving as national platform for FPOs, which will not only cater to meet the data needs(MIS), but will also a function as digital platform for maintaining membership, activities, business growth and annual accounts of FPOs. It will provide requisite data and analysis to DAC&FW, N-PMAFSC and DMI as may be required from time to time.

- **Support in formulation of programme & policy directions:-**

N-PMAFSC will create knowledge for FPO formation and bring out programmatic & policy suggestions/ directions. NPMA will assist in formulation of such suggestions, churned out from the project's learning; which has capability of adding value to agri-business overall.

- **Policy orientation and related advocacy at National and State level:-**

NPMA will assist in facilitating and identifying National and State level institutes in the field of Agribusiness. There is need to partner with such stakeholders for effective project implementation. NPMA shall assist in linking/undertaking MoUs with these institutions for long term engagement and development of FPOs. Also, NPMA will assist in such advocacy among stakeholders.

6.0 Implementing Agencies

6.1 In order to form and promote FPOs in uniform and effective manner so as to achieve the target of formation of 10,000 new FPOs in 5 years and to make the FPOs economically sustainable, initially three Implementing Agencies, namely, SFAC, NCDC and NABARD, shall be responsible to form and promote FPOs.

6.1.1 SFAC will form and promote those FPOs to be incorporated under Part IX A of Companies Act.

6.1.2 NCDC will form and promote those FPOs to be registered under any Co-operative Societies Act of the States.

6.1.3 NABARD will form and promote those FPOs which are registered either under Part IX A of Companies Act or registered under any Co-operative Societies Act of States.

6.2 In addition to afore-stated three implementing agencies, if any State/Union Territory is desirous to have its own implementing agency, State/UT may

approach DAC & FW with details about the State/UT, its agency, activities and experience of the agency etc., and DAC & FW will consider the proposal on experiences and existing manpower required for formation and promotion of FPOs in the region.

- 6.3 DAC&FW may, in due course, identify and assign other additional Implementing Agencies to cover various sectors and geographical locations to form 10,000 FPOs as per the need of the programme.
- 6.4 The Initial Implementing Agencies as well as the State level or any other Implementing Agencies approved by DAC&FW shall also be supported.
- 6.5 Year-wise indicative target for Implementing Agencies- Considering the Implementing Agencies' existence in the States/Regions/Districts/Produce Clusters, their human resource and also their area of specialization, targets are to be tentatively allocated by Project Management Advisory and Fund Sanctioning Committee (N-PMAFSC) in consultation with the Implementing Agencies. In such case, the targets may be interchangeable on requirement basis.
- 6.6 Duties and Responsibilities of Implementing Agencies:**
- (i) Implementing Agencies will closely and cohesively work with CBBOs to ensure that CBBOs perform their activities to make FPOs economically sustainable.
 - (ii) Implementing Agencies will also monitor CBBOs to ensure regular data entry on integrated portal with respect to details of respective FPOs.
 - (iii) Implementing Agencies can operate through their MIS portal till Integrated Portal is put in place to ensure uniformity of database on FPO. Once national level Integrated Portal managed through National Project Management Agency (NPMA) is put in place, Implementing Agencies will have to ensure interoperability with Integrated Portal to ensure smooth data transfer and operate in coordination with Integrated Portal design and requirement.
 - (iv) NABARD and NCDC will maintain and manage Credit Guarantee Fund (CGF) as per the established procedure.
 - (v) Implementing Agencies in consultation with DAC&FW will formulate rating

553926/2020/NRLPS tools for FPOs to assess them in terms of level of activity, economic viability and sustainability, etc. The rating of the FPOs can be used as an instrument to promote FPOs.

- (vi) Implementing Agencies will prepare Annual Action Plan and submit to DAC&FW in advance for consideration of Project Management Advisory and Fund Sanctioning Committee (N-PMAFSC) along with prescribed Utilization Certificate.
- (vii) As assigned by DAC&FW/N-PMAFSC, Implementing Agency will coordinate with concerned Value-Chain Organization(s) regarding stages of formation and promotion of FPOs by those organizations along with FPO management cost & utilization of previous amount along with documentary proof from time to time as well as requirement of Equity Grant for channelizing their claim to N-PMAFSC for payment.
- (viii) Other Implementing agencies may create with prior approval of DAC&FW, if and when required, their monitoring and data management units for FPOs to manage the growing volume of FPOs and their activities but will coordinate with NPMA to provide all requisite input, as national level data repository.

7.0 Cluster- Based Business Organizations (CBBOs)

7.1 Implementing Agencies will set up Cluster- Based Business Organizations (CBBOs) at the State/Cluster level to form and promote FPOs as per their requirements; however, targets for produce clusters, full or part of the State or region will be allocated by Project Management Advisory and Fund Sanctioning Committee (N-PMAFSC). The Implementing Agencies will apply due diligence to ensure that professionally competent CBBOs are transparently engaged & have experience in promotion and professional supports to FPOs.

- a) In a State, based on geography, produce clusters, cropping pattern, etc., there may be one or more than one CBBO. Even one CBBO may serve more than one State as per requirement. However, CBBOs should be given work according to available human resources with them, their past turnover and work experience etc.
- b) The CBBOs should be going concern with professional experience and exposure in formation of FPOs in agriculture and allied sector and providing handholding support to them.
- c) The CBBOs should be supported with five categories of specialists from the

domain of (i) Crop husbandry; (ii) Agri. marketing / Value addition and processing; (iii) Social mobilization; (iv) Law & Accounts; and (v) IT/MIS in agriculture & agriculture marketing. The CBBOs with requisite number of other technical and supporting staff to be housed/operated from their own offices in respective States or from offices of respective Implementing Agencies, which have selected them.

7.2 Criteria for Identification of CBBOs:

- a) The professional organization to be identified to function as CBBOs will be selected following a transparent method and the organization may be required to demonstrate such technical strength as is reasonably required for discharging its role envisaged under the Scheme.
- b) A Committee under Chairmanship of MD, SFAC with representatives of Chairman, NABARD and MD, NCDC will consider and recommend the criteria for eligibility and qualification and other minimum requirements to select the CBBOs. The Committee may consider minimum requisite qualification and experience of requisite experts of CBBO, area of expertise & minimum experience as well as net worth of organization to be selected as CBBO. Finalization of criteria for selection will be with approval of DAC&FW.
- c) Implementing agencies, if required, may seek the support of NPMA for assistance in the selection process.
- d) Each Implementing Agency will then draw up the list of empaneled CBBOs for engagement by them in any cluster as may be necessary.
- e) The initial engagement of CBBOs will be for a period of maximum three years for the purpose of formation of new FPOs (for which they will continue handholding for entire relevant five years for each concerned FPO as provided in the Scheme). In case the performance of the CBBO is found satisfactory by Implementing Agency, their term may be extended appropriately.
- f) Implementing Agency will review the performance of CBBOs from time to time for their continuation or otherwise to ensure that CBBOs perform efficiently in formation and promotion of FPOs
- g) Interested State and Central Government Agriculture Universities and KVKs promoting FPOs may be empanelled as CBBOs as may be relevant in consultation with N-PMAFSC on nomination basis.

553926/2020/NRLPS^h) Subordinate and attached organisations of DAC&FW may be co-opted on operational need based in consultation with N-PMAFSC on nomination basis.

7.3 Duties and Responsibilities of CBBOs:

- a) Assist in the implementation of the programme as suggested by the NPMA and as per Scheme guidelines.
- b) Assist Implementing Agency in cluster identification.
- c) Assist in community mobilization - baseline survey, cluster finalization, value chain study, formation of groups and FPO and assist in their periodic meetings. They may seek the assistance of Local Bodies, wherever feasible in identification of proper produce cluster and mobilization of members.
- d) Registration of FPOs and Training of BODs on roles, responsibilities, management and also capital/ equity mobilization.
- e) Training and capacity buildings of FPOs/farmer groups- Training needs identification, develop training modules, conduct basic training workshops and exposure visits.
- f) Encourage and promote social cohesiveness amongst members of FPOs.
- g) Preparation and execution of Business Plans for long-term sustainability of FPO- Business plan preparation (for different incubation services), acquiring land, mobilizing equity capital and implementation of Business Plan while assisting in input management, adoption of proper and good agricultural practices through knowledge sharing, aggregation of produce, quality management, assaying, processing, packaging, supply chain development and marketing and market linkages with buyers/processors/exporters, trading, export etc as may be necessary to ensure long-term sustainability of FPOs.
- h) Assist in regular interface with stakeholders like various Government Departments, Financial Institutions, Training, Research and Development Institutions at the cluster level.
- i) Assist FPO in availing Equity Grant and Credit Guarantee Facility as per need and growth.
- j) Incubation/handholding services for sustainability - Provide support and monitoring in terms of incubation activities; capacity building of BODs and FPO management for sustainability. The incubation/handholding services include ensuring input, market linkages, preparing and implementing related business plans.

- k) Facilitate establishment of necessary common pool production, marketing and processing infrastructure facility by the FPO, as may be necessary, to develop the business for long-term viability.
- l) Facilitating traceability, compliance and global market connectivity.
- m) Review and monitoring of the field team during implementation as per desired outcomes.
- n) Assist in communication and dissemination of information to farmers by way of market and crop advisory.
- o) Progress report on all specified target activities to be submitted periodically to the NPMA.
- p) Ensuring programme/project targets are met.
- q) Assist in compliance issues of FPO including their capacity building in the subject.
- r) Assist NPMA and Implementing Agency in data collection and generating MIS reports/information in the required data sheets.
- s) Assist Implementing Agency and NPMA in rating of FPOs as may be necessary.
- t) Assist in federating FPOs when necessary for business growth and expansion.
- u) Assist FPO in proper financial management and utilization of fund and accounting and timely submission of returns and certificates.
- v) Any other activity related to implementation, management and monitoring of the project.
- w) An advisory body consisting of various stakeholders including state government representative, NGOs, RIs, KVKs or any other support institutions will provide active guidance over project implementation.

7.4 Payment to CBBOs:

- a) Payment will be made to the CBBOs by Implementing Agencies. The Implementing Agencies after applying the due diligence will satisfy themselves with the performance of the CBBOs as per criteria laid down below at clause (c) before submitting the proposal to the DAC&FW. The Project Management Advisory and Fund Sanctioning Committee (N-PMAFSC) will consider the proposal for release to Implementing Agencies.
- b) Payment shall be released after receiving the utilization certificate of the previously released amount.
- c) Following indicative criteria/guidelines are provided for guidance of

553926/2020/NRLPS Implementing Agencies for performance assessment of CBBOs-

- (i) In the first six months of a FPO project, performance of the CBBOs will be assessed based on baseline survey, report submitted and aggregation activities undertaken for FPO formation.
- (ii) In the period from six months to one year, performance of the CBBOs will be assessed based on (a) No. of FPOs formed in allocated aspirational districts in different blocks, if any (b) number of farmers mobilized to become the members of FPOs with minimum membership of 300 in case of plain areas and 100 members in case of North-Eastern and Hilly areas (including such other areas of UTs) as per prescribed minimum number; (c) Registration of FPOs; and (d) formulation of Business Plan for FPOs.
- (iii) In the second year, performance will be based on (a) first equity grant availed by the FPOs;(b) statutory clearances obtained to carry out business activities; (c) minimum 50% of business activities executed as per business plan; (d) number of preliminary awareness programmes for member/BoDs and exposure visits of FPOs are undertaken; (e) first tranche of Equity Grant availed by FPOs, if any; (f) first tranche of Credit Guarantee Facility availed by FPOs, if any; (g) Institutional Training provided to CEOs/BoDs; and (h) registration of FPOs in e-NAM or other electronic platform undertaken and trading activity thereon taken place.
- (iv) In third and fourth year, performance of the CBBOs will be assessed based on – (a) issuing Share Certificates to each member in third year, if any; (b) audited Financial Statements for FPOs for second year and third year in due time and filing as required; (c) MoU and vendor registration as per Business Plan with Marketing Agencies/Institutional Buyers; (d) trading/uploading of produce in e-NAM/other sources, if any; (e) second tranche equity grant to FPOs, if any; and (f) second tranche of credit guarantee facility, if any .
- (v) In the fifth year, performance of the CBBOs will be assessed based on (a) audited Statements of accounts of FPO and filing it; (b) 100% of agri-business plan executed and value chain developed; (c) revenue model showing financial growth in last 3 consecutive years; (d) detailed project completion Report; and (e) third tranche of credit guarantee facility if any.

553926/2020/NR/15 8.0 Budgetary provisions

8.1 The scheme on formation and promotion of 10,000 FPOs is to be implemented till 2023-24 with budgetary support of Rs. 4496.00 crore. Since financial support excepting management cost is to be extended for five years, therefore, FPOs formed will be required to be financially supported till 2027-28, with the additional committed liability for period from 2024-25 till 2027-28 of Rs. 2369.00 crore say Rs. 2370.00 crore. Thus, the total budgetary requirement up to 2027-28 would be Rs. 6866.00 crore. The budget requirement is to be met from overall allocations of DAC&FW.

8.2 Payment to Implementing Agencies:

8.2.1 DAC&FW will make the advance release to the Implementing Agencies (IAs) on six monthly basis based on recommendation of N-PMAFSC, Annual Action Plan (AAP) of IAs and the due utilization certificate submitted to meet out the expenses for engaging NPMA, FPO formation & incubation cost to CBBO and also meeting out the cost of FPO management cost direct to concerned FPOs account on recommendation of concerned CBBO and Equity Grant etc. for effective and timely implementation of the programme. The Implementing Agencies will develop the payment schedule based on their various stages and component of payment involved. The Implementing Agencies will raise the demand to DAC&FW for release of payment. The Implementing Agencies will submit utilization certificate of last payment released as per GFR for releasing the next payment to them. In case of training, NABARD and NCDC will submit to N-PMAFSC the training schedule for a year with tentative expenditure for training through specialised training institutes organised through their respective nodal training Institute. DAC&FW will make due payment to NABARD and NCDC for training through specialised Institutions based on the demand raised by NABARD and NCDC respectively and utilisation certificate will be submitted to DAC&FW by both as due. Further, as regards DAC&FW's share towards Credit Guarantee Fund (CGF) to be maintained and managed by NABARD and NCDC, the DAC&FW will provide its matching share to NABARD and NCDC, as the case may be, which in turn will submit detailed status of utilization to DAC&FW before raising the further demand for next installment of CGF.

Implementing Agencies (viz. SFAC and NCDC) will be given upfront amount computed @ 3% of estimated annual expenditure in the form of supervision charges to meet the expenses incurred in discharge of their duties and responsibilities; while additional amount computed @ 2% will be given to them based on their performance assessment. The supervision amount will be released in two instalments and second instalment may be released after assessment of performance. This amount shall not include expenditure towards Credit Guarantee Scheme & Equity Grant. However, NABARD, as consented, will not charge any supervision charges for activities undertaken towards formation and promotion of FPOs under the Scheme. The expenditure on this account of supervision charges will be met from the budget of this Scheme.

The performance assessment will be done on quarterly or half yearly basis by N-PMAFSC, as deems fit. The N-PMAFSC will recommend to DAC&FW for consideration of release of additional amount @ up to 2%. The performance assessment criteria may be as under-

- (i) During the first four quarter , number of FPOs registered will be basis for assessment of performance.
- (ii) For the remaining period after one year, there may be criteria like (a) activeness of FPO exhibited by their activities; (b) adoption and execution of business development plan; and such other criteria as decided by N-PMAFSC.
- (iii) Sustainability of FPOs formed.

9.0 FPO Formation & Incubation Cost including CBBOs Cost and Cost of Monitoring & Data Management/MIS Portal including Cost of NPMA

9.1 The Formation and Incubation cost of CBBO, limited to maximum of Rs. 25 lakh / FPO of support or actual which is lesser, is to be provided for five years from the year of formation. It includes cost towards undertaking baseline survey, mobilization of farmers, organizing awareness programmes and conducting exposure visits, professional hand holdings, incubation, cost of engaging CBBOs and other overheads etc. There is also a provision for cost of NPMA towards manpower, establishment, travel and advisory and maintaining MIS portal. This also includes a provision towards cost for development of appropriate overall ICT based MIS web portal for the Scheme.

- 10.1 Under the scheme, financial support to Farmer Producer Organization (FPO) @ up to maximum of Rs. 18 lakh / FPO or actual, whichever is lesser is to be provided during three years from the year of formation. The financial support is not meant for reimbursing the entire administrative and management cost of FPO but it is to provide the financial support to the FPOs to the extent provided to make them sustainable and economically viable. Hence, the fourth year onwards of formation, the FPO has to manage their financial support from their own business activities. The indicative financial support broadly covers (i) the support for salary of its CEO/Manager (maximum up to Rs.25000/month) and Accountant (maximum up to Rs. 10000/month); (ii) one time registration cost(one time up to maximum Rs. 40000 or actual whichever is lower); (iii) office rent (maximum up to Rs. 48,000/year); (iv) utility charges (electricity and telephone charges of office of FPO maximum up to Rs. 12000/year); (v) one-time cost for minor equipment (including furniture and fixture maximum up to Rs. 20,000); (vi) travel and meeting cost (maximum up to Rs.18,000/year); and (vii) misc. (cleaning, stationery etc. maximum up to Rs. 12,000/year). Any expenditure of operations, management, working capital requirement and infrastructure development etc., over and above this, will be met by the FPOs from their financial resources.
- 10.2 FPO being organization of farmers, it does not become feasible for FPO itself to professionally administer its activities and day to day business, therefore, FPO requires some professionally equipped Manager/CEO to administer its activities and day to day business with a sole objective to make FPO economically sustainable and farmers' benefiting agri-enterprise. Not only for business development but the value of professional is immense in democratizing the FPOs and strengthening its governing system. To substantiate the fact, the most successful example is of dairy co-operative in India where professional managers have contributed immensely to make it a success. There are other so many examples which prove the absolute requirement of professional managers. The number of professional staff could depend on geographical spread of business operation, diversity of activities and volume of business. However, an FPO should have minimum a CEO/Manager and an Accountant. Accountant is required in FPO to look after its day to day accounting work. Based on requirement, FPO can engage other staff also.
- 10.3 The CEO/Manager is to be appointed by the executive body of the FPO who should be either graduate in agriculture / agriculture marketing / agri-business management or BBA or equivalent. Locally available professionals with 10+2 and

preferably diploma in agriculture / agriculture marketing / agri-business management or in such other related areas may be preferable. The accountant should have educational qualification of 10+2 with Mathematics as a compulsory subject or alternatively with Commerce or Accountancy background. If any members of the FPO meet the above criteria, they may be considered preferably in the selection process.

- 10.4 Under the scheme, financial support towards salary of CEO/Manager up to @ Rs. 25,000/- per month and of Accountant up to @ Rs.10,000/- per month with annual increment up to 5% is to be provided from the earmarked financial support for first 3 years only. Thereafter, FPOs will manage from their own resources to pay the salary of CEO/Manager and Accountant. In order to create interest of good professional activities of CEO/Accountant, the FPO may also offer higher payment with their own sources of funds on above of Govt. support. One CEO will provide full time services to one FPO at a time only. It will be duty and responsibility of respective Board of Directors (BoDs) and CBBO that quality of services is rendered by CEO for developing the business for sustainability of the FPO.
- 10.5 **One time registration cost:** Under the scheme, the registration cost of incorporating FPOs under Companies Act. or registering under Co-operative Societies Act. will be reimbursable up to a limit of Rs. 40,000/- or actual, whichever is less; and remaining, if any, will be borne by respective FPO.
- 10.6 FPO will forward the periodic utilization certificate for FPO management cost received and utilized as may be necessary to Implementing Agency through concerned CBBO.

11.0 Provision for Equity Grant

- 11.1 Producer members' own equity supplemented by a matching Equity Grant from Government, which is required to strengthen financial base of FPOs and help them to get credit from financial institutions for their projects and working capital requirements for business development. Equity Grant shall be in the form of matching grant upto Rs. 2,000 per farmer member of FPO subject to maximum limit of Rs. 15.00 lakh fixed per FPO. This Equity Grant is not in the form of government participation in equity, but only as a matching grant to the FPOs as farmer members' equity. Therefore, Rs.1,500 crore with DAC&FW is proposed in the scheme to cover all the 10,000 FPOs, if maximum permissible equity is contributed to all 10,000 FPOs.

11.2 Objectives of Equity Grant: The objectives of Equity Grant are to (i) enhance viability and sustainability of FPOs; (ii) increase credit worthiness of FPOs; and (iii) enhance shareholding of members to increase their ownership and participation in their FPO.

11.3 Eligibility Criteria for FPOs: An FPO fulfilling following criteria shall be eligible to apply for Equity Grant under the Scheme-

- (i) It shall be a legal entity as per para 2 of this guidelines.
- (ii) It has raised equity from its Members as laid down in its Articles of Association/ Bye laws, as the case may be.
- (iii) The number of its Individual Shareholders is in accordance with the terms hereto read together with the Scheme.
- (iv) Minimum 50% of its shareholders are small, marginal and landless tenant farmers as defined by the Agriculture Census carried out periodically by the Ministry of Agriculture, GoI. Women farmers' participation as its shareholders is to be preferred.
- (v) Maximum shareholding by any one member shall not be more than 10% of total equity of the FPO.
- (vi) A farmer can be member in more than one FPO with different produce clusters but he/she will be eligible only once (for any one FPO that he/she is a member) for the matching equity grant up to his/her share.
- (vii) In the Board of Directors (BoD) and Governing Body (GB), as the case may be, there shall be adequate representation of women farmer member(s) and there should be minimum one woman member.
- (viii) It has a duly constituted Management Committee responsible for the business of the FPO.
- (ix) It has a business plan and budget for next 18 months that is based on a sustainable, revenue model as may be determined by the Implementing Agency.

11.4 Procedure for release of Equity Grant:

- (i) The Equity Grant will be made available to the eligible FPOs to receive a grant equivalent in amount to the equity contribution of their shareholder members in the FPO subject to its cap of Rs. 15 lakh per FPO. Equity Grant sanctioned shall be released to respective Implementing Agency for transferring to the bank account of the FPO. The FPO shall, within 45 days of the receipt of the Equity Grant, issue additional shares to its shareholder members, equivalent in value to the amount of the Grant received by it, provided that the maximum grant per category of shareholder irrespective of

553926/2020/NRLPS their share as aforesaid is as follows:

- (ii) Individual Shareholder – up to Rs 2,000/- per member.
 - a) The criteria for calculation of Equity Grant (rounded off to the Share Unit Value (subject to point a) to each shareholder member of the FPO (as per authenticated copy of the Shareholders' Register maintained by the Producers Company/ Co-operative Society as per the applicable provisions of the relevant Act) is as follows:
 - (i) Allocation of shares shall be on matching/ pro-rata basis of the shareholders' current shareholding, subject to the maximum specified above and ensuring that each shareholder member receives minimum one equity share.
 - (ii) If the Grant sanctioned to the FPO is not sufficient to ensure a minimum one share to all its shareholder members, allocation of grant shall be based on the shareholders' current landholding, starting with shareholder with the least land holding / the smallest producer in case of allied activities/ or by transparent draw of lots where such identification is not possible.
 - b) The FPO shall be allowed to draw the Equity Grant in a maximum of three (3) tranches (within a period of 4 years of the first application and within the handholding period of CBBO) subject to the cap of Rs. 15 lakh per FPO, provided and to the extent that it is able to raise additional Member Equity to qualify for an additional matching grant within the overall ceiling of Rs. 15 lakh. The request for the second tranche shall be treated as a fresh application and the full process of due diligence shall be repeated.
 - c) In the event that a shareholder, who receives additional shares issued by the FPO against Equity Grant sanctioned by the Implementing Agency, exits the FPO at any point after receiving the shares, the additional shares received by him/her in lieu of the Equity Grant and standing in his/her name must be transferred to another shareholder or new shareholder within 90 days of his/her exiting the FPO, through an open and transparent draw of lots. In such cases, the original shareholder cannot receive the value of the additional shares transferred to other/ new members.
 - d) DAC&FW may ask Implementing Agencies or Implementing Agencies on its own motion shall have right to recall the Equity Grant amount from the FPO, which shall be legally liable to comply with the same in the case of-
 - a) failure to issue additional shares to members against the Equity Grant received by the FPO within 45 days of its receipt;
 - b) closure / dissolution

553926/2020/NRLPS of FPO within five years of the receipt of the Equity Grant; and c) instances of misuse / misappropriation of the Equity Grant (viz. use of funds for activity other than mentioned in Memorandum of Association/Articles of Association/ Business plan of the FPO) .

11.5 Application for Equity Grant:-

Eligible FPOs shall apply for the Equity Grant in the prescribed Application Form (**Annexure-I**) only. Other mandatory documents required to be submitted along with the Application are listed below:

- (i) Shareholder List and Share Capital contribution by each member verified and certified by a Chartered Accountant (CA)/Co-operative Auditors prior to submission(**Enclosure-I of Annexure-I**).
- (ii) Resolution of the Board of Directors/Governing Body to seek Equity Grant for members (**Enclosure-II of Annexure-I**).
- (iii) Consent of shareholders, stating name of shareholder, gender, number of shares held, face value of shares, land holding, signifying consent for Implementing Agencies to directly transfer the Equity Grant sanctioned to the FPO on their behalf, to FPO Bank account, against the consideration of additional shares of equivalent value to be issued to them by FPO and on exit- transfer of the shares as per rules (**Enclosure-III of Annexure-I**).
- (iv) If the FPO is in operation for more than one or more financial year then it shall provide copy of the Audited Financial Statements of FPO for all years of existence of the FPO, verified and certified by a Chartered Accountant (CA)/ Cooperative Auditors prior to submission.
- (v) In case FPO is in operation for period of less than one financial year, Photocopy of Bank Account Statement for last six months authenticated by the Branch Manager of the "Bank" is required
- (vi) Business Plan of FPO and budget for next 18 months.
- (vii) Names, photographs, and identity proof (anyone from among ration card, Aadhaar card, election identification card, passport) of Representatives/ Directors authorized by the Board for executing and signing all documents under the Scheme. Each page of the Application Form and accompanying documents shall be signed by a minimum of two Board Member /Authorized Representatives of the FPO.

Note: All the information/documents are to be verified by respective CBBOs while submitting the same to the respective Implementing Agencies.

553926/2020/NR/PS Institutional Due Diligence:-

(i) The Implementing Agency shall undertake a due diligence process to establish the credibility, sustainability and viability of the FPO, before taking a decision on its application for Equity Grant. The Due diligence shall cover the following aspects- a). Governance; b). Business and Business Plan Viability; c). Management Capability; d). Financials. All the documents and information in this respect are to be routed to Implementing Agencies through respective CBBOs duly verified by them.

(ii) Due diligence shall be conducted through Desk Appraisal by the implementing Agencies on the basis of documents received. The Implementing Agencies may seek assistance of NPMA in process of applying due diligence and if required may verify the claims.

11.7 Sanction:

The application shall be made by FPOs to the Implementing Agencies. After application of due diligence by Implementing Agencies, the proposal may be approved for sanction of Equity Grant. The Implementing Agency shall make demand of fund for disbursement under the Scheme as per their Annual Action Plan (AAP) to DAC&FW. Same may be released to Implementing Agency upon furnishing Utilization Certificate as described in para 8.2 of this guidelines.

11.8 Disbursement:

- (i) After accepting the terms of sanction, the FPO shall enter into Agreement with Implementing Agencies.
- (ii) Implementing Agencies shall transfer sanctioned funds to the FPO Account.

11.9 Compliance and Verification:

The FPO shall submit the following documents to Implementing Agencies:

- (i) List of additional shares issued by it to its shareholder members under the Scheme, along with the respective Folio Numbers, verified and certified by a Chartered Accountant (CA), within 45 days of receiving the fund.
- (ii) If the FPO does not honour its commitment in any manner whatsoever, either in the matter of issuing shares or in notifying Implementing Agency within the specified time limit, the Equity Grant amount sanctioned and released by Implementing Agency to the FPO is liable to be cancelled and recalled by Implementing Agency, as detailed in the Agreement between Implementing Agency and FPO.

In the event of violation of any of the terms and conditions herein contained or contained in the rules or any of the instructions issued by Implementing Agency from time to time or instances of misuse/misappropriation of the Equity Grant sanctioned and released to FPO by Implementing Agency, Implementing Agency shall have the right to demand and enforce forthwith repayment of the entire amount of Equity Grant sanctioned by Implementing Agency along with appropriate damages.

12.0 Credit Guarantee Facility

12.1 In order to ensure access of FPOs to credit from mainstream Banks and Financial Institutions, there is a need to create a dedicated fund. The dedicated Credit Guarantee Fund (CGF) will provide suitable credit guarantee cover to accelerate flow of institutional credit to FPOs by minimizing the risk of financial institutions for granting loan to FPOs so as to improve their financial ability to execute better business plans leading increased profits.

12.2 Objective of CGF:

The primary objective of CGF is providing a Credit Guarantee Cover to Eligible Lending Institution (ELI) to enable them to provide collateral free credit to FPOs by minimising their lending risks in respect of loans.

12.3 Corpus of CGF:-

(i) A dedicated Fund of up to Rs. 1,500.00 crore will be created as CGF. Out of up to Rs. 1,500.00 crore CGF, up to Rs. 1,000.00 crore will be created, maintained and managed by NABARD and the rest of up to Rs. 500.00 crore by NCDC. DAC&FW will annually contribute on matching share basis to CGF created, maintained and managed by NABARD and NCDC each contributing equal amount to respective CGF without paying any other management cost both NABARD & NCDC for managing the Fund.

(ii) The FPOs promoted and registered under Co-operative Societies Act will have option to avail CGF maintained and managed either by NBARD or NCDC. The FPOs promoted and registered under Companies Act can avail CGF maintained and managed by NABARD.

12.4 Definitions:

- i. **“Credit Facility”** means any fund based credit facility extended by an Eligible Lending Institution (ELI) to an Eligible Borrower without any Collateral Security or Third Party Guarantee ;
- ii. **“Credit Guarantee Fund”** means the Credit Guarantee Fund for FPOs created

with NABARD and NCDC respectively under the Scheme with matching grant from DAC&FW for the purpose of extending guarantee to the eligible lending institution(s) against their collateral free lending to eligible FPOs;

- iii. **“Eligible Lending Institution (ELI)”** means a Scheduled Commercial Bank for the time being included in the second Schedule to the Reserve Bank of India Act, 1934, Regional Rural Banks, Co-operative Banks, Cooperative Credit Society, NEDFI, or any other institution (s) as may be decided by the NABARD and/or NCDC, as the case may be, in consultation with Government of India from time to time. NABARD and NCDC can also finance, if they so desire with the approval of DAC&FW/N-PMFSC. NBFCs and such other financing institutions with required net worth and track record may also serve as Eligible Lending Institutions (ELIs), for lending to FPOs with a moderate spread between their cost of capital and lending rate. However, Standard Financial Sector Rating Agency should have rated NBFC **to be AAA** to be considered as ELI;
- iv. **“Guarantee Cover”** means maximum cover available per eligible FPO borrower;
- v. **“Guarantee Fee”** means the onetime fee at a specified rate of the eligible credit facility sanctioned by the ELI, payable by the ELI to NABARD or NCDC, as the case may be; and
- vi. **“Tenure of Guarantee Cover”** means the agreed tenure of the Term loan/ composite credit i.e. the maximum period of Guarantee Cover from the Guarantee start-up which shall run through the agreed tenure of the term credit, and where working capital facilities or Term loan alone are extended and/or continuing working capital arrangements granted along with the Term Loan, for a period of 5 years or block of 5 years and/or loan / working capital credit or composite credit facilities’ termination date, whichever is earlier or such period as may be specified by the NABARD or NCDC, as case may be.

12.5 Eligibility Criteria for FPO:

(i) An ELI can avail Credit Guarantee for the FPO/Federation of FPOs, which are covered under the Scheme.

(ii) Further, it should be ensured that the ELI has extended / sanctioned within six months of the date of application for the Guarantee or /in-principle agreed in writing / has expressed willingness in writing to sanction Term Loan/ Working Capital/ Composite Credit Facility without any collateral security or third party guarantee including personal guarantee of Board of Directors/Governing Body Members.

553926/2020/NR/PS 12.6 Credit Facilities Eligible under the Scheme:

Under CGF, NABARD and NCDC, as the case may be, shall cover:

- i. Fund based Credit facilities already sanctioned / extended within six months from the date of the application for the Guarantee Cover or intended to be extended singly or jointly by one or more than one Eligible Lending Institution (ELI) to a single eligible FPO borrower by way of term loan and/or working capital/composite credit facilities without any collateral security and/or third party guarantees.
- ii. The ELI can extend credit without any limit; however, the Guarantee Cover shall be limited to the maximum guarantee cover specified under the Scheme.
- iii. Non-Banking Financial Companies (NBFCs) and such other Financial Institutions (FIs) with required net worth, track record and rating of AAA may also be accommodated as Eligible Lending Institutions (ELIs), such NBFC should on-ward lend to FPOs with a moderate spread between their cost of capital and lending rate.

12.7 Non-Eligibility of Credit Facilities from Credit Guarantee Fund:

The following credit facilities shall not be eligible for Guarantee Cover under the Scheme:

- i. Any credit facility which has been sanctioned by the ELI against collateral security and/ or third party guarantee.
- ii. Any credit facility in respect of which risks are additionally covered under any scheme operated/administered by Reserve Bank of India/or by the Government/or by any general insurer or any other person or association of persons carrying on the business of insurance, guarantee or indemnity.
- iii. Any credit facility, which does not conform to, or is in any way inconsistent with, the provisions of any law, or with any directives or instructions issued by the Central Government or the Reserve Bank of India, which is, for the time being, in force.
- iv. Any credit facility granted to any borrower, who has himself availed of any other credit facility covered under this scheme or under the schemes mentioned in clause (i), (ii) and (iii) above at any point in time.
- v. Any credit facility that is overdue for repayment/ NPA taken over by the ELI from any other lender or any other default converted into a credit facility.
- vi. Any credit facility which is overdue for repayment.

553926/2020/NRLPS) Any credit facility which has been rescheduled or restructured on becoming overdue for repayment.

12.8 Eligible project loan amount for Credit Guarantee Cover and its period:

- i. The credit guarantee cover per FPO will be limited to the project loan of Rs. 2 crore. In case of project loan up to Rs. 1 crore, credit guarantee cover will be 85% of bankable project loan with ceiling of Rs. 85 lakh; while in case of project loan above Rs.1 crore and up to Rs. 2 crore, credit guarantee cover will be 75% of bankable project loan with a maximum ceiling of Rs. 150 lakh. However, for project loan over Rs. 2 crore of bankable project loan, credit guarantee cover will be limited maximum upto Rs.2.0 crore only.
- ii. ELI shall be eligible to seek Credit Guarantee Cover for a credit facility sanctioned in respect of a single FPO borrower for a maximum of 2 times over a period of 5 years.
- iii. In case of default, claims shall be settled up to 85% or 75 % of the amount in default subject to maximum cover as specified above.
- iv. Other charges such as penal interest, commitment charge, service charge, or any other levies/ expenses, or any costs whatsoever debited to the account of FPO by the ELI other than the contracted interest shall not qualify for Credit Guarantee Cover.
- v. The Cover shall only be granted after the ELI enters into an agreement with NABARD or NCDC, as the case may be, and shall be granted or delivered in accordance with the Terms and Conditions decided upon by NABARD or NCDC, as the case may be, from time to time.

12.9 Procedure to avail Guarantee Cover:

The ELI shall be required to apply to NABARD or NCDC, as the case may be, for Guarantee Cover in the specified form only provided at **Annexure-II** for credit proposals sanctioned by them during any quarter prior to expiry of the following quarter viz., application w.r.t. credit facility sanctioned in April–June Quarter must be submitted by the ensuing quarter, i.e. July-September to qualify for consideration under the Scheme.

- **NABARD or NCDC, as the case may be, shall-**

- i. Scrutinize the proposal before sanctioning the Guarantee Cover to the ELI under the Scheme in accordance with its Terms and Conditions of respective Implementing Agencies.

ii. Insofar as it may be considered necessary, for the purposes of the Scheme, inspect or call for copies of the Books of Account and other records (including any Book of Instructions or Manual or Circulars covering general instructions regarding Conduct of Advances) of the Lending Institution or of the Borrower from the Lending Institution.

- iii. Such Inspection shall be carried out either through the officers of NABARD or NCDC, as the case may be, or any other officer of DAC&FW specifically appointed for the purpose of Inspection.
- iv. The Investment and Claims Settlement Committee (I&CSC) of NABARD or NCDC, as the case may be, shall sanction the Guarantee Cover to the concerned Bank based on the findings of the above.
- v. The ELI shall enter into an Agreement with NABARD or NCDC, as the case may be, at the level of the Bank Branch as per the format of Agreement decided by NABARD or NCDC, as the case may be.

12.10 **Guarantee Fee (GF):**

- i. The one time Guarantee Fee if chargeable by NABARD or NCDC, as the case may be, will be payable by the ELI for Credit Guarantee Cover (CGC) under the Scheme, which will be maximum up to @ 0.75% of the credit facility up to and including Rs. 1.00 crore project loan and up to @ 0.85% of credit facility above Rs. 1.00 crore and up to Rs. 2.00 crore project loan sanctioned by the ELIs. The ELI shall pay the Guarantee Fee upfront to NABARD or NCDC, as the case may be, within 30 days from the date of issue of sanction letter for CGC, failing which the Guarantee will be liable to become void unless and until its continuance is specifically approved by NABARD or NCDC, as the case may be.
- ii. The Guarantee Fee once paid by the lending institution to NABARD or NCDC, as the case may be, is non-refundable except where Guarantee Cover for which Guarantee Fee is paid has not been approved.

12.11 Responsibilities of Lending Institutions under the Scheme prior to recommending proposals for the consideration of NABARD or NCDC, as the case may be, the ELI shall:

- i. Appraise each loan proposal for selecting commercially viable projects. ELI's Appraisal Note shall accompany the Application for Guarantee Cover under the Scheme.
- ii. Carry out processing, legal work and documentation for sanction of the loan in accordance with the requirements of the ELI and the terms and conditions of NABARD or NCDC, as the case may be.

553926/2020/NRLPS Furnish such statements, information, documents, receipts, certificates etc. as

NABARD or NCDC, as the case may be, may require in connection with any credit facility under this Scheme.

- iv. Certify that /be deemed to have affirmed that the contents of such documents, receipts, certificates and other written documents are true, provided that no claim shall be rejected and no liability shall attach to the lending institution or any officer thereof for anything done in good faith.
- v. Monitor the Borrower -account and maintain records of periodical monitoring and actions initiated on observations, if any.
- vi. Ensure that the Guarantee Claim in respect of the credit facility to the FPO Borrower is lodged with NABARD or NCDC, as the case may be, in the form and manner and within such time as may be specified by NABARD or NCDC, as the case may be, in this behalf. Further, there shall not be any delay on its part to notify NABARD or NCDC, as the case may be, of the default in the Borrower's Account, as a result of which delay, NABARD or NCDC, as the case may be, shall face higher Guarantee Claims.
- vii. The payment of Guarantee Claim by NABARD or NCDC, as the case may be, to the lending institution does not in any way absolve the lending institution of the responsibility of recovering the entire outstanding amount of the credit from the borrower. The lending institution shall exercise all necessary precaution and take recourse to all measures to recover from the borrower the entire amount of credit facility that is owed to it by the borrower and safeguarding the interest of NABARD or NCDC, as the case may be, as it shall exercise in the normal course if no guarantee had been furnished by NABARD or NCDC, as the case may be.
- viii. The lending institution shall be bound to comply with such directions as NABARD or NCDC, as the case may be, may deem fit to issue from time to time, for facilitating recoveries of the guaranteed account, or safeguarding its interest as a guarantor.
- ix. The lending institution shall, in particular, refrain from any act either before or subsequent to invocation of guarantee, which may adversely affect the interest of NABARD or NCDC, as the case may be, as the guarantor.
- x. The lending institution shall be bound under the Scheme to intimate in advance to NABARD or NCDC, as the case may be, its intention to enter into any compromise or arrangement, which may have effect of discharge or waiver of primary security.
- xi. Further, the lending institution shall secure for NABARD or NCDC, as the case

may be, or its appointed agency, through a stipulation in an Agreement with the Borrower or otherwise, the right to list the defaulted Borrowers' names and particulars on the Website of NABARD or NCDC, as the case may be or Integrated Portal

12.12 Monitoring by NABARD and NCDC:-

- i. The ELI shall undertake regular desk and /or field monitoring of the borrowing FPOs.
- ii. NABARD or NCDC, as the case may be, shall be authorized to call for reports of such monitoring as may be required from time to time.

12.13 Governance:

- i. There shall be an Investment and Claims Settlement Committee (I&CSC) in NABARD and NCDC. The I&CSC in NABARD will be chaired by its Deputy Managing Director (Dy.MD) or as nominated by Chairman, NABARD in case Dy. MD post is vacant ; while in NCDC, it will be chaired by its Managing Director (MD). The respective Committee may have also representative of States in rotation, Banking Institutions and relevant subject matter Experts apart from a representative of DAC&FW. NABARD may also co-opt a representative from SFAC. The procedure, frequency of conduct of meeting etc. will be decided by respective Organization as may be required.
- The I&CSC in NABARD and NCDC will apply their due diligence to scrutinize and accord the financial sanction to the proposals received from ELIs for Credit Guarantee Cover. NABARD and NCDC will submit by tenth day of next month the detailed progress of sanctioned credit guarantee cover of the previous month to DAC&FW on prescribed pro-forma. The N-PMAFSC shall be final authority in all policy and strategic decision making in this regard.
- ii. The I&CSC shall have discretion to take decisions in all matters concerning the Fund and its administration, set standards for risk exposure, design the financial structure of the Fund and profit targets, including special consideration for FPO with good track record of recovery.
- iii. The I&CSC shall deliberate upon Policy Issues and Strategy for overall development of the Fund and make recommendations to the NABARD and NCDC, as the case may be, for their approval. The NABARD and NCDC will accord approval and inform N-PMAFSC.
- iv. The I&CSC shall regularly keep the NABARD and NCDC, as the case may be,

informed about all major decisions and actions taken by it in this regard, and shall work under its overall control and guidance with regard to the Fund and the Scheme. Simultaneously, the NABARD and NCDC will keep the N-PMAFSC apprised about such decisions and actions taken in this regard.

- v. Decisions regarding Guarantee Pay-Outs shall be the primary responsibility of I&CSC which shall meet at least once every quarter or as often as necessary.
- vi. The ELI may invoke the Guarantee in respect of Credit Facility within a maximum period of one year from the date of NPA, if the conditions set out by NABARD or NCDC, as the case may be, are met out.

12.14 **Claim Settlement:-**

Only such Claim, as is submitted by the ELI and as specified by NABARD or NCDC, as the case may be, from time to time in consultation with N-PMAFSC will be considered.

12.15 **Modifications and Exemptions:-**

NABARD or NCDC, as the case may be, reserves the right to modify, cancel or replace the scheme or terms and conditions, in any manner whatsoever, that it deems necessary, in consultation with DAC&FW.

12.16 **Interpretation :-**

The decision of NABARD or NCDC, as the case may be, shall be final in regard to the interpretation of any of the provisions of the Scheme or of any directions or instructions or clarifications given in connection therewith. While taking any such decisions, NABARD or NCDC, as case may be, will hold prior consultation with DAC&FW.

12.17 **Disputes Resolution:-**

Disputes, if any, arising out of the Agreement shall be resolved through mutual consultation, failing which, subject to the relevant agreement, Arbitration in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and its up to date amendments shall be resorted to.

13.0 **Training and Capacity Building for Promotion of FPOs**

13.1 Capacity building, training and skill development of CEOs/ BoDs and other stakeholders identified by Nodal training institution, in consultation with DAC&FW, through transfer of technology, innovation is very essential for development of robust FPOs and for running the business activities successfully

self-sustainable basis. The transfer of technology and innovation, *inter alia*, includes entire vertical and horizontal aspects of agricultural value chain, managerial aspect including accounting with focus on value addition, processing, and marketing. The subject matter of training will cover topics ranging from Organisational management/behaviour, crop husbandry, value addition, processing, marketing, trading, export, supply chain, grading, branding, packaging, accounting, auditing, compliance requirements, incubation, ICT & MIS as may be relevant for promotion of FPOs including case studies in best practices if any.

- 13.2 The Bankers Institute of Rural Development (BIRD), Lucknow promoted by NABARD is designated as Nodal Training Institution at central level for FPOs promoted by NABARD and SFAC and other allowed/designated Implementing Agencies whether incorporated under Part IX A of Companies Act or registered under Co-operative Societies Act. The BIRD will work in partnership with other reputed organisations like NIRD, MANAGE, NIAM, NIFTEM, VAMNICOM and such other national and regional institutions such as IRMA, Anand and ASCI, Hyderabad, State and Central Government Agriculture Universities, National Level Skill Development Universities, KVKs and other National Level Management and Skill Development Institutions etc. The BIRD in consultation with NABARD and DAC&FW will prepare a training module and training schedule for the ensuing year, which will be got approved by N-PMAFSC.
- 13.3 Training expenses, in case of BIRD being nodal agency, will be equally shared by DAC&FW and NABARD. BIRD through NABARD will claim the expenses from DAC&FW and will also submit the utilization certificate through NABARD after the training programme is over.
- 13.4 Laxmanrao Imandar National Academy for Co-operative Research & Development (LINAC), Gurugram promoted by NCDC is designated as Nodal Training Institution at central level for FPOs registered under Co-operative Societies Act and promoted by NCDC. The LINAC will work in partnership with other reputed national and regional training institutions like NIAM, VAMNICOM, MANAGE, NIRD, NCCT, IRMA, ASCI, State and Central Agriculture Universities, KVK, very reputed National level Management and Skill Development Institutions/Universities etc. The LINAC in consultation with NCDC and DAC&FW will prepare a training module and training schedule for the ensuing year, which will be got approved by N-PMAFSC. As regards training expenses, in case of LINAC being nodal agency, the LINAC through NCDC will claim the

expenses from DAC&FW and will also submit the utilization certificate through NCDC after the training programme is over.

- 13.5 DAC&FW in due course may also identify and designate other training institute(s) as additional Nodal Training Institute at central level, which will undertake training and skill development partnering with other national and regional level institutes.
- 13.6 The central Nodal Training Institutes will ensure that training programme be held preferably in same State/UT wherein FPO trainees located are proposed to participate to reduce the burden on transportation(TA/DA) cost. While formulating the training schedule, Nodal Training Institutes will ensure that BoDs, CEOs/Managers and other stakeholders etc. are trained twice in a year. Nodal Training Institutes will have to make boarding and lodging arrangements for the trainees and will also reimburse to and fro journey tickets to the extent of sleeper class train tickets and/or ordinary bus fare. Nodal Training Institutions will also evolve methodology to monitor and track the performance of trainees and their FPO organization to ensure effectiveness of training being provided. Nodal Institutions will also provide the annual summary of various training provided and their effectiveness to national level Project Management Advisory and Fund Sanctioning Committee (N-PMAFSC) constituted in DAC&FW.
- 13.7 Nodal Training Institutions may also develop various video based demonstrative/interactive e-learning modules in relevant subjects and made available in local languages to widely disseminate knowledge to new and existing FPOs.
- 13.8 Nodal training Institutes may also develop distance learning Diploma Program in FPO management for members of new and existing FPOs so as it may foster in future trained and professional FPO managers/accountants like that for Industry.
- 13.9 There is budgetary provision of Rs. 3.0 crore each year by DAC&FW for four years for training through specialized institutions and NABARD will be contributing on matching basis for the capacity building to be undertaken by BIRD (in consultation with N-PMAFSC) partnering with other National and Regional level institutions.

14.0 **Implementation & Monitoring Mechanism**

Considering the significance of effective implementation and better monitoring mechanism for success of a scheme, there is a well-structured, institutionalized three tiered structure at National level, State level and District level for effective implementation and monitoring of formation and promotion of FPOs.

14.1.1 To cohesively coordinate the Implementing Agencies, activities and to decide the policy guidelines in the matter for better outcome of the Scheme, there is a national level Project Management Advisory and Fund Sanctioning Committee (N-PMAFSC) constituted in DAC&FW. Composition of the Committee shall be –

- (i) Secretary, DAC&FW -----Chairperson
- (ii) Addl. Secretary (Marketing), DAC&FW -----Member
- (iii) AS&FA, DAC&FW -----Member
- (iv) JS (MIDH, RKVY, Co-operation), DAC&FW -----Member
- (v) JS (MoFPI), as nominated by its Secretary-----Member
- (vi) JS (DoAHD), as nominated by its Secretary-----Member
- (vii) JS (Deptt. of Fisheries), as nominated by its Secretary-----Member
- (viii) JS (MoRD), as nominated by its Secretary-----Member
- (ix) JS (DoNER), as nominated by its Secretary-----Member
- (x) JS (Tribal Affairs) nominated by Secretary-----Member
- (xi) Managing Director (SFAC)-----Member
- (xii) Managing Director (NCDC)-----Member
- (xiii) NABARD's representative not below the rank of CGM-----Member
- (xiv) JS (Marketing), DAC&FW-----Member Secretary

Note: (i) Chairperson may co-opt any additional member(s) including from any other Ministry /Department, States or expert(s) to assist the functioning of the Committee. In case of co-opted Members(s) from States, it shall be on rotation basis. Two prominent farmer members or representatives of FPOs be nominated as member of the Committee by Government of India.

(ii) Directorate of Marketing & Inspection, an attached office of DAC&FW will provide necessary secretarial services and assistance including technical inputs to N-PMAFSC in coordination, scrutiny and sanction of proposals and will coordinate with NPMA, which shall also assist N-PMAFSC with inputs on policy formulation, coordination among implementing agencies.

14.1.2 Duties & Responsibilities of N-PMAFSC:-

- (i) Coordinate with all the Implementing Agencies, State Level Consultative Committee and District level Monitoring Committee (D-MC) for smooth implementation. It will also consider feedback received from other relevant Ministries and Organizations on Clusters identification for consideration.
- (ii) It will monitor the progress either by holding the meetings of Implementing

553926/2020/NRLPS Agencies and other stakeholders or by other means.

- (iii) It will allocate the produce clusters/districts/States to Implementing Agencies for formation and promotion of FPOs.
- (iv) It will undertake scrutiny of Action Plan of Implementing Agencies(IAs), consider recommendation of release of fund to Implementing Agencies based on previous utilization as due with respect to funding under the Scheme.
- (v) It will provide policy inputs to DAC&FW for modification in the Scheme to better suit in the formation and promotion of FPOs to make them economically sustainable.
- (vi) It will provide aid and advice to Implementing Agencies as may be required for smooth functioning of the scheme.
- (vii) Based on suggestions received from various Implementing Agencies, other Ministries, States and experience/need, N-PMAFSC may examine and recommend revision of the minimum membership norm per FPO to DAC&FW.
- (viii) It may seek detailed input and analysis as may be required from time to time from NPMA and also seek assistance of DMI in verification etc.

14.2 State Level

14.2.1 Considering the significance and strategic roles of the State Government and its machinery down the line in synergizing the efforts in mobilizing the farmers, offering various services relating to production and post-production and also closely and periodically review the developmental and functioning including constraints faced by FPOs, a State Level Consultative Committee called SLCC is constituted. The Composition of the Consultative Committee is as under-

- i. Addl. Chief Secy/Secy. I/c Agriculture/ Agriculture Marketing----Chairperson
- ii. Secretary of line Ministries/Departments -----Members
(Horticulture, Animal Husbandry& Fisheries,
Co-operation, Marketing, Rural Development, Panchayati Raj)
(In State/UT where there is no post of ACS/PS;
and Secretary, I/c Agriculture is Chairperson, members
may be Directors of line Departments)
- iii. Representative of SFAC -----Member
- iv. Representative of NCDC -----Member
- v. Representative of NABARD -----Member Secretary*

553926/2020/NRLPS Convener, SLBC -----Member

vii. Two Experts from Agriculture Universities/Institutions -----Members

Note: (i) Chairman may co-opt additional Member(s) as per requirement and In-charge of DMI of respective State/UT may be invited in the meeting as special invitee. Two prominent farmer members or representatives of FPOs in the State/UT be nominated as member of the Committee by Government of India.

*(ii) Representative of NABARD will be Member Secretary to convene and coordinate the meetings of SLCC, however, in State (s) where there is presence of NCDC and State level SFAC and they are playing lead and significant roles in formation and promotion of FPOs, their representatives may be Member Secretary in place of NABARD). In case of any dispute, decision of N-PMAFSC in this regard shall be final.

(iii) State Governments/ UT Administration will issue order for formation of State Level Consultative Committee.

14.2.2 Duties & Responsibilities of SLCC

- (i) It will regularly monitor and review the progress of FPO development and functioning by holding its regular meetings.
- (ii) It will work out a strategy for all stakeholders including the Implementing Agencies (SFAC, NABARD and NCDC), institutions engaged in formation and promotion of FPOs and State Government machinery engaged in agricultural and rural development to work synergistically to achieve the objective.
- (iii) It will identify the constraints in implementation of scheme and communicate to DAC&FW and N-PMAFSC for taking the appropriate policy decision, if so required.
- (iv) It will direct respective State Government departments to help in identification of produce clusters for recommendation to N-PMAFSC and assist in mobilization of farmers to form the FPOs.
- (v) It will formulate an effective extension mechanism to be undertaken through existing State extension machinery down the line.
- (vi) Most importantly, the committee will coordinate with respective State Government departments to facilitate FPOs in getting the license/registration for inputs, shops/spaces in the mandis and also availing the assistance for development of various infrastructures relating to production and post-production activities. The committee will also ensure that FPOs be associated/involved in all the farmers' centric schemes of the Government to

553926/2020/NRLPS to the extent feasible.

- (vii) It will facilitate in making available land at appropriate place for development of common facility center and also custom hiring center. It will also strategize and prioritize for linking of Common Facility Centre (CFC) with e-NAM or with any other e-trading platform.

14.3 District level

14.3.1 Monitoring of the scheme at the District / Cluster Level and effective coordination among the stakeholders are critical for real success of the scheme and benefit to the farmer members as envisaged. Therefore, a District level Monitoring Committee (D-MC) is constituted for overall coordination of implementation of scheme in the district including the cluster development and challenges faced by FPOs. The Composition of the District level Monitoring Committee is as under-

- | | |
|---|--------------------|
| (i) District Collector | - Chairperson |
| (ii) CEO , District Council | - Member* |
| (iii) District level officers of line departments
(Agriculture/ Horticulture / Animal Husbandry/
Fisheries/Marketing/Cooperation) | - Member |
| (iv) DDM (NABARD) | - Member Secretary |
| (v) Lead District Manager (LDM) | - Member |
| (vi) Experts from KVK, ATMA, local producers'
Organizations (3 No.) | - Members |
| (vii) Representatives of NCDC/SFAC, if available | - Members |

Note: (i) Chairperson may co-opt additional Member(s) including the representative of CBBOs/ PACs as per requirement.

* (ii) The District level Committee will be chaired by CEO; Zila Parishad in State(s) where development / agriculture related work is the responsibility of Zila Parishad and the concerned State/UT so decide.

(iii)The implementation of the Scheme for formation and promotion of FPOs would also be reviewed by District Development Coordination & Monitoring Committee (DISHA) in their periodic reviews.

(iv) State Government/UT Administration will issue advisories to Districts for formation of District Level Monitoring Committee.

14.3.2 Duties & Responsibilities of D-MC

- (i) It will closely monitor and review the progress of FPO development and functioning by holding its regular meetings.
- (ii) It will suggest the potential produce clusters in the district (where FPOs can be formed & promoted) to N-PMAFSC and will also assist Implementing Agencies, CBBOs and other stakeholders in identification of cluster(s) and activity (ies) and also in mobilization of farmers.
- (iii) It will resolve the financial constraints of FPOs through District Level Bankers' Committee and provide feedback to N-PMAFSC.
- (iv) It will identify the constraints in implementation of scheme at the ground level and communicate the same to State Level Consultative Committee for further taking up the matter with DAC&FW and N-PMAFSC for appropriate policy decision.
- (v) Any other matter so decided by the committee in the interest of the scheme and farmers.

14.4 Close and effective monitoring has been considered a major trigger for success of this scheme. Therefore, in addition to three tiered afore-stated structured mechanism for monitoring of the scheme, there shall be continuous in-house monitoring by DAC&FW and by the Implementing Agencies also. The DAC&FW may utilize the services of Directorate of Marketing & Inspection (DMI), which has existence through its Regional & Sub-Offices across the country. For effective monitoring, DAC&FW may engage consultants also and cost for same will be borne from the budget of the scheme itself.

15.0 Evaluation of the Scheme

15.1 In order to evaluate the performance of the scheme with reference to its envisaged objectives, the mid-term (4th year) and end-term evaluation will be done in terms of (i) No. of FPOs formed and registered; (ii) No. of farmers mobilized category-wise ; (iii) Quantum of Equity Grant provided and No. of FPOs covered; (iv) Quantum of Credit Guarantee provided for credit linkages including volume of loan availed for working capital; (v) No. of training programmes conducted for capacity building and No. of persons trained and (vi) Business turnover of the FPOs.

15.2 DAC&FW will hire third party appropriate Consultant / Agency transparently for undertaking the study as well as mid-term and end-term evaluation of the scheme. If it deems feasible and appropriate, DAC&FW may ask any of the Implementing Agencies to undertake the mid-term and end-term evaluation of the

scheme and evaluation report will be shared with DAC&FW and also among the other Implementing Agencies. Based on the suggestions and findings in the report, DAC&FW may modify the Operational guidelines. If exigency arises in the interest of the scheme, DAC&FW may at any time suitably modify the scheme to achieve the objective as envisaged in it. The evaluation cost will be borne from the budget of the scheme itself.

16.0 Integrated portal

16.1 NPMA in consultation with DAC&FW will get configured an “Integrated portal” and will also be national level data repository. The portal will serve as an e-National platform for FPOs. The portal will have basically two components, namely (i) vertical and horizontal e-Market place functioning digital platform for business transaction through various stakeholders; and (ii) Management Information System (MIS) to cater the data needs of stakeholders. The portal will have in tracking all type of data up to FPO level. The integrated portal may be developed through outsourcing or through NIC by SFAC.

16.2 Functions of Integrated portal

- (i) The software for vertical and horizontal e-Market place will provide information about the details of FPOs produce with its quality ready for sale.
- (ii) It will provide details of availability of quality inputs with price and also the details of custom hiring facility with rate.
- (iii) It will also provide detailed information about formation of FPO, its registration, location, major business activity, profitability status and all other related information FPO-wise.
- (iv) It will have window to highlight the problems being encountered in any stage of formation and promotion of FPOs and quick response by respective agency to resolve the problem.
- (v) All the software developed by Implementing Agencies with respect to FPOs are to be inter-operable with this Integrated portal.

17.0 Miscellaneous

- (i) Those corporate bodies (Agri-Value Chain/Industry) forming and promoting FPOs through cluster-based approaches without going through CBBOs may be encouraged through providing financial support under this scheme. Concerned Industries/Value Chain Processing & Export Industries forming and promoting FPOs through cluster approaches without going through CBBOs / Professional Agencies engaged by CBBOs, will be eligible for assistance for their new FPOs

Under the Scheme in case at least 60% of the produce of members of such FPOs is ensured with appropriate processing & assured marketing linkages on sustainable basis for remunerative prices for improving the income of the members as well as to developing processing and value addition within the country. In addition, such FPOs can also avail credit guarantee cover under CGF if comply the eligibility for same under this Scheme and also norms & guidelines of CGF maintaining and managing agency. Such FPOs will also be allowed benefits of advisory services from NPMA and other components on par with FPOs such as Equity Grant promoted by implementing agencies. These Organizations will submit DAC&FW/ N-PMAFSC in advance about detail proposal of forming and promoting FPOs and will also submit the detail Year-wise Action Plan for consideration. Thereafter, they will submit the stages of formation and promotion of FPOs and submit proposal for FPO management cost from time to time along with utilization of previous amount along with documentary proof as well as requirement of Equity Grant to one of the assigned Implementing Agency for verification, which in turn will channelize the claim to N-PMAFSC for payment through respective IA. As regards Credit Guarantee facility, they will approach concerned Credit Fund with bank credit detail.

- (ii) Ongoing schemes of Government will be used in convergence to enhance the cost effectiveness of FPOs in production and raising productivity and also to meet the cost of infrastructure requirement of the FPOs. Implementing Agency may converge the fund available with various on-going Government of India schemes such as Rashtriya Krishi Vikas Yojna (RKVY), Mission for Integrated Development for Horticulture (MIDH), National Food Security Mission (NFSM), Pradhan Mantri Kisan Sampada Yojna (PM-SAMPADA), Deendayal Antyodaya Yojna-National Rural Livelihood Mission (DAY-NRLM), PM- FME Scheme of MoFPI, TRIFED etc. in programs, activities and creation of infrastructure like Custom Hiring Centre/Common Facilitation Centre with machinery/equipment relating to production and post-production, value addition and farm level processing, storage and other activities to make FPOs sustainable and economically viable.
- (iii) Further, Agricultural Marketing Infrastructure (AMI) Sub-Scheme of Integrated Scheme for Agriculture Marketing (ISAM) will also be converged and an FPO willing to develop post-harvest management and marketing infrastructure can avail assistance thereunder.
- (iv) States/ Union Territories can avail assistance for development of marketing and farm level value addition infrastructure/facilities for FPOs including setting up of

Custom Hiring Centre (CHC)/Common Facilitation Center (CFC) for marketing and supply chain etc. under Agri- Market Infrastructure Fund (AMIF) approved for creation in NABARD for development of marketing and farm level value addition infrastructure/facilities in Gramin Agriculture Markets (GrAMs). In this case, operational guidelines of AMIF and NABARD's procedure and terms and conditions of sanction and repayment of loan for AMIF shall be applicable.

- (v) States/Union Territories can top up and additionally supplement the activities of FPOs from their own fund for activities and infrastructure not covered under Government of India Scheme.
- (vi) States/Union Territories may actively consider to make available appropriate size of land to FPOs for setting up of CFCs and CHCs at cheaper rate on rent/lease or otherwise; or may make available free of cost.
- (vii) Government may prioritize FPOs to undertake procurement operation on Minimum Support Price (MSP).
- (viii) States must actively consider encouraging FPOs for selling their produce through e-National Agriculture Market (e-NAM) including FPO module of e-NAM or through other electronic platform from their premises itself without physically bringing the produce to the APMC market yards.
- (ix) Department of Agriculture, Cooperation & Farmers Welfare is authorized to finalize Operational Guidelines of the scheme (and model Bye Laws if any) including mid-term changes thereto, and issue the same with the approval of Hon'ble Minister for Agriculture & Farmers' Welfare.

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Application Form for seeking Equity Grant by FPO

Date:

To,

(i) The Managing Director
Small Farmers' Agri-Business Consortium (SFAC),
NCUI Auditorium, August Kranti Marg,
Hauz Khas, New Delhi 110016.

(ii) The Managing Director
National Co-operative Development Corporation (NCDC),
4, Siri Institutional Area,
Hauz Khas, New Delhi 110016.

(iii) The Chief General Manager
National Bank for Agriculture and Rural Development (NABARD),
Regional Office -----

(iv) To any other additional Implementing Agency
allowed/designated, as the case may be.

Sub: Application for Equity Grant under scheme of Formation and Promotion of 10,000
Farmer Producer Organizations (FPOs)

Dear Sir/Madam,

We herewith apply for Equity Grant as per the provisions under the captioned scheme.

1. The details of the FPO are as under-

S. No.	Particulars to be furnished	Details
1.	Name of the FPO	
2.	Correspondence address of FPO	
3.	Contact details of FPO	
4.	Registration Number	
5.	Date of registration/incorporation of FPO	
6.	Brief account of business of FPO	
7.	Number of Shareholder Members	
8.	Number of Small, Marginal and Landless Shareholder Members	

553926/2020/NRLPS

	Paid up Capital (in INR)	
10.	Amount of Equity Grant sought (in INR)	
11.	Maximum shareholding of an Individual Shareholder Member	
12.	Bank name in which account is maintained	
13.	Account number	
14.	Branch name & IFSC code	
15.	Number of Directors with their briefs	
16.	Mode of Board formation (election/ nomination)	
17.	Number of Women Director(s)	
18.	Date(s) of Board/Governing Body Meetings held in the last year	
19.	Number of functional committees of the FPO: (Mention the major activities of each committee)	1. 2. 3.
20.	Roles & Responsibility of Boards/ Governing Body	1. 2. 3. 4.

2. Details of Board of Directors/Governing Body-

S. No.	Name of the Directors of Board/ Governing Body	Designation/ Role in the FPO	Aadhar Number	DIN Number	Qualifications Tenure (in yrs.)	Contact No./ Address	Land holding (in Acres)
1.							
2.							
3.							
4.							

553926/2020/NRLPS
3. Details of Members of Board/ Governing Body

S. No .	Name of the Members of Board/ Governing Body	Role in the FPO	Aadhar Number	Qualifications Tenure (in yrs.), if any	Contact No./ Address	Land holding (in Acres)
1.						
....						

4. Details of Shareholding of FPO Members-

#	Number of shareholders	Number and face value (INR) of shares allotted	Total amount paid (including premium in INR.)

We certify that no member of our FPO had availed Equity Grant facility earlier.

We submit our application along with the mandatory documents and request that the equity grant be approved.

Yours faithfully,

President/Chief Executive Officer/Manager

Authorized Representative/ Director of FPO

553926/2020/NRLPS ***List of mandatory documents to be attached with the application form**

- i. Shareholder List and Share Capital contribution by each Member verified and certified by a Chartered Accountant (CA) prior to submission (Format attached, Annexure I- Enclosure-I).
- ii. Resolution of FPO Board/Governing Council to seek Equity Grant for Members (Format attached, Annexure I- Enclosure-II).
- iii. Consent of Shareholders, stating name of shareholder, gender, number of shares held, face value of shares, land holding, and signature, signifying consent for Implementing Agency to directly transfer the Equity Grant sanctioned to the FPC on their behalf, to FPC Bank account, against the consideration of additional shares of equivalent value to be issued to them by FPC and on exit- transfer of the shares as per rules (Format attached, Annexure I-Enclosure-III).
- iv. Audited Financials of FPO for a minimum 1 year/for all years of existence of the FPO if formed less than three years prior to application/ for the last 3 years for FPO in existence for 3 years or more, verified and certified by a Chartered Accountant (CA) prior to submission.
- v. Photocopy of FPO Bank Account Statement for last six months authenticated by Branch Manager.
- vi. Business plan and budget for next 18 months.
- vii. Names, photographs, and identity proof (one from among ration card, Aadhaar card, election identification card, and passport of Representatives/ Directors authorized by the Board for executing and signing all documents under the Scheme.
- viii. Each page of Application Form and accompanying documents should be signed by a minimum of two Board Member Authorised Representatives of FPO;

Shareholders' List and Share Capital contribution by each member verified and certified by a Chartered Accountant (CA) prior to submission

S.No	Member Name & Gender	Date of Membership	Share Money deposited by member (Rs.)	No. of Shares allotted (Share Value in INR)	Folio Share distinctive Number	Land holding of Shareholders (in Acres)	Land Record (Khasra No.)

Signature of President

Name:

Place:

Date:

Signature of CEO

Name:

Place:

Date:

Verified and certified by Chartered Accountant (CA) (Sign and Seal)

Resolution of Board of Directors/Governing Body to seek Equity Grant for Members

FPO to seek Equity Grant for Shareholders (Certified true Copy)

- a) Place of meeting.....
 - b) Date of meeting.....
- Agenda of Meeting: to avail Equity Grant support

Whereas the FPO has been formed under _____ (legal registration status of FPO) and on the basis of the decision of the AGM/EGM (held on) _____ (mention the date) to avail Equity Grant support under the Scheme.

We, the Board of Directors of the FPO unanimously resolve that-

- i. The grant shall be utilized for business enhancement of the FPO.
- ii. The basis of allocation of the said fund shall be the individual share money contribution by members and in accordance with the criteria laid down in the Scheme.
- iii. The accounts of the said grant shall be maintained in a proper manner.
- iv. The benefit of the said support shall be extended shareholder member-wise and shall be available to an individual till she/he is the member of the FPO.
- v. If a shareholder member quits the FPO at any point, the shares issued in lieu of the grant shall be retained by the FPO and shall not be paid to the member but shall be allocated to a new/additional existing member as per the scheme guidelines. This has been discussed in the AGM/EGM held for this purpose on----- and the Shareholders are fully cognizant of the Terms and Conditions of the Scheme & have agreed to abide by the same.

We further resolve that to execute the documents pertaining to this support, the President / in his absence, any one of the following Directors of the FPO for any reason due to non-availability of the President and the Chief Executive of FPO, whose signatures are given below and certified by the Bank are authorised to sign all documents and forms jointly. Further resolved that this Resolution be communicated to..... (Name of Implementing Agency) and shall remain in force until further notice in writing.

Signed by the CEO & Board of Directors and Sealed

S.No.	Name	Designation	Signatures

Consent Form of all Shareholders

We are Shareholders in _____ (Name of the FPO) located in _____ (Name of village/block/district/State). We have purchased _____ (number of issued Shares) worth Rs. _____ (value of the issued Shares) from the FPO, as per the list below-

(List to be attached stating name of shareholder, gender, number of shares held face value of shares, land holding, and signature.)

We have been informed about /read the Terms and Conditions of the EG and agree to the same. In particular, each shareholder hereby agrees that the entire amount of Equity Grant sanctioned by.....(Name of Implementing Agency) on our behalf be directly transferred to our FPO's account towards the consideration of additional shares to be issued to us of equivalent amount in the FPO.

On receipt of the amount, the FPO shall immediately, issue additional shares to respective shareholders, of the equivalent amount sanctioned to each shareholder by the.....(Name of Implementing Agency)

We also agree that should any shareholder at any point cease to be a Member of the FPO for any reason whatsoever, the additional shares against the Equity Grant that stand in his/her name shall be retained by the FPO to be allocated to another Member as specified under the Scheme and that in such a case, he shall not receive the value of the share.

In support of our consent, we have affixed our signatures /thumb impressions below:
Consent details:-

	Name & Gender of Shareholder	Current Equity holding (Number and Face Value in INR)	Current Landholding (in acres.)	Signatures/Thumb impressions
1.				
2.				
3.				

We declare that the information furnished by the shareholders above is true.

Chief Executive Officer (Seal)

President/Authorised Signatory

Certified by a Chartered Accountant (CA) (Seal) Countersigned by Bank Manager (of the Bank where the FPC has the account) (Seal)

Application Form for Seeking Credit GUARANTEE Cover UNDER CGF

Name of Implementing Agency (NABARD/NCDC):.....					
Address:					
.....					
Phone Number:					
(Each page of the application form should be signed by Branch head and Zonal Manager)					
Name and Address of the applicant Bank Branch :					
1 a)	Complete Postal Address (*with pin-code) :				
1 b)	Phone No. with STD :				
1 c)	Fax No.:				
1 d)	E-Mail Address:				
1 e)	Details of the authorised person of the Bank submitting the Claim:	Designation	Mobile No.	E-Mail Address.	
2	Name of Borrower FPO :				
2 a)	Constitution:	Producer Organization			
2 b)	Registered Office Address (*with pin-code):				
	(i). Phone No.	(ii). Fax No.	(iii). E-mail Address		
2 c)	Business Office Address (if any)				
	(i). Phone No.	(ii). Fax No.	(iii). E-mail Address		
2 d)	Name of CEO :				
	Mobile No.				
2 e)	Credit Facility for which guarantee cover sought :				
	Old	New	Expansion	Technical Up-gradation	
2 f)	Give details of components:-				
	Inputs:		Processing:		
	Marketing:		Any other:		
	Total Investment:				
3	Banking Facilities Sanctioned by sanctioning authority (Rs. in Lakh):-				
	(i). Term-Loan :	Date of Sanction:	Amount Outstanding:	IRAC Status:	

553926/2020/NR/PS

	Cash Credit :	Date of Sanction:	Amount Outstanding:	IRAC Status:
3 a)	Sanctioning Office:	Branch:	ZO / RO:	HO:
3 b)	Designation of Sanctioning Authority :			
3 c)	Sanctioning authority approval vide :			
3 d)	Sanction / Appraisal Note No.	Dated:		
3 e)	Agenda No. / Minutes conveying sanction :			
4	Name and Address of Controlling Office of the Branch (*with pin-code):			
4.a).	Name of Controlling Authority :			
4.b).	Mobile No.:			
4.c).	Fax. No. :			
4.d).	E-Mail Address. :			
5	Present status of FPO Activity : (Give component wise details)			
5. a)				
5. b).				
5. c).				
5. d).				
5. e).				
5. f)				
6	Status of Accounts			
6. a).	Term-Loan:			
	Amount of Disbursement till date :		Outstanding as on date :	
	i). First installment due on (date) :			
	ii). Last Installment due on (date) :			
6. b).	Cash Credit :			
	Limit:	Drawing Power:	Outstanding:	
	Comments on Irregularity (if any):			
	Any adverse comments on the unit by inspecting official in last inspection report:			
7.	A. Cost of Project (as accepted by sanctioning authority)(In Rs. Lakh)		B. Means of Finance (as accepted by sanctioning authority)(In Rs. Lakh)	
	Give component wise details		a. Term loan of Bank:	
			b. Promoter Equity	
			c. Unsecured loan :	
			d. Others if any	
	Total		Total	
8.	A. Forward Linkages:		B. Backward Linkages with Small/Marginal farmers:	
	1		No. of members:	

553926/2020/NR/2PS

			Details of Primary and Collateral Securities taken by the bank (if any)	
	3		a. Primary Securities	b. Collateral Securities
	4			
	5			
	6			
(Please enclose details separately)				
9	Name of the Consortium (if any) associated with Credit Facility with complete address, contact details and email:			
9 a)	Address (*with pin-code) :			
9 b)	Contact Details :			
9 c)	Email Address :			
<p>Request of Branch head for Credit Guarantee:- In view of the above information, we request Credit Guarantee Cover against Credit Facility of Rs.....(in Rupees) to FPO(copy of sanction letter along with appraisal/process note of competent authority is enclosed for your perusal and record). Further we confirm that :</p> <ol style="list-style-type: none"> 1. The KYC norms in respect of the Promoters have been complied by us. 2. Techno-feasibility and economic viability aspect of the project has been taken care of by the sanctioning authority and the branch. 3. On quarterly basis, bank will apprise the .....(Name of Implementing Agency) about progress of unit, recovery of bank's dues and present status of account to.....(Name of Implementing Agency) 4. We undertake to abide by the Terms & Conditions of the Scheme. 				
Date.....		..... Signature of Branch Manager with branch seal Name..... ... Designation Signature of Authorized Person in zonal office Name..... Designation		
List of Enclosures				
1. Recommendation with amount of CGC sought on Bank's Original letterhead with date and dispatch number duly signed by the Branch Manager on each page.		5. Promoter's request letter addressed to the Bank Manager on original letter head of FPO		9. List of shareholders confirmed by promoter and bank

553926/2020/NRLPS

2. Sanction letter of sanctioning authority addressed to recommending branch.	6. Implementation Schedule confirmed by the bank.	10. Affidavit of promoters that they have not availed CGC from any other institution for sanctioned Credit Facility.
3. Bank's approved Appraisal/Process note bearing signature of sanctioning authority.	7. Up-to-date statement of account of Term loan and Cash Credit (if Sanctioned).	11. Field inspection report of Bank official as on recent date.
4. Potential Impact on small farmer producers 1. Social Impact, 2. Environmental Impact 3. Risk Analysis	8. a).Equity Certificate, C.A/CS certificate/RCS certificate b). FORM-2, FORM-5 and FORM-23 filed with ROC for Company/RCS.	* Pin Code at Column No. 1. a), 2. b), 2. c), 4. a) and 9. a) is Mandatory

For further information, please contact:

<p>Managing Director Small Farmers' Agri- Business Consortium, Head office, NCUI Auditorium Building 5th floor, 3, Siri Institutional Area August Kranti Marg, Hauz Khas, New Delhi-110016 Tel: 011-41060075, 26966017 e-mail: sfac@nic.in Website: www.sfacindia.com</p>	<p>Chief General Manager, National Bank for Agriculture & Rural Development, NABARD, C-24, 'G' Block, Bandra-Kurla Complex, Bandra East, Mumbai – 400051 Tel: 022- 26539530,26539500 e-mail: csr.murthy@nabard.org, fsdd@nabard.org Website: www.nabard.org</p>	<p>Managing Director National Co-operative Development Corporation, NCDC, 4-Siri Institutional Area, Hauz Khas, New Delhi – 110016 Tel: 011- 26960796, 26567140 e-mail: mail@ncdc.in Website: www.ncdc.in</p>
<p>Agriculture Marketing Adviser Directorate of Marketing & Inspection DAC&FW, New CGO Complex, NH-IV, Faridabad - 121001 Tel: 0129- 2412518 e-mail: mdrc-dac@gov.in Website: www.dmi.gov.in</p>		

**Agricultural Marketing Division
Department of Agriculture, Co-operation & Farmers' Welfare
Ministry of Agriculture & Farmers' Welfare
Krishi Bhawan, New Delhi-110001
Tel: 011-23386235, 23388579
Website: www.agricoop.nic.in**

Most Immediate

F. No. 11015/2/2019-M-II/397-438

Government of India

Ministry of Agriculture & Farmers' Welfare

Department of Agriculture, Cooperation & Farmers' Welfare
(Agricultural Marketing Division)

Shastri Bhawan, New Delhi

Dated: 08.03.2019

To,
Chief Secretaries of all States/UTs
(As per list attached)

Subject: Scheme Guidelines of Agri-Market Infrastructure Fund (AMIF) for Development and Up-gradation of Agricultural Marketing Infrastructure in Gramin Agricultural Markets (GrAMs) and APMC Markets - reg.

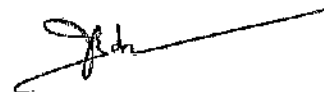
Madam/Sir,

It is to invite your kind attention to the announcement in the Union Budget, 2018-19 to develop and upgrade existing 22,000 rural Haats into Gramin Agricultural Markets (GrAMs). In these rural haats physical infrastructure is to be strengthened by MGNREGS and other Government Schemes. Marketing Infrastructure in these rural haats is to be strengthened through Agri-Market Infrastructure Fund (AMIF).

2. The Government of India has approved setting up of Agri-Market Infrastructure Fund (AMIF) with a corpus of Rs. 2000 crore with NABARD for development and upgradation of marketing infrastructure in 10,000 GrAMs and 585 APMCs. States may access AMIF for development and upgradation of marketing infrastructure in rural haats.

3. Development of existing village haats into GrAMs with modern marketing and value addition facilities will substantially enhance the market accessibility of farmers including SC/ST and women farmers near to their farm gate and will also facilitate remunerative prices by enabling them to sell their produce directly to consumers and bulk consumers.

4. The Government has formulated Scheme Guidelines of Agri-Market Infrastructure Fund (AMIF) for Development and Up-gradation of Agricultural Marketing Infrastructure in Gramin Agricultural Markets (GrAMs) and APMC Markets.

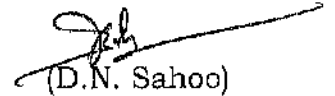


2/-

-2-

5. A copy of the aforesaid scheme guidelines is enclosed herewith with request to kindly forward the same to the concerned Departments of the State/UT (Agriculture/ Horticulture/ Marketing/ Cooperation/ Rural Development/ Panchyati Raj) for taking necessary action in this respect.
6. The Scheme will take effect from the date of issue i.e., 08.03.2019.

Yours faithfully,



(D.N. Sahoo)
Deputy Secretary to the Government of India
Tel. No. 011-23388861

Enclosure: As above.

Copy to:

1. Secretary, Ministry of Rural Development, Krishi Bhawan, New Delhi.
2. Secretary, Ministry of Panchyati Raj, Krishi Bhawan, New Delhi.
3. Secretary, Ministry of Tribal Affairs, Shastri Bhawan, New Delhi
4. Secretary, Department of Financial Services, New Delhi.
5. Chairman, NABARD
6. Joint AMA, DMI, Faridabad.



**Agri-Market Infrastructure Fund (AMIF)
for Development and Up-gradation of Agricultural Marketing
Infrastructure in Gramin Agricultural Markets (GrAMs) and
APMC Markets**

Scheme Guidelines

**Department of Agriculture , Cooperation & Farmers' Welfare
Ministry of Agriculture & Farmers' Welfare
Government of India**

Index

S.No.	Particulars	Page No.
1.	Introduction	3-4
2.	Rationale of the Scheme	4-5
3.	Objectives of Scheme	5
4.	Fund Corpus and Cost of Fund	5-6
5.	Implementation Period of Scheme	6
6.	Financial Implication	6
7.	Eligible Projects	6-7
8.	Eligible Beneficiaries	7-8
9.	Priority and Investment Limits	8
10.	Implementation Mechanism and Routing of Proposal/DPR	8-10
11.	Duties and Function of Screening Committee	10
12.	Utilisation of Loan	10-11
13.	Payment of Interest Subvention and Repayment of Loan	11
14.	Monitoring & Evaluation of the Scheme	11-12
15.	Project Completion Report/Certificate	12
16.	Sanction and Recovery of loan	12
17.	Memorandum of Agreement	13
18.	Annexure – I to IV	14-19

Scheme Guidelines of Agri-Market Infrastructure Fund (AMIF) for Development and Up-gradation of Agricultural Marketing Infrastructure in Gramin Agricultural Markets (GrAMs) and APMC Markets.

1.0 Introduction

1.1 Farmers either sell their produce to the aggregators/ local traders at prices dictated by them or sell in the nearby rural *haats* or are generally required to bring their produce to wholesale markets, which are regulated under the provisions of respective States' Agricultural Produce Marketing (Regulation) Acts/Rules , popularly called Agricultural Produce Market Committee (APMC) Act/Rules . As on 31.03.2017, there are 6630 regulated wholesale markets in the country with an average density of 496 square Km. per market. Expansion of number of wholesale regulated markets may not be feasible being capital intensive and time consuming. In addition to these wholesale markets, there are reportedly 22,941 rural *haats* in the country located nearer to the farm gate. As reported by State Agricultural Marketing Departments/Boards, approximately 11,811 rural *haats* are under Rural Local Bodies i.e Panchayats , approximately 1274 rural *haats* under Agricultural Produce Market Committees (APMCs), cooperatives & other government agencies, while remaining approximately 9856 rural *haats* are under private sectors including individuals , trusts, waqf boards , etc.

1.2 Rural *haats* and Agricultural Produce Market Committee/Regulated Market Committee (APMC/RMC) markets play a crucial economic role for agrarian community in realizing prices for the commodities traded. However, the village *haats*, lacking requisite marketing and supporting infrastructure and facilities, are of paramount importance for farmers in general and for small and marginal farmers including women in particular, for better value realization of their agricultural produce. Many regulated wholesale markets also suffer from the lack of necessary marketing and auxiliary infrastructures. Inaccessibility and inadequate supporting and marketing infrastructure together lead to prevalence of avoidable intermediaries, resulting into low price realization to the producers, more so to the small & marginal ones. Hence, improving the infrastructure of rural *haats* & selected regulated wholesale markets will substantially improve the agri. value chain and will improve the market accessibility & price realisation, reduce wastages and provide opportunity

to the farmers for value addition and processing to make it more marketable and remunerative.

2.0 Rationale of the Scheme

2.1 In order to provide farmers particularly small and marginal ones with proper marketing facilities nearer to farm-gate and improve farmer- market linkages, Government announced in the Union Budget, 2018-19 to develop and upgrade existing approximately 22,000 rural *haats* into Gramin Agricultural Markets (GrAMs). In these GrAMs, physical infrastructure to be strengthened using MGNREGS and other Government Schemes; and an Agri-Market Infrastructure Fund (AMIF) with a corpus of Rs. 2000 crore is also to be set up for developing and upgrading agricultural marketing infrastructure in the 22,000 Gramin Agricultural Markets (GrAMs) and 585 Agriculture Produce Market Committee (APMC) Markets. The GrAMs are to be linked to electronic National Agricultural Market (e-NAM).

2.2 Pursuant to budgetary announcement in 2018-19 and in order to provide market facilities nearer to farm gate to the farmers to directly sell their produce to the consumers and bulk purchasers in the GrAMs and strengthen & modernize the marketing and auxiliary infrastructure/facilities in APMC markets so as to improve its marketing efficiency, this scheme has been formulated.

2.3 Against the announcement in the Union Budget ,2018-19 to develop and upgrade existing 22,000 rural *haats* , a total of 10,000 number of rural *haats* are proposed to be covered under the AMIF during 2018-19 and 2019-20 . The rationality behind proposing 10,000 rural *haats* is that as per information received from State Agricultural Marketing Departments / Boards, there are only 11,811 rural *haats* under control of local bodies i.e Panchayats ; and as per the provision of MGNAREGA , rural *haats* only under control of local bodies can be developed from its fund. Further, out of existing 11,811 rural *haats* , around 1,000 rural *haats* have already been adequately developed by States under various schemes including Agricultural Competitiveness Project of World Bank. As regards proposing 585 APMC markets, it has been considered in sync with budgetary announcement and also to modernize them in terms of infrastructure and logistic support to facilitate

value addition, temporary stocking and movement from dispatch to destination centres in inter-mandi and inter-state trade.

3.0 Objectives of Scheme

3.1 To improve marketing and supporting infrastructure in Gramin Agricultural Markets (GrAMs) as well as in regulated wholesale markets of APMC/RMC by developing marketing infrastructure so as to enhance farmers' market accessibility and reduce post-harvest losses, marketing cost and number of intermediation in supply chain, resulting into increased net income of the farmers. To link GrAMs to e-NAM portal to facilitate the farmers for on-line trade of the aggregated produce and thereby to avail the benefit of transparent online trading on e-NAM platform for a remunerative prices through better price discovery.

3.2 To provide better farmer-consumer interface through development of GrAMs as Farmer-Consumer Direct Markets.

3.3 To facilitate aggregation of the produce in GrAMs and establish forward linkages with the secondary markets of APMCs in hub and spoke mode and also in Public Private Partnership mode as well as to establish linkage with the processors, organized retailers and consumers including that with Mega Food Parks and Integrated Cold Chain etc.

3.4 To modernize the marketing, processing, storage and ancillary infrastructure/logistics including better assaying facilities in 585 regulated APMC markets to enhance marketing efficiency and promote inter-mandi and inter-State trade transactions by developing adequate logistics.

4.0 Fund Corpus and Cost of Fund

4.1 National Bank for Agriculture and Rural Development (NABARD) will set up an initial Corpus Fund of Rs.2000 crore as Agri-Market Infrastructure Fund (AMIF) through market borrowings at the prevalent rate of interest (now @8.5%). The aforesaid corpus of Rs. 2,000 crore will be developed by NABARD in two years during 2018-19 and 2019-20, however, NABARD will be free to apply its own procedure to develop the corpus.

4.2 The cost of fund would include the cost of borrowing by NABARD from market and NABARD's margin of 0.6%. The margin of 0.6 % p.a. will be added to current market cost of borrowing by NABARD towards covering processing, administrative, overheads, risk cost etc The cost of fund will be computed by NABARD through its established procedure.

4.3 The rate of interest on loan on each occasion shall be 3 % below the corresponding cost of fund. DAC&FW will provide an interest subvention of 3.0 % to enable NABARD to advance loans to State Governments/UT Administrations at concessional rate of interest .

5.0 Implementation Period of Scheme

5.1 The Scheme will be operational from 2018-19 to 2025-26 which includes moratorium period of 2 years. The proposals received from States/ Union Territories and duly approved/sanctioned upto 31.03.2020 shall be eligible for assistance under the scheme.

6.0 Financial Implication

6.1 The loans at the applicable rate will be extended by NABARD to the State Government / UT administration during the remaining period of 14th Finance Commission i.e. 2018-19 and 2019-20 with an allocation of Rs. 12.00 crore and Rs. 1988.00 crore respectively. Based on demand and other factors, the amount of loan disbursement to the State Governments / UT administrations may *inter se* vary. Total expected outgo in the form of interest subvention for the Government of India is estimated to be Rs.240 crore over the scheme period starting from 2018-19 to 2025-26.

7.0 Eligible Projects

7.1 States/ UTs will consider those rural *haats* for assistance under the Scheme wherein basic and supporting infrastructure under MGNREGS have either already been developed or at any stage of development. Those rural *haats* , with adequate basic and supporting infrastructure requiring no further need of development from

MGNREGS , may also be considered for assistance. Justification in this respect may be given either by the concerned official of MGNREGS at district level or designated nodal officer of the State/UT. A list of infrastructure /facilities prescribed under MGNREGS is at Annexure-I, which is subject to modification from time to time.

7.2 In addition to incentivizing development of marketing infrastructure in GrAMs and strengthening & modernizing marketing and auxiliary infrastructure/facilities in APMC markets under the Scheme , States /UTs, through own resources under special and innovative initiatives, may also further strengthen and improve the physical infrastructure

7.3 State Governments / UT Administrations, while preparing the Detailed Project Report (DPR)/Proposal , may prioritize those rural *haats* and APMC markets located in aspirational district(s) and also those located in notified tribal areas.

7.4 The size and dimensions of the marketing and support infrastructure may be based on the size/type of markets along with requirements therefor. Cost norms for civil structure will be based on the estimates of civil / electrical as per unit cost rate followed by respective State/UT . As regards marketing infrastructure, the unit cost norm for any component of infrastructure may be followed from the unit cost norm existing in respective State; and in the absence of such norms, Central Government cost norm will be applicable . However, for integrated market infrastructure projects and innovative marketing infrastructure component, for which no norms exist, actual cost may be taken for formulating cost estimates. No capacity ceiling is prescribed to give flexibility to state/UT to promote state of the art value chain projects involving APMCs & GrAMs in cluster mode.

8.0 Eligible Beneficiaries

8.1 The fund in the form of loan is to be accessed by the State Government / UT Administration not by the individual beneficiaries (Panchayats, State Government Departments , Marketing Boards, APMCs, Co-operative, other State agencies) as per the set procedure and guidelines in this respect applicable in NABARD.

8.1.1 For GrAMs, as loan will be advanced to State Governments/ UT Administrations, therefore, the direct beneficiary will be State Government/UT

Administration . State Government /UT Administration through its identified institutional mechanism or otherwise will transfer the fund to the real beneficiary of Panchayats for assistance to develop marketing infrastructure in Gramin Agricultural Markets (GrAMs). State Government /UT Administration can also transfer the fund to other State agencies like APMCs and Co-operatives for developing marketing infrastructure in rural *haats* controlled by them into Gramin Agricultural Markets (GrAMs) subject to the condition that such agency (ies) undertake to provide necessary basic and supporting infrastructure/facilities in rural *haats* and also undertake to deregulate such GrAMs from APMC Act reregulation.

8.1.2 For APMCs, as loan will be advanced to State Governments/ UT Administrations, therefore, the direct beneficiary will be State Government/UT Administration. The State Government/ UT Administration through State Agricultural Marketing Departments/ Boards, as the case may be, will transfer the fund to Agricultural Produce Market Committees (APMCs)/ Regulated Market Committees (RMCs) to develop marketing and auxiliary infrastructure/facilities in APMC/RMC markets.

9.0 Priority and Investment Limits

9.1 States/UTs will have full flexibility to identify the type/ size and dimension of the infrastructure with minimum of Rs. 8.00 lakh to maximum of Rs. 25.00 lakh investment per GrAM. In case of APMC market, investment ceiling is Rs. 2.05 crore per market . Investment in GrAMs is to be prioritized with more focus to the GrAMs located in the aspirational districts. However, States/UTs, while submitting DPRs/proposals to DAC&FW, have to ensure that at least 40 % of the total proposed investment should be made towards development of marketing infrastructure in GrAMs.

10.0 Implementation Mechanism and Routing of Proposal/DPR

10.1 State Government/ UT administration will designate a nodal officer in the State/ UT and will also constitute a State Level Sanctioning Committee (SLSC) chaired by aforesaid designated nodal officer and comprising members from line departments like rural development, panchayatiraj, finance, marketing, co-operation, agriculture, horticulture, animal husbandry & fisheries. The SLSC will consider and scrutinize the

DPRs/ proposals received from districts of the State/UT before forwarding compiled proposals/DPRs to the DAC &FW in prescribed pro-forma given at Annexure-II in case of proposal/DPR relating to GrAMs. The proposal/DPR is to be forwarded by the SLSC to DAC&FW in two copies. State Governments/ UT Administration for compilation of the proposals and proper coordination in the districts will identify a District Level Institutional Mechanism, which would forward the compiled proposals/DPR to SLSC. In case of proposals /DPRs relating to APMC markets , respective State Agricultural Marketing Department/Board, as the case may be, will coordinate and compile and forward the proposal to SLSC. In case of proposals relating to APMCs too, the SLSC will forward the compiled proposal/DPR to DAC&FW in two copies in the prescribed pro-forma.

10.2 Designated State Level Nodal Officer will have to ensure that at any point of time investment proposal should not be less than 40% towards GrAMs of the total investment proposed.

10.3 The Screening Committee constituted in the DAC&FW shall consider DPRs/ proposals received from States/UTs . The Screening Committee will scrutinise and recommend the DPRs/ proposals to NABARD for sanction/ release of loan along with the total cost, eligible loan amount to the State/UT.

10.4 Composition of Screening Committee shall be as under:-

- | | | |
|--------|---|-------------------|
| (i) | Additional Secretary (In-charge of Agricultural Marketing)
or as nominated by DAC&FW | -Chairman |
| (ii) | Representative of Deptt. of Financial Services, GOI | -Member |
| (iii) | Chief General Manager of NABARD or its nominee not
below the rank of DGM | -Member |
| (iv) | Representative from Ministry of Rural Development | -Member |
| (v) | Representative from Ministry of Panchyati Raj | -Member |
| (vi) | Advisor Agriculture, NITI Aayog | -Member |
| (vii) | Representative of IFD, DAC&FW | -Member |
| (viii) | Representative of concerned State/UT seeking assistance | -Member |
| (ix) | Director General, NIAM, Jaipur | -Member |
| (x) | Joint Secretary (Mktg.) & AMA | -Member Secretary |

10.5 The Chairman of the Committee may co-opt one additional Member from DMI not below the rank of Deputy Secretary to assist the committee in technical matters related thereto. Chairman may also co-opt any agriculture marketing and finance specialists having well-versed knowledge on the subject.

10.6 DMI will provide secretarial assistance to Screening Committees.

10.7 The NABARD will sanction the DPR/proposal received from DAC&FW by applying the due diligence and release the fund to the respective State Government/ UT Administration (Finance Department) in the manner & procedure applicable in NABARD and in sync with the MoU.

11.0 Duties and Function of Screening Committee

11.1 DAC&FW shall set up a Screening Committee to discharge and perform following duties and functions.

- i) To scrutinize the DPRs/ proposals and recommend the same for sanction by NABARD after applying its due diligence.
- ii) To provide recommendation to the DAC&FW, and also to the NABARD, if need arises, for formulation and changes to the guidelines for implementation of the projects.

12.0 Utilisation of Loan

12.1 The loan amount shall be given to the States /UTs in a perspective manner. The State Government/ UT Administration will ensure that loan is utilized for the purpose (s) it has been taken.

12.2 State Governments / UT Administrations may access loan for developing marketing infrastructure in GrAMs and strengthening & modernizing marketing and auxiliary infrastructure/facilities in APMC. Illustrative lists of eligible marketing infrastructure in GrAMs and marketing and auxiliary infrastructure/facilities in APMC markets are given at **Annexure- III and IV**, respectively. Based on requirements considering varied factors like infrastructure gap, nature of produce , throughput , etc, marketing infrastructure in GrAMs and marketing and auxiliary

infrastructure/facilities in APMC markets can be modified. The list is an indicative only not exhaustive.

13.0 Payment of Interest Subvention and Repayment of Loan

13.1 To keep the borrowing under AMIF attractive for the State Governments/ UT administrations, NABARD shall lend at 3 % lower interest rate than the corresponding cost of funds mobilized by NABARD from market borrowings inclusive of NABARD's margin. The interest subvention amount on claim/application by NABARD shall be quarterly payable to NABARD subject to availability of fund with DAC&FW upon submission of Audited claims. However, DAC&FW will make efforts to coincide interest subvention with the date of repayment of interest by the State Governments/ UT Administration . This cost shall be met from existing budget of sub-scheme of Agricultural Marketing Infrastructure (AMI) under the Scheme of Integrated Scheme of Agriculture Marketing (ISAM) of DAC&FW.

13.2 Borrowings from NABARD shall be paid back in 7 years including moratorium period of 2 years starting from 2018-19 to 2025-26. The year of disbursement shall also be counted for moratorium of 2 years. States/UTs shall repay the loan to NABARD as per the instructions as specified in the terms and conditions of sanction letter and disbursement advice issued by NABARD.

13.3 The NABARD will submit statement of State/UT- wise loan amount released and outstanding loan quarterly basis along with claim/application for interest subvention.

14.0 Monitoring & Evaluation of the Scheme

14.1 Monitoring of individual projects shall primarily be the responsibility of the implementing Agency/Department of the State Government.

14.2 NABARD may undertake monitoring of projects on sample basis.

14.3 Monitoring of implementation of the scheme will be done by the Government of India, through a special monitoring cell, to be set up in Directorate of Marketing and Inspection (DMI), an attached office of DAC&FW. NABARD may submit audited

UCs for Grants-in-aid released by GoI in previous FY and provisional UC for funds released in previous quarter by GoI.

14.4 A third party independent mid- term evaluation of the scheme will be carried out after the end of second year (2019-20) of the Scheme to assess the benefits such as better price realization by farmers due to improvement in the infrastructure of GrAMs and APMC markets from within the Budget of DMI.

15.0 Project Completion Report/Certificate

15.1 Project completion certificate alongwith the project completion report shall be submitted by the implementing Department through Finance Department of the concerned State Government/ UT Administration to DAC& FW through NABARD within three months from the date of completion of project. It shall be duty of NABARD to ensure that such certificate alongwith the completion report is timely received in DAC&FW. The project is to be completed within 16 months from the day of sanction of proposal by NABARD. If reason is justified, grace period for another three months can be granted by DAC&FW on recommendation by NABARD.

16.0 Sanction and Recovery of loan from AMIF

16.1 Loan sanctioned and disbursed by the NABARD to State Government /UT Administration under the scheme shall be recovered in time bound manner from the loanee State/UT Administration. The such recovery of loan shall be in the process and manner as contained in the Memorandum of Agreement and also as per the terms and conditions of loan sanction letter issued by NABARD .

16.2 However in the event of default by any State Government/UT Administration in honouring its repayment obligation with reference to AMIF as per MoU, DAC & FW may consider not to release any further amount to the extent of default to concerned State Government/UT Administration under central share from RKVY or any other scheme of DAC&FW. In addition to this, in case of any default of repayment, any other measure as deemed fit, may be initiated by DAC &FW in consultation with NABARD.

17.0 Memorandum of Agreement

17.1 States/UTs shall sign tripartite Memorandum of Agreement (MoA) with DAC&FW (GoI) and NABARD to ensure effective implementation and periodic repayment of loan and interest to NABARD. The MoA in respect of State Government/UT Administration will be signed by its Finance Department, being the “Nodal Department” for availing the loan under AMIF . The loan under AMIF will be advanced as per the terms and conditions of sanction letter and provisions contained in the aforesaid MoA, which is to be finalized in due course in consultation with NABARD. The operational guidelines for MoA for sanction and release of loan to States/UTs out of AMIF and any modifications thereto shall be read as part and parcel of this Memorandum of Agreement.

Annexure I

List of basic and support Infrastructure for development in Rural *haats* under MGNREGS

S.No.	Infrastructure/ Facilities
1.	Open raised, covered platform
2.	Toilets (Separate for women and Men)
3.	Drinking water facility
4.	Drains
5.	Brick/Stone soling in the moving space
6.	Garbage pits at corner
7.	Office block
8.	Storage (Small size)
9.	Boundary wall/fencing with two gates(incoming and outgoing)
10.	Parking space
11.	Drinking water facility for cattle

Annexure-II

Pro-forma for Proposal/DPR to submit DAC&FW

Name of the State/UT: _____

Name and Designation
with telephone no. and email id of the contact person: _____

Sl. No.	Particulars	Write the applicable		
1	2	3		
A.	Proposal/DPR relates to GrAM / APMC Markets	GrAM		
1.	In case of GrAM, indicate the entity(Panchayat/Cooperative/APMC/other state agency)			
2.	Location of the GrAM (name of village,block/aluka, district)			
3.	Type of GrAM (wholesale/retail/both wholesale & retail)			
4.	Nature of GrAM (agricultural produce market/ horticultural produce market/mixed market/fish market/livestock market / specify, if other)			
5.	Status of adequacy of basic Infrastructure Yes/No If yes, provided- i) under MGNREGS with list of such basic infrastructure ii) under other than MGNREGS along with its source with list of such basic infrastructure If no, please undertake to adequately provide the basic infrastructure			
6.	Details of marketing infrastructure proposed under AMIF			
	Sl. No.	Name of the infrastructure	Estimated cost (Rs. in	Criteria for considering cost

			lakhs)	
	1.			
	2.			

	Total cost			
7.	Financial contribution of State/UT, if any, over and above AMIF (Rs. in lakhs)			
8.	Potential to integrate with e-NAM portal			
9.	Time line for completion of project			
10.	Whether or not outside the ambit of APMC regulation			
11.	Recommendation/remark of the State Government/ UT Administration			
B.	Proposal/DPR relates to GrAM / APMC Markets			APMC market
1.	Name and address of APMC market with whether Principal Market Yard or Sub-Market Yard			
2.	Commodity specific/ general market If commodity specific, please mention the name of commodity or group of commodities traded alongwith its turnover and total turnover If general market, please mention the name of three major commodities traded along with their turnover and total turnover			
3.	Whether already integrated with e-NAM or not, if not whether any proposal is to integrate?			
4.	Details of marketing and auxiliary infrastructure/ facilities existed. Please provide the list.			
5.	Details of marketing and auxiliary infrastructure/ facilities proposed under AMIF			
6.	Details of marketing infrastructure proposed under AMIF			
	Sl. No.	Name of the infrastructure	Estimated cost	Criteria for

		(Rs. in lakhs)	considering cost
	1.		
	2.		

	Total cost		
7.	Financial contribution of State/UT, if any, over and above AMIF (Rs. in lakhs)		
8.	Time line for completion of project		
9.	Recommendation/remark of the State Government/ UT Administration		

Signature of State Government/UT Administration official with designation
Competent to forward the proposal.

Note: Above pro-forma is to be filled up individual GrAM and APMC market wise separately and also a consolidated summery sheet is to be attached indicating the total fund requirement under AMIF for GrAMs and APMC markets separately in crores along with the percentage thereof. If the proposal is for 2nd time, the summery consolidated summery sheet of previous time is also to be attached.

Annexure III

List of indicative marketing infrastructure eligible for GrAMs under the scheme.

S.No.	Indicative marketing Infrastructure
1.	1. Cleaning, sorting grading, washing, waxing, processing, packaging, pack house as required.
2.	2. Low energy cool chamber / Deep Freezer / Storage facility/Mini Reefer Vans/Solar powered Cold Storage, Freezer etc.
3.	3. IT infrastructure for integrating with e-NAM and for market information including electronic ticker board/ market information announcement system.
4.	4. Electronic weighing scales/normal weighing scales
5.	5. Other Infrastructure such as value additions machines such as Mini Dal Mill / Mini Rice Huller / Mini Millet processing unit/ Mini Oil Expeller/Deshelling/ Decorticator Machines including solar powered ones etc.
6.	6. Bagging and stitching machines and facilities

Annexure IV

List of indicative marketing and other supporting Infrastructure

S.No.	Indicative Marketing / and other supporting Infrastructure
1.	Common Auction system and drying platform/drying equipment.
2.	Scientific warehouses including material handling and testing equipment.
3.	Ripening Chamber Cold Storages/ Pack houses/ Refrigeration Deep Freezer/ Reefer vans etc including solar powered and zero energy and with other technological innovations ones.
4.	Cleaning, grading, washing, waxing, packaging and primary processing.
5.	Electronic and normal weighing scale/ weigh bridge.
6.	Computer & IT equipments and connectivity/POS devices for e-trading and market information system
7.	Assaying equipment and assaying Laboratory.
8.	Price display board (Electronic/ Non-electronic) and / or Public announcement system
9.	Mini dal mil/oil mil/ Mini Rice Huller/flour mill/deshelling/ decorticator machine/ mini oil expeller and refining facility/Cotton ginning / Mini millet processing unit and allied facilities/spice making and other value addition machines such as drying machines & required platform etc.
10.	Bagging and Stitching Machines and facilities for packaging



PRADHAN MANTRI MATSYA Sampada YOJANA

OPERATIONAL GUIDELINES

Government of India
Ministry of Fisheries, Animal Husbandry and Dairying
Department of Fisheries

June, 2020

CONTENTS

CHAPTER -1

1. INTRODUCTION
2. PRADHAN MANTRI MATSYA SAMPADA YOJANA (PMMSY)
3. VISION
4. AIMS AND OBJECTIVES
5. FUNDING PATTERN
 - 5.1 CENTRAL SECTOR SCHEME (CS)
 - 5.2 CENTRALLY SPONSORED SCHEME (CSS)
6. INVESTMENT
7. END IMPLEMENTING AGENCIES (EIAS)
8. BENEFICIARIES
9. MODE OF IMPLEMENTATION
 - 9.1 INSTITUTIONAL FRAMEWORK AT CENTRAL GOVERNMENT LEVEL
 - 9.1.1 CENTRAL APEX COMMITTEE (CAC)
 - 9.1.2 PROJECT APPRAISAL COMMITTEE (PAC)
 - 9.1.3 PROJECT MONITORING AND EVALUATION UNIT (PMEU)
 - 9.1.4 PROJECT MONITORING UNIT (PMU)
 - 9.2 INSTITUTIONAL FRAMEWORK AT STATE/UT AND DISTRICT LEVEL
 - 9.2.1 DISTRICT LEVEL COMMITTEE (DLC)
 - 9.2.2 STATE LEVEL APPROVAL AND MONITORING COMMITTEE (SLAMC)
10. CONVERGENCE
11. MAJOR IMPACT, INCLUDING EMPLOYMENT GENERATION POTENTIAL
12. LIST OF ACTIVITIES
13. DETAILED PROJECT REPORT (DPR)
14. PRE-INVESTMENT ACTIVITIES
15. CENTRAL FINANCIAL ASSISTANCE
16. NODAL DEPARTMENT IN THE STATE/UT
17. COST NORMS FOR ADMISSIBILITY OF CENTRAL FINANCIAL ASSISTANCE
18. ADMINISTRATIVE EXPENSES
19. DETAILED COST ESTIMATE
20. LAND AND WATER BODY
21. STATUTORY CLEARANCES
22. INCLUSIVE DEVELOPMENT
23. SUBMISSION OF PROPOSAL
24. MODE OF FINANCIAL RELEASES
25. MONITORING AND EVALUATION
26. POST DEVELOPMENT MANAGEMENT OF FACILITIES
27. PRIVATE SECTOR PARTICIPATION, PUBLIC PRIVATE PARTNERSHIP (PPP) AND VIABILITY GAP FUNDING (VGF) UNDER PMMSY

28. SPECIAL PURPOSE VEHICLES (SPVS), SOCIETIES, COMPANIES INCLUDING JOINT VENTURE COMPANIES (JVCS), FISH FARMERS PRODUCER ORGANIZATIONS/COMPANIES (FFPOS/CS) AND OTHERS
29. COMMITTED FINANCIAL LIABILITIES OF CSS - BLUE REVOLUTION
30. TECHNOLOGY

CHAPTER -2

1. RATIONALE FOR PMMSY
2. STRATEGY
 - I. ENHANCEMENT OF PRODUCTION AND PRODUCTIVITY
 - II. INFRASTRUCTURE AND POST-HARVEST MANAGEMENT
 - III. FISHERIES MANAGEMENT AND REGULATORY FRAMEWORK

CHAPTER -3

ANNEXURE-I: CENTRAL SECTOR SCHEME SUB-COMPONENTS/ ACTIVITIES WITH 100% CENTRAL FUNDING UNDER THE PRADHAN MANTRI MATSYA SAMPADA YOJANA (PMMSY)

ANNEXURE -II: BENEFICIARY ORIENTED SUB-COMPONENTS AND ACTIVITIES UNDER CENTRALLY SPONSORED COMPONENTS OF PRADHAN MANTRI MATSYA SAMPADA YOJANA

ANNEXURE-III: NON-BENEFICIARY ORIENTED ACTIVITIES UNDER CENTRALLY SPONSORED COMPONENTS OF PRADHAN MANTRI MATSYA SAMPADA YOJANA

ANNEXURE-IV ORDER OF CREATION OF CENTRAL APEX COMMITTEE

ANNEXURE-V ORDER OF CREATION OF PROJECT APPRAISAL COMMITTEE

ANNEXURE-VI ORDER OF CREATION OF PROJECT MONITORING AND EVALUATION UNIT

ANNEXURE-VII ORDER OF CREATION OF PROJECT MONITORING UNIT

ANNEXURE-VIII STATE LEVEL /UNION TERRITORY LEVEL APPROVAL AND MONITORING COMMITTEE & DISTRICT LEVEL COMMITTEE (DLC) FOR PMMSY

ANNEXURE-IX DETAILS OF CONTRACTUAL MANPOWER TO BE ENGAGED BY STATES/UTS FOR OPERATING STATE PROGRAMME UNIT (SPU)/UNION TERRITORY PROGRAMME UNIT (UTPU), DISTRICT PROGRAMME UNIT (DPU) AND INSTITUTIONAL ARRANGEMENTS AT SUB-DISTRICT LEVEL INCLUDING MONTHLY OFFICE EXPENSES UNDER PMMSY

ANNEXURE-X CERTIFICATE (FOR STATE /UT IMPLEMENTED PROJECTS)

ANNEXURE-XI CERTIFICATE (FOR THE PROJECTS OTHER THAN STATE /UT IMPLEMENTED PROJECTS)

ANNEXURE-XII-A FORM OF UTILIZATION CERTIFICATE (FOR STATE GOVERNMENTS)

ANNEXURE-XII-B FORM OF FORM OF UTILIZATION CERTIFICATE FOR AUTONOMOUS BODIES OF THE GRANTEE ORGANIZATION

ABBREVIATIONS

ARL	:	Aquatic Referral Laboratory
CAC	:	Central Apex Committee
CS	:	Central Sector Scheme
CSS	:	Centrally Sponsored Scheme
DARE	:	Department of Agricultural Research and Education
DAT	:	Distress Alert Transmitter
DLC	:	District Level Committee
DoF	:	Department of Fisheries
DPR	:	Detailed Project Report
DPU	:	District Program Unit
EEZ	:	Exclusive Economic Zone
EIAs	:	End Implementing Agencies
FFPOs/Cs	:	Fish Farmers Producer Organisations/Companies
FH	:	Fishing Harbour
FLC	:	Fish Landing Centre
FY	:	Financial Year
GoI	:	Government of India
GVA	:	Gross Value Added
IAP	:	Integrated Aqua Park
INCOIS	:	Indian National Centre for Ocean Information Services
ISRO	:	Indian Space Research Organization
IT	:	Information Technology
JLGs	:	Joint Liability Groups
KCC	:	Kisan Credit Card
MCS	:	Monitoring, Control and Surveillance
MGNREGS	:	Mahatma Gandhi National Rural Employment Guarantee Scheme
MIS	:	Management Information System
MPEDA	:	Marine Products Export Development Authority
NE	:	North Eastern
NFDB	:	National Fisheries Development Board
NRLM	:	National Rural Livelihoods Mission
OIE	:	World organization for Animal Health
PAC	:	Project Appraisal Committee
PFZ	:	Potential Fishing Zones
PL	:	Post Larvae
PMEU	:	Project Monitoring and Evaluation Unit
PMMSY	:	Pradhan Mantri Matsya Sampada Yojana
PMU	:	Project Monitoring Unit
PPP	:	Public Private Partnership

QIP	:	Quality Improvement Programme
RKVY	:	Rashtriya Krishi Vikas Yojana
SC	:	Scheduled Caste
SCP	:	Self Contained Proposal
SCP	:	Self Contained Proposal
SFDB	:	State Fisheries Development Boards
SHG	:	Self Help Group
SLAMC	:	State Level Approval and Monitoring Committee
ST	:	Schedule Tribe
UC	:	Utilization Certificate
USD	:	United State's Dollar
UT	:	Union Territory
VGf	:	Viability Gap Funding
VHF	:	Very High Frequency

PRADHAN MANTRI MATSYA SAMPADA YOJANA**VISION**

Ecologically healthy, economically viable and socially inclusive fisheries sector that contributes towards economic prosperity and well-being of fishers, and fish farmers and other stakeholders, food and nutritional security of the country in a sustainable and responsible manner

CHAPTER -1

1. INTRODUCTION

- 1.1 India is one of the largest fish producing countries in the world and shares 7.58% to the global production. Contributing 1.24% to India's Gross Value Added (GVA) and 7.28% (2018-19) to the agricultural GVA, fisheries and aquaculture continue to be an important source of food, nutrition, income and livelihood to millions of people. Fisheries sector in India has shown impressive growth with an average annual growth rate of 10.88% during the year from 2014-15 to 2018-19. A comparison between the growth rate of fisheries sector GVA and National GVA is Table-1 & Graph-1. The fish production in India has registered an average annual growth of 7.53% from 2014-15 to 2018-19 (Graph-2) and stood at an all-time high of 137.58 lakh metric tons during 2018-19 (provisional). The export of marine products stood at 13.93 lakh metric tons and valued at Rs.46,589 crores (USD 6.73 billion) during 2018-19 (Graph-3) with an impressive average annual growth rate of about 10% in recent years.
- 1.2 The marine fisheries potential is estimated at 5.31 million tons as against present production of 4.17 million tons during 2018-19 (provisional) [harnessing nearly 78% of the estimated potential] and its activities are spread along the country's vast coastline with 2.02 million square km Exclusive Economic Zone (EEZ) and continental shelf area of 0.53 million sq.km. Besides, India is also bestowed with varied inland fisheries potential resources in the form of rivers and canals (1.95 lakh km), floodplain lakes (8.12 lakh hectares), ponds and tanks (24.1 lakh hectares), reservoirs (31.5 lakh hectares), brackish water (12.4 lakh hectares), saline/alkaline affected areas (12 lakh hectares) etc., with current estimated fish production potential¹ of about 17 million ton as against production of 9.58 million tons during 2018-19 (provisional) [harnessing only 56.3% of potential].
- 1.3 Fisheries and aquaculture remain an important source of food, nutrition, employment and income for millions, especially the rural populations. In fact, the sector provides livelihood to about 25 million fishers and fish farmers at the primary level and twice the number along the value chain. Fish being an affordable and rich source of animal protein, is one of the healthiest options to mitigate hunger and nutrient deficiency. It has immense potential to enhance incomes and usher in economic prosperity to stakeholders. Hence it

¹ The inland fisheries potential of India is currently under review. With technology infusion, scope for productivity enhancement, area expansion, diversification etc. it is expected to be much higher than estimated 17 million tons.

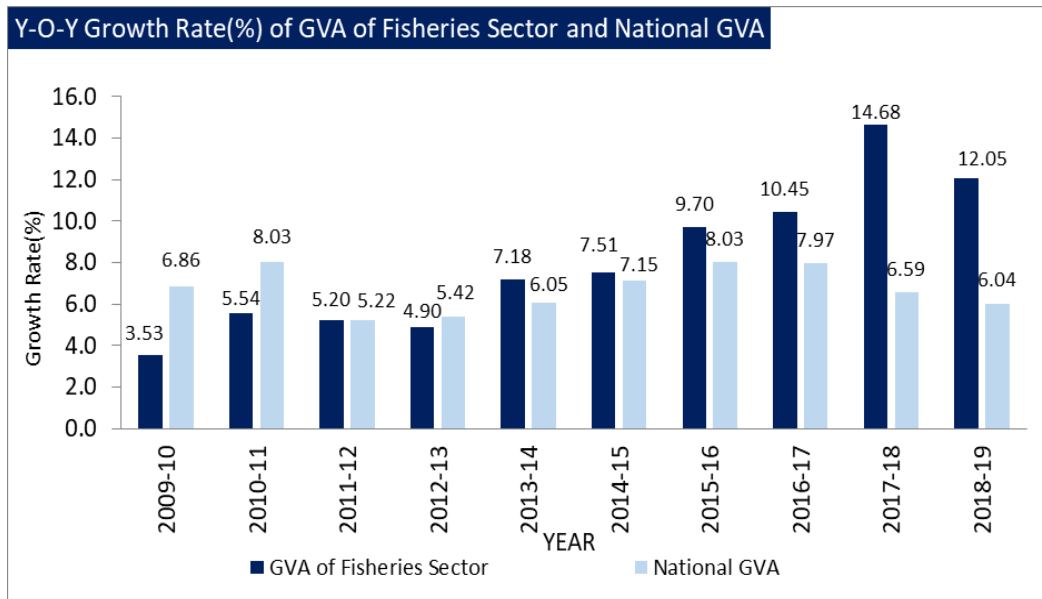
is essential that sustained and focused attention is given to the fisheries sector through policy and financial support to accelerate its development in a sustainable, responsible, inclusive and equitable manner.

- 1.4 Further, since majority of fisher folk directly depend on the sector, especially the small scale and artisanal fishers and are continue to fall behind the national indices of socio-economic development, it is essential to provide requisite impetus towards amelioration of poverty and backwardness among these marginalized and vulnerable communities and promote their holistic development and welfare.
- 1.5 Foreseeing the immense potential for development of fisheries and for providing focused attention to the sector, the Government of India in May, 2020 approved the "Pradhan Mantri Matsya Sampada Yojana (PMMSY) – A scheme to bring about Blue Revolution through sustainable and responsible development of fisheries sector in India" with an estimated investment of Rs. 20050 crores comprising of (i) Central share of Rs. 9407 crores, (ii) State share of Rs 4880 crores and (iii) Beneficiaries contribution of Rs. 5763 crores for its implementation for a period of 5 years from FY 2020-21 to FY 2024-25 in all States/Union Territories (Figure-1).

Fisheries Sector Growth Rate (%) of Gross Value Addition (GVA) (Constant Price: 2011-12)				
Years	Y-O-Y Growth Rate (Fisheries Sector)	Average Growth Rate (%) (Fisheries Sector)	Y-O-Y Growth Rate (National)	Average Growth Rate (%) (National)
2009-10	3.53	5.27	6.86	6.32
2010-11	5.54		8.03	
2011-12	5.20		5.22	
2012-13	4.90		5.42	
2013-14	7.18		6.05	
2014-15	7.51	10.87	7.15	7.16
2015-16	9.70		8.03	
2016-17	10.45		7.97	
2017-18	14.68		6.59	
2018-19	12.05		6.04	

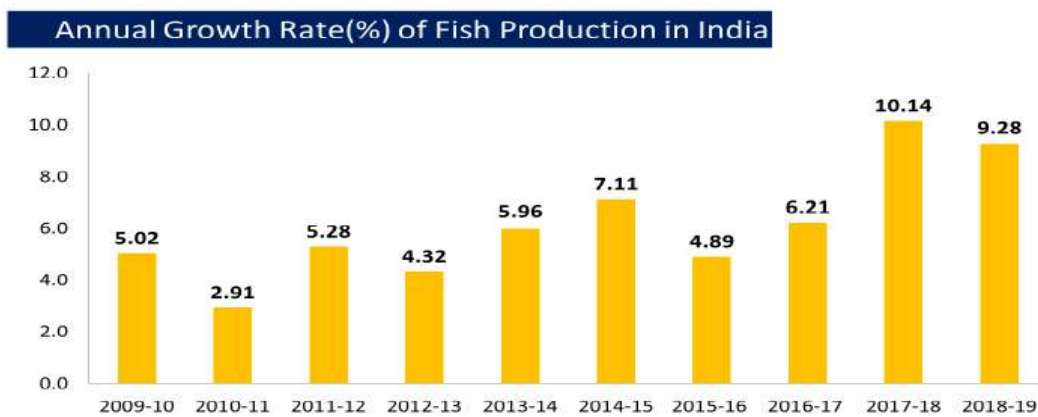
TABLE -1 Y-O-Y Growth Rate of GVA of Fisheries Sector and National GVA

Source- MoSPI



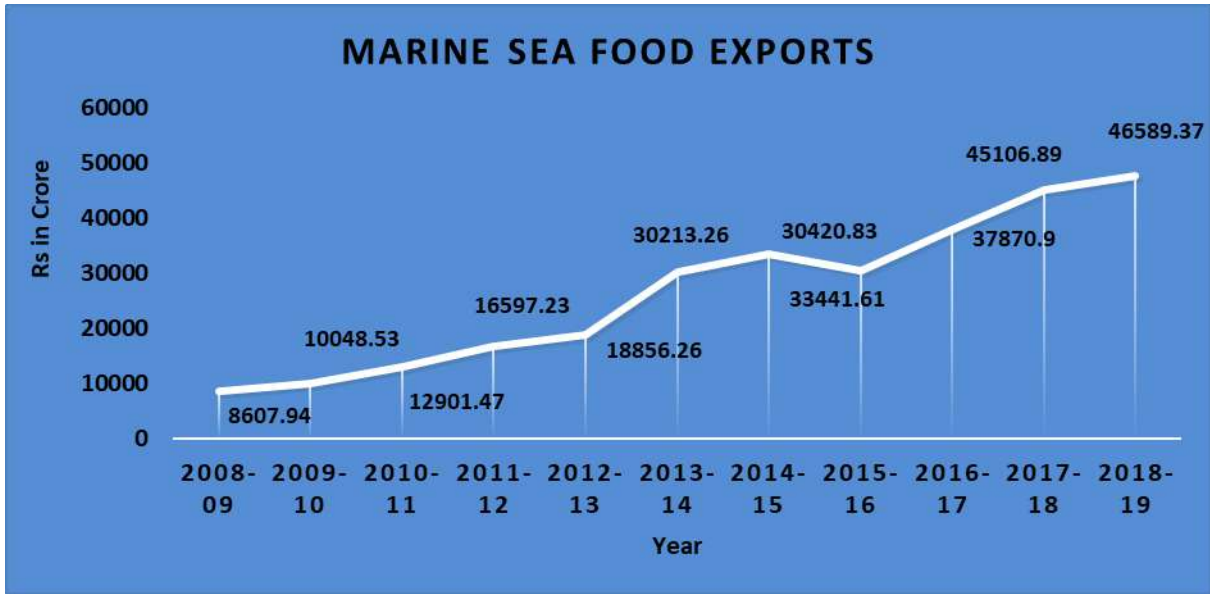
Graph-1 Y-O-Y Growth Rate of GVA of Fisheries Sector and National GVA

Source- MoSPI



Graph -2 Annual Growth of Fisheries Production in India

Source – States/UTs



Graph -3 India's Marine sea food export trend from 2008-09 to 2018-19

Source -MPEDA

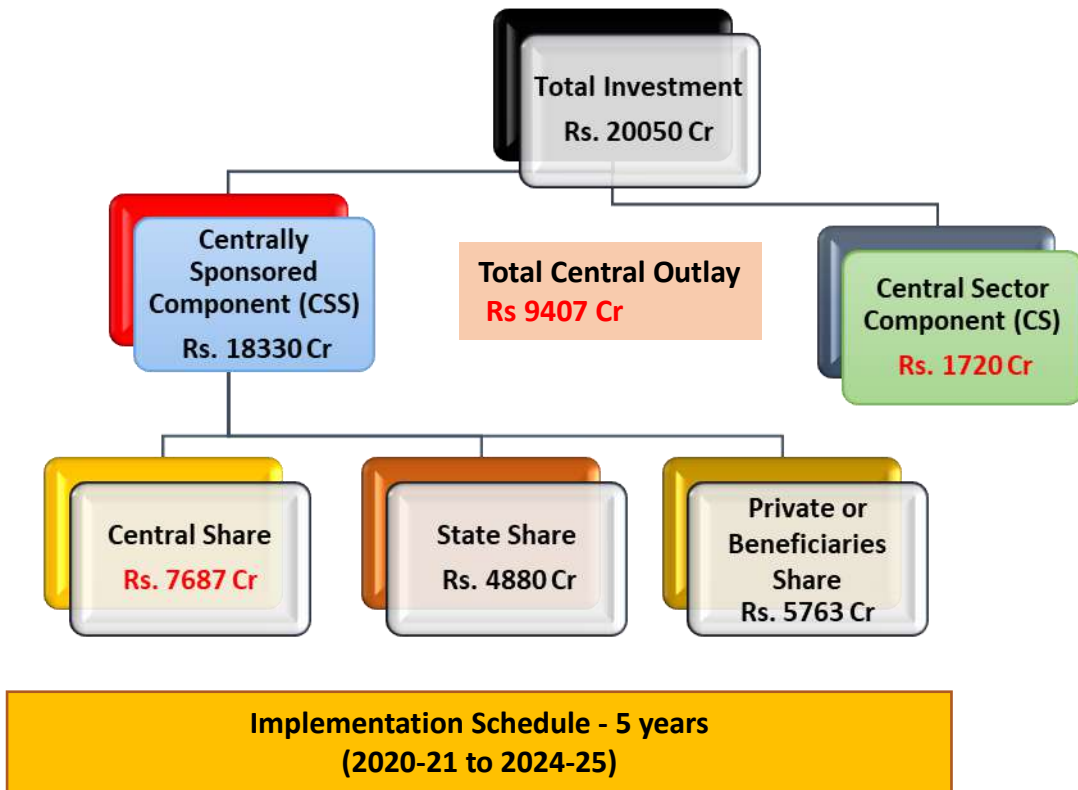


Figure- 1: PMMSY INVESTMENT BREAKUP AND IMPLEMENTATION SCHEDULE

2. PRADHAN MANTRI MATSYA SAMPADA YOJANA (PMMSY)

- 2.1 The PMMSY is designed to address critical gaps in fish production and productivity, quality, technology, post-harvest infrastructure and management, modernisation and strengthening of value chain, traceability, establishing a robust fisheries management framework and fishers' welfare.
- 2.2 The PMMSY is an umbrella scheme with two separate Components namely (a) Central Sector Scheme (CS) and (b) Centrally Sponsored Scheme (CSS). The Centrally Sponsored Scheme (CSS) Component is further segregated into Non-beneficiary oriented and beneficiary orientated sub-components/activities under the following three broad heads:
- (i) Enhancement of Production and Productivity
 - (ii) Infrastructure and Post-harvest Management
 - (iii) Fisheries Management and Regulatory Framework
- 2.3 Pradhan Mantri Matsya Sampada has been approved at a total estimated investment of Rs. 20,050 crores comprising of Central share of Rs. 9407 crores, State share of Rs 4880 crores and Beneficiaries contribution of Rs. 5763 crores (Figure-1).
- 2.4 PMMSY will be implemented in all the States and Union Territories for a period of 5(five) years from FY 2020-21 to FY 2024-25.

3. VISION

"Ecologically healthy, economically viable and socially inclusive fisheries sector that contributes towards economic prosperity and well-being of fishers, and fish farmers and other stakeholders, food and nutritional security of the country in a sustainable and responsible manner".

4. AIMS AND OBJECTIVES

- 4.1 The Aims and Objectives of the Pradhan Mantri Matsya Sampada Yojana (PMMSY) are:
- (a) Harnessing of fisheries potential in a sustainable, responsible, inclusive and equitable manner
 - (b) Enhancing of fish production and productivity through expansion, intensification, diversification and productive utilization of land and water
 - (c) Modernizing and strengthening of value chain - post-harvest management and quality improvement
 - (d) Doubling fishers and fish farmers incomes and generation of employment
 - (e) Enhancing contribution to Agriculture GVA and exports
 - (f) Social, physical and economic security for fishers and fish farmers

- (g) Robust fisheries management and regulatory framework

5. FUNDING PATTERN

5.1 Central Sector Scheme (CS)

- (a) The entire project/unit cost will be borne by the Central government (i.e. 100% central funding).
- (b) Wherever direct beneficiary oriented i.e. individual/group activities are undertaken by the entities of central government including National Fisheries Development Board (NFDB), the central assistance will be up to 40% of the unit/project cost for General category and 60% for SC/ST/Women category.

5.2 Centrally Sponsored Scheme (CSS)

- 5.2.1 For the **Non-beneficiary orientated** sub-components/activities under CSS component to be implemented by the States/UTs, the entire project/unit cost will be shared between Centre and State as detailed below:

- (a) North Eastern & Himalayan States : 90% Central share and 10% State share.
- (b) Other States : 60% Central share and 40% State share.
- (c) Union Territories (with legislature and without legislature): 100% Central share.

- 5.2.2 For the **Beneficiary orientated i.e. individual/group activities** sub-components/activities under CSS component to be implemented by the States/UTs, the Government financial assistance of both Centre and State/UTs governments together will be limited to 40% of the project/unit cost for General category and 60% of the project/unit cost for SC/ST/Women. The Government financial assistance will in turn be shared between Centre and State/UTs in the following ratio:

- (a) The North Eastern & the Himalayan States: 90% Central share and 10% State share.
- (b) Other States: 60% Central share and 40% State share.
- (c) Union Territories (with legislature and without legislature): 100% Central share (No UT Share).

To illustrate

If the project cost is Rs 1 lakh, the government assistance both central and state combined will be a maximum of Rs 40 thousand for general category and Rs 60 thousand for SC/ST/women. The remaining amount would be the beneficiary share. Further, the aforesaid government assistance would be shared between

the center and state in the ratio of 90:10 for North Eastern & the Himalayan States and 60:40 for other states. As far as Union Territories (both with legislature and without legislature) are concerned, the entire government assistance i.e. 100% will be provided by Central government.

5.2.3 One activity namely "Livelihood and nutritional support for socio economically backward, active traditional fishers' families for conservation of fisheries resources during fish ban/lean period" under PMMSY is continued as per the norms, guidelines and funding pattern of the Saving-cum-Relief Component of the Centrally Sponsored Scheme (CSS) - Blue Revolution Scheme: Integrated Development and Management of Fisheries. Accordingly, the governmental assistance of Rs 3000 per annum per enrolled beneficiary under this activity under PMMSY will be shared as detailed below:

- (a) The North Eastern & the Himalayan States: 80% Central share and 20% State share.
- (b) Other States: 50% Central share and 50% State share.
- (c) Union Territories (with legislature and without legislature): 100% Central share.

5.2.3.1 Each enrolled beneficiary under this component is required to contribute Rs. 1500 annually. The beneficiary fishers will save Rs. 1500 over a period of 9 months during fishing season annually towards their contribution with a bank designated by the State/UT Department of Fisheries. States/UTs will devise suitable modalities to ensure transparency and smooth implementation of this activity. Depositing of beneficiary contribution on a lump sum basis in a period of one or two months may be avoided.

5.2.3.2 The sharing funding pattern for this activity under the PMMSY is summarized as below:

States/UTs	Funding pattern	Contribution
(i)	(ii)	(iii)
General States	(i) 50:50 Centre and General States	Centre share Rs. 1500 + State share Rs. 1500 + Beneficiary share Rs. 1500 = Rs. 4500/-year
North East and Himalayan States	(i) 80:20 Centre and NE & Himalayan States	Centre share Rs. 2400 + State share Rs. 600 + Beneficiary share Rs. 1500 = Rs. 4500/-year
Union Territories	100% as Centre share for UTs (with legislature and without legislature)	Centre share Rs. 3000 + Beneficiary share Rs.1500 = Rs.4500/-year

5.2.3.3 The accumulated amount of Rs. 4500/- indicated above would be disbursed to enrolled beneficiary by the respective states/UTs at the rate of Rs. 1500/- per month.

6. INVESTMENT

6.1 For implementation of the PMMSY over a period of five years from the financial year FY 2020-21 to FY 2024-25, a total investment of Rs. 20,050 crores comprising of (a) Central share of Rs. 9,407 crores, (b) State share of Rs 4,880 crores and (c) Beneficiaries share of Rs. 5,763 crores has been estimated.

6.2 Details of Financial Estimates are shown in table below:

SI No	Components	Total (Rs Crores)	Central Share (Rs Crores)	State Share (Rs Crores)	Beneficiary contribution (Rs Crores)
(i)	(ii)	(iii)	(iv)	(v)	(vi)
A	Central Sector Scheme	1720.00	1720.00	Nil	Nil
B	Centrally Sponsored Scheme	18,330.00	7687.00	4880.00	5763.00
	B1. Beneficiary orientated activities	11,990.00	3878.00	2349.00	5763.00
	B2. Non-beneficiary-oriented activities	6340.00	3809.00	2531.00	Nil
	Total (A+B)	20,050.00	9407.00	4880.00	5763.00

7. END IMPLEMENTING AGENCIES (EIAs)

7.1 The PMMSY would be implemented through the following agencies:

- (i) Central Government and its entities including National Fisheries Development Board
- (ii) State/UT Governments and their entities
- (iii) State Fisheries Development Boards
- (iv) Any other End Implementing Agencies as decided by Department of Fisheries

8. BENEFICIARIES

8.1 The intended beneficiaries under the Pradhan Mantri Matsya Sampada Yojana are:

- (i) Fishers

- (ii) Fish farmers
- (iii) Fish workers and Fish vendors
- (iv) Fisheries Development corporations
- (v) Self Help Groups (SHGs)/Joint Liability Groups (JLGs) in fisheries sector
- (vi) Fisheries cooperatives
- (vii) Fisheries Federations
- (viii) Entrepreneurs and private firms
- (ix) Fish Farmers Producer Organizations/Companies (FFPOs/Cs)
- (x) SCs/STs/Women/Differently abled persons
- (xi) State Governments/UTs and their entities including
- (xii) State Fisheries Development Boards (SFDB)
- (xiii) Central Government and its entities

8.2 Central Sector Scheme sub-components/ activities with 100% central funding under the PMMSY are furnished below:

9. MODE OF IMPLEMENTATION

9.1 INSTITUTIONAL FRAMEWORK AT CENTRAL GOVERNMENT LEVEL

9.1.1 Central Apex Committee (CAC)

- (i) PMMSY envisages constitution of a Central Apex Committee (CAC) under the Chairpersonship of Secretary, Department of Fisheries (DoF), Government of India (GoI) with members drawn from relevant line Ministries/Departments/Organizations of GoI including DoF to steer the overall implementation of the PMMSY including its monitoring and review.
- (ii) Accordingly, a Central Apex Committee (CAC) under the Chairpersonship of Secretary, Department of Fisheries, Government of India (GoI) has been constituted which will steer the overall implementation of the PMMSY including its monitoring and review. DoF's Order No. J-117012-2/2020-Fy dated 8th June, 2020 which indicates Composition and Terms of References of the CAC is furnished at **ANNEXURE-IV**.

9.1.2 Project Appraisal Committee (PAC)

- (i) PMMSY *inter-alia* envisages that the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying shall constitute a Project Appraisal Committee (PAC) comprising of domain experts and headed by the Chief Executive, National Fisheries Development Board (NFDB) for appraisal of the projects/proposals under the component of Centrally Sponsored Scheme sent

by States and Union Territories(UTs) with the prior approval of the respective State Level Approval and Monitoring Committee (SLAMC).

- (ii) The PMMSY also provides that after appraisal by PAC, the viable projects/proposals under the Centrally Sponsored Scheme will be recommended to Department of Fisheries for approval and release of admissible central financial assistance.
- (iii) Accordingly, PAC comprising of domain experts and headed by the Chief Executive (CE), National Fisheries Development Board (NFDB) has been constituted to appraise and recommend the projects/proposals under the component of Centrally Sponsored Scheme sent by States and UTs for approval of the Department of Fisheries. DoF's Order No. J-117012-3/2020-Fy dated 23rd June, 2020 which indicates Composition and Terms of References of the PAC is furnished at **ANNEXURE-V**.

9.1.3 Project Monitoring and Evaluation Unit (PMEU)

- (i)The PMMSY provides that the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying will also monitor and evaluate the implementation of the PMMSY periodically through a Project Monitoring and Evaluation Unit (PMEU) of domain experts headed by Joint Secretary, Department of Fisheries.
- (ii) Further, activities/projects implemented by National Fisheries Development Board (NFDB) under Central Sector Scheme Components of the PMMSY would be monitored by PMEU.
- (iii) PMMSY also provides that the Central Apex Committee (CAC) may entrust any other responsibilities to PMEU.
- (iv) Accordingly, the Project Monitoring and Evaluation Unit (PMEU) comprising domain experts headed by Joint Secretary, Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying has been constituted which will be responsible for monitoring and evaluation of implementation of the PMMSY periodically. In addition, the CAC has entrusted the responsibilities of coordination of PMMSY activities at national level to the PMEU. The DoF's Order No. J-117012-3/2020-Fy dated 23rd June, 2020 which indicates Composition and Terms of References of the PMEU is furnished at **ANNEXURE-VI**.

9.1.4 Project Monitoring Unit (PMU)

- (i) PMMSY provides that a Project Monitoring Unit (PMU) comprising of domain experts will be set up within National Fisheries Development Board (NFDB) for monitoring the projects/activities of PMMSY on regular basis.
- (ii) Accordingly, the Project Monitoring Unit (PMU) comprising of domain experts and headed by the Chief Executive, National Fisheries Development Board (NFDB) has been constituted for monitoring the projects/activities of PMMSY on regular basis. The DoF's Order No. J-117012-3/2020-Fy dated 23rd June, 2020 which indicates Composition and Terms of References of the PMEUE is furnished at **ANNEXURE-VII**

9.2 INSTITUTIONAL FRAMEWORK AT STATE/UT AND DISTRICT LEVEL

9.2.1 District Level Committee (DLC)

- (i) PMMSY provides constitution of District Level Committee (DLC) headed by District Collector/Deputy Commissioner of the District at the district level for preparation and approval of Annual District Fisheries Plan, smooth implementation, supervision and monitoring of PMMSY.
- (ii) Wherever considered essential, a District Program Unit (DPU) would be created with necessary support structure for assisting the district fisheries establishment and the DLC in implementation of PMMSY.
- (iii) Besides, wherever required, for assisting the DPU, necessary institutional arrangements at sub-district level would be created. The District's fisheries potential, fishers' population, backwardness etc. would be some of the criteria for identification of districts for establishing such institutional arrangements.
- (iv) The model composition, roll and responsibilities of the DLCs, which are communicated to the State Governments, UTs and other end implementing agencies vide DoF's No. J-117012-2/2020-Fy dated 8th June, 2020 are furnished at **ANNEXURE-VIII**.
- (v) The State Governments/UTs will constitute the DLC at the potential districts as per the model Composition, Terms of References and other terms and conditions of the DLC, communicated/circulated vide DoF's No. J-117012-2/2020-Fy dated 8th June, 2020.

9.2.2 State Level Approval and Monitoring Committee (SLAMC)

- (i) PMMSY *inter-alia* envisages that a State Level Approval and Monitoring Committee (SLAMC) in each state headed by the senior most Secretary in-charge of Department of Fisheries of States will be constituted (similar Committee will be constituted in Union Territories i.e. UTLAMC) for smooth implementation of PMMSY including its supervision and monitoring.
 - (ii) The SLAMC will consolidate all district plans, prepare a State/UT Fisheries Annual Action Plan, approve the same including the projects/proposals as per the guidelines, pattern of assistance and cost norms of PMMSY and recommend for taking up under PMMSY.
 - (iii) The SLAMC approval of the State fisheries Plans, fisheries development proposals and overall responsible for smooth implementation, supervision and monitoring of PMMSY at State/UT level.
 - (iv) At the State level a State Program Unit (SPU) [for Union Territories Union Territory Program Unit (UTPU)] would be created with necessary support structure for assisting the State/UT fisheries establishment and the SLAMC in implementation of PMMSY.
 - (v) Model Composition, Terms of References and other terms and conditions of the SLAMC, communicated/circulated vide DoF's No. J-117012-2/2020-Fy dated. 8th June, 2020 are furnished at **ANNEXURE-VIII**.
 - (vi) The State Governments and Union Territories rtoes Ts will constitute their respective SLAMC/UTLAMC as per the model Composition, Terms of References and other terms and conditions of the SLAMC, communicated/circulated vide DoF's No. J-117012-2/2020-Fy dated 8th June, 2020.
- 9.3 The CAC would also be assisted by such committees/bodies as may be constituted by the Department of Fisheries for smooth execution of its roles and responsibilities.
- 9.4 The establishment and operational costs of institutional arrangements/structures like PMEU in DoF, PAC and PMU in NFDB, SPU/UTPU

at State/UT level, DPUs in selected districts and need based institutional arrangements/structures at the sub-district level would be borne out of Administrative Expenses of PMMSY. The establishment and operational costs of the above institutional arrangements/structures will *inter alia* include (a) cost of hiring of minimum manpower on contractual basis including office expenses, allowances etc. and (b) minimum infrastructure support like furniture/fixtures, computers/laptops, printers, software etc.

- 9.5 The nomenclature and scale of manpower, their remuneration, eligibility criteria, etc. for hiring the services of contractual manpower for operating the State Programme Unit (SPU), District Programme Unit (DPU) and the Sub-district level institutional arrangements are placed at **ANNEXURE-IX**. The State/UT governments will engage the services of these personnel purely on contractual basis in a transparent manner by observing all codal formalities and prescribed procedures of the States/UTs governments. The engagement of manpower under PMMSY Scheme shall be coterminous with the PMMSY Scheme. Moreover, engagement of personnel under PMMSY on contractual basis shall not confer any right claim or to any regularization or continuation of their services in Department of Fisheries, Government of India or State/Union Territory Governments at any point of time. Engagement as well as continuation of the services of the contractual manpower during the PMMSY implementation period will be subject to satisfactory performance and it can be terminated by the engaging Authority (States/UTs) without assigning any reason(s) whatsoever at any time. Department of Fisheries, Government of India will issue separate instructions with regard to the number of contractual personnel to be engaged in each State/UT for SPU/UTPU and DPU, the number of districts where the DPU will be established, the start of commencement of the engagement process, job description of the personnel, etc. Establishment of institutional arrangements/structures under PMMSY at sub-district level will be considered by Department of Fisheries, Government of India (GoI) only from second year of the implementation of the PMMSY in some potential districts as per the needs assessed by Department of Fisheries, GoI including initiatives taken up by the States/UTs for fisheries development both under PMMSY or any other Schemes of Center/States/UTs in these districts.
- 9.6 The monthly office expenses that would be provided for each institutional arrangement/structure are also indicated at **ANNEXURE-IX**.
- 9.7 The DoF will approve the activities/projects under Central Sector Scheme Component of PMMSY on the recommendations of the CAC and release funds to the implementing agencies. Provided the activities/projects would be appraised through the PAC of the NFDB or such other entities as may be

decided by DoF before placing in the CAC. Support to NFDB for undertaking need-based fisheries development activities under the Central Sector Scheme Component will be based on Annual Action Plan which will be approved by DoF upon the recommendations of the CAC. Similarly, NFDB, Fisheries Institutions of DoF, Regulatory Authorities of DoF such as CAA, Directorate of Aquatic Quarantine, State Fisheries Development Boards would be strengthened by providing them with need-based supports in terms of infrastructure, etc.

- 9.8 The DoF based on the recommendations of the CAC may fix an upper ceiling of the governmental financial assistance for individual sub-components/activities especially the beneficiary-oriented ones which in any case shall not exceed 40% of the project cost for General category and 60% of project cost for SC/ST and Women as envisaged in the Funding Pattern of the PMMSY.
- 9.9 The States/UTs may provide additional financial assistance from their own resources over and above the governmental assistance provided under PMMSY for implementation of the intended sub-components/activities/projects, if they decide to do so for enhancing the viability, felt need, local requirements/priorities and speedy implementation.
- 9.10 In order to maximize the coverage of the activities/projects taken up under the relevant sub-components of the Central Sector Scheme, the DoF based on the recommendations of the CAC, may fix an upper ceiling on the total cost of the individual project especially the beneficiary-oriented ones that would be supported.
- 9.11 In order to consolidate the efforts and ensure suitable linkages and convergence with other schemes, each state/UT may formulate their respective State/UT Fisheries Vision documents and Annual Plans in sync with PMMSY.
- 9.12 The states/UTs while proposing beneficiary-oriented projects/proposals under PMMSY will also facilitate fostering of suitable linkages with banks/financial institutions including National Cooperative Development Corporation (NCDC) and NABARD for mobilization of institutional finance wherever the beneficiaries desire to avail institutional finance.
- 9.13 The DoF would make State/UT-wise allocation of central funds on an annual basis for the Centrally Sponsored Scheme Component of the PMMSY for which requisite parameters/guidelines would be developed. *Inter alia*, initiatives taken by States/UTs towards policy, institutional and structural

reforms in fisheries sector in their respective States/UTs, overall performance of States/UTs fisheries sector, efforts made by States/UTs towards sustainable fishing practices and enforcement of regulatory and management framework, having fisheries management plans in place could be some of the possible parameters for allocation of central funds under PMMSY.

- 9.14 A comprehensive PMMSY portal along with necessary Information Communication Technology (ICT) based Management Information System (MIS) will be put in place for regular monitoring of the physical and financial progress, deliverables, etc. under the scheme.
- 9.15 In order to enhance competitiveness of fisheries sector, facilitate economies of scale, generate higher incomes, accelerate growth and expansion of the sector in an organized manner, amplify outcomes, etc., to the extent possible, 'Cluster or Area based approaches' will be adopted while approving and implementing the beneficiary-oriented components/activities. Some of the thrust areas for such approaches are (i) brackish-water aquaculture, (ii) mariculture including seaweed cultivation, (iii) development of resource specific deep-sea fisheries like tunas, (iv) cold water fisheries, (v) development of aquaculture by productive utilization of saline/alkaline areas, (vi) integrated development of reservoirs, etc. Under this approach, the activities will be taken up in an integrated manner with non-beneficiary oriented sub-components/activities of PMMSY and in convergence with schemes and programs of center/state/UT governments with end to end solutions.
- 9.16 Various individual sub-components/activities of PMMSY may be integrated and packaged with end to end solutions wherever feasible for maximizing the output and outcomes and may be implemented as entrepreneur/business models for encouragement of entrepreneurship and innovations, and development of fisheries entrepreneurs including 'aquapreneurs'.
- 9.17 A separate fisheries development action plan will be prepared covering fisheries related interventions and activities that would directly benefit the large number of Scheduled Caste (SC) households and encourage SC population in taking up fisheries activities under the PMMSY. The plan so prepared under PMMSY would be implemented in convergence with the appropriate schemes of the Ministry of Social Justice & Empowerment, Gol. Focus would be given to the districts identified/covered under the Development Action Plan for Scheduled Castes (DAPSC).
- 9.18 In order to maximize the coverage of small and marginal fishers and fish farmers under PMMSY, the upper ceiling on the area eligible for support in case of individual beneficiary projects/activities will be 2 hectares per

beneficiary. In case of beneficiary-oriented projects/activities implemented as a group activity by the Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. or those undertaken in a cluster/area approach, the upper ceiling on the total area eligible for governmental assistance for each group under PMMSY will be restricted to 2 ha multiplied by the number of members of the group/society with a ceiling of 20 ha per group/society. However, a cluster/area may have multiple groups/societies. As far as FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total area/units eligible for support under PMMSY would be decided by the CAC in order to optimize the outcomes as envisaged by DoF and/or by the Ministry of Agriculture and Farmers Welfare.

- 9.19 Feasibility of contract farming and buy back arrangements would be explored wherever appropriate and feasible, with a view to reduce the risk of price fluctuation, stabilize fish farmers' incomes and to ensure assured market for the producer as well as better quality products for the fish marketing firms and consumers.
- 9.20 Emphasis will be given to promote sustainable fish production systems/methods with minimal environmental impacts (more crop per drop).
- 9.21 While implementing PMMSY, to the extent possible, 'cluster or area-based approaches' will be adopted in order to enhance competitiveness of fisheries sector, facilitate economies of scale, generate higher incomes, accelerate growth and expansion of the sector in an organized manner, amplify outcomes, etc. Potential growth clusters/areas for development of fisheries and aquaculture will be identified and will be developed as an integrated cluster with requisite interventions/activities, forward and backward linkages and with facilities for quality brood, seed and feed, critical infrastructure, processing and marketing networks, etc. Thrust will be on water management and spatial planning supported by regulatory framework. States/UTs will designate their officers as Cluster Coordinators for handholding, monitoring and supervision of the development of clusters. The officer designated as Cluster Coordinator is required to have requisite skill sets to effectively communicate, motivate and handhold the stakeholders. The manpower engaged in SPU/DPU under PMMSY may also be entrusted with the responsibilities of Cluster Coordinators.
- 9.22 Under PMMSY particularly the technology-based interventions related to production, productivity and post-harvest, communication and/or tracking technologies, potential fishing zones (PFZ) technologies, safety kits, other MCS activities, bio toilets etc. are subject to continuous advancement/change. To

keep pace with technological advancements/changes, the CAC taking into consideration the sectoral needs and demands will be competent to approve inclusion of devices/units of new and/or cost-effective technologies, and exclude devices/units of obsolete/unviable technologies. Further, CAC may also expand the scope of technology-based interventions including aforesaid devices/units to cover any deserving/needful class of beneficiaries/vessels etc.

10. CONVERGENCE

- 10.1 In order to consolidate outcomes and save public resources, PMMSY envisages suitable linkages and convergence with various Central government schemes wherever feasible.
- 10.2 Some of the identified central schemes for linkages and convergence frameworks envisaged under PMMSY with the schemes/sub-schemes being undertaken by Ministries/Departments include the below mentioned:
- (a) *Sagarmala Programme* of the Ministry of Shipping for fishing harbours/fish landing centers and any other admissible activities.
 - (b) Pradhan Mantri Kisan Sampada Yojana of Ministry of Food Processing Industries for post-harvest and cold chain facilities etc.
 - (c) Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) for ponds construction and water bodies development etc.
 - (d) Rastriya Krishi Vikas Yojana and other schemes of Ministry of Agriculture and Farmers Welfare for pond construction and other admissible activities.
 - (e) National Rural Livelihoods Mission for admissible activities and marketing.
 - (f) Schemes of Department of Commerce for modernization/construction of fishing harbours and other admissible activities, promotion and doubling of fisheries exports, certification, traceability, branding, etc. in association with MPEDA.
 - (g) Kisan Credit Card (KCC) of Ministry of Agriculture and Farmers Welfare to meet the working capital requirement of fishers and fish farmers for production and productivity related activities.

- (h) Promotion of Fish Farmers Producer Organizations/Companies (FFPOs/Cs) through PMMSY and Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture and Farmers Welfare wherever possible, to economically empower the fishers and fish farmers and enhance their bargaining power.
 - (i) Technology demonstration, Genetic improvement and Nucleus Breeding Centers in collaboration with Department of Agricultural Research and Education (DARE) and Department of Commerce (MPEDA).
 - (j) Ministry of Earth Sciences, Indian National Center for Ocean Information Services (INCOIS) for Potential Fishing Zones (PFZ) advisories and devices.
 - (k) Ministry of Home – Border Management for coastal security, Monitoring Control and Surveillance (MCS) related activities including Biometric cards, etc.
 - (l) Department of Space – ISRO for MCS activities including satellite-based communication and/or tracking devices such as transponders.
 - (m) Ministry of Jal Shakti various issues concerning water management and utilization.
- 10.3 In addition, Department of Fisheries will also explore fostering convergence with other existing or future schemes of Government of India wherever feasible.
- 10.4 PMMSY envisages that activities/projects under Centrally Sponsored Scheme (CSS) component of PMMSY involving States/UTs, may be taken up in a convergence mode with other Central Government Ministries/Departments wherever feasible and agreed to for the same by the concerned Central Ministries/Departments. Wherever possible, in such activities/projects, the central financial liability may be shared between the DoF and the Central Government Ministries/Departments on mutually agreed pattern and terms and conditions.
- 10.5 Similarly, the activities/projects under the Central Sector Scheme Component of PMMSY may also be taken up in a convergence mode with Central Government Ministries/Departments including States/UTs wherever feasible and agreed to for the same by the concerned Central Ministries/Departments/State/UT Governments. Wherever possible, the

project/activity cost may be shared between DoF and the aforesaid entities on mutually agreed cost sharing pattern and terms and conditions.

- 10.6 Further, any investment coming into PMMSY from Central Ministries/Departments and State/UT Governments as a result of convergence will be over and above the estimated investment of Rs 20050 crores under PMMSY.

11. MAJOR IMPACT, INCLUDING EMPLOYMENT GENERATION POTENTIAL

- 11.1 An investment of Rs 20050 Crores under PMMSY is the highest ever in Fisheries and Aquaculture Sector. Therefore, the PMMSY sets an ambitious target. The anticipated outcomes on account of implementation of Pradhan Mantri Matsya Sampada Yojana (PMMSY) in quantifiable terms are as below:

- (a) The fish production is likely to be enhanced from 13.75 million metric tons (2018-19) to 22 million metric tons by 2024-25.
- (b) A sustained average annual growth of about 9% in fish production is expected.
- (c) An increase in the contribution of GVA of fisheries sector to the Agriculture GVA from 7.28% in 2018-19 to about 9% by 2024-25.
- (d) Double export earnings from the present Rs.46,589 crores (2018-19) to about Rs.1,00,000 crores by 2024-25.
- (e) Enhancement of productivity in aquaculture from the present national average of 3 tons to about 5 tons per hectare.
- (f) Reduction of post-harvest losses from the reported 20-25% to about 10%.
- (g) Doubling of incomes of fishers and fish farmers.
- (h) Generation of about 15 lakhs direct gainful employment opportunities and thrice the number as indirect employment opportunities along the supply and value chain.
- (i) Enhancement of the domestic fish consumption from about 5 kg to about 12 kg per capita.
- (j) Encouragement of private investment and facilitation of growth of entrepreneurship in the fisheries sector.

12. LIST OF ACTIVITIES

- 12.1 The PMMSY is an umbrella scheme with two separate Components namely (a) Central Sector Scheme (CS) and (b) Centrally Sponsored Scheme (CSS). The Centrally Sponsored Scheme (CSS) Component is further segregated into

Non-beneficiary oriented and beneficiary orientated sub-components/activities under the following three broad heads:

- (i) Enhancement of Production and Productivity
- (ii) Infrastructure and Post-harvest Management
- (iii) Fisheries Management and Regulatory Framework

- 12.2 The sub-components/activities under the Central Sector Component of the Pradhan Mantri Matsya Sampada Yojana along with broad activities to be supported etc., are furnished at **ANNEXURE-I**.
- 12.3 Beneficiary oriented sub-components and activities under the Centrally Sponsored Component of the Pradhan Mantri Matsya Sampada Yojana along with sub-components/activities-wise unit costs, Governmental assistance and terms and conditions are furnished at **ANNEXURE-II**.
- 12.4 Non-beneficiary-oriented sub-components and activities under the Centrally Sponsored Scheme Component of Pradhan Mantri Matsya Sampada Yojana along with sub-components/activities-wise unit costs, Governmental assistance and terms and conditions are furnished at **ANNEXURE-III**.

13. DETAILED PROJECT REPORT (DPR)

- 13.1 The PMMSY primarily a project based and therefore, Detailed Project Reports (DPRs) / Self Contained Proposals should be prepared and submitted by the End Implementing Agencies (EIAs) to the National Fisheries Development Board (NFDB)/Department of Fisheries, Gol.
- 13.2 The DPR / Self Contained Proposals shall include the following broad essential elements:
- (i) Background of the implementing agency (other than the Department of State/UT) and their credential and competencies, including financial statement of previous three years in case of autonomous agencies, entrepreneurs.
 - (ii) Feasibility studies wherever required to assess the demand and supply gaps of intended benefits, particularly in the project locality.
 - (iii) Project objectives.
 - (iv) Anticipated benefits in quantifiable terms, especially in enhancement of fish production, employment generation etc.
 - (v) Cost benefit analysis, wherever required (especially in case of bankable projects).
 - (vi) Bio-security and Environment concerning issues (if any).

- (vii) Documentary evidence of availability of land and statutory clearances/permissions/licenses, wherever required.
- (viii) Sources of funding for implementation of the project (Central assistance, State contribution, own contribution/bank loan etc. as the case may be).
- (ix) Clear time-lines (in form of a Bar Chart) for completion of the project.
- (x) Undertaking to the effect that there shall be no duplication of central funding or implementation of a similar project by the same agency in the same location.
- (xi) Detailed Cost Estimate of the project formulated in accordance with the methodology stipulated in this guideline.
- (xii) Presentation of details of the project before the PAC, NFDB or such entity as decided by DoF wherever required.

13.3 However, the above said broad essential elements may vary from project to project depending on the local conditions, project requirements, magnitude and gestation period of the project etc.

14. PRE-INVESTMENT ACTIVITIES

- 14.1 The expenditure towards completion of essential pre-investment activities required for formulation of Detailed Project Report (DRP)/Self Contained Proposal (SCP) of intended proposal under the PMMSY will form the part of the unit cost/project cost.
- 14.2 The End Implementing Agency (EIA)/Beneficiary is required to formulate necessary DPR/SCP in respect of their intended project/proposal and incur own expenditure towards completion of necessary pre-investment activities and formulation of DPR/SCP. EIA/Beneficiary may include the pre-investment expenditure in the project/unit cost with supporting documentary evidence in the total project cost.
- 14.3 The maximum expenditure for completion of essential pre-investment activities shall be restricted to 1% of the total estimated project cost/unit cost (with a ceiling of Rs. 150 lakh for multi-crore infrastructure projects), which shall be shared as per the funding patterns of the PMMSY. Any additional expenditure over and above this ceiling will be met by the concerned EIA/Beneficiary.
- 14.4 The central share of such pre-investment expenditure shall be reimbursed to the EIA/Beneficiary only after the project/proposal is approved by the Competent Authority in the DoF, Gol.

- 14.5 The broad activities involved in project formulation and to be covered for assistance under the PMMSY are (i) surveys and investigations of all types, (ii) pre-feasibility studies, (iii) preparation of Pre-Feasibility Reports(PFRs), (iv) project planning and designing, (v) preparation of Feasibility Reports(FRs), (vi) preparation of Detailed Project Reports(DPRs)/Self Contained Proposals, (vii) Techno Economic Feasibility Reports(TEFRs) and (viii) structural design and detailed cost estimates etc.
- 14.6 In case the intended proposal is not approved by the competent authority due to any reasons whatsoever like (i) the proposal fails to meet its objectives of the PMMSY, (ii) not viability/non-feasibility project, (iii) non-compliance of pre-requisites such non availability of required clearances, land, environmental and sustainability concerns or any other reason whatsoever, the central share of the expenditure incurred for completion of the pre-investment activities shall not be reimbursed under the PMMSY.
- 14.7 It is the responsibility of the EIA/beneficiaries to formulate viable/feasible and result oriented proposals etc. The GOI shall not have any commitment to meet the expenditure incurred by the project beneficiary/implementing agency in formulating unviable and unacceptably proposals.

15. CENTRAL FINANCIAL ASSISTANCE AND APPROVAL PROCESS

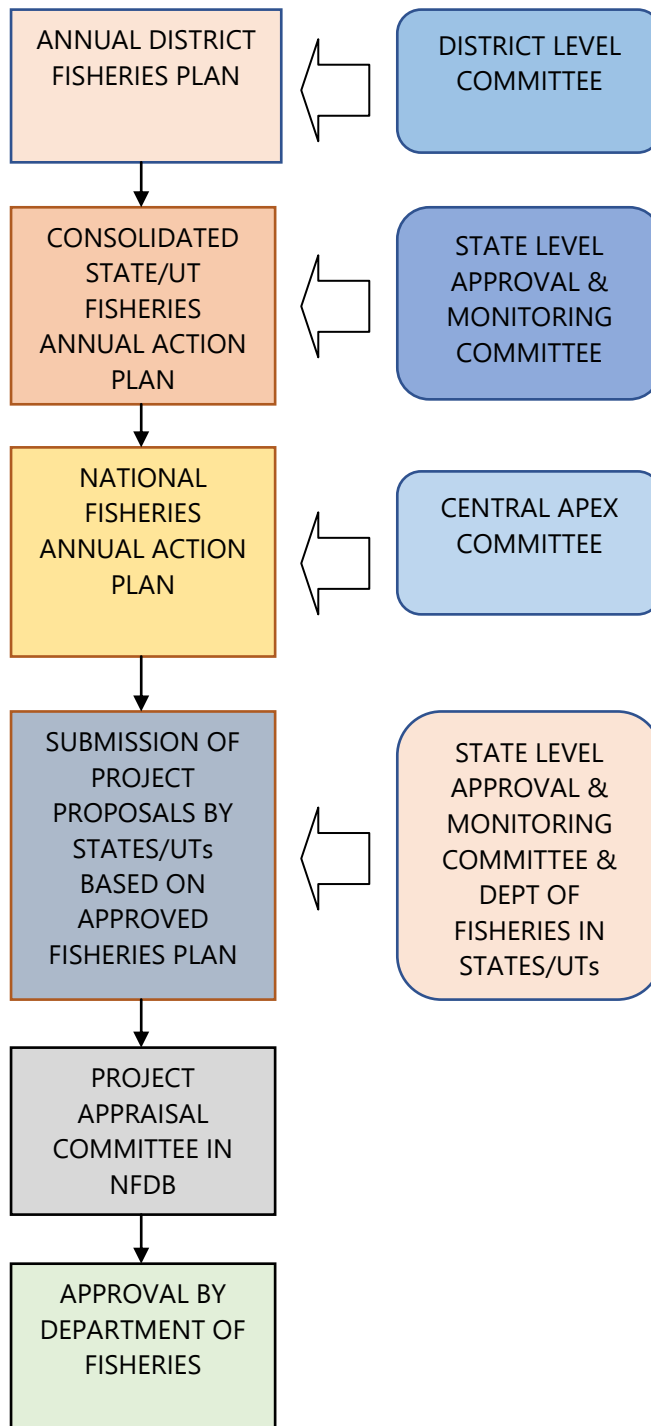
- 15.1 The PMMSY will be implemented in accordance with the annual budgetary allocation in the Demand for Grants of the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Department of Fisheries.
- 15.2 Dept. of Fisheries will prepare an Annual Action Plan of PMMSY with approval of CAC indicating physical and financial targets including anticipated outcomes of the year under the PMMSY. The Annual Action plan will be prepared within the broad framework of the PMMSY, based on the progress of preceding year(s), pipeline proposals (in hand), annual budgetary allocation, financial liability of previous years, demands and needs of the sector, inputs/preparedness of States/UTs and other EIAs etc.
- 15.3 The process of preparation of National Fisheries Annual Action Plan of PMMSY for a particular financial year would commence by October-November of the previous financial year. The timelines for preparation and approval of the National Fisheries Annual Action Plan based on the State/UTs Fisheries Annual Action Plans, Communication of annual allocation under PMMSY to States/UTs, submission of approved DPRs/Project proposals by States/UTs, their appraisal by PAC/NFDB and final approval by DoF are shown in Table below: -

Sl no	Action	Approving Authorities	Time lines
1	Communication of Tentative Annual outlay under PMMSY to States/UTs	DoF	By end of October
2	Preparation and approval of Annual District Fisheries Plan	DLC	By end of November
3	Preparation and approval of Consolidated State/UT Fisheries Annual Action Plan	SLAMC/UTLAMC	By end of December
4	Preparation and approval of National Fisheries Annual Action Plan	CAC & DoF	By end of February
5	Communication of Final Annual allocation under PMMSY to States/UTs	DoF	By 15 th March
6	Submission of DPRs/SCPs/Project proposals by States/UTs to PAC, NFDB based on the allocations	SLAMC/UTLAMC & State/UT Fisheries Departments	By end of April
7	Appraisal of DPRs/Project proposals	PAC, NFDB	By 15 th May
8	Approval of DPRs/Project proposals and sanction	DoF	By end of May

15.4 The procedure for approval of DPR/project proposals under PMMSY

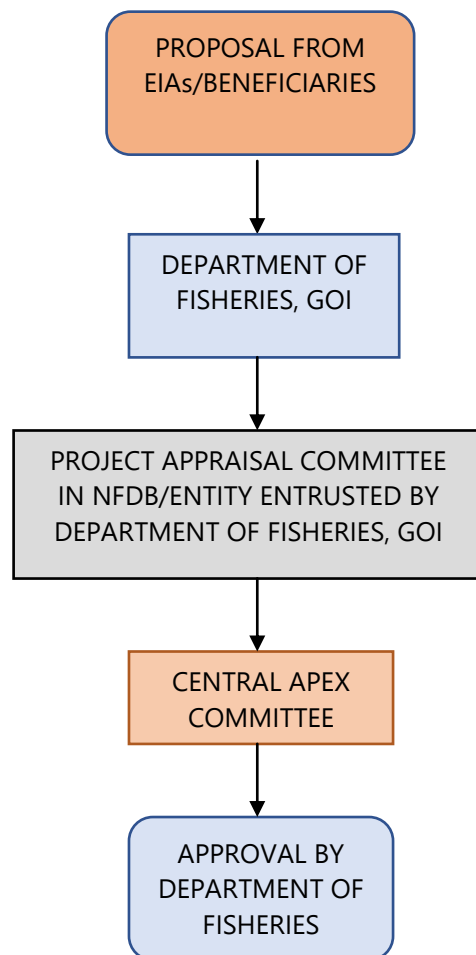
15.4.1 PMMSY CENTRALLY SPONSORED SCHEME COMPONENT

APPROVAL PROCESS



15.4.2 PMMSY CENTRAL SCHEME COMPONENT

APPROVAL PROCESS



16. NODAL DEPARTMENT IN THE STATE/UT

- 16.1 The Department of Fisheries in the State/UT shall be the nodal Department for planning and implementation of the PMMSY in the State/UT. Even where the projects/activities under PMMSY are implemented by Agencies/Entities of State/UT including State Fisheries Development Board, the primary responsibility of ensuring proper planning and implementation of the projects/activities sanctioned under PMMSY including their supervision and monitoring lies with the Department of Fisheries of State/UT.

17. COST NORMS FOR ADMISSIBILITY OF CENTRAL FINANCIAL ASSISTANCE

- 17.1 The Department of Fisheries vide order No J-13011/3/2019-Fy dated 11th July, 2019 constituted a Central Standing Committee (CSC) with representatives of 18 States and 5 Central fisheries institutes, National Fisheries Development Board (NFDB), senior officers of the Department of Fisheries and Integrated Finance Division as members. for formulation of unit costs, unit cost norms and operational guidelines of all the components/sub-components/activities of the PMMSY.
- 17.2 The CSC Central Standing Committee (CSC) after consultations with member states formulated the draft Operational Guidelines including unit costs of components/sub-components/activities-wise of the PMMSY which were considered and approved by the Central Apex Committee (CAC) in its first meeting held on 22.6.2020 which were subsequently approved by DoF. The Component/Sub-component-wise list of activities envisaged under the PMMSY and their unit costs formulated by the CSC, approved by the CAC and the DoF are furnished at **ANNEXURE-I, II & III.**

18. ADMINISTRATIVE EXPENSES

- 18.1 PMMSY provides that 2.5% of the annual budgetary allocation under PMMSY (central share) would be earmarked for meeting the administrative expenses for implementation, monitoring, evaluation and review of PMMSY (both Central Sector and Centrally Sponsored Scheme components) by the DoF, NFDB and the End Implementing Agencies (EIAs).
- 18.2 The DoF on the recommendations of CAC will earmark the extent of funds under administrative expenses that would be released to the NFDB & EIAs.
- 18.3 Further, the earmarked funds under administrative expenses will be utilized towards meeting the costs of (i) hiring of minimum manpower on contractual basis for institutional arrangements/structures namely PMEU in DoF, PAC and PMU in NFDB, SPU at State/UT level, DPU at district level and need based institutional arrangements/structures at the sub-district level including office expenses, allowances etc. (ii) procuring minimum infrastructure like furniture/fixtures, computers/laptops, printers, software etc. for establishment, operationalization and day-to-day functioning of the institutional arrangements/structures mentioned at (i) above in this paragraph (iii) any other need based support/services to the institutional arrangements/structures mentioned at (i) above in this paragraph as decided by DoF (iv) Information Education Communication (IEC) activities and for preparation of IEC material including electronic and print materials, (v)

preparation of required MIS along with necessary hardware/software and its operation, (vi) design, development and operation of online PMMSY portal (vii) publicity and promotional activities through electronic, social and print media, (viii) hiring of project/programme management consultants/advisory(PMC/PMA) and knowledge partners (ix) organizing seminars, workshops, meets, summits/conferences (regional, national and International), official meetings, etc., (x) cost of fish farmers and fisheries cooperative meets, (xi) evaluation of the PMMSY, (xii) hiring of vehicles, (xiii) design and printing of guidelines, publications, SOPs and other documents as necessary, (xiv) periodic evaluation (mid-term) whenever required and post implementation evaluation of PMMSY through third party/independent agency, (xv) activities to support quality control and regulation of the fisheries sector aimed at enhancing quality, production and productivity (xvi) hiring of domain experts and supporting staff on contractual basis and (xvii) any other activities as may be required for administrating and smooth implementation of the PMMSY.

- 18.4 The DoF would be competent to decide on the modalities and guidelines including cost norms for incurring expenditure under Administrative expenses. This also includes the modalities, guidelines and cost norms for establishing and operating the Project Appraisal Committee (PAC) and Programme Monitoring Unit (PMU) in NFDB, Project Monitoring and Evaluation Unit (PMEU) in the DoF, State Programme Unit (SPU) at State/UT level, and District Programme Unit (DPU) at district level including necessary institutional arrangements/structure at the sub-district level.

19. DETAILED COST ESTIMATE

- 19.1 PMMSY recognizes that cost of any development project depends on several factors such as size, project components, location, intended benefits, environmental and geographical/ topographical features, prevailing SoRs of the concerned states and prevailing market rates amongst the others.
- 19.2 The Detailed Cost Estimate of individual/integrated project for the purpose of assessing their unit cost will be worked out by the concerned State/UT/implementing agencies/beneficiaries based on the following aspects:
- (a) The project cost estimate shall be formulated based on completion of necessary surveys and assessment of condition of project location/site, planning, designing (as may be required), detailed calculation of quantity of the actual works involved etc., and adopting the approved

Schedule of Rates of the concerned state Government/UT which are applicable/prevaling in the intended project locality.

- (b) In case, no approved Schedule of Rates are available for civil works under the intended project, the unit rates in respect of such items are arrived at after detailed rate analysis which will be endorsed by the local engineering Department of the concerned State/ UT Government.
 - (c) In case of plant and machineries, where approved schedule of rates are not available, the estimate for such activities shall be prepared based on the rates quoted by authorised suppliers (authorised dealers).
 - (d) A certificate to the effect that the project cost estimate has been formulated based on the prevailing Schedule of Rates, prevailing market rates and cost is reasonable shall be provided by the concerned State/UT/Implementing agency.
- 19.3 The project so arrived by adopting above methodology shall be considered for approval under the PMMSY.
- 19.4 The ceiling of the government financial assistance will be fixed based on the prevailing unit cost fixed under the PMMSY (present unit cost costs are at **ANNEXURE-I, II and III**). However, the unit costs of capital-intensive infrastructure projects like fishing harbours and Aqua parks depend up on the project location, site conditions, proposed facilities, project size, SoRs of states etc. Such capital-intensive infrastructure projects will be taken up on DPR mode and the project will be funded as per actual cost within the overall fund earmarked to the respective activities under PMMSY.
- 19.5 Given the remoteness and difficult terrain, differential unit costs for Islands, Himalayan States/UTs and the North Eastern States would be permitted. For these States/UTs up to 20% markup would be allowed over and above the unit cost of the sub-components/activities indicated at **ANNEXURE-I, II and III**. However, it is pertinent to mention that while fixing unit costs for activities under sl-no 3 namely 'Development of Fisheries in North-Eastern and Himalayan States/UTs' in Annexure – II, the factors like remoteness and difficult terrain have already been factored in. Therefore, the above-mentioned additional premium up to 20% will not be added to these unit costs indicated under sl-no 3 in Annexure – II.
- 19.6 A certificate to the effect that the project cost estimate has been formulated based on the prevailing Schedule of Rates, prevailing market rates and cost is reasonable shall be provided by the concerned State/UT/Implementing agency.

20. LAND AND WATER BODY

- 20.1 Central financial assistance under the PMMSY shall not be provided for acquiring land by whatsoever means including by way of land acquisition/purchase/gift/transfer/lease of land, required for implementation of the intended project(s).
- 20.2 The project beneficiary/implementing agencies are required to acquire necessary land (in case of non-availability of land with them) at their own cost and complete all processes requiring land acquisition, before submission of the proposal for central financial assistance under the PMMSY.
- 20.3 The project beneficiary shall submit a certificate to the effect that the land proposed for development of intended facilities/infrastructure is free from encroachments and encumbrances. This certificate shall be submitted along with the DPR/SCP and a proforma for submission of the certificate is furnished at **ANNEXURE-X and ANNEXURE-XI**.
- 20.4 The projects having land on long term lease shall be considered for funding under the PMMSY. Unless otherwise specified, the lease period/agreement shall not be less than a minimum period of 10 (ten) years for development of intended infrastructure facilities under the PMMSY and a period of 7 (seven) years for non-infrastructure projects under the PMMSY. The requirements of lease are shown against individual sub-component/activities at **ANNEXURE-I, II & III** of these Operational Guidelines.
- 20.5 The projects having water body on lease/enter upon permission will also be considered for central financial assistance under the PMMSY. The lease period/enter upon permission on a water body for being eligible for central financial assistance under PMMSY will be as per the prevailing leasing policy/guidelines of the State/UT Government.
- 20.6 In case, the project beneficiary terminates the lease agreement before the expiry of the prescribed lease period or transfers the assets created with financial assistance under the PMMSY on the leased land/water body before the expiry of prescribed lease period, he/she shall return the entire central financial assistance availed till that point of time along with accrued interest, if any, on the central financial assistance. In addition, penal interest @ 12% per annum on the central financial assistance shall also be charged. The entire central financial assistance, accumulated interest including penal interest shall be paid to Government of India in a lumpsum single installment.

21. STATUTORY CLEARANCES

- 21.1 The applicants/beneficiaries are also required to obtain necessary statutory clearances, permits and licenses, whatsoever and wherever required for implementation of the intended project. The expenditure, if any involved in this process shall be met by the applicants/beneficiaries.
- 21.2 Confirmation with necessary documentary evidence on availability of land and statutory clearances (wherever necessary) shall be clearly indicated in the DPR/Self Contained Proposal.

22. INCLUSIVE DEVELOPMENT

- 22.1 The PMMSY encompasses inclusive development by providing higher financial assistance to Women, Scheduled Castes (SCs) and Scheduled Tribes (STs).
- 22.2 The State Level Approval and Monitoring Committee (SLAMC) will ensure that while selecting beneficiaries under the PMMSY, adequate coverage is given to small and marginal farmers, Scheduled Castes, Scheduled Tribes and women.
- 22.3 Since the mandated budgetary allocation are made under the Scheduled Caste Sub Plan (SCSP) and Tribal Sub Plan (TSP), States/implementing agencies are mandated to ensure that benefits of the scheme go to such intended beneficiaries of SCs/STs.

23 SUBMISSION OF PROPOSAL

23.1 Centrally Sponsored Scheme Component of PMMSY

- 23.1.1 The End Implementing Agencies such as States/UTs/Agencies will submit the DPR/Self Contained Proposal (SCP) in triplicate copies. This includes two copies directly to NFDB and one advance copy to the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, GOI.
- 23.1.2 The DPR/Self-Contained Proposal in duplicate will be submitted to the NFDB at the following address:

**The Chief Executive,
National Fisheries Development Board,
Department of Fisheries,
Ministry of Fisheries, Animal Husbandry and Dairying,
Government of India,**

**Pillar No:235, PVNR Expressway, SVPNPA Post,
Hyderabad-500052
(Fax: 040-24015568/24015552)**

23.1.3 A copy of the DPR/Self Contained Proposal will also be submitted to the Department of Fisheries, Government of India as an advance copy to the following address:

**The Secretary
Department of Fisheries,
Ministry of Fisheries, Animal Husbandry and Dairying,
Government of India
Room No-221, Krishi Bhawan,
New Delhi-110001**

23.2 Central Sector Scheme Component of PMMSY

23.2.1 The projects proposals in respect of the Central Sector Scheme Component of the PMMSY should be submitted to Department of Fisheries, Government of India at the address mentioned in paragraph- 23.1.3 above.

24 MODE OF FINANCIAL RELEASES

24.1 Central financial assistance under the PMMSY may be released to the concerned end implementing agencies as listed at para-7.1 of these guidelines for implementation of the intended approved projects. However, for release of central funds to State Fisheries Development Board under the Centrally Sponsored Scheme component of PMMSY, prior consent of State Government shall be mandatory.

24.2 On approval of the project/proposal, the admissible central financial assistance under the PMMSY would be released normally in two instalments. However, the size and number of instalments may vary depending on the magnitude of the project, quantum of total central assistance, availability of financial resources, funds absorbing capacity of the project implementing agency and assessment of the progress of the project.

24.4 After the release of first instalment, proposals for subsequent release of Central share will be considered after the fulfilment of the following:

- (a) Utilization of the Central funds for the purpose for which it was released and submission of its Utilization Certificate (UC) as per the

prescribed proforma under GFR **(ANNEXURE –XII-A/ANNEXURE – XII-B)**

- (b) Submission of documentary evidence on contribution of proportionate share of the beneficiary State Government/implementing agencies.
 - (c) Furnishing of physical and financial progress reports along with photographs
 - (d) Any other stipulation as may be prescribed by DoF.
- 24.5 The project implementing agencies will ensure utilization of the central funds strictly as per the Terms and Conditions (T&C) of the sanction and for the purpose for which it is released.
- 24.6 No diversion of central funds for any other purpose shall be allowed. In case, the end implementing agency fails to utilize the sanctioned central funds under PMMSY, they shall return the same along with entire accumulated interest, if any.
- 24.7 Cost escalations, if any, on justifiable grounds, will be dealt as per the extant guidelines/instructions of Government of India.
- 24.8 The project implementing agency shall strictly maintain & preserve proper records on the expenditure incurred on implementation of the approved proposal/project, produce the same as and when desired by the funding Ministry/ Board and also by the concerned State Government/SFDB.
- 24.9 The accounts maintained by the project proponent regarding receipt of central funds and their utilization on implementation of the approved project shall be open to inspection wherever and whenever required by the Sanctioning Authority and audit, both by the Comptroller and Auditor General of India and Internal Audit of the concerned Principal Accounts Officer, Government of India.

25 MONITORING AND EVALUATION

- 25.1 The project proposals taken up under the PMMSY will be monitored through a Project Monitoring Unit (PMU) headed by the Chief Executive, NFDB, Project Monitoring and Evaluation Unit (PMEU) headed by Joint Secretary, Department of Fisheries, a State Level Approval and Monitoring Committee (SLAMC) headed by the State Secretary in-charge of Fisheries and the District Level Committee headed by District Collectors/Deputy Commissioner of the District.

- 25.2 A comprehensive Information Communication Technology (ICT) based Management Information System (MIS) will be put in place for regular monitoring of the physical and financial progress and deliverables under the PMMSY.
- 25.3 The PMEU will review the progress periodically at least once in 6 (six) months and guide the implementing agency to ensure proper and speedy implementation of the projects. Besides, the Department of Fisheries may also depute its representatives regularly to the project site for physical inspection/verification.
- 25.4 No deviations in the approved project proposal will be permitted in the normal course. In case, the approved project proposal is to be revised with any addition/deletion/modification of approved items on account of Force Majeure causes or any other unavoidable technical compulsions, such proposals will be placed before the SLAMC and PAC. The warranted mid-term correctives arrived/recommended by the SLAMC and PAC will be placed before the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying for appropriate decision/consideration/approval.
- 25.5 The project implementing agency will submit a detailed progress report (both financial and physical) to the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying and NFDB on a quarterly basis till the project is completed in all respect and a project completion report after the project is completed in all respects.

26 POST DEVELOPMENT MANAGEMENT OF FACILITIES

- 26.1 The entire responsibility of post development/construction management of the facilities created with the central assistance under the PMMSY will be with the beneficiary agency/State/UT. The Government of India, Department of Fisheries, shall not be responsible for post construction operational costs, losses, if any incurred during the development, operation, maintenance and management of the facilities created with financial assistance under the PMMSY.
- 26.2 The project beneficiary agency will also bear all expenses required towards maintenance, management and operational of the facilities created under the PMMSY in an efficient manner and in accordance with standard commercial operating/maintenance practices/procedures. The beneficiary agencies shall ensure that the facilities are maintained in operational conditions.

- 26.3 The beneficiaries/State/UTs/other EIAs will procure and maintain adequate/necessary and relevant qualified manpower required for proper operation, maintenance and management of the facilities created under the PMMSY at their own costs. The responsibility/liability arising on account of deployed manpower such as wages, allowances, charges or any other statutory or other dues shall be that of the beneficiaries/State/UTs/other EIAs. The Government of India, Department of Fisheries shall not have any liability/responsibility in this respect on any account whatsoever (on post development/construction and management of the facilities).
- 26.4 Resolving of legal disputes if any arising out of the infrastructure/facilities created with Central assistance under the PMMSY and implementation of the Court verdicts will be the sole responsibility of the concerned State Government/UT/Implementing agency/beneficiary organizations. The financial implications, if any, in these activities will also be met by the concerned State Government/UT/Implementing agency/beneficiary organizations.

27 PRIVATE SECTOR PARTICIPATION, PUBLIC PRIVATE PARTNERSHIP (PPP) AND VIABILITY GAP FUNDING (VGF) UNDER PMMSY

- 27.1 In the implementation of PMMSY, private sector participation wherever appropriate and feasible would be encouraged and involved including in the operation and management (O&M) of assets created under PMMSY in order to leverage resources, expertise and efficiencies of private sector.
- 27.2 The DoF would commission a study by the second year of implementation of PMMSY in consultation with NITI Aayog to identify large fisheries infrastructure activities that can be developed and managed on Public Private Partnership (PPP) mode. Based on the findings of the study, the DoF may decide on the development of large infrastructure like fishing harbours in PPP mode.
- 27.3 The aforesaid study would *inter-alia* examine the need for providing Viability Gap Funding (VGF) for fisheries infrastructure projects to be taken up on PPP mode, the maximum quantum of VGF that may be required to be provided for such projects under PMMSY, the additional quantum of VGF that may be permitted from other sources (i.e. from State/UT/Center) over and above the VGF to be provided under PMMSY including the modalities of implementation and related matters in line with the VGF Scheme of Department of Economic Affairs, Ministry of Finance. Based on the recommendations of the study, the DoF, if considered necessary, may provide VGF from PMMSY for the fisheries infrastructure PPP projects and fix the quantum of VGF and modalities of implementation.

28. SPECIAL PURPOSE VEHICLES (SPVS), SOCIETIES, COMPANIES INCLUDING JOINT VENTURE COMPANIES (JVCS), FISH FARMERS PRODUCER ORGANIZATIONS/COMPANIES (FFPOS/CS) AND OTHERS

- 28.1 The option of implementation of the projects/activities under PMMSY wherever feasible and considered necessary through creation of Special Purpose Vehicles (SPVs), Societies, Companies including Joint Venture Companies (JVCs) etc. will be explored.
- 28.2 As announced in the Union Budget 2020, 500 Fish Farmers Producer Organizations/Companies (FFPOs/Cs) would be set up to economically empower the fishers and fish farmers and enhance their bargaining power. FFPOs/Cs will be set up with funding under PMMSY and the Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture and Farmers Welfare wherever possible. The cost norms, guidelines and modalities, etc. for setting up and handholding of FFPOs/Cs would be finalized by the CAC as per the specific needs and requirements of fisheries sector. For this purpose, the CAC may take the cost norms and guidelines of Fish Farmers Producer Organizations scheme being implemented by the Department of Agriculture, Cooperation and Farmers Welfare as the basis. Wherever feasible, FFPOs/Cs would also be set up with financial assistance from other central Ministries/Departments/organizations.
- 28.3 In order to optimize the outcomes of FFPOs/Cs, the CAC would be competent to decide on the upper ceiling of the total area/number of units of a particular activity that would be supported/assisted under PMMSY for taking up by FFPOs/Cs.
- 28.4 Efforts would also be made to foster linkages with Department of Agriculture, Cooperation and Farmers Welfare, NABARD, National Cooperative Development Corporation (NCDC) etc. in order to extend credit guarantee cover to the FFPOs/Cs to the extent possible.

29 COMMITTED FINANCIAL LIABILITIES OF CSS - BLUE REVOLUTION

- 29.1 The CSS-Blue Revolution: Integrated Development and Management of Fisheries ended on 31st March 2020. The committed liabilities of Government of India (both by DoF as well as National Fisheries Development Board) as on 1.4.2020 on account of the approved/ongoing projects under the CSS-Blue Revolution: Integrated Development and Management of Fisheries (scheme activities) will be borne out of the PMMSY budgetary allocations to ensure completion of the ongoing activities/projects subject to submission of UCs and

progress reports by the States/UTs. However, the funding pattern, mode of approval and release of central funds in such cases shall continue to be as existed under the CSS on Blue Revolution: Integrated Development and Management of Fisheries. Further, the Non-scheme activities of National Fisheries Development Board and Fisheries Institutes of the Department of Fisheries would continue as usual.

30 TECHNOLOGY

- 30.1 Pradhan Mantri Matsya Sampada Yojana aims at technology infusion along the value chain for enhancing fish production and productivity, quality and hygiene and modernization and strengthening the supply and value chain.
- 30.2 It is proposed to induct and promote adoption of technologies in production and post-harvest management including High-density aquaculture in ponds, Re-circulatory Aquaculture System (RAS), Bio-floc, aquaponics, cage culture, nano-feed, live feed technology, Block chain, value addition, quality preservations and marketing etc. Further technology transfer from research labs to fishers and fish farmers will be encouraged and promoted.
- 30.3 A plan will be devised in consultation with the fisheries research institutes, ICAR and fisheries university and domain experts to induce the required technology to promote modern methods of fish cultivation and fishing through application of modern scientific methods. Further, wherever required and feasible, linkages with the national and international universities and research institutes of repute will be made to obtain the latest technologies in fisheries including skill development/capacity building to adopt such technologies.

CHAPTER -2

1. RATIONALE FOR PMMSY

- 1.1 It has been envisioned by the government to double fishers and fish farmers' incomes. While the Centrally Sponsored Scheme - Blue Revolution - Integrated Development and Management of Fisheries launched in 2015-16 for a period of 5 years has made vital contributions towards development of fisheries sector, the full potential of the fisheries sector is yet to be realized due to critical gaps in quality inputs, fish genetics, investment, infrastructure, value addition, technological know-how and skilled manpower. While the demand for fish is ever increasing and given the slow pace of growth of marine capture fisheries and the fact that only 56.3% of the inland potential has been harnessed (2018-19), there is an urgent need to enhance production and productivity through targeted interventions aimed at harnessing the unrealized potential in Inland fisheries sector, aquaculture and mariculture in a responsible and sustainable manner.
- 1.2 It is essential to optimally harness deep sea and oceanic resources, especially the tuna resources in EEZ and high seas which fetch high value in the international market. While the area of EEZ around the Andaman and Nicobar Islands accounts for 30% of total EEZ area of India, the fish production from the EEZ of these Islands is about 1% of the estimated potential.
- 1.3 It is essential to expand (both horizontally and vertically), intensify and diversify inland fisheries and aquaculture, focus on diversification of species, introduction of new species and peg the critical gaps in the demand and supply of quality brood and seed of cultivable species and species-specific feeds. Adequate number of brood banks, hatcheries, seed rearing units, specific pathogen free or resistant seed, genetically improved brood stock, and feed mills have to be established.
- 1.4 Northeast India is a major consumer of fish and a net importer. Hence there is need for focused and region-specific interventions for promotion and development of inland fisheries and aquaculture in the North East.
- 1.5 Emerging concerns regarding antibiotic residues in shrimp needs to be effectively addressed in order to ensure that the marine exports continue to show a sustained double-digit growth. A system of seed and feed certification and accreditation needs to be setup. A system of end to end traceability in fish needs to be urgently put in place.

- 1.6 An Aquatic Animal Health Management System that effectively addresses the emergence of new and trans-boundary aquatic diseases especially in aquaculture needs focused attention.
- 1.7 It is also essential to promote modern methods of fish cultivation and fishing through application of modern scientific methods. There is need to develop eco-friendly diversified fishing practices for responsible and sustainable fishing.
- 1.8 There is considerable scope to raise incomes in fisheries sector by modernizing and strengthening the value chain. One of the key concerns is huge post-harvest losses and wastage which needs to be addressed urgently for enhancing the incomes of the stakeholders. This requires substantial investment in logistics, infrastructure and supply chain.
- 1.9 Post harvest hygienic handling of fish with efficient cold chain and storage are essential for enhancement of shelf life and providing quality fish to consumers. Fishing harbours and fish landing centres which are playing a vital role in ensuring safe landing, berthing and allied activities including institutional arrangement for development and management are some thrust areas required to be addressed. Modern fish markets, processing units, value addition, transportation, branding, niche labeling and traceability in fish from 'bait to plate' through creation of fish documentation and network system are essential for ensuring quality and increasing profitability in the post-harvest operations and for improvement of the overall efficiency of the value chain. Further, it is essential to benchmark with global best practices.
- 1.10 Strategy and action plan with specific measures for promotion of fish consumption in domestic markets requires focused attention.
- 1.11 A robust fisheries extension system is essential for dissemination of information and knowledge about the best practices as well as the schemes and programmes amongst the intended beneficiaries along with the details of concerned EIAs and state officials.
- 1.12 It is essential to formulate fisheries management plans along with regulatory framework towards effective fisheries governance to ensure sustainable and responsible development through an ecosystem approach. Effective governance of the 'Blue Economy' is required to strike a sustainable balance between the utilization of marine fisheries resources for securing food security of nation and livelihoods of coastal fisher communities on one hand and protection of marine ecosystems on the other.

- 1.13 Marine fishing is considered one of the riskiest professions straddled with risk to life and livelihood. Security (physical, economic and social) of traditional fishers, fish farmers and fish workers from risks associated with capture and culture fisheries including natural calamities needs to be ensured. Besides, it is also essential to ensure that fishers and their welfare are at the core of the fisheries development plans.
- 1.14 Recognizing the importance of fisheries to the economy of the country and for focused and holistic development of fisheries sector with socio economic wellbeing and welfare of fishers, fish farmers and fish workers at the core, the Government of India in February, 2019 created a separate Department of Fisheries and followed up with the creation of a new Ministry of Fisheries, Animal Husbandry and Dairying in June, 2019. Further, in order to consolidate the fisheries sectoral gains, sustain growth and address some of the critical gaps in the sector in a sustainable, responsible, inclusive, and equitable manner, the government envisages to implement PMMSY.

2. STRATEGY

- 2.1 Under PMMSY, focused and sustained interventions will be made for addressing the issues of fish production, productivity and quality, fisheries infrastructure and post-harvest management, modernization and strengthening of the value chain. Emphasis will be laid on harnessing of resources in a sustainable and responsible manner, addressing the critical gaps, infusion of technology and water management aimed at '*more crop per drop*', quality and hygiene in fish and fish products, steps aimed at enhancing stakeholders economic returns along the value chain combined with a robust fisheries management and regulatory framework. Priority will be given for securing and promoting the interests of traditional and small-scale fishers, marginal fish farmers and fish workers along with social, physical and economic security.
- 2.2 While implementing PMMSY, to the extent possible, 'cluster or area-based approaches' will be adopted in order to enhance competitiveness of fisheries sector, facilitate economies of scale, generate higher incomes, accelerate growth and expansion of the sector in an organized manner, amplify outcomes, etc. Potential growth clusters/areas for development of fisheries and aquaculture will be identified and will be developed as an integrated cluster with requisite interventions/activities, forward and backward linkages and with facilities for quality brood, seed and feed, critical infrastructure, processing and marketing networks, etc. Thrust will be on water management and spatial planning supported by regulatory framework.

2.3 The broad indicative interventions are detailed below: -

(i) Enhancement of production and productivity

- (a) Under PMMSY interventions aimed at optimal harnessing of unrealized potential of inland and marine fisheries will be supported through expansion, intensification, diversification, technological infusion and productive utilization of land and water in a sustainable and responsible manner. These interventions include aquaculture, mariculture, seaweed, ornamental fish and pearl cultivation.
- (b) In both marine and inland fisheries sectors including aquaculture and mariculture, input support and facilities like national brood banks, hatcheries, rearing facilities, quality seed units including specific pathogen free or resistant seed facilitates will be provided for enhancing production and productivity. Infrastructure and systems for seed and feed certification, input quality testing, aquatic animal health management including quarantine, and disease diagnostics laboratories and referral laboratories, capacity building and establishment of extension support services will be supported.
- (c) Given the low level of harnessing of deep-sea fisheries resources in EEZ and High seas, support under PMMSY will be provided to traditional fishermen for acquiring deep sea fishing vessels, promotion of technologically advanced fishing vessels and fishing gear for fishermen/fishermen groups through State/UT governments. Training and capacity building for undertaking deep-sea fishing will be supported under PMMSY if required in collaboration with important maritime nations.
- (d) Under PMMSY, income generating economic activities like Mariculture including open sea cage cultivation, Seaweed cultivation and processing, pearl and bivalve cultivation will be supported. Potential mariculture sites along the Indian coast will be mapped and demarcated and steps will be taken for strengthening brood, seed and feed infrastructure and supply chains including large-scale seed production of prospective fish and shellfish species. Wherever possible, a cluster/area-based approach will be followed in Mariculture. Seaweed farming will be promoted in a mission mode and supported under PMMSY through financial, marketing and logistical support to ensure income and welfare gains to small fisher population especially women and fisherwomen headed households. Seaweed seed banks, nurseries, tissue culture units, processing and marketing units, etc. would be supported.
- (e) Islands offer greater opportunities for development of fisheries. Thrust will be given for fisheries development in Islands to harness their marine resources

like tuna and other high value species, including induction of suitable technology for this purpose. Towards, this end an appropriate plan will be devised for development of fisheries in islands to harness their fisheries resources in a sustainable and responsible manner including preservation, conservation of fish stock of islands.

- (f) India's share in the global ornamental fish industry is minimal. In view of growing domestic and export market demand, support under PMMSY will be provided for ornamental fish cultivation through requisite interventions like establishing production units, introduction of commercially important exotic species, import of breeding technology, extending technological, marketing and logistical support to entrepreneurs, etc. Support will also be given in a focused manner to promote culture of bivalves, including for pearl cultivation, and for mussels and other hitherto unexplored commercial species.
- (g) On the inland fisheries front, support will be provided for fish seed stocking of reservoirs, wetlands like *beels*, ox-bow lakes etc., *in situ* hatcheries and fingerlings rearing units for open water bodies. Integrated fish farming need-based aquaculture activities in freshwater, brackish water, saline/alkaline affected soil areas and cages/pens culture, etc. will be taken up. Paddy cum fish culture will be promoted in Eastern India.
- (h) Reservoirs are usually called 'sleeping giants' because their potential is untapped. Under PMMSY support will be provided for stocking of reservoirs with quality fingerlings of Indian Major Carps and other suitable species, creation of *in-situ* hatcheries and fingerlings rearing units for production of quality fingerlings for stocking, integrated development of reservoirs etc. Further support will be given under PMMSY for large-scale cage cultivation in reservoirs. Similarly, wetlands like *beels*, ox-bow lakes, etc., have to be optimally harnessed and hence supported under PMMSY.
- (i) Freshwater (pond/tanks) has huge potential for development through both expansion and intensification. By expanding the total area for aquaculture and promotion of technology backed intensification, the total fish production from fresh water aquaculture can be increased many folds. Hence, these activities will be supported under PMMSY. PMMSY will be dovetailed with MGNREGS, NRLM Scheme etc. of Department of Rural Development wherever feasible for developing fisheries in holistic manner and amplifying outcomes.
- (j) Species Diversification through new candidate species having high production and market potential like *Pangasius*, *Tilapia* species, native catfishes (*magur and singhi*), *Scampi* (freshwater prawn), etc. will to be encouraged under PMMSY. Composite fish culture will also be encouraged.

- (k) India's export growth story is primarily due to the success of brackish water aquaculture of shrimp. This sector offers huge scope for horizontal and vertical growth and needs focused attention. Under PMMSY support will be provided for quality brackish water shrimp farming to ensure sustained income transfers to the marginalized small farmers and fuel growth of exports. Given the huge export potential of shrimps, mud crab, fishes like sea bass, pangasius and tilapia, it is essential to rapidly enhance production of these export-oriented fin and shell fish in next 5 years. Towards this end there is need for area expansion, intensification and species diversification in a cluster/area approach coupled with good farm management practices and the same will be supported under PMMSY. Area expansion under PMMSY has to be focused in inland regions having alkaline and saline soils in a cluster/area approach through end-to-end interventions. Further species diversification of shrimps needs to be promoted to limit dependence upon only one species.
- (l) Cold-water fisheries (trout, IMCs etc.) will be supported under PMMSY in the interest of the growth of Fisheries sector in the Himalayan states/UTs. Support will be also provided for import of germplasm of genetically improved cold-water strains/species and technology transfer through Centre of Excellence, establishment of raceways, brood banks, hatcheries and fingerling production, running water culture units, feed mills, fish transport infrastructure, value added product units, etc. Innovations in new and high value cold-water fisheries will be encouraged on pilot basis. Marketing and branding assistance for organic Himalayan trout and other high value species will be provided. Avenues will be explored to support Krill fishing under PMMSY.
- (m) Recreational fishing, largely for pleasure is growing with tourist industry and offers huge scope for increasing fishers' incomes especially in tourist locations and hence will be encouraged under PMMSY along with ornamental fisheries and aquaria.
- (n) Support under PMMSY will be provided for focused and region-specific interventions for promotion and development of inland fisheries and aquaculture in the Northeastern region. Methods like integrated fish farming and symbiotic rice cum fish culture will be encouraged.
- (o) In aspirational districts identified by NITI Aayog and in the states affected by Left Wing Extremism, under PMMSY priority will be given for rolling out employment generating activities in inland aquaculture, fisheries infrastructure and marketing through area specific interventions in a cluster mode with end to end linkages.

- (p) Interventions aimed at technology infusion and water management to harvest 'more crop per drop' will be supported under PMMSY both in inland and marine sectors. Therefore, High-density aquaculture in ponds and Recirculatory Aquaculture System (RAS), new technology induction such as Biofloc, aquaponics, cage culture etc. will be supported under PMMSY.
- (q) Innovations and innovative interventions/activities will be encouraged and supported under PMMSY. New advances in Aquaculture that are viable and can be replicated will be supported under innovations. Establishment of and handholding of Fisheries and Aquaculture Startups would be a priority intervention under PMMSY.
- (r) Under PMMSY, Integrated Aquaparks would be developed as hubs of multifarious fisheries activities/facilities covering various stages/aspects of fisheries and aquaculture value chain. *Inter alia*, Aquaparks may be centers of production of quality seed and feed, pre and post-harvest infrastructure, business & commerce, logistics, marketing, export promotion, innovation, technology incubation, knowledge dissemination, recreation etc. Besides, Aqua parks may be developed on a hub and spoke model integrating clusters/areas with end to end solutions based on local needs and specific themes. Seaweeds, ornamental fisheries and commercially important species would be given thrust. Aquapark(s) may host a modern Aquarium.
- (s) Establishment of Fisheries Incubation Centers (FICs) would be supported under PMMSY both through government and private sector. They would be managed through the State/Central Government entities including NDFB and/or through professional private firms/agencies. Fisheries Incubation Centers would provide opportunities to the incubatees like young professionals/entrepreneurs, fisheries institutes, fisheries researchers, cooperatives/federations, progressive fish farmers, fisheries-based industries and other entities to showcase their innovations and innovative ideas, technologies in fisheries and commercialize them for the benefit of fishers/fish farmers. This would also help in creating new businesses, entrepreneurs' development (aquapreneurs) and employment opportunities in fisheries. The identified incubatees would be provided the built up (building space) and necessary facilities at the FICs at the pilot stage of their business plan to validate and popularize their innovative and innovations ideas and new technology in fisheries on a pay and use basis. The successful incubatees on validation of their innovative, innovations ideas and technologies in fisheries may also be provided necessary financial assistance under the PMMSY for expanding their operations and facilitate them in obtaining necessary finance/credit (if any required) from the financial institutions.

- (t) Research and extension support services needs to be strengthened. PMMSY aims to build requisite convergence with Department of Agriculture Research and Education (DARE) and ICAR for this purpose. Every Krishi Vigyan Kendra under ICAR should have an expert on fisheries 'Matsya Visheshagya'. Department of Fisheries will work in close coordination with ICAR institutes for transfer of technology from lab to land i.e. Aqua Technology Transfer. Under PMMSY establishment of aquaculture extension service centers will be supported.
- (u) Under PMMSY, special focus will be accorded for Training and Capacity building of fishermen, fish farmers and fish workers and a comprehensive action plan will be prepared for this purpose.
- (v) The development of genetically improved finfish and shellfish having economic value through selective breeding is an important intervention for increasing the production. Further, development of genetically improved strains is essential for attaining self-reliance and long-term sustainability of aquaculture in the country. Towards this end, the PMMSY would support genetic improvement programmes for finfish and shellfish like Seabass, Tilapia, Prawns, Shrimps etc. Furthermore, under PMMSY establishment of Nucleus Breeding Centres (NBCs) in the country for priority shrimp species like *Peneaus monodon*, *Peneaus indicus* and *Litopenaeus vannamei*, etc. will be supported. Given the need for disease/pathogen free Polychaetes in shrimp farming, PMMSY will extend support for development of SPF Polychaetes through breeding/genetic improvement programme.

(ii) Infrastructure and Post-harvest Management

- (a) At present, the landing and berthing facilities developed or being developed can meet the needs of around 40% of the total fishing fleet. Furthermore, the existing harbours need to be modernized and require structural changes. Therefore, under PMMSY it is proposed to develop modern fishing harbours and landing centres and modernize/upgrade the existing ones to suit the present and future needs. The navigability/efficacy of the existing fishing harbours and landing centres will be improved. 100% central funding will be provided for modernization of fishing harbours owned by central government and its entities. Development of inland fish landing centres will be supported.
- (b) Post-harvest infrastructure including cold chain for reduction of post-harvest losses will be developed and strengthened. Requisite infrastructure for processing, storage, value addition, packaging, transportation and marketing of fish and fisheries products will be supported. This include processing plants, cold storages, ice plants, freezing and packing plants, fish and fisheries

products transportation vehicles including refrigerated and insulated vehicles, ice flaking and ice crushing units, ice/fish holding boxes, etc. will be supported. Support will be given for creation of value addition facilities like establishment of post-harvest modern handling of fish and fish processing equipment and warehouses.

- (c) Modern wholesale fish markets including supermarkets, retail fish markets and outlets, mobile fish and live fish markets will be developed so as to ensure quality and hygienic fish to the consumers.
- (d) Fish marketing mechanisms will be strengthened to protect fishers and fish farmers from the vagaries of middlemen, traders and safeguard the interests of consumers. E-markets and e-trading of fish and fish products will be supported and promoted under the scheme. Under PMMSY, Organic Aquaculture will be promoted and steps will be taken for certification. Steps will be taken for promotion of domestic consumption fish, GI in fish, branding of fish like 'Himalayan Trout', 'Tuna branding', etc.
- (e) An appropriate IT enabled traceability and labeling system will be supported to ensure tracking of fish and fish products throughout the supply chain from 'bait to plate'/ 'catch to consumer' and describing accurately to consumers. Requisite SOPs, best management practices and regulatory framework will be developed and implemented. Steps will be taken to educate the fishers on responsible fishing and traceability. Blockchain technology would be adopted in fisheries and aquaculture.
- (f) Integrated modern coastal fishing villages will be developed under PMMSY to leverage Blue economy/Blue growth with an aim to maximize economic and social benefits to coastal fishers while minimizing environmental degradation through sustainable fishing practices. Fishers of these villages would be empowered for securing their livelihoods and equal participation along the fisheries value chain. Requisite gap filling infrastructure, modern amenities, disaster resilient houses, cyclone and tsunami shelters, post-harvest amenities, etc. identified based on local needs and priorities in a participatory and integrated manner would be provided to the extent possible. The core strengths of the coastal villages would be leveraged and channelized for amplifying the economic benefits in a sustainable manner. Convergence with Ministries/Departments would be forged wherever feasible.
- (g) Production and productivity linked critical infrastructure and systems having the implication along the value chain such as aquatic animal health management including Quarantine facilities, input quality testing and diagnostics laboratories including referral laboratories, promotion of

technologically advanced vessels to fishermen/fishermen groups through state/UTs governments, etc. will be taken up for funding under this component of PMMSY.

(iii) Fisheries Management and Regulatory Framework

- (a) Under PMMSY it is intended to provide need-based support to states/UTs for formulation and implementation of fisheries management plans in lines with the requirements of Code of Conduct for Responsible Fisheries (CCRF), FAO's Guidelines on small scale fisheries, Sustainable Development Goals (SDGs) and any other international voluntary and mandatory guidelines/codes and instruments.
- (b) Under PMMSY, it is proposed to develop and manage a robust Monitoring, Control and Surveillance (MCS) regime, to ensure safety and security of fishermen and their vessels/assets at sea. Necessary infrastructure facilities and Networks for MCS will be created and managed. Support will be provided under PMMSY for a comprehensive Vessel Monitoring System (VMS) equipped with requisite communication and safety devices/appliances for traditional and motorized fishing vessels.
- (c) Fisheries documentation and database of fishers both marine and inland will be taken up under PMMSY. Multipurpose support services in fisheries management will be created and supported under the scheme. Under PMMSY, coastal villages will be deployed with multipurpose workers '*Sagar Mitras*' for providing multiple support services to the marine fishermen, undertaking fish catch documentation, etc.
- (d) Under PMMSY support will be provided for sea/ocean ranching, use of satellite technology to complement the fishing efforts of marine fishermen in partnership with INCOIS for decimating Potential Fishing Zones (PFZs) and according training to fishermen for adoption of PFZ advisories. Support will also be provided for usage of navigation and position monitoring systems.
- (e) Fishing being a seasonal activity, financial assistance will be provided under PMMSY for livelihood and nutritional support for traditional and socio-economically backward, eligible active marine and inland fishermen families during the fishing ban (both marine and inland fishing ban) period for conservation of fisheries resources.
- (f) The PMMSY scheme will also promote capacity building for alternative avenues of income through surfing and other water sport for fishermen.

- (g) Use of by-catch and juvenile fish excluders and turtle exclusion devices will so be pomoted as a part of conservation and management measures.
- (h) Security agencies involved in safeguarding safety and security of fishermen at sea and engaged in monitoring and surveillance in the maritime zones of India for securing India from sea-based threats will be strengthened by providing requisite regulatory infrastructure including boats, devices, equipment, etc. under PMMSY.
- (i) The disease monitoring and surveillance programme i.e. National Surveillance Programme on Aquatic Animal Diseases (NSPAAD) will be further strengthened, broad based with active involvement of stakeholders especially states/UT governments and research institutions.
- (j) Traditional fishers' need to be protected from the risks associated with capture fisheries during natural calamities. Towards this end, assistance for insurance cover to fishing vessels of the marine fishermen will be provided under PMMSY. Further, capacity building of fishermen as life guards, to make the beaches and coasts safe and as first responders in disaster will be provided.
- (k) As a part of Swachh Bharat Abhiyan, support under PMMSY will be provided for fitment of Bio toilets in mechanized fishing vessels for maintaining hygiene, prevention and spread of diseases, prevention of pollution of oceans and seas and protection of their ecology (*swachh sagar*).
- (l) Under PMMSY, Fisheries Institutions of Department of Fisheries will be strengthened by creation of necessary infrastructure, acquisition of modern resource survey/training vessels and up-gradation of existing survey/training vessels and capacity building as may be required for fish Data collection, fisheries research and imparting fishermen training. Besides, support to NFDB for its infrastructure and for undertaking need based fisheries development activities; assistance to Regulatory Authorities of Department of Fisheries, Gol such as CAA, Directorate of Aquatic Quarantine and State Fisheries Development Boards for their infrastructure etc. will be provided under the PMMSY.

ANNEXURE-I

CENTRAL SECTOR SCHEME SUB-COMPONENTS/ACTIVITIES WITH 100% CENTRAL FUNDING UNDER PRADHAN MANTRI MATSYA SAMPADA YOJANA

Sl. No	Sub-component	Background and Broad Activities covered	Terms and Conditions
(i)	(ii)	(iii)	(iv)
1	Genetic improvement programmes and Nucleus Breeding Centers (NBCs)	<p>Development of genetically improved strains of finfish, shellfish and seaweeds having economic value is an important intervention for increasing the production and attaining self-reliance and long-term sustainability of aquaculture in the country. The PMMSY would support genetic improvement programmes for seaweeds, finfish and shellfish like Seabass, Tilapia, Prawns/Shrimps etc. Furthermore, under PMMSY establishment of Nucleus Breeding Centres (NBCs) in the country for priority shrimp species like <i>Peneaus monodon</i>, <i>Peneaus indicus</i> and <i>Litopenaeus vannamei</i>, etc. will be supported. Given the need for disease/pathogen free Polychaetes in shrimp farming, PMMSY will extend support for development of SPF Polychaetes through breeding/genetic improvement programme.</p> <p>Species of Interest: Economically Important species like</p> <ul style="list-style-type: none"> • Finfish (Sea Bass, Tilapia etc) • Shellfish (Prawn, <i>Peneaus indicus</i>, <i>Peneaus monodon</i>, <i>Litopenaeus vannamei</i> etc) • Seaweed 	<p>(i) The activities under this sub-component will be implemented on DPR mode. The End Implementing Agencies (EIA) must submit Detailed Project Report (DPR) providing necessary justification, technical-economical details, species considered, capital cost, recurring cost involved, post construction management and operation of the NBC and other infrastructure, anticipated direct & indirect employment generation to local population, specific time lines for implementation of project etc.</p> <p>(ii) The Genetic Improvement Programs and Nucleus Breeding Centre can be proposed by EIAs with 100% central funding.</p> <p>(iii) EIA will provide documentary evidence of availability of requisite land (either own/registered lease</p>

		<ul style="list-style-type: none"> • SPF Polychaetes (Due to the importance for Shrimp farming) • Any other species as may be decided by DoF • In case of fresh water species good quality fresh water source like river, canal etc. should be available. In case of marine species, good quality sea water should be available. Also, the desired species for which the facility to be set up must have local demand. <p>Components:</p> <ul style="list-style-type: none"> • Sheds and Building for NBC including Brood stock holding facility, Milt/Egg collection unit, hatching facility, rearing unit, • Boundary walls /Fencing for Bio-Security measures • Cryo-milt preservation facility (wherever required) • Disinfection facilities • Clean water source • Effluent Treatment System (ETS) • Capacity Building/Awareness program for importance of Genetic improvement • Disease Diagnostic Laboratory • Disposal facilities 	<p>document). In case of leased land, the lease period should not be less than 10 years from the date of submission of DPR/SCP and registered lease document should be included in the DPR/SCP /SCP.</p> <p>(iv) The unit cost and Central Governmental financial assistance will be decided by the CAC for each project on a case to case basis.</p> <p>(v) Further, implementation of the activities under this sub-component on a convergence mode with the other central governmental and their entities including states will encouraged.</p>
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		<ul style="list-style-type: none"> Any other facilities required for specific location/species 	
2	Innovations and Innovative projects/activities, Technology demonstration including startups, incubators and pilot projects.	<p>Innovations and innovative activities related to fisheries and aquaculture including pilot projects will be encouraged and supported under PMMSY. Besides, startups in fisheries, fisheries incubators centres(FIC), block chain, activities like sea ranching, harnessing of krill quota, new advances in aquaculture and capture fisheries, innovative approaches to address malnutrition, innovative approaches like promotion of ornamental fishes as pets/hobby, dissemination of importance of fisheries through installation and operation of aquaria in public places/schools/government offices or any other activity as approved by CAC will be supported under this sub-component. The CAC of PMMSY will be competent to approve activities to be taken up under this sub-component.</p>	<p>(i) Project will be taken up on Detailed Project Report (DPR) mode.</p> <p>(ii) The unit cost of each project will be evaluated on case to case basis and approved by CAC.</p> <p>(iii) The unit cost will be limited as follows:</p> <ol style="list-style-type: none"> Innovative projects-up to Rs. 1 crores Incubation Centres- up to Rs. 3 crores Technology Demonstration project- up to Rs. 2 crores Startups up to Rs. 50 lakhs Pilot projects- up to Rs. 2 crores Any other projects as recommended by CAC. <p>(iv) In the case of direct beneficiary oriented i.e. individual/group activities undertaken for the above projects from (iii) a to f, the same will be done through entities of central government including National Fisheries Development</p>

			<p>Board (NFDB). In such cases the central assistance will be up to 40% of the unit/project cost for General category and 60% for SC/ST/Women category.</p> <p>(v) Projects of higher outlay would be supported for (iii) a to f on a case to case basis based on necessity by the DoF on recommendations of CAC .</p> <p>(vi) Whenever implementation of activities under this sub-component is directly done by DoF or through its entities the project outlay would be as per actual cost.</p> <p>(vii) The End Implementing Agencies(EIA)/Beneficiary will submit Detailed Project Report (DPR) with necessary justification, techno-economical details, species considered, capital cost, recurring cost involved, post construction management and operation of Innovations and Innovative projects/activities, Technology demonstration including startups, incubators and pilot projects and other infrastructure/institution</p>
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			<p>proposed, anticipated direct & indirect employment generation and specific time lines for implementation of project etc.</p> <p>(viii) (EIA)/Beneficiary will provide documentary evidence of availability of requisite land (either own/registered lease document). In case of leased land, the lease period/agreement shall not be less than a minimum period of period of 10 years from the date of submission of DPR/SCP for infrastructure projects. Whereas for non-infrastructure projects the lease period/agreement shall not be less than 7 (seven) years from the date of submission of DPR/SCP. The registered lease document should be included in the DPR/SCP.</p>
3	Training, Awareness, Exposure and capacity Building	Under PMMSY, special focus will be accorded for Training, Awareness, Exposure and Capacity building of fishers, fish farmers, fish workers/vendors and officials. Steps would be taken to improve skills of fishers to take up alternative activities like lifeguards, beach tourist guides, etc. A comprehensive action plan will be drawn up to train about 1.5 lakh	<p>(i) Project will be taken up on Detailed Project Report (DPR) mode.</p> <p>(ii) A comprehensive Operational Guidelines for Training, Awareness, Exposure and capacity Building will be prepared and issued in due course with the approval of the CAC and DoF.</p>

		beneficiaries by FY 2024-25	<p>(iii) Till such time, the following activities are approved.</p> <p>a) All states have to conduct a One-day state level Awareness cum Training Programme on PMMSY for the stake holders with at least 500 participants and for which central assistance of Rs. 5 lakh will be provided. Additional fund if required will be met by the State.</p> <p>b) One day district level/regional level (combining 2 to 3 districts, wherever possible) for creating awareness on PMMSY has to be conducted. Awareness cum Training Programme on PMMSY will be conducted for the stakeholders with not less than 500 participants by the state for which central assistance of Rs. 100,000 (for each program) will be provided. Additional fund if required will be met by the State.</p>
4	Aquatic Quarantine Facilities	Due to increased and faster international trade in fisheries sector, there is possibility of ingress of known and unknown transmissible diseases which have	(i) Setting up of Aquatic Quarantine Facilities would be supported on 100% Central Assistance.

	<p>the potential of very serious and rapid spread, adverse socio-economic and aquatic animal/human health consequences. The purpose and scope of setting up of Quarantine Stations in fisheries sector is to prevent the ingress of dangerous exotic diseases into the country through imported germ- plasma, live aquatic animal and aquatic products. Under PMMSY, special focus will be given for establishment of aquatic quarantine facilities in the country.</p>	<p>(ii) The States/UTs should provide requisite land free of cost for establishing the AQF.</p> <p>(iii) Central Government or its entities/State Government or its entities are eligible for seeking assistance for establishing AQFs with 100% central funding. However, the operation and management (O&M) costs of the AQF should be borne by the concerned sponsoring entity. DoF shall not fund the recurring expenses for O&M.</p> <p>(iv) DoF may fund establishing and running AQFs under its administrative control i.e. through the Directorate of Aquatic Quarantine of DoF.</p> <p>(v) Site should preferably be in the vicinity/close proximity of an international port of entry.</p> <p>(vi) Access to good quality water source should be available.</p> <p>(vii) Establishment AQF by DoF would be as per actual cost. In case of AQFs sponsored by</p>
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			States/UTs or their entities, Central government or their entities (other than DoF) the unit cost for each AQF will be as per DPR with an upper ceiling of Rs. 20 crores for project. Additional costs, if any, over and above the ceiling, will have to be borne by these sponsoring entities.
5	Modernization of fishing harbours of central government and its entities	At present, the landing and berthing facilities developed or being developed can meet the needs of around 40% of the total fishing fleet. Fish importing nations are insisting on clean and hygienic landing places and there is need for modernize the fishing harbours to improve the hygienic conditions to ensure quality of fish landed. Furthermore, the existing harbours need to be modernized and required structural changes are made to suit the present requirements. Few major fishing harbours developed in the past are under the control of Port Trusts. Therefore, modernization of such fishing harbours of Gol has been considered as priority activities under the Central Sector Scheme of the PMMSY. The projects will be implemented on DPR mode. Approximately 3 to 4 fishing harbours of central government and its entities will be modernized. Dovetailing of resources with Sagarmala of Ministry of Shipping will be explored	<p>(i) The concerned port trust/government or its entity shall provide justification for the modernization of existing fishing harbour.</p> <p>(ii) The available fleet size shall be specified.</p> <p>(iii) Economic analysis will be included in the DPR/SCP.</p> <p>(iv) Techno Economic Feasibility reports will be submitted.</p> <p>(v) EIA study, Environmental Clearance, CRZ clearance if required shall be obtained</p> <p>(vi) All the subcomponents will be considered based on the DPR and need based by DoF.</p> <p>(vii) The End Implementing Agencies(EIA) will submit Detailed Project Report (DPR) with necessary justification, techno-economic details, capital cost, post construction management and operation for Modernization of fishing</p>

		<p>Components</p> <ul style="list-style-type: none"> • Extension / renovation of existing breakwater. Repair and maintenance of breakwater • Extension/ renovation of landing Jetty/ wharf. Repair/Maintenance of wharf. • Renovation / modernization of Auction halls, Net Mending sheds, Workshop facilities, Slipways, Public toilets • Renovation/ Modernization / Additional facilities for Ice plant, Cold storage etc. • Renovation / modernization of Water supply arrangements • Renovation / Modernization of Electrical arrangements • Repairs / renovation of approach and internal roads. • Dredging of Fishing harbour • Effluent Treatment Plant (ETP) / it's maintenance 	<p>harbours of central government and its entities proposed, anticipated direct & indirect employment generation and specific time lines for implementation of project etc.</p> <p>(viii) Cost will be as per the actual requirement/need. Site specific DPR may be submitted to DoF.</p> <p>(ix) The concerned port trust/Govt. body should indicate the existing management model of the fishing harbours and the system it would put in place for revamping the operation and management of the fishing harbour. This would be one of the key conditions.</p>
6	<p>Support to National Fisheries Development Board (NFDB), Fisheries Institutions and Regulatory Authorities of Department of Fisheries, Government of India and need based assistance to State Fisheries Development Boards.</p>	<p>Four Fisheries Institutions namely (i) Fishery survey of India (FSI), (ii) Central Institute of Fisheries Nautical and Engineering Training, (CIFNET), (iii) National Institute of Fisheries Post Harvest Technology and Training (NIFPHATT) and (iv) Central Institute of Coastal Engineering for Fishery (CICEF) are presently functioning under the administrative control of the Department of Fisheries. The Coastal Aquaculture Authority (CAA) was established in 2005 to regulate the coastal aquaculture activities in the country. Further a Directorate of Aquatic Quarantine is also within the Department. National Fisheries Development</p>	<p>1. National Fisheries Development Board (NFDB):</p> <p>Support will be provided to NFDB for undertaking need based fisheries activities including beneficiary-oriented ones within the ambit of Central Sector Scheme. Support will also be provided to NFDB for need based infrastructure of NFDB.</p> <p>NFDB would prepare an Annual Action Plan and get it approved by its Executive Committee (EC) and send the proposal to DoF for approval.</p> <p>The Annual Action Plan of NFDB will be appraised by an</p>

	<p>Board (NFDB) with its head office at Hyderabad has been set up in July, 2006 and it has been registered under the Andhra Pradesh Societies Registration Act, 2001. The NFDB was set up to bring activities relating to fisheries and aquaculture for focused attention and professional management along with other objectives. The PMMSY also envisages State Fisheries Development Boards (SFDBs) as one of end implementing agencies.</p> <p>Similarly, NFDB, Fisheries Institutions of DoF, Regulatory Authorities of DoF such as CAA, Directorate of Aquatic Quarantine, State Fisheries Development Boards would be strengthened by providing them with need-based supports in terms of infrastructure, etc.</p> <p>It is necessary to strengthen the aforesaid entities by providing need-based supports in terms of infrastructure etc. and new entities if any, established by DoF during the course of implementation of PMMSY would also be supported in terms of infrastructure etc.</p> <p>NFDB would also take up need-based fisheries development activities with the funds provided to it within the ambit of the Central Sector Scheme.</p>	<p>authorized entity of DoF before placing in CAC for recommending to DoF for its approval. DoF in turn will release the funds as per approved Annual Action Plan to NFDB.</p> <p>DoF on recommendations of CAC may entrust NFDB with the responsibilities of implementation of any other feasible sub-components/activities under the central sector scheme component including beneficiary-oriented ones. The requisite funds for the same will be sanctioned by DoF and released to NFDB. It is desirable that the NFDB make a Comprehensive Annual Action Plan duly indicating the same</p> <p>Support will also be provided for need based infrastructure to Fishery Survey of India (FSI), Central Institute of Fisheries Nautical & Engineering Training (CIFNET), National Institute of Fisheries Post Harvest Technology and Training (NIFPHATT), Central Institute of Coastal Engineering for Fishery (CICEF), Coastal Aquaculture Authority (CAA), Directorate of Aquatic Quarantine, State Fisheries Development Board (SFDB) or any new entities established by DoF during the course of implementation of PMMSY. The support will be based on Detailed Project Report (DPR) and the quantum</p>
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			of support would be based on actual need and as decided by the DoF as per recommendations of CAC. However, the support to State Fisheries Development Boards for their infrastructure i.e. technical civil works including procuring furniture, computers and other communication devices etc. would be limited to a maximum of Rs 50 lakhs per SFDB as a onetime grant.
7	Support for survey and training vessels for Fisheries Institutes including dredger TSD Sindhuraj owned by the DoF and Gol.	It is necessary to strengthen the fisheries institutes especially (i) Fishery survey of India (FSI) and (ii) Central Institute of Fisheries Nautical and Engineering Training, (CIFNET) by providing need-based support for acquisition of modern resource survey/training vessels and up-gradation of existing survey/training vessels and capacity building etc.	<p>(i) Project will be taken up on Detailed Project Report (DPR) mode for procurement of survey and training vessels for Fisheries Institutes of FSI involved in fisheries survey and CIFNET involved in imparting training and undertaking course. The expenditure in taking up these activities would as per actuals. The unit cost of each project will be evaluated on case to case basis and recommended by CAC</p> <p>(ii) Department of Fisheries had in December, 1999 procured a Trailer Suction Hopper Dredger "TSD Sindhuraj" under Japanese Grant-in-aid Programme to carry out maintenance dredging at the fishing harbours. It is proposed to manage and upkeep this dredger under the PMMSY.</p>
8	Disease Monitoring and Surveillance Network	Surveillance programme for monitoring and controlling spread of fish diseases of national and international significance has become a primary concern for	(i) The disease monitoring and surveillance programme i.e. National Surveillance Programme on Aquatic Animal Diseases (NSPAAD) will be

		<p>effective health management. Realizing the importance of such a programme, Department of Fisheries (DoF) has initiated a National Surveillance Programme for Aquatic Animal Diseases (NSPAAD) in 2013. Currently, this programme is being implemented in 15 states of aquaculture importance and Union Territory of Andaman and Nicobar Islands, through 24 National/State Fisheries Institutes. The 2nd phase of National Surveillance Programme on Aquatic Animal Diseases (NSPAAD) will be supported under PMMSY with active involvement of States/UTs.</p>	<p>further strengthened and broad based.</p> <p>(ii) The 2nd phase of National Surveillance Programme on Aquatic Animal Diseases (NSPAAD) will be taken up with active involvement of stakeholders especially states/UT governments and research institutions.</p> <p>(iii) Third party evaluation of the first phase of NSPAAD would be done and the learnings if any would be incorporated in the second phase to improve the deliverables. Till such time or until decided by CAC and DoF, 2nd phase of National Surveillance Programme on Aquatic Animal Diseases (NSPAAD) would be implemented by DoF on exiting terms and conditions of NSPAAD phase-I given the larger public interest/importance attached to this programme</p> <p>(iv) The DoF on recommendations of CAC may take up any other Disease Monitoring and Surveillance Network project/activities in addition to or in lieu of NSPAAD</p>
9	Fish data collection, fishers' survey and	Strengthening of fisheries database is a vital input for planning and formulations of programmes and policies. PMMSY	The following items are included under this sub-component (i) Survey and regular census of Inland and Marine fishers

	strengthening of fisheries database	envisages strengthening of fisheries database which includes survey and regular census of inland and marine fishermen, resource/fish stock assessment (including seaweeds), documentation, etc. In addition, specific studies aimed at validation of marine fisheries stocks for their conservation, management and productive utilization, documentation of impact of fishing activities on other marine animals especially protected species etc. would be supported. Need based support would be provided for formulation and implementation of Fisheries Management Plans with the available funds.	<p>(ii) Survey of Resource/Fish Stock assessment (including seaweeds)</p> <p>(iii) Documentation</p> <p>(iv) Validation of marine Fisheries stock for their conservation and management and productive utilization</p> <p>(v) Impact study on fishing activities and documentation for marine animal specially for protected/endangered species etc.</p> <p>(vi) Formulation and implementation of fisheries management plan</p> <p>All the above items will be implemented as per actuals by DoF. Wherever EIAs other than DoF undertake these activities, the same would be considered on case to case basis based on a DPR/Self-contained Proposal submitted by the EIAs and subject to recommendations of CAC.</p>
10	Support to security agencies to ensure safety and security of marine fishermen at sea	Security agencies involved in safeguarding safety and security of fishermen at sea. The agencies are engaged in monitoring and surveillance in the maritime zones of India for securing India from sea-based threats. It is proposed to strengthen such agencies by providing requisite regulatory infrastructure including boats, devices, equipment, etc. under PMMSY. While priority will be given for central security agencies, wherever considered necessary the need-based support would be extended to state security	<p>(i) The allocated fund will be provided to Coast Guard and other security agencies including state security agencies like Marine Police or any other security agencies designated by the State Govt.</p> <p>(ii) DPR/Self-contained Proposal has to be submitted with justification for the regulatory infrastructure including speed boat for patrolling, security devices and communication equipment etc. The benefit that the</p>

		agencies as well.	<p>fishermen get out of the infrastructure supported to security agencies should be indicated</p> <p>(iii) The Security agencies should certify that the proposed infrastructure is not provided for under their regular budget or any other sources.</p> <p>(iv) The proposal will be received by DoF and considered for approval by DoF on recommendation of CAC.</p> <p>(v) Security Agencies would be responsible for safe custody of the infrastructure.</p> <p>(vi) In addition to monitoring and surveillance in the maritime zones of India, the security agencies should support the local State/UT fisheries establishment during crisis and disasters.</p> <p>(vii) Wherever feasible, the infrastructure/equipment may also be used for imparting training to local youth by security agencies.</p>
11	Fish Farmers Producer Organizations/Companies (FFPOs/Cs)	As announced in the Union Budget 2020, it is proposed to set up 500 Fish Farmers Producer Organizations/Companies (FFPOs/Cs) to economically empower the fishers and fish farmers and enhance their	(i) The cost norms, guidelines and modalities, etc. for setting up and handholding of FFPOs/Cs would be prepared by the DoF and finalized by the CAC in due course. For this purpose, the CAC may take the cost norms

	<p>bargaining power. FFPOs/Cs will be set up with funding under PMMSY and the Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture and Farmers Welfare wherever possible. The cost norms, guidelines and modalities, etc. for setting up and handholding of FFPOs/Cs would be finalized by the CAC as per the specific needs and requirements of fisheries sector. For this purpose, the CAC may take the cost norms and guidelines of FFPO scheme being implemented by the Department of Agriculture, Cooperation and Farmers Welfare as the basis. Wherever feasible, FFPOs/Cs would also be set up with financial assistance from other central Ministries/Departments/organizations. In order to optimize the outcomes of FFPOs/Cs, the CAC would be competent to decide on the upper ceiling of the total area/number of units of a particular activity that would be supported/assisted under PMMSY for taking up by FFPOs/Cs. Efforts would also be made to foster linkages with Department of Agriculture, Cooperation and Farmers Welfare, NABARD, NCDC, etc. in order to extend credit guarantee cover to the FFPOs/Cs to the extent possible.</p> <p>Scope:</p> <ul style="list-style-type: none"> ➤ To economically empower the Fishers and Fish Farmers ➤ To enhance their bargaining 	<p>and guidelines of FFPO scheme being implemented by the Department of Agriculture, Cooperation and Farmers Welfare as the basis.</p> <p>(ii) Till such time, the DoF will implement this activity based on the existing cost norms and guidelines of FPO scheme being implemented by Ministry of Agriculture, and Farmers welfare.</p> <p>(iii) Efforts would also be made to foster linkages with Dept. of Agriculture, cooperation and Farmers welfare, NABARD, NCDC etc. in order to extend credit guarantee cover to FFPOs/Cs to the extent possible.</p>
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power

- To develop own marketing network

Indicative activities for a FFPO/Company:

1. Procurement of Inputs (Fish seed/Feed/Construction materials)
2. Pond Culture/Cage Culture/Pen Culture/Cage culture (Inland/Marine/Brackish water)/RAS/Raceways/Bio-floc, Fishing Activities for both inland and marine etc
3. Dissemination of technology
4. Innovative Fisheries activities
5. Primary Processing
6. Branding of the product
7. Development of Fish and Fishery Products/By-products
8. Quality Control
9. Cold chain Development
10. Packaging/Levelling/Standardisation
11. Marketing
12. Export
13. Any other fisheries related activity that would be suitable for undertaking by FFPOs/Cs

12	<p>Certification, accreditation, traceability and labelling.</p>	<p>A system of seed and feed certification and accreditation needs to be setup for fin fish and shell fish. Emerging concerns of presence of antibiotics and residues in shrimp needs to be effectively addressed in order to ensure that the marine exports continue to show a sustained double-digit growth. A system of end to end traceability in fish needs to be urgently put in place including use of Block chain technology. Under PMMSY, special focus will be given for establishing a comprehensive traceability and labelling system using IT applications wherever required. Certification of aquaculture inputs including seed and feed, accreditation of production units like brood banks, farms, hatcheries, supporting extension systems, etc. will be supported.</p> <p>Any other need-based activity and infrastructure related to certification, accreditation, traceability and labelling in fish will be supported.</p> <p>Aspects of accreditation are dealt by National Accreditation Board for Certification Bodies (NABCB). NABCB may approve certain Inspection Bodies (IBs)/ Certifying Bodies (CB) under Quality Management System (QMS), for fish/ shrimp hatcheries and feed mill.</p> <p>Objective:</p> <ul style="list-style-type: none"> • For setting quality 	<p>(i) Will be implemented on DPR/Self Contained Proposal basis on recommendations of CAC and approval of DoF.</p> <p>(ii) Detailed operational guidelines for this sub-component would be worked out and issued in due course.</p>
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		<p>standards for shell fish / fin fish hatcheries/Feed mills in India and ensuring that their production process conforms to norms of quality seed/feed.</p> <ul style="list-style-type: none"> • Economically empower the hatchery owners/ feed mill • To ensure the availability and supply of quality fish/shrimp seed and feed to all farmers at a reasonable price • To keep traceability of Broodstocks and documentation of seed production in case of hatcheries and traceability of raw material, process documentation for feed mill. <p>The Accreditation and Certification systems will be made mandatory to all hatcheries of Finfish/Shell fish (Shrimp, Crab etc) and feed mills in India – under both private and public sector that undertake breeding of fish/ shrimp hatcheries and feed mill.</p> <p>DoF would also work out suitable model for traceability and labelling for hatcheries, seed farm, fish/shrimp farm/capture fish etc.</p>	
13	Administrative Expenses for implementation of PMMSY (to meet expenses of both for Central Sector and Centrally Sponsored Schemes components)		(i) The overall Administrative Expenses for each project/schemes/sub components will not exceed 2.5% of the Central assistance. The broad activities under Administrative expenses are indicated at Para-18.1 to 18.4 of this Operational Guidelines.

			<p>(ii) The DoF would be competent to decide on the modalities and guidelines including cost norms for incurring expenditure under Administrative expenses. This also includes the modalities, guidelines and cost norms for establishing and operating the Project Appraisal Committee (PAC) and Programme Monitoring Unit (PMU) in NFDB, Project Monitoring and Evaluation Unit (PMEU) in the DoF, State Programme Unit (SPU) at State/UT level, and District Programme Unit (DPU) at district level including necessary institutional arrangements/structure at the sub-district level.</p> <p>(iii) The nomenclature and scale of manpower, scale, their remuneration, eligibility criteria, etc. for establishing and operating the State/UT Programme Unit (S/UT PU) at State/UT level, District Programme Unit (DPU) at district level including necessary institutional arrangements/structure at the sub-district level are placed at</p>
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			<p>ANNEXURE-IX of these Operational Guidelines. The monthly office expenses for these offices is also indicated ANNEXURE-IX.</p> <p>For the rest, details will be issued separately by the DoF.</p>
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ANNEXURE -II**BENEFICIARY ORIENTED SUB-COMPONENTS AND ACTIVITIES UNDER CENTRALLY SPONSORED COMPONENTS OF PRADHAN MANTRI MATSYA SAMPADA YOJANA**

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
A ENHANCEMENT OF PRODUCTION AND PRODUCTIVITY						
1 Development of Inland Fisheries and Aquaculture						
1.1	Establishment of New Freshwater Finfish Hatcheries	(No)	25.00	10.00	15.00	<p>(i) Beneficiaries will submit Detailed Project Report(DPR) with full justification & technical-economical details, including the species to be produced, capital cost and the recurring cost involved. Project report should also contain details of anticipated direct & indirect employment generation to local population, enhancement of fish production, specific time lines for implementation of project etc.</p> <p>(ii) Beneficiary will provide documentary evidence of availability of requisite land (either own/registered lease document) free from encroachments and encumbrances, sources of finance like Banks consent to provide loan towards the Non-subsidy portion of the project cost or declaration by the beneficiary for own investing, necessary clearances/permissions etc.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>(iii) In case of leased land, the lease period/agreement should not be less than a minimum period of 10 years from the date of submission of DPR/SCP and the registered lease document should be included in the DPR/SCP.</p> <p>(iv) Freshwater Finfish Hatchery will have a minimum capacity of 15 million fry/year/unit or 6 crores spawn/year/unit with minimum area of 0.50 ha.</p> <p>(v) Fish hatchery will include brooder pond, nursery ponds, rearing tanks, small laboratory, water & electric supply, required infrastructure facilities etc.</p> <p>(vi) The fish hatchery should be managed by the required qualified technical staff.</p> <p>(vii) Beneficiary will ensure supply of seed produced from the central assisted hatcheries to farmers at affordable/reasonable price.</p> <p>(viii) Post construction operation, management and maintenance of the hatcheries will be carried out in a satisfactory manner by the beneficiaries at their own costs.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						(ix) Cost of accreditation of the hatchery will be mandatorily included in project estimates.
1.2	Establishment of New Freshwater Scampi Hatcheries	(No)	50.00	20.00	30.00	<p>(i) Beneficiaries will submit Detailed Project Report(DPR) with justification & technical-economical details including the species to be produced, capital cost, source of funding for the project, and recurring cost involved etc.</p> <p>(ii) DPR should also contain details of anticipated direct & indirect employment generation to local population, enhancement of fish production, specific time lines for implementation of project etc.</p> <p>(iii) Beneficiary will provide documentary evidence of availability of requisite land (either own/registered lease document) free from encroachments and encumbrances, sources of finance like Banks consent to provide loan towards the Non-subsidy portion of the project cost or declaration by the beneficiary for own investing etc.</p> <p>(iv) In case of leased land, the lease period/agreement should not be less than a minimum period of 10</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>years from the date of submission of DPR/SCP and the registered lease document should be included in the DPR/SCP.</p> <p>(v) Freshwater Scampi Hatchery will have a minimum capacity of 30 million PL/Year with minimum area of 0.5 ha.</p> <p>(vi) The Scampi hatchery should be managed by qualified skilled technical staffs.</p> <p>(vii) Beneficiary will ensure supply of seed produced from the central assisted hatcheries to farmers at affordable /reasonable price.</p> <p>(viii) Post construction operation, management and maintenance of the hatcheries will be carried out in a satisfactory manner by the beneficiaries at their own cost.</p> <p>(ix) Those who are trained or willing to be trained in hatchery or having experience in the field of hatchery are eligible.</p> <p>(x) Cost of accreditation of the hatchery will be mandatorily included in project estimates.</p>
1.3	Construction of New	(Ha)	7.00	2.80	4.20	(i) Beneficiaries will submit self-contained proposal with

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
	Rearing ponds (nursery/seed rearing ponds)					justification & technical-economical details etc. including the species to be cultured, capital cost and recurring cost involved.
1.4	Construction of New Grow-out ponds	(Ha)	7.00	2.80	4.20	<p>(ii) The self-contained proposal should also contain details of anticipated direct & indirect employment generation to local population, enhancement of fish production, specific timelines for implementation of project, recurring cost involved, source of finance like consent of Bank to provide loan to meet the beneficiary share or self-declaration for investing own funds.</p> <p>(iii) The self-contained proposal will also include documentary evidence of availability of requisite land (either own/registered lease document) free from encroachments and encumbrances, necessary clearance/permission if any required. In case of leased land, the lease period/agreement should not be less than 7(seven) years from the date of submission of self-contained proposal and the registered lease document be included in</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>the self-contained proposal.</p> <p>(iv) Post construction operation, management and maintenance of the pond will be carried out in a satisfactory manner by the beneficiaries at their own cost.</p> <p>(v) The beneficiary will submit an undertaking to the effect that he/she has not availed subsidy for the same activity under any Govt. scheme or agency.</p> <p>(vi) The Ponds/tanks to have a minimum water depth of 1.5 m are eligible for financial assistance.</p> <p>(vii) The governmental assistance is restricted to (a) 2 ha per individual beneficiary, (b) 2 ha multiplied by the number of members of the group/society with a ceiling of 20 ha per group/society in case of Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. or those undertaken in a cluster/area approach. However, a cluster/area may have multiple groups/societies. As far as FFPOs/Cs are concerned, the</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						modalities of implementation and upper ceiling on the total area eligible for support would be decided by the CAC.
1.5	Inputs for fresh water Aquaculture including Composite fish culture, Scampi, Pangasius, Tilapia etc.	Ha)	4.00	1.60	2.40	(i) Beneficiaries will be provided governmental assistance for input costs for the initial crop only in the newly constructed ponds/tanks. (ii) Governmental assistance for input cost will be released only after the ponds/tanks are ready for culture.
1.6	Establishment of need based New Brackish Hatcheries (shell fish and fin fish)	No)	50.00	20.00	30.00	(i) Beneficiaries will submit Detailed Project Report (DPR) with justification & technical-economical details etc. including the species to be produced, capital cost and the recurring cost involved. (ii) The DPR should also contain details of anticipated direct & indirect employment generation to local population, enhancement of fish production, specific time lines for implementation of project etc. (iii) Beneficiary will provide documentary evidence of availability of requisite land (either own/registered lease document) free from

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>encroachment, necessary clearance/permission from Coastal Aquaculture Authority (CAA) if the proposed area is within the jurisdiction of CAA, sources of finance like Bank's consent to provide loan towards the Non-subsidy portion of the project cost or declaration by the beneficiary for own investing. In case of leased land, the lease period should not be less than 10(ten) years from the date of submission of self-contained proposal and the registered lease document be included in the self-contained proposal.</p> <p>(iv) Brackish Hatchery will have a minimum capacity of 5 lakh fry/year for finfish and 10 million PL/year for shrimp with minimum area of 0.4 ha.</p> <p>(v) The Brackish water fish hatchery shall include brooder pond/tank, nursery rearing facility, rearing tanks, small laboratory, water & electric supply, required infrastructure and facilities.</p> <p>(vi) The hatchery should be managed by qualified skilled</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>technical staffs and ensure supply of quality seed to farmers.</p> <p>(vii) Beneficiary organisations will ensure supply of seed produced from the Government assisted hatcheries to farmers at affordable /reasonable price.</p> <p>(viii) Post construction operation, management and maintenance of the hatcheries will be carried out in a satisfactory manner by the beneficiaries at their own cost.</p> <p>(ix) The beneficiary will submit an undertaking to the effect that he / she has not availed financial assistance for the same activity under any Govt. scheme or agency.</p> <p>(x) Cost of accreditation of the hatchery will be mandatorily included in project estimates.</p>
1.7	Construction of New ponds for Brackish Water Aquaculture	Ha)	8.00	3.20	4.80	(i) Beneficiaries will submit self-contained proposal with justification & technical-economical details etc. including the species to be cultured, capital cost and the recurring cost involved.
1.8	Construction	(Ha)	8.00	3.20	4.80	

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
	of New ponds for Saline /Alkaline areas					<p>(ii) The self-contained proposal should also contain details of anticipated direct & indirect employment generation to local population, enhancement of fish production, specific timelines for implementation of project, recurring cost involved, source of finance like consent of Bank to provide loan to meet the beneficiary share or self-declaration for investing own funds.</p> <p>(iii) The self-contained proposal will also include documentary evidence of availability of requisite land (either own/registered lease document) free from encroachments and encumbrances and necessary clearance/permission from Coastal Aquaculture Authority (CAA) if the proposed area is within the jurisdiction of CAA. In case of leased land, the lease period should not be less than 7(seven) years from the date of submission of self-contained proposal (SCP) and the registered lease document will also be included in the SCP.</p> <p>(iv) In case polythene lining is provided (as per specifications</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>prescribed by DoF), an additional governmental assistance up to Rs. 2 lakh per ha may be provided to beneficiaries (General/SC/ST/Woman). This additional governmental assistance up to Rs. 2 lakh per ha has been arrived at based on the unit cost of polythene @ Rs 8 lakhs/hectare. Further, this amount up to Rs 2 lakhs would be shared between centre and state as per funding pattern under CSS component of PMMSY.</p> <p>(v) Post construction operation, management and maintenance of the pond will be carried out in a satisfactory manner by the beneficiaries at their own cost.</p> <p>(vi) The beneficiary will submit an undertaking to the effect that he/she has not availed subsidy for the same activity under any Govt. scheme or agency.</p> <p>(vii) Ponds/tanks to have a minimum water depth of 1.5 m are eligible for financial assistance.</p> <p>(viii) The governmental assistance is restricted to (a) 2 ha per individual beneficiary, (b) 2 ha multiplied by the number of</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						members of the group/society with a ceiling of 20 ha per group/society in case of Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. or those undertaken in a cluster/area approach. However, a cluster/area may have multiple groups/societies. As far as FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total area eligible for support would be decided by the CAC.
1.9	Inputs for Brackish Water Aquaculture	(Ha)	6.00	2.40	3.60	i. Beneficiaries will be provided governmental assistance for input costs for the initial crop only in the newly constructed ponds/tanks.
1.10	Inputs for Saline /Alkaline Water Aquaculture	(Ha)	6.00	2.40	3.60	ii. Governmental assistance for input cost will be released only after the ponds/tanks are ready for culture.
1.11	Construction of Biofloc ponds for Brackish water/Saline/Alkaline areas including	0.1 Ha	18	7.2	10.8	i. Beneficiaries will submit project report (PR) with full justification & technical-economical details etc. including the species to be cultured, capital cost and the recurring cost involved. Project report should also contain details of anticipated direct & indirect

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
	inputs of Rs 8 lakhs/Ha					employment generation to local population, enhancement of fish production, specific time lines for implementation of project etc.
1.12	Construction of Biofloc ponds for Freshwater areas including inputs of Rs 4 lakhs/Ha	0.1 Ha	14	5.6	8.4	<p>ii. Beneficiary will provide documentary evidence of availability of requisite land (either own/registered lease document</p> <p>ii. In case of leased land, proper registered lease document for a period of 7(seven) years from the date of submission of SCP will have to be submitted.</p> <p>v. The project proposals will be routed through the concerned States/UTs.</p> <p>v. Post construction operation, management and maintenance of the pond will be carried out in a satisfactory manner by the beneficiaries at their own cost</p> <p>vi. He/She should not have availed subsidy for the same activity under any Govt. scheme or agency</p> <p>vii. Banks consent to provide loan towards the Non-subsidy portion of the investment or declaration of the farmer or the entrepreneur for investing on His/her own.</p> <p>(ix) The governmental assistance is restricted to (a) 2 units of 0.1 ha per individual beneficiary, (b) 2 units of 0.1 ha multiplied by the</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						number of members of the group/society with a ceiling of 20 units of 0.1 ha per group/society in case of Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. or those undertaken in a cluster/area approach. However, a cluster/area may have multiple groups/societies. As far as FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total area eligible for support would be decided by the CAC.
1.13	Stocking of Fingerlings in Reservoirs @1000FL/ha (3.0/1lakh FL)	(Ha)	Rs 3/Fingerling	Rs 1.2/Fingerling	Rs 1.8/Fingerling	<p>(i) It would be approved as a group activity. Beneficiaries will submit self-contained proposal/Detailed Project Report (DPR) with full justification & details of the reservoirs etc. The individual project outlay would be decided by DoF.</p> <p>(ii) The DPRs will also contain details of anticipated direct & indirect employment generation, enhancement of fish production and productivity, improvement of economic status of locals, specific time lines for the implementation of the project etc.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>(iii) The beneficiaries will obtain necessary prior permissions from the concerned State/UT Government and other Competent Authorities for fishing in the reservoirs including fish stocking.</p> <p>(iv) The DPR should also clearly indicate the due diligence and transparency in stocking of the fish stock, time cycle in stocking and harnessing etc.</p> <p>(v) Small reservoir may be provided with pen culture units as may be decided by DoF. The unit cost for pen culture unit is at sl 5.6 under "Technology infusion and Adoption" of this Annexure and the same will be followed.</p>
1.14	Stocking of Fingerlings in Wet lands @1000FL/ha (3.0/1lakh /FL)	(Ha)	Rs 3/Fingerling	Rs 1.2/Fingerling	Rs 1.8/Fingerling	<p>(i) This activity would be approved as a group activity. Beneficiaries will submit self-contained proposal/Detailed Project Report (DPR) with full justification & details of the reservoirs etc. The individual project outlay would be decided by DoF.</p> <p>(ii) Beneficiaries will submit self-contained Detailed Project Report (DPR) with full</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>justification & details of the reservoirs etc.</p> <p>(iii) The DPRs will also contain details of anticipated direct & indirect employment generation, enhancement of fish production and productivity, improvement of economic status of locals, specific time lines for the implementation of the project etc.</p> <p>(iv) The beneficiaries will obtain necessary prior permissions from the concerned State/UT Government and other Competent Authorities for fishing in the wetlands including fish stocking.</p> <p>(v) The DPR should also clearly indicate the due diligence and transparency in stocking of the fish stock, time cycle in stocking and harnessing etc.</p> <p>(vi) Wetland may be provided with pen culture units as may be decided by DoF. The unit cost for pen culture unit is at sl 5.6 under "Technology infusion and Adoption" of this Annexure and the same will be followed.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
2. Development of marine fisheries including mariculture and seaweed cultivation						
2.1	Establishment of Small Marine Finfish Hatcheries	(No)	50.00	20.00	30.00	<p>(i) Beneficiaries will submit Detailed Project Report (DPR) with justification & technical-economical details etc. including the species to be produced, capital cost and the recurring cost involved.</p> <p>(ii) The DPR should also contain details of anticipated direct & indirect employment generation to local population, enhancement of fish production, specific time lines for implementation of project etc.</p> <p>(iii) Beneficiary will provide documentary evidence of availability of requisite land (either own/registered lease document) free from encroachment and encumbrances, necessary clearance/permission from Coastal Aquaculture Authority (CAA), if any required, sources of finance like Banks consent to provide loan towards the Non-subsidy portion of the project cost or declaration by the</p>
2.2	Construction of large Marine Finfish Hatcheries	(No)	250.00	100.00	150.00	

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>beneficiary for own investing. In case of leased land, the lease period should not be less than 10(ten) years from the date of submission of DPR and the registered lease document be included in the DPR.</p> <p>(iv) Small Marine Finfish Hatcheries will have a minimum capacity of 5 lakh fry/year for finfish and 10 million PL/year for shrimp with a minimum area of 0.4 ha.</p> <p>(v) Large Marine Finfish Hatcheries shall have a minimum capacity of 2 to 3 million fry per year for finfish and 100 million PL/year for shrimp with a minimum area of 1 ha.</p> <p>(vi) The hatcheries will include brooder pond/tank, nursery rearing facility, rearing tanks, small laboratory, water & electric supply, required infrastructure and facilities.</p> <p>(vii) The hatchery should be managed by qualified skilled technical staffs and ensure supply of quality seed to farmers.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>(viii) Beneficiary organisations will ensure supply of seed produced from the Government assisted hatcheries to farmers at affordable /reasonable price.</p> <p>(ix) Post construction operation, management and maintenance of the hatcheries will be carried out in a satisfactory manner by the beneficiaries at their own cost.</p> <p>(x) Cost of accreditation of the hatchery will be mandatorily included in project estimates.</p>
2.3	Marine Finfish Nurseries	(No)	15.00	6.00	9.00	<p>(i) Beneficiaries will submit Self-Contained Proposal(SCP) with full justification & technical-economical details, species to be produced, capital cost, recurring cost involved, financial sources for implementation of the project including consent of bank to provide loan to meet the beneficiary contribution or self declaration for investing His/her own funds.</p> <p>(ii) SCP should also contain anticipated direct & indirect employment generation to local population, enhancement of fish production, specific time lines for</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>implementation of project etc.</p> <p>(iii) Beneficiary will provide documentary evidence of availability of requisite land (either own/registered lease document), necessary clearance/permission from the concerned authorities as may be required. In case of leased land, the lease period should be minimum of 7 (seven) years from date of submission of SCP and the registered lease document should be included in the SCP.</p> <p>(iv) The Marine Fin Fish nurseries will have a minimum producing capacity 2 lakh fingerlings /year with minimum area of 500 sqm which may include circular nursery/rearing tank, rectangular tanks, Seawater sump, overhead tank, power back up, required infrastructure and other facilities.</p> <p>(v) The Marine Finfish Nursery should be managed by qualified skilled technical staffs.</p> <p>(vi) Beneficiary will ensure supply of seed produced from the Governmental assisted nurseries to the fishers and fish farmers at affordable /reasonable price.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>(vii) Post construction operation, management and maintenance of the nurseries will be carried out in a satisfactory manner by the beneficiaries at their own cost.</p> <p>(viii) The Governmental assistance will be restricted to one unit of Marine finfish Nursery for individual beneficiary or Co-operatives/SHGs with a production capacity of 2 lakh fingerlings /year with minimum area of 500 sqm.</p> <p>(ix) The beneficiary will produce an undertaking in the SCP to the effect that he/she has not availed governmental assistance for the same activity under any Govt. scheme or agency.</p>
2.4	Establishment of Open Sea cages (100-120 cubic meter volume)	(No)	5.00	2.00	3.00	<p>(i) The beneficiary will obtain necessary prior permissions from the concerned State/UT Government and other Competent Authorities for installation of cages in the sea. Allotment of sea area by the State/UT Government for cage culture would be as per the prevailing leasing policy/guidelines of the State/UT.</p> <p>(ii) The beneficiary will submit a Self-Contained Proposal(SCP),</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>containing technical-economical details, technical specifications of cages, cost estimate, species to be produced, recurring cost involved, permissions obtained, financial sources for implementation of the project including consent of bank to provide loan to meet the beneficiary contribution or self-declaration for investing his/her own funds.</p> <p>(ii) The unit cost of Rs. 5 lakh per cage includes capital, one time operational and maintenance costs.</p> <p>(iv) The governmental assistance is restricted to (a) a maximum of 5 cages per individual beneficiary (b) In case of Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. or those undertaken in a cluster/area approach, the number of cages for governmental assistance will be limited to 2x number of members of such group with a ceiling of 50 cages per group. However, a cluster/area may have multiple groups/societies. As far as FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total units</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						eligible for support would be decided by the CAC.
2.5	Establishment of Seaweed culture rafts including inputs (per raft).	(No)	0.015	0.006	0.009	<p>(i) The beneficiaries will obtain necessary permission for allotment of sea area by the concerned State Government/UT. Allotment of sea area by the State/UT Government for seaweed cultivation would be as per the prevailing leasing policy/guidelines of the State/UT.</p> <p>(ii) The beneficiaries will be required to submit Self-contained Proposal (SCP) together with documentary evidence of necessary permissions and technical knowhow to avail the assistance.</p> <p>(iii) Beneficiaries should be Fishermen/Fisherwomen Cooperatives Societies. SC/ST Cooperative Societies, Women Self Help Groups, etc., the Governmental financial assistance will be restricted of 15 rafts per member with a ceiling of 500 rafts per Group/Society at suitable sites/locations.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>(iv) The unit cost includes the capital costs, one-time inputs and operational costs.</p> <p>(v) DoF may sanction more units to the group for justifiable reasons.</p>
2.6	Establishment of Seaweed culture with Monoline/tubenet Method including inputs (one unit is approximately equal to 15 ropes of 25m length)	No	0.08	0.032	0.048	<p>(i) The beneficiaries will obtain necessary permission for allotment of sea area by the State Government/UT. Allotment of sea area by the State/UT Government for seaweed cultivation would be as per the prevailing leasing policy/ guidelines of the State/UT.</p> <p>(ii) The beneficiaries will be required to submit self-contained project proposal containing techno-economic details, species to be cultured, together with documentary evidence of necessary permissions, technical knowhow, source of financing to meet the beneficiary contribution etc.</p> <p>(iii) The unit cost includes the capital costs, one-time inputs and operational costs.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>(iv) Beneficiaries should be Fishermen/Fisherwomen Cooperatives Societies, SC/ST Cooperative Societies, Women Self Help Groups, etc., Governmental financial assistance will be normally restricted to 100 units* per Group for <i>kappaphagus</i> and up to 300 units per group for <i>Gracillaria</i> species.</p> <p>(*one unit is approximately equal to 15 ropes of 25m length)</p> <p>(v) DoF may sanction more units to the group for justifiable reasons.</p>
2.7	Bivalve cultivation (mussels, clams, pearl etc.)	(No)	0.20	0.08	0.12	<p>(i) The beneficiary will obtain necessary permission for allotment of sea area by the respective State Government/UT. Allotment of sea area by the State/UT Government for Bivalve cultivation would be as per the prevailing leasing policy/guidelines of the State/UT.</p> <p>(ii) The unit cost includes the capital costs and one-time input & operational cost.</p> <p>(iii) The beneficiary will be required to submit self-contained proposal indicating techno-financial details together with documentary evidence of</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						necessary permissions and technical knowhow etc. (iv) Governmental financial assistance is restricted to 5 units for individual farmer/beneficiary, 50 units for Fishermen/Fisherwomen Cooperatives Societies, SC/ST Cooperative Societies, Women Self Help Groups etc., having at least 10 members.
3	Development of fisheries in North-eastern and Himalayan States/UTs (Besides the below activities, the North-eastern and Himalayan States/UTs will also be assisted under other sub-components/activities envisaged under PMMSY that are common to all states/UTs. While fixing unit costs for Himalayan States/UTs and the North Eastern States under this Sub-component, the remoteness and terrain of these areas has already been factored in and hence the unit costs shown are higher than the rest of the other States/UTs. Therefore, no further mark-up on these unit costs will be allowed).					
3.1	Establishment of Trout Fish Hatcheries.	(No)	50.00	20.00	30.00	(i) Beneficiaries will submit Details Project Report (DPR) with full justification, technical-economical details, species to be produced, capital cost, recurring cost involved, source of funds for meeting the beneficiary contribution including bank consent, undertaking of beneficiary to the effect that no governmental assistance is availed for the proposed project, anticipated direct & indirect employment

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>generation to local population, enhancement of fish production and specific time lines for implementation of project etc.</p> <p>(ii) Beneficiary will provide documentary evidence of availability of requisite land (either own/registered lease document). In case of leased land, the lease period should be for a period of 10 years from the date of submission of DPR/SCP and registered lease document should be included in the DPR/SCP.</p> <p>(iii) Trout fish Hatchery will have a minimum capacity of 10 lakh fry/ Year or 15 lakh Eyed ova of trout/year in a minimum area of 0.4 Ha or at least 1 acre.</p> <p>(iv) The Beneficiary may also import eyed ova for hatching as per requirement and rear the hatchlings up to fry/fingerlings to facilitate continuous supply of Trout seed throughout the year.</p> <p>(v) The Trout hatchery will include at least 4 raceways like brood stock raceways, nursery</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>raceways, etc. Further, it would include feeding tank, water channel & electric supply, required infrastructure and other facilities.</p> <p>(vi) The Trout Fish hatchery should be managed by qualified skilled technical manpower.</p> <p>(vii) Beneficiary will ensure supply of seed produced from the Government assisted hatcheries to farmers at affordable /reasonable price.</p> <p>(viii) Post construction operation, management and maintenance of the hatcheries will be carried out in a satisfactory manner by the beneficiaries at their own cost.</p> <p>(ix) Cost of accreditation of the hatchery will be mandatorily included in project estimates.</p>
3.2	Construction of Raceways of minimum of 50 cubic meter	(No)	3.00	1.20	1.80	(i) Beneficiaries will submit self-contained proposal (SCP) with justification, techno-financial details, species to be cultured, capital cost and the recurring cost involved, source of funds for meeting the beneficiary contribution including bank

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>consent, undertaking of beneficiary to the effect that no governmental assistance is availed for the proposed project, anticipated direct & indirect employment generation to local population, enhancement of fish production and specific time lines for implementation of project etc.</p> <p>(ii) Beneficiaries will provide documentary evidence of availability of requisite land (either own/registered lease document). In case of lease land, the minimum lease period should be 7(seven) years from the date of submission of DPR/SCP and the registered lease document be included in the DPR/SCP.</p> <p>(iii) Post construction operation, management and maintenance of the Raceways will be carried out in a satisfactory manner by the beneficiaries at their own costs.</p> <p>(iv) The procurement of fish seed, feed and the market for the produce will be the sole responsibility of the beneficiary.</p> <p>(v) The Governmental financial assistance is restricted to 4 numbers of Raceways for individual farmer/entrepreneurs and 20 units</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						for Co-operatives, SHGs and other groups/agencies having minimum 10 members with a production capacity of 1 MT/raceway/Year.
3.3	Inputs for Trout Rearing Units.	(No)	2.50	1.00	1.50	<p>(i) Beneficiaries will be provided governmental assistance for input costs for initial crop only in the newly constructed ponds/tanks.</p> <p>(ii) Governmental assistance for input cost will be released only after the rearing units are ready.</p> <p>(iii) The Governmental financial assistance is restricted to 4 nos. raceways for Individual farmer/entrepreneur and 20 units of race ways for SHGs/Co-operatives having minimum 10 members.</p>
3.4	Construction of New Ponds.	(Ha)	8.40	3.36	5.04	(i) Beneficiaries will submit Self Contained Proposal(SCP) with full justification, technical-economical details, species to be cultured, capital cost, recurring cost involved, source of funds for meeting the beneficiary contribution including bank consent, anticipated direct & indirect employment generation to local population, enhancement of fish production and specific time lines for implementation of project etc.

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>(ii) Beneficiary will provide documentary evidence of availability of requisite land (either own/registered lease). In case of leased land, the lease period should be for a minimum period of 7(seven) years from the date of submission of SCP and registered lease document should be included in the SCP.</p> <p>(iii) Post construction operation, management and maintenance of the pond will be carried out in a satisfactory manner by the beneficiaries at their own cost.</p> <p>(iv) The governmental assistance is restricted to (a) 2 ha per individual beneficiary, (b) 2 ha multiplied by the number of members of the group/society with a ceiling of 20 ha per group/society in case of Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. or those undertaken in a cluster/area approach. However, a cluster/area may have multiple groups/societies. As far as FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total area eligible for support would be decided by the CAC.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						(v) Inputs will be provided from the allocations shown against activity at sl no-1.5 "inputs for fresh water Aquaculture...." of sub-component SI-1 "Development of Inland fisheries and Aquaculture" of Annexure-II. Further, the unit cost admissible will remain unchanged i.e. Rs 4.0 lakh/hectare as indicated at sl no-1.5 "inputs for fresh water Aquaculture....".
3.5	Establishment of Medium RAS for Cold water Fisheries. (with 4 tank of minimum 50 m ³ /tank capacity and fish production capacity of 4 ton/crop)	(No)	20.00	8.00	12.00	(i) Beneficiaries will submit Details Project Report (DPR) with justification, technical-economical details, species to be produced, capital cost, recurring cost involved, source of funds for meeting the beneficiary contribution including bank consent for providing loan, undertaking of beneficiary to the effect that no other governmental assistance is availed for the proposed project, anticipated direct & indirect employment generation to local population, enhancement of fish production and specific time lines for implementation of project etc.
3.6	Establishment of large RAS for cold water fisheries (with 10 tanks of minimum 50 m ³ /tank)	(No)	50.00	20.00	30.00	(ii) Any surface water source like canal, river, spring subsurface/ground water from open well, tube well, ground water etc. may be used for

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
	capacity and fish production capacity of 10 ton/crop)					<p>RAS.</p> <p>(iii) Beneficiaries will provide documentary evidence of availability of requisite land (either own/registered lease). In case of lease land, the minimum lease period should be 10 years from the date of submission of DPR/SCP and the registered lease document will be included in the DPR/SCP.</p> <p>(iv) Post construction operation, management and maintenance of the RAS will be carried out in a satisfactory manner by the beneficiaries at their own costs.</p> <p>(v) Infrastructure created should have essential requirements for RAS including water treatment units.</p> <p>(vi) The procurement of fish seed, feed and the market for the produce will be sole responsibility of the beneficiary.</p> <p>(vii) The Governmental financial assistance is restricted to 1 unit for Establishment of medium size RAS (1 Unit=10 tanks) for individual beneficiary and 2 (two) units per group/society with production capacity of 10 ton/unit in case they are taken up by Groups of fishers</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. with minimum 10 members or those undertaken in a cluster/area approach. However, a cluster/area may have multiple groups/societies. As far as FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total units eligible for support would be decided by the CAC.</p> <p>(viii) The Governmental assistance is restricted to 1 unit for establishment of Mini RAS (1 unit= 4 tanks) for individual farmer or 2 units (2 units=8 tanks) for groups such as Co-operative/SHG etc., with a production capacity of 4 ton/unit per group/society in case they are taken up by Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. with minimum 10 members or those undertaken in a cluster/area approach. However, a cluster/area may have multiple groups/societies. As far as FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total units eligible for support would be</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>decided by the CAC.</p> <p>(ix) The RAS units include essential components such as shed/building, Store-cum-office for feed and accessories, Pump house, Grow out tanks(Circular cement tanks/ FRP tanks, including inlet, outlet central drainage), settling tanks for sludge, water storage(sump) tanks, overhead tanks, Mechanical/Bio filter, big size drum filter, Water supply system(bore well etc., wherever required, Pumps and motors, Ozone generation system, Power generator, sludge collector, settleable/dissolved solid collectors, Bio-filters, UV units, Electrification, Aeration system (air/ oxygen), Water testing kit, inputs such as Seed, Feed, additives and supplements, electricity/Diesel, man power etc.</p>
3.7	Input support for Integrated fish farming (paddy cum fish cultivation, livestock cum fish, etc).	(Ha)	1.00	0.40	0.60	(i) Beneficiaries will submit Self Contained Proposal (SCP) with justification, capital cost, recurring cost involved, source of funds for meeting the beneficiary contribution including bank consent for providing loan, undertaking of beneficiary to the effect that no other governmental assistance is availed for the proposed project, anticipated direct

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>& indirect employment generation to local population, enhancement of fish production and specific time lines for implementation of project etc.</p> <p>(ii) Beneficiaries will provide documentary evidence of availability of requisite land (either own/registered lease). In case of lease land, the minimum lease period should be 7(seven) years from the date of submission of SCP and the registered lease document will be included in the SCP.</p> <p>(iii) Ponds/tanks having minimum water depth of 1 m are only eligible for Governmental assistance under this activity.</p> <p>(iv) The governmental assistance is restricted to (a) a maximum of 2 hectares per individual beneficiary (b) In case of Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. or those undertaken in a cluster/area approach, the governmental assistance will be limited to 2x number of members of such group with a ceiling of 20 hectares per group. However, a cluster/area may have multiple groups/societies. As far as</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total units eligible for support would be decided by the CAC.</p> <p>(v) The Governmental assistance will be released by the concerned State/UT to the beneficiary only after the tanks/ ponds are ready for taking up culture activities.</p> <p>(vi) In case of paddy-cum-fish, 0.1-0.2 Ha (10-20% of the available area) of 1 Ha has to be used for peripheral trench with a depth of at least 1 m.</p>
3.8	Establishment of Cages in cold water regions.	No	5.00	2.00	3.00	<p>(i) The Beneficiaries will obtain necessary prior permissions from the concerned State/UT Government and other Competent Authorities for installation of cages in reservoirs and other water bodies. Allotment of water area by the State/UT Government for cage culture would be as per the prevailing leasing policy/ guidelines of the State/UT.</p> <p>(ii) Beneficiaries will submit Self Contained Proposal (SCP) with justification, capital cost, recurring cost involved, source of funds for meeting the beneficiary</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>contribution including bank consent for providing loan, undertaking of beneficiary to the effect that no other governmental assistance is availed for the proposed project, anticipated direct & indirect employment generation to local population, enhancement of fish production and specific time lines for implementation of project etc.</p> <p>(iii) The governmental assistance is restricted to (a) a maximum of 5 cages per individual beneficiary (b) In case of Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. or those undertaken in a cluster/area approach, the number of cages for governmental assistance will be limited to 2x number of members of such group with a ceiling of 50 cages per group. However, a cluster/area may have multiple groups/societies. As far as FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total units eligible for support would be decided by the CAC.</p> <p>(iv) The unit cost includes inputs.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
4 Development of ornamental and recreational fisheries						
4.1	Backyard Ornamental fish Rearing unit (both Marine and Fresh water)	(No)	3.00	1.20	1.80	<p>(i) Beneficiaries will submit Self Contained Proposal (SCP) with techno financial details together with documentary evidence of availability of requisite land (either own/registered lease).</p> <p>(ii) The Governmental financial assistance will be provided to household/ individual beneficiaries those who have own house with a minimum vacant land of 300 Sq.ft with adequate water facility for setting up of ornamental fish production unit.</p> <p>(iii) The Governmental financial assistance will also be provided to the beneficiaries have vacant land of minimum 300 Sq.ft with adequate water facility on lease for a minimum of 7(seven)years period from the date of submission of SCP adjacent to their house for setting up of backyard ornamental fish rearing unit.</p> <p>(iv) The unit will comprise of shed and rearing/culture tanks for ornamental fish.</p> <p>(v) The Unit cost includes capital and one-time operational costs.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>(vi) The governmental financial assistance is restricted to one unit for each individual beneficiary.</p> <p>(vii) The Governmental financial assistance may also be provided to the members of SHGs/cooperatives/JLGs etc. who can come together and establish these units as a group activity for establishing economies of scale. However, each member should have his/her own/leased land as per conditions indicated at (ii) & (iii) above.</p> <p>(viii) The governmental assistance is restricted to (a) 1 unit per individual beneficiary, (b) 1 unit multiplied by the number of members of the group/society with a ceiling of 20 units per group/society in case of Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. or those undertaken in a cluster/area approach. However, a cluster/area may have multiple groups/societies. As far as FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total units eligible for support would be decided by the CAC.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
4.2	Medium Scale Ornamental fish Rearing Unit (Marine and Freshwater Fish)	(No)	8.00	3.20	4.80	<p>(i) Beneficiaries will submit Self Contained Proposal (SCP) with techno financial details together with documentary evidence of availability of requisite land (either own/registered lease).</p> <p>(ii) The Governmental financial assistance will be provided to beneficiaries those who own a minimum vacant land of 150 Sq.m with adequate water facility.</p> <p>(iii) The Governmental financial assistance will also be provided to the beneficiaries have vacant land of minimum 150 Sq. m with adequate water facility on lease for a minimum of 7 (seven) years period from the date of submission of SCP preferably adjacent to their house for setting up of ornamental fish rearing unit.</p> <p>(iv) The Unit cost includes capital and one-time operational costs.</p> <p>(v) The unit will comprise of shed, breeding, rearing and culture tanks for ornamental fish.</p> <p>(vi) The governmental assistance is restricted to (a) 1 unit per individual beneficiary, (b) 1 unit</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						multiplied by the number of members of the group/society with a ceiling of 20 units per group/society in case of Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. or those undertaken in a cluster/area approach. However, a cluster/area may have multiple groups/societies. As far as FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total units eligible for support would be decided by the CAC.
4.3	Integrated Ornamental fish unit (breeding and rearing for fresh water fish)	(No)	25.00	10.00	15.00	(i) Beneficiaries will submit Self Contained Proposal (SCP) with techno financial details together with documentary evidence of availability of requisite land (either own/registered lease) and financial resources for meeting the beneficiary share etc.
4.4	Integrated Ornamental fish unit (breeding and rearing for marine fish)	(No)	30.00	12.00	18.00	(ii) The Governmental financial assistance will be provided beneficiaries those who own a minimum land of 500 Sq.m with adequate water facility for setting up of an integrated ornamental fish unit. (iii) The Governmental financial assistance will also be provided to

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>the beneficiaries acquiring land of minimum 500 Sq.m with adequate water facility on lease for a minimum of 7(seven) years period from the date of submission of SCP for setting up of an integrated ornamental fish unit.</p> <p>(iv) The Integrated Ornamental fish unit will include shed, fresh water/seawater intake (as the case may be), breeding tanks, nursery tanks, rearing tanks, live feed culture, small laboratory, water & power facilities, required infrastructure facilities etc.</p> <p>(v) Integrated ornamental fish unit will have a minimum capacity of 1 lakh fry/year and should be managed by the required qualified technical staff.</p> <p>(vi) Post construction operation, management and maintenance of the unit will be carried out in a satisfactory manner by the beneficiaries at their own costs.</p> <p>(vii) Beneficiary will ensure supply of seed produced from the central assisted units to farmers at affordable/ reasonable price.</p> <p>(viii) The governmental assistance is</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						restricted to (a) 1 unit per individual beneficiary, (b) 1 unit multiplied by the number of members of the group/society with a ceiling of 20 units per group/society in case of Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. or those undertaken in a cluster/area approach. However, a cluster/area may have multiple groups/societies. As far as FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total units eligible for support would be decided by the CAC.
4.5	Establishment of Fresh water Ornamental Fish Brood Bank.	(No)	100.00	40.00	60.00	(i) Beneficiaries will submit Details Project Report (DPR) with justification, technical-economical details, brooder species, capital cost, recurring cost involved, source of funds for meeting the beneficiary contribution including bank consent(if any) for providing loan, undertaking of beneficiary to the effect that no other governmental assistance is availed for the proposed project, anticipated direct & indirect employment generation to local population, enhancement of ornamental fish production &

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>trade, and specific time lines for implementation of project etc.</p> <p>(ii) Beneficiaries will provide documentary evidence of availability of requisite land (either own/registered lease). In case of lease land, the minimum lease period should be 10 years from the date of submission of DPR and the registered lease document will be included in the DPR.</p> <p>(iii) The post-construction operational, management and maintenance costs of the brood bank facility will be carried out in a satisfactory manner by the beneficiary at their own costs.</p> <p>(iv) Cost estimate of the brood bank project will be based on the latest SoRs admissible in the project area and prevailing market rates.</p> <p>(v) The governmental assistance is restricted to (a) 1 unit per individual beneficiary, (b) up to 2 units per group/society in case of Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. or those undertaken in a cluster/area approach.</p>
4.6	Promotion of Recreational Fisheries.	No	50.00	20.00	30.00	<p>(i) Beneficiaries will submit DPR/Self Contained Proposal (SCP) with techno financial details.</p> <p>(ii) Beneficiaries will submit</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>documentary evidence of availability of requisite land (either own/registered lease) (minimum of 0.4 Ha water area) should be provided wherever required. In case of leased land/private water body, the lease period should not be less than 10(ten) years from the date of submission of DPR/SCP and the registered lease document be included in the DPR/SCP. If the project is intended to be taken up on water body, the lease/enter upon permission should be as per the leasing policy/guidelines of the state/UT and requisite documentary proof has be included in the DPR/SCP.</p> <p>(iii) Reactional fisheries in open water bodies like oceans, seas, rivers, lakes, reservoirs, perennial streams etc. will be considered.</p> <p>(iv) The cost of the project will be evaluated on a case to case basis and supported up to a ceiling of Rs 50 lakhs per project.</p> <p>(v) Preference will be given for traditional marine fisher youth as an alternative livelihood option in case of marine recreational fisheries.</p> <p>(vi) Priority will be given to creative activities with potential for large employment generation especially</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						in tourist areas both marine and inland. (vii) The SCP should also indicate anticipated direct & indirect employment generation to local population.
5 Technology infusion and adaptation						
5.1	Establishment of large RAS (with 8 tanks of minimum 90 m ³ /tank capacity 40 ton/crop)/ Biofloc (50 tanks of 4m dia and 1.5 high) culture system.	No.	50	20	30	(i) Beneficiaries will submit Detailed Project Report (DPR) with justification, capital cost, recurring cost involved, source of funds for meeting the beneficiary contribution including bank consent for providing loan to meet the beneficiary share, undertaking of beneficiary to the effect that no other governmental assistance is availed for the proposed project, anticipated direct & indirect employment generation to local population, enhancement of fish production and specific time lines for implementation of project etc. (ii) Water source: Any surface water source like canal, river, spring subsurface/ground water from open well, tube well, ground water etc. may used for RAS. (iii) Beneficiaries will provide documentary evidence of
5.2	Establishment of Medium RAS (with 6 tank of minimum 30m ³ /tank capacity 10ton/crop)/ Biofloc culture system(25 tanks of 4m dia and 1.m	(No)	25.00	10.00	15.00	

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
	high)					
5.3	Establishment of small RAS (with 1 tank of 100m ³ capacity/Biofloc (7 tanks of 4m dia and 1.5 high) culture system	No	7.50	3.00	4.50	<p>availability of requisite land (either own/registered lease). In case of lease land, the minimum lease period should be 10 years from the date of submission of the DPR/SCP and the registered lease document will be included in the DPR/SCP.</p> <p>(iv) DPR should also contain details of anticipated direct & indirect employment generation to local population, enhancement of fish production, specific time lines for implementation of project etc.</p>
5.4	Establishment of Backyard mini RAS units	No.	0.50	0.20	0.30	<p>(v) Post construction operation, management and maintenance of the RAS will be carried out in a satisfactory manner by the beneficiaries at their own costs.</p> <p>(vi) Infrastructure created should have essential requirements for RAS including water treatment units.</p> <p>(vii) The procurement of fish seed, feed and the market for the produce will be sole responsibility of the beneficiary.</p> <p>(viii) Governmental assistance will be restricted to one unit of large RAS or one unit of Medium RAS or 1 of small RAS or 1 unit of mini RAS for individual beneficiary.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>(ix) Governmental assistance will be restricted to 2 units of large RAS or 3 unit of Medium RAS or 4 units of Small RAS per group/society in case they are taken up by Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. or those undertaken in a cluster/area approach. However, a cluster/area may have multiple groups/societies. As far as FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total units eligible for support would be decided by the CAC.</p> <p>(x) As far as mini RAS taken up as a group activity by Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. in their own back yard, the Governmental assistance will be 1 unit multiplied by the number of members of the group/society with a ceiling of 20 units per group/society.</p> <p>(xi) In case of Exotic Fish Species, permission from Govt. is mandatory.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
5.5	Installation of Cages in Reservoirs	No.	3.00	1.20	1.80	<p>(i) The Beneficiary will obtain necessary prior permissions from the concerned State/UT Government and other Competent Authorities for installation of cages in reservoirs. Allotment of water area by the State/UT Government for cage culture would be as per the prevailing leasing policy/guidelines of the State/UT.</p> <p>(ii) The reservoir identified for cage culture should contain water throughout the year with an approximate depth of 8 meters at the cage installation area.</p> <p>(iii) Beneficiaries will submit Detailed Project Report(DPR) with justification, capital cost, recurring cost involved, source of funds for meeting the beneficiary contribution including bank consent for providing loan, undertaking of beneficiary to the effect that no other governmental assistance is availed for the proposed project, anticipated direct & indirect employment generation to local population, enhancement of fish</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>production and specific time lines for implementation of project etc.</p> <p>(iv) The Governmental financial assistance will be restricted to a maximum of 5 numbers of cages for individual farmer/beneficiary and a maximum of 20 Nos of cages at a particular location for a group such as cooperative societies/SHGs/JLGs etc., having minimum 10 members. As far as FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total units eligible for support would be decided by the CAC.</p> <p>(v) In case of Exotic Fish Species, permission from Govt. is mandatory.</p>
5.6	Pen culture in open water bodies	Ha.	3.00	1.20	1.80	<p>(i) The Beneficiaries will obtain necessary prior permissions from the concerned State/UT Government and other Competent Authorities for undertaking pen culture in the open water bodies.</p> <p>(ii) The open water-body identified for pen culture should contain water with an adequate water depth at the pen installation area.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>(iii) Beneficiaries will submit Self Contained Proposal(SCP) with justification, technical specification capital cost, recurring cost involved, source of funds for meeting the beneficiary contribution including bank consent for providing loan, undertaking of beneficiary to the effect that no other governmental assistance is availed for the proposed project, anticipated direct & indirect employment generation to local population, enhancement of fish production and specific time lines for implementation of project etc.</p> <p>(iv) The governmental assistance is restricted to (a) a maximum of 2 hectares per individual beneficiary (b) In case of Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. or those undertaken in a cluster/area approach, the governmental assistance will be limited to 2x number of members of such group with a ceiling of 20 hectares per group. However, a cluster/area may have multiple groups/societies. As far as FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total units eligible for support would be</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>decided by the CAC.</p> <p>(v) In case of Exotic Fish Species, permission from Govt. is mandatory.</p> <p>(vi) In case of reservoir fisheries development, pen culture may be included for small reservoirs.</p>
B INFRASTRUCTURE AND POST-HARVEST MANAGEMENT						
6 Post harvest and cold chain infrastructure						
6.1 Construction of Cold Storages/Ice Plants						
	Plant/storage of minimum 10-ton capacity.	No	40.00	16.00	24.00	<p>(i) Beneficiaries will submit Detailed Project Report (DPR) with justification including demand and supply gaps, detailed cost estimate, technical specifications of the components of the ice plant/cold storages, recurring cost involved, source of funds for meeting the beneficiary contribution including bank consent for providing loan, undertaking of beneficiary to the effect that no other governmental assistance is availed for the proposed project, anticipated direct & indirect employment generation to local population, and specific time lines for completion of the project etc.</p> <p>(ii) Cost estimates will be based on the latest SoRs admissible in the project area and prevailing market rates.</p>
	Plant/storage of minimum 20-ton capacity.	No	80.00	32.00	48.00	
	Plant/storage of minimum 30-ton capacity	No	120.00	48.00	72.00	
	Plant of minimum 50-ton capacity.	No	150.00	60.00	90.00	

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>(iii) Beneficiaries will provide documentary evidence of availability of requisite land (either own/registered lease), necessary clearances/permissions from the concerned State/UT/authority as may be required. In case of lease land, the minimum lease period should be 10 years from the date of submission of the DPR/SCP and the registered lease document will be included in the DPR/SCP.</p> <p>(iv) The Beneficiaries will submit an undertaking in the DPR to the effect that all operational, maintenance and post construction management costs of the infrastructure facilities will be borne by them and the ice plant/cold storage will be kept in operational condition.</p> <p>(v) The Governmental assistance for these ice plant/cold storage projects will be as per actual cost within the overall ceiling indicated in the respective sub-components/activities under PMMSY.</p> <p>(vi) Beneficiaries will display a board permanently at the infrastructure facilities to the effect that the Ice</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>plant/cold storage is constructed with Government financial assistance under the PMMSY of the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying.</p> <p>(vii) The Beneficiaries will ensure supply of ice produced from the government assisted ice plant to the fishers and fish farmers at affordable price.</p> <p>(viii) The beneficiary will be abide by the government regulations, if any in development, operation and management including quality assurance etc., of the ice plant/cold storage.</p>
6.2	Modernization of Cold storage /Ice Plant	No	50.00	20.00	30.00	i) Beneficiaries will submit Detailed Project Report (DPR) with justification and necessity of modernization of the existing cold storage/ice plant, detailed cost estimate based on the latest SoR & prevailing market rates, technical specifications of the components of the modernization project, source of funds for meeting the beneficiary contribution including bank consent for providing loan, undertaking of beneficiary to the effect that no other governmental assistance is availed for the proposed project, direct & indirect

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>employment generation to local population, and specific time lines for completion of the project etc.</p> <p>(ii) Modernization of existing & operational plants of minimum 10 years old only will be considered for governmental assistance on one-time basis.</p> <p>iii) The broad items for renovation/modernization of the existing plants will include civil works of the existing building, replacement of plants & machineries, electrification & water supply & sanitation works etc., with a view to enhance the efficacy, supply of quality ice and services, improve the hygienic conditions etc., of the existing plant.</p> <p>iv) The beneficiaries should have the ownership of the existing infrastructure plant/facilities and produce the documentary evidence to this effect in the DPR.</p> <p>(v) The Beneficiaries will confirm that all operational and maintenance costs of the modernized plant/infrastructure facility shall be borne by them.</p>
6.3	Refrigerated	No	25.00	10.00	15.00	(i) Beneficiaries will submit Self

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
	vehicles					<p>Contained Proposal (SCP) together with availability of financial resources for meeting the beneficiary share etc.</p> <p>(ii) Beneficiaries should ensure that fish transport facilities are maintained in operational condition.</p> <p>(iii) Maintenance & operational costs of the fish transport vehicles shall be met by the beneficiaries at their own cost.</p> <p>(iv) Government of India shall not be responsible for any losses incurred on procurement, operation, maintenance and management of the fish transport facilities.</p> <p>(v) Beneficiaries will abide by rules/regulations, if any imposed by the concerned State/UT as well as Central Government on maintenance & operation of the fish transport facilities.</p> <p>(vi) Beneficiaries will ensure that the fish transport vehicles/facilities procured under the scheme will be used only for transport of fish and fisheries related items</p>
6.4	Insulated vehicles	No	20.00	8.00	12.00	
6.5	Motor cycle with Ice Box	No	0.75	0.30	0.45	
6.6	Cycle with Ice Boxes	No	0.10	0.04	0.06	
6.7	Three wheeler with Ice Box including e-rickshaws for fish vending	No	3.00	1.20	1.80	
6.8	Live fish vending Centres	(No)	20.00	8.00	12.00	

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>and not for any other purposes.</p> <p>(vii) In case, it is found at any point of time that the fish transport vehicles procured under the PMMSY are used for other than the fisheries purposes, the Government of India will recover the entire central assistance with interest from the beneficiaries.</p> <p>(viii) Beneficiaries will display permanently to the effect that the fish transport vehicle is procured with Government financial assistance under the PMMSY of the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying.</p> <p>(ix) Live fish vending center can be a stationary center or mobile vehicle or a combination of both.</p>
6.9 Fish Feed Mills						
(a)	Mini Mills of production Capacity of 2 ton /Day	No	30.00	12.00	18.00	(i) Beneficiaries will submit Detailed Project Report (DPR) with justification including demand and supply gap in the project locality, detailed cost estimate, technical specifications of the components of the feed
(b)	Medium Mills of production Capacity of	No	100.00	40.00	60.00	

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
	8 ton /Day					<p>mill/plant, recurring cost involved, source of funds for meeting the beneficiary contribution including bank consent for providing loan, undertaking of beneficiary to the effect that no other governmental assistance is availed for the proposed project, anticipated direct & indirect employment generation to local population, and specific time lines for completion of the project etc.</p> <p>(ii) Cost estimates of the feed mill/plant will be based on the latest SoRs/ prevailing market rates.</p> <p>(iii) Beneficiaries will provide documentary evidence of availability of requisite land (either own/registered lease), necessary clearances/permissions from the concerned State/UT/authority as may be required. In case of lease land, the minimum lease period should be 10 years from the date of submission of the DPR/SCP and the registered lease document will be included in the DPR/SCP.</p>
(c)	Large mills of production Capacity of 20 ton /Day	No	200.00	80.00	120.00	
6.10	Fish Feed Plants of production Capacity of at least 100 ton /Day.	No	650.00	260.00	390.00	

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>(iv) The Beneficiaries will submit an undertaking in the DPR to the effect that all operational, maintenance and post construction management costs of the infrastructure facilities shall be borne by them and the ice plant/cold storage will be kept in operational condition.</p> <p>(v) Beneficiaries will display a board permanently at the infrastructure facilities to the effect that the feed mill/plant is constructed with Government financial assistance under the PMMSY of the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying.</p> <p>(vi) The Beneficiaries will ensure supply of feed produced from the government assisted feed mill/plant to the fishers and fish farmers at affordable price.</p> <p>(vii) The beneficiary will be abide by the government regulations, if any in development, operation and management including feed quality assurance etc.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>(viii) The Governmental assistance for these projects will be as per actual cost within the overall ceiling indicated in the respective sub-components/activities under PMMSY.</p> <p>(ix) Accreditation of the feed mill will be part of the project estimates and it is mandatory.</p>
7	Markets and marketing infrastructure					
7.1	Construction of fish retail markets including ornamental fish/aquarium markets.	No	100.00	40.00	60.00	<p>(i) Beneficiaries will submit Detailed Project Report (DPR) (SCP in case of kiosks) with justification, detailed cost estimate, recurring cost involved, source of funds for meeting the beneficiary contribution including bank consent for providing loan, undertaking of beneficiary to the effect that no other governmental assistance is availed for the proposed project, anticipated direct & indirect employment generation to local population, and specific time lines for completion of the project etc.</p> <p>(ii) Beneficiaries will provide documentary evidence of</p>
7.2	Construction of fish kiosks including kiosks of aquarium/ornamental fish	No	10.00	4.00	6.00	
7.3	Fish Value Add Enterprises Units	No	50.00	20.00	30.00	

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>availability of requisite land (either own/registered lease), necessary clearances/permissions from the concerned State/UT/authority as may be required. In case of lease land, the minimum lease period should be 10 years from the date of submission of DPR/SCP and the registered lease document will be included in the DPR/SCP.</p> <p>(iii) Beneficiaries with market/shop of adequate dimensions either owned or on long term lease of at least 10 years (from the date of submission of DPR) primarily in urban areas/metropolitan cities shopping Malls/market complexes will also be supported for establishing a modern fish retail market. Support for such market/shop will be given for modernization and renovation, creation of need based marketing infrastructure like display cabins, refrigeration facilities, storage facilities, live fish handling facilities, furniture and fixtures, etc. In case, the market/shop is for marketing of ornamental fish, the facilities</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>may vary accordingly as per the need. In the DPR up to 10 % of the unit cost should be earmarked for E-marketing/e-trading, branding and promotional activities for marketing.</p> <p>(iv) The Beneficiaries will submit an undertaking in the DPR to the effect that all operational, maintenance and post construction management costs of the infrastructure facilities shall be borne by them and the fish market/kiosk will be kept in operational condition.</p> <p>(v) Beneficiaries will display a board permanently at the infrastructure facilities to the effect that the fish market/kiosk is constructed with Government financial assistance under the PMMSY of the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying</p> <p>(vi) The Beneficiaries will ensure maintenance of hygienic conditions in the fish markets/kiosks and supply of quality fish to the consumers at affordable price.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>vii) The beneficiary will be abide by the government regulations, if any in development, operation and management including food quality standards etc.</p> <p>iii) Priority will be given for establishing these markets in urban areas especially Metropolitan cities.</p> <p>ix) One-time cost of Quality certification/standards can be part of the DPR/SCP</p> <p>(x) Fish value added enterprises would be supported on a DPR basis. Permissible items include need based civil and electric works, water supply and sanitation, plant and machinery, etc. In the DPR up to 10 % of the unit cost should be earmarked for E-marketing/e-trading, branding and promotional activities for marketing of value-added products.</p> <p>xi) Seaweed Retail Markets, seaweed value added enterprises for seaweed marketing and value addition will be supported.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>ii) Governmental assistance will be restricted to one unit for individual beneficiary</p> <p>iii) Governmental assistance will be restricted to a maximum of 2 units per Group/society in case they are taken up by Groups of fishers and fish farmers i.e. fisher SHGs/Joint Liability Groups (JLGs)/Fisher Cooperatives etc. or those undertaken in a cluster/area approach. However, a cluster/area may have multiple groups/societies. As far as FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total units eligible for support would be decided by the CAC.</p>
7.4	E-platform for e-trading and e-marketing of fish and fisheries products	DPR/SCP basis				<p>(i) DoF will consider projects on a DPR/SCP mode based on essentiality and the benefits the project activities would accrue to the fisheries sector. The size of the project outlay would be decided by DoF on a case to case basis.</p> <p>(ii) Inter alia, beneficiary shall give an undertaking to the effect that e-platform will be put in satisfactory operation for a</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						minimum period of 5 years.
8	Development of deep-sea fishing					
8.1	Support for acquisition of Deep-sea fishing vessels for traditional fishermen	No	120.00	48.00	72.00	<p>(i) Only traditional/artisanal fishermen and their societies/associations/ SHGs/ FFPOs are eligible.</p> <p>(ii) Beneficiary should possess valid ownership certificate, Registration certificate under the ReALCraft, fishing license and Biometric ID cards of fishers/QR coded Aadhar card.</p> <p>(iii) The governmental assistance is restricted to (a) 1 unit per individual beneficiary, (b) 2 units per group/society (of at least 10 members) in case of Groups of traditional/artisanal fishermen i.e. traditional/artisanal fishermen SHGs/Joint Liability Groups (JLGs)/ traditional/artisanal Fisher Cooperatives etc. or those undertaken in a cluster/area approach. However, a cluster/area may have multiple groups/societies. As far as FFPOs/Cs are concerned, the modalities of implementation and upper ceiling on the total units eligible for support would be decided by the CAC.</p> <p>(iv) The vessel should have</p>

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				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>onboard machineries/fishing equipment including refrigerated storage facilities for undertaking deep sea tuna long lining and gill netting.</p> <p>(v) Appropriate communication systems, AIS/transponders and other navigational equipment for safe navigation etc., as per the relevant regulations/guidelines are mandatory onboard the vessels.</p> <p>(vi) Deep sea fishing vessel should be considered as an alternative for replacement of the existing bottom trawler and the State/UT shall ensure suitable disposal of old fishing boat (against which new one is replaced).</p> <p>(vii) Beneficiaries will submit Self-Contained Proposal (SCP) with relevant techno-financial details of the vessel.</p> <p>(viii) Installation of Bio-toilet shall be mandatory within the project cost.</p> <p>(ix) The Beneficiaries will submit the detailed voyage report including voyage period from-</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						to-time, species-wise catch details, the price realized (if exported) as per the prescribed proforma.
8.2	Up gradation of existing fishing vessels for export Competency	No	15.00	6.00	9.00	<p>(i) The fishing vessels identified for up-gradation should possess valid ownership certificate, Registration certificate and fishing license under the ReALCraft and the owners/crew members should possess the valid Biometric ID cards/QR Coded Aadhar Card.</p> <p>(ii) The vessel should be operational condition and not outlived its life span and fit for undertaking up-gradation work required for its export competency or conversion and capable of doing resource specific deep-sea fishing (including tuna long lining) after up-gradation/conversion.</p> <p>(iii) The up-gradation work for export competency of the vessel may <i>inter alia</i> include (a) Assistance for insulated fish hold, including those with mechanical slide door system, (b) Insulated Fish boxes, (c) Slurry ice making machine/Refrigerated Sea Water (RSW), (d) setting up of</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>Bio Toilet, (e) Fiber Reinforced Plastic (FRP) sheathing on the wooden deck. And (f) any other need based activity to improve export competitiveness.</p> <p>(iv) The Beneficiaries will ensure utilization of the Governmental assistance strictly for the purpose for which it has been sanctioned.</p> <p>(v) The vessels which have already converted/upgraded or availed assistance under previous or ongoing scheme of the Government shall not be eligible for the subsidy under this component.</p> <p>(vi) The beneficiary shall not sell/dispose the converted/upgraded vessel to any other party for at least five years from the date of availing Government financial assistance.</p> <p>(vii) The Beneficiaries shall ensure that conversion/Up-gradation of the identified fishing vessels with governmental assistance carried in accordance with the specified fishing methods and it</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>should not be converted to any other type of fishing method after availing Governmental assistance.</p> <p>(viii) Violation of any stipulation under sanctions under the PMMSY will be viewed seriously and the beneficiaries in such cases have to refund the entire Governmental assistance along with accrued interest as well as penal interest @ 12% per annum from the date of release of funds till the date of recovery.</p> <p>(ix) The beneficiary has to comply with the Guidelines/ regulations applicable for fishing in the EEZ and will submit the detailed voyage report including voyage period, area of fishing, species-wise catch details and the value of catch periodically as per prescribed format to the FSI. He is also required to submit the type of fish, its quantity and price realized in case of exports, with a copy of invoice and GR forms to the designated agency within 15 days from the date of completion of each voyage.</p>
8.3	Establishmen	No	0.50	0.20	0.30	(i) Support under PMMSY will be

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
	t of Bio-toilets in mechanised fishing vessels					<p>provided for fitment of Bio toilets in fishing vessels for maintaining hygiene, prevention and spread of diseases, prevention of pollution of oceans and seas and protection of their ecology (<i>swachh sagar</i>)</p> <p>(ii) The mechanised fishing vessels identified for fitment of Bio-toilets should possess valid registration certificate and fishing license under the ReALCraft and the owners/crew members should also possess the valid Biometric ID cards and QR coded Aadhar card issued by Gol.</p> <p>(iii) The mechanized fishing vessel should be operational condition and not outlived its life span</p> <p>(iv) The beneficiary and State/UT shall ensure that the bio toilets assisted under PMMSY are maintained in operational conditions. Transfer of bio toilets to other person/vessel by any means shall be strictly prohibited. The concerned State/UT shall put in place an appropriate system for verification at regular intervals on installation and use of bio toilets supplied under the PMMSY.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
9 Aquatic health management						
9.1	Establishment of Disease diagnostic and quality testing labs	No	25.00	10.00	15.00	(i) Beneficiaries will submit Self Contained Proposal(SCP) with justification, detailed cost estimate, recurring cost involved, source of funds for meeting the beneficiary contribution including bank consent for providing loan, undertaking of beneficiary to the effect that no other governmental assistance is availed for the proposed project, anticipate direct and indirect employment generation. The SCP inter-alia includes; (i) For activity "9.1 Establishment of Disease diagnostic and quality testing labs", documentary evidence of availability of requisite space (either owned/registered lease) admeasuring at least 1000 Sq. feet at a suitable location should be provided. In case of space taken on lease, the lease period should be at least 7 (seven) years from the date of submission of SCP and the registered lease document shall be furnished with SCP. It is pertinent to mention that the minimum lease period has been fixed at 7 years for this minor infrastructure activity in order to encourage and attract
9.2	Disease diagnostic and quality testing Mobile labs/clinics	No	35.00	14.00	21.00	

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>educated unemployed youth in taking up this activity. In deserving cases, the State/UT may further relax the minimum lease period requirement from 7 (seven) years to 5 (five) years with other conditions remaining the same.</p> <p>a) Location, Layout design of the proposed laboratory (in case of immovable lab), details of the trained man power to be positioned for day-to-day operations.</p> <p>b) Strength of farmers, quantum of farming areas(ha) along with major species farmed/cultured nearer to the proposed laboratory that are likely to use the facility.</p> <p>(ii) Beneficiary should be a young professional possessing a Degree in Fisheries Science/Life Sciences/Marine Biology/Microbiology/Zoology/Biochemistry. Preference will be given for higher qualifications in these areas.</p> <p>(iii) The assistance would be given for establishment and operationalization of the</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>laboratory which includes minor civil and electricals works, procurement of lab equipment and machineries, testing kits, chemicals and consumables, furniture and fixtures, and other need-based items etc.</p> <p>(iv) In case an ELISA and RT-PCR machines and accessories are included in the activity "9.1 Establishment of Disease diagnostic and quality testing labs" the unit cost will be Rs. 40 lakhs instead of Rs 25 lakhs. This unit cost of Rs 40 lakhs would be shared between center, state and beneficiary as per funding pattern of Centrally sponsored scheme Component of PMMSY. Accordingly, the number of units under this activity may vary.</p> <p>(v) The funds shall not be diverted for any other purpose.</p> <p>(vi) After completion of the project on setting up of the laboratory, the Beneficiaries will submit the report on the number of samples tested under various categories, revenue generated and manpower in place, number of farmers benefitted etc. to NFDB/DoF regularly on a quarterly basis.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>(vii) The laboratory shall maintain proper registers/records pertaining to the details of the test reports.</p> <p>(viii) Beneficiary will ensure that the technical staff employed in the laboratory shall be trained regularly.</p> <p>(ix) The laboratory shall adhere to the existing norms and guidelines prevalent in the concerned states/UTs.</p> <p>(x) The Beneficiaries will maintain and operate the laboratory for a minimum period of 5 years from the date of its commissioning. The beneficiaries will submit an undertaking to this effect.</p> <p>(xi) Accreditation of the Laboratory will be part of the project estimates.</p>
C	FISHERIES MANAGEMENT AND REGULATORY FRAMEWORK					
10	Monitoring, Control and Surveillance (MCS)					
10.1	Communication and /or Tracking Devices for traditional	No.	0.35	0.14	0.21	(i) The fishing vessel identified for fitment of communication/tracking device should possess valid ownership certificate, Registration certificate under the ReALCraft &

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
	and motorised vessels like VHF/DAT/NAVIC/Transponders etc.					<p>fishing license, and the owner & crew members shall possess valid Biometric ID card and QR coded Aadhar Card.</p> <p>(ii) Beneficiaries of traditional fishing vessels will be supported for fitment of one-unit of appropriate communication/tracking device based on the recommendations of the concerned States/UTs.</p> <p>(iii) Within the prescribed unit cost, beneficiaries of motorised fishing vessels will supported for fitment of a maximum of two devices comprising of a) DAT and b) appropriate communication and/or tracking device based on the recommendations of the concerned States/UTs. In case, a device serves multiple purposes such as distress alert, two-way communication, tracking etc. the States/UTs may recommend such multipurpose device having these features for fitment onboard the motorized fishing vessels within the prescribed unit costs.</p> <p>(iv) Fitment and operation of a particular type of communication and/or tracking device onboard the fishing vessel is subject to necessary clearances from</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>concerned authorities. The concerned States/UTs should ascertain and confirm this while recommending a particular device.</p> <p>(v) The Beneficiaries will abide by the relevant regulation in operation and guidelines issued by the Government for effective operation of the devise installed in his/he fishing vessels.</p>
11 Strengthening of safety and security of fishermen						
11.1	Support for providing safety kits for fishermen of Traditional and motorized fishing vessels (other than Communication and/or Tracking Device mentioned at 10.1 above)		1.00	0.40	0.60	<p>(i) The fishing vessel identified for supply of safety kit devices should possess valid, registration certificate & fishing license under the ReALCraft, and the owner & crew members shall possess Biometric ID cards and QR coded Aadhar card. The beneficiary should be an active fisherman.</p> <p>(ii) The safety kit may consist of GPS, life jacket, lifebuoy and other life-saving appliances, a radar reflector, first-aid box, a set of flares, backup battery, search & rescue beacons etc., (other than Communication and/or Tracking Device mentioned at 10.1 above). Within the ceiling of Rs 1 lakh unit cost, the States/UTs, after due-diligence and based on essentiality are free to seek central financial assistance for</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>all or some or any one individual essential item of safety kit.</p> <p>(iii) Coastal States/UTs will make an assessment of the requirements of the items mentioned in the safety kit mentioned above for each category of traditional and motorized fishing vessels, including the cost of the required items and submit a self contained proposal.</p> <p>(iv) The State/UT will also ensure that the assistance to safety kit is provided only once to each identified/eligible operational fishing vessels.</p> <p>(v) The beneficiary and State/UT shall ensure that the devices/appliances assisted under the safety kit are maintained in operational conditions. Transfer of such devices/appliances to other person/vessel by any means such as sale/gift/lease etc., shall be strictly prohibited. The concerned State/UT shall put in place an appropriate system for verification at regular intervals on installation and use of safety kits supplied under the PMMSY.</p>
11.2	Providing boats	No.	5.00	2.00	3.00	(i) Traditional (including artisanal) marine fishermen actively involved

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
	(replacement) and nets for traditional fishermen					<p>in fishing are eligible for the benefit under this component.</p> <p>(ii) As far as inland fisheries are concerned, the States/UTs will certify the genuineness of the beneficiary with regard to fishing/fishing related activities as his/her occupation/livelihood. However, QR coded Aadhar card is mandatory.</p> <p>(iii) In case of marine fisheries, the beneficiary should possess valid (a) ownership certificate, (b) Registration Certificate and Fishing License under ReALCraft, (d) Biometric ID Card or Fishers ID card and (e) mandatorily QR coded Aadhar Card.</p> <p>(iv) States/UTs shall ensure that the old fishing boats against which the replacement is being made are suitably disposed of, and while disposing such old boats do not cause environmental pollution.</p>
11.3	Support to Fishermen for PFZ devices and network including the cost of installation	No	0.11	0.044	0.066	(i) The beneficiary identified for providing assistance for PFZ device should possess valid (a) fishing vessel ownership certificate, (b) fishing vessel Registration Certificate under ReALCraft and Fishing License, (c) the owner and crew members

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
	and maintenance etc.					<p>should possess valid Biometric ID Cards/QR coded Aadhar cards and (d) the beneficiary is an active fisherman.</p> <p>(ii) Only one PFZ device per beneficiary will be supported including its installation on fishing vessels and maintenance.</p> <p>(iii) The unit cost of the PFZ device also includes installation and annual maintenance of PFZ devices for a period of 5 years.</p> <p>(iv) The fishing vessel should be in operational condition and not outlived its life span.</p> <p>(v) The beneficiary and State/UT shall ensure that the PFZ device supported are maintained in operational condition. Transfer of PFZ device to other person/vessel by any means such as sale/gift/lease etc., shall be strictly prohibited. The concerned State/UT shall put in place an appropriate system for verification at regular intervals regarding the proper use of PFZ devices supplied under the PMMSY.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
12 Fisheries extension and support services						
12.1	Extension and support Services.	No	25	10	15	<p>(i) The extension services centre supported under the PMMSY will serve as MATSYA SEVA KENDRA, a one stop solution centre for providing requisite services to fishers and fish farmers in the locality.</p> <p>(ii) Beneficiary should be a young professional possessing a Degree in Fisheries Science/Life Sciences/Marine Biology/Microbiology/Zoology/Biochemistry. Preference will be given for higher qualifications in these areas</p> <p>(iii) Beneficiary should have good knowledge of fisheries and aquaculture.</p> <p>(iv) Beneficiaries will submit Self Contained Proposal(SCP) with justification, detailed cost estimate(including copies quotations), recurring cost involved, source of funds for meeting the beneficiary contribution including bank consent for providing loan(if any), undertaking of beneficiary to the effect that no other governmental assistance is availed for the proposed</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>project, anticipate direct and indirect employment generation. The SCP <i>inter-alia</i> includes;</p> <p>(v) Documentary evidence of availability of requisite space (either own/registered lease document) admeasuring at least 1000 Sq. feet at a suitable location. In case of space taken on lease, the lease period should be at least 7 (seven) years from the date of submission of SCP and the registered lease document shall be furnished with SCP. It is pertinent to mention that the minimum lease period has been fixed at 7 (seven) years for this minor infrastructure activity in order to encourage and attract educated unemployed youth in taking up this activity. In deserving cases, the State/UT may further relax the minimum lease period requirement from 7 (seven) years to 5 (five) years with other conditions remaining the same.</p> <p>(vi) Location, Layout design of the proposed fisheries extension service centre, details of the trained man power to be</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>positioned for day-to-day operation of the centre.</p> <p>(vii) Strength of fishers, fish farmers, quantum of farming areas(ha) along with major species farmed/cultured nearer to the proposed fisheries extension centre that are likely to use the facility.</p> <p>(viii) The Governmental financial assistance shall not be diverted for any other purpose.</p> <p>(ix) Beneficiaries will be eligible to collect prescribed fees from the clients for services provided. After completion of the project on setting up of the extension service centre, the beneficiary will report on the number of samples tested (water, soil, fish quality etc.), revenue generated and manpower in place, number of farmers benefitted etc. to NFDB/DoF on a quarterly basis.</p> <p>(x) The Extension service centre shall maintain proper registers/records on various services provided.</p> <p>(xi) The Beneficiaries will maintain</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions												
				General (40%)	SC/ST/Women (60%)													
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)												
						<p>and operate the laboratory for a minimum period of 5 years from the date of its commissioning. The beneficiaries will submit an undertaking to this effect.</p> <p>(xii) This activity may also be sanctioned to a consortium of two or more beneficiaries. However, the total number of extension service units in such case will be restricted to two units per consortium.</p> <p>(xiii) DoF will issue detailed SoPs for creation and operationalizing of Extension and Support services i.e. MATSYA SEVA KENDRAS separately.</p>												
13	Livelihood and nutritional support for fishers for conservation of fisheries resources																	
13.1	Livelihood and nutritional support for socio-economically backward active traditional fishers' families for conservation	No	(a) The governmental assistance and beneficiary share under this activity of PMMSY will be shared as detailed below:															
				<table border="1"> <thead> <tr> <th>States/UTs</th> <th>Funding pattern</th> <th>Contribution</th> </tr> <tr> <th>(i)</th> <th>(ii)</th> <th>(iii)</th> </tr> </thead> <tbody> <tr> <td>General States</td> <td>(i) 50:50 Centre and General States</td> <td>Centre share Rs. 1500 + State share Rs. 1500 + Beneficiary share Rs. 1500= Rs. 4500/-year</td> </tr> <tr> <td>North East and Himalayan</td> <td>(i) 80:20 Centre and NE & Himalayan</td> <td>Centre share Rs. 2400 + State share Rs. 600 + Beneficiary share Rs. 1500</td> </tr> </tbody> </table>			States/UTs	Funding pattern	Contribution	(i)	(ii)	(iii)	General States	(i) 50:50 Centre and General States	Centre share Rs. 1500 + State share Rs. 1500 + Beneficiary share Rs. 1500= Rs. 4500/-year	North East and Himalayan	(i) 80:20 Centre and NE & Himalayan	Centre share Rs. 2400 + State share Rs. 600 + Beneficiary share Rs. 1500
States/UTs	Funding pattern	Contribution																
(i)	(ii)	(iii)																
General States	(i) 50:50 Centre and General States	Centre share Rs. 1500 + State share Rs. 1500 + Beneficiary share Rs. 1500= Rs. 4500/-year																
North East and Himalayan	(i) 80:20 Centre and NE & Himalayan	Centre share Rs. 2400 + State share Rs. 600 + Beneficiary share Rs. 1500																

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
	of fisheries resources during fishing ban/lean period.		States	States		= Rs. 4500/-year
			Union Territories	100% as Centre share for UTs (with legislature and without legislature)		Centre share Rs. 3000 + Beneficiary share Rs.1500 = Rs.4500/-year
			(b) Eligibility criteria			
			(i) Beneficiary should be a fulltime active fisher			
			(ii) Beneficiary should be a member of a functional local fishers cooperative society/Federation/any other registered body.			
			(iii) Beneficiary should be Below Poverty Line (BPL) and of between 18 and 60 years of age			
			(iv) The beneficiary fishers will save Rs. 1500 over a period of 9 months during fishing season annually towards their contribution with a bank designated by the State/UT Department of Fisheries. States/UTs will devise suitable modalities to ensure transparency and smooth implementation of this activity. Depositing of beneficiary contribution on a lump sum basis in a period of one or two months may be avoided.			
			(v) States/UTs may top up with any additional financial benefits both in cash and/or kind including subsidized ration, fuel etc. Besides, beneficiaries are also entitled to get benefits under the PDS.			
			(vi) States/UTs shall be responsible for correctness of beneficiary selection and genuineness of the beneficiaries. A certificate to this effect shall be submitted			

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>by the states/UTs along self-contained project proposals. The availability of budgetary allocation in the State budget should also be indicated.</p> <p>(vii) States/UTs shall maintain records of documentary evidence of (i) to (iv) above along with other details such as duration of lean/ban months, beneficiaries enrolled and their contribution, category of fishers (SC/ST), etc. and share the information with the Department of Fisheries Government of India.</p> <p>(viii) The accumulated amount of Rs. 4500/- indicated above would be disbursed to enrolled beneficiary by the respective states/UTs at the rate of Rs. 1500/- per month.</p>
14	Insurance of Fishing Vessels and Fishermen					
14.1	Insurance to fishers	Nos.				<p>i) The fishers shall be eligible for insurance and insurance coverage under the PMMSY is as below:</p> <p>(a) Rs.5.00 lakh against death or permanent total disability</p> <p>(b) Rs. 2.50 lakh against permanent partial disability</p> <p>(c) DoF will rationalize insurance coverage for hospitalization expenses and include in the insurance package for the aforesaid beneficiaries.</p> <p>ii) For the purpose of insurance, 'fishers' will also mean to include fish workers, fish farmers and any other categories of persons directly involved in fishing and fisheries related allied activities.</p> <p>iii) The insurance cover shall be for a period of 12 months and premium shall be paid annually.</p>

Sl. No	Sub-component and Activities	Unit	Unit cost (Rs. lakhs)	Governmental Assistance (Rs. lakhs)		Terms and Conditions
				General (40%)	SC/ST/Women (60%)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
						<p>) The entire premium amount will be shared between the centre and state as per the funding pattern of the PMMSY which means that no beneficiary contribution is envisaged.</p> <p>) Department of Fisheries, Government of India will decide on the mechanism and institutional arrangement for implementation of the insurance for fishers including release of the central financial liability of premium amount in respect of insured fishers. This would be done in consultation with the States/UTs.</p> <p>) The incidental charges, if any, for implementation of the aforesaid insurance activity would be met out of the earmarked funds of PMMSY.</p>
14.2	Insurance premium subvention for fishing vessels					<p>DoF will implement the Insurance premium subvention for fishing vessels' as per the funding pattern envisaged under the PMMSY. Accordingly, the governmental assistance will be up to 40% of the annual premium amount for General category and 60% for SC/ST/Women and rest of the premium will be borne by the beneficiary. The Insurance premium subvention amount in turn will be shared between centre and states as per the funding pattern of PMMSY Scheme.</p> <p>DoF will implement this activity in consultation with States/UTs and insurance companies by arriving at a suitable insurance product.</p>

ANNEXURE-III**NON-BENEFICIARY ORIENTED ACTIVITIES UNDER CENTRALLY SPONSORED COMPONENTS OF PRADHAN MANTRI MATSYA SAMPAD A YOJANA**

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
A ENHANCEMENT OF FISH PRODUCTION AND PRODUCTIVITY							
1 Development of inland fisheries and aquaculture							
1.1	Establishment of Brood Banks (including seed banks for seaweeds)	No.	500.00	300.00	450.00	500	<p>(i) PMMSY envisages setting up of Specific/Multi species Brood Banks in the States/UTs primarily to source, select, raise and maintain Quality Brood and/or develop Improved Varieties/Strains through Selective Breeding/Genetic Improvement Programmes and to supply quality brooder to hatchery owners for production and supply of quality fish/shrimp seed.</p> <p>(ii) Option -I Brood Banks Developed by States/UTs. a) The State/UT</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>will submit Detailed Project Report (DPR) with justification, technical-economical details including the species to be produced, capital cost and the recurring cost involved and availability of requisite land at suitable location and clearances.</p> <p>b) The DPR should also contain suitability of environmental parameters (water & soil quality) for setting up of brood bank, the income that would be earned out of the brood bank operations, anticipated direct & indirect</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>employment generation to local population, enhancement of fish production, specific time lines for implementation of project etc.</p> <p>c) States/UTs will deploy requisite manpower for the operation and management of Brood banks and meet the day to day expenditure for the same.</p> <p>d) States/UTs may collaborate with scientific institutions/universities/colleges for seek technical backstopping for the Brood Banks.</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>(iii) Option-II Development of Brood Banks in collaboration with other entities.</p> <p>a) Entities such as ICAR Institutes/State Agricultural Universities/State Fisheries Colleges may come forward to establish and operationalize the Brood Banks. The land should be provided by these entities free of cost. In such cases, the capital cost will be met from PMMSY as per the sharing pattern between Center and willing State (or 100% center funding for willing UTs) on mutually agreed terms and conditions</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>between center, states/UTs and aforesaid entities. The operational and management cost of running the Brood Banks would be met by these entities.</p> <p>b) RGCA under MPEDA of DoC or NFDB of DoF may also develop and manage Brood Banks in any of the willing States/UTs. The requisite land has to be provided by the willing State/UTs free of cost. In such cases, the capital cost will be met from PMMSY as per the sharing pattern between Center and willing State (or 100%</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>center funding for willing UTs) on mutually agreed terms and conditions between center, states/UTs and aforesaid entities. The operational and management cost of running the Brood Banks would be met by NFDB and RGCA.</p> <p>(iv) In all the above options an appropriate MoA would be entered into between all concerned parties.</p> <p>(v) Accreditation of the Brood banks will be part of the project cost.</p> <p>(vi) Government of India in consultation with States/UTs and aforesaid Entities may develop a suitable model for</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>Operation and Management of the Brood Banks in the country. This may include creation of a National Network of Brook Banks, suitable financial model for making the Brood Banks self-sustainable etc</p> <p>(vii) Further, the feasibility of involving Private sector in the operation and management (O&M) of Brood Banks would be explored in consultation with States/UTs and aforesaid</p> <p>(viii) Entities in order to leverage additional resources, expertise and efficiencies of private sector.</p>
1.2	Integrated Development of Reservoirs (Large) (Area: more than 5000	No	600	360	540	600	(i) States/UT will submit Detailed Project Report (DPR) with justification & technical details etc.

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
	hectares)						
1.2.1	Integrated Development of Reservoirs (Medium) (Area: 1000 to 5000 hectares)	No	400	240	360	400	<p>(ii) States/UT will provide documentary evidence on area of the reservoir, name and number of groups involved in fishing, necessary clearances/permissions & fishing rights etc. in the DPR. No funds will be provided for the purchase of land. States/UTs will provide documentary evidence on availability of requisite Government land free from all encumbrances for creation and establishment of infrastructure such as hatchery, seed rearing area, marketing facilities etc. in vicinity of the reservoirs.</p> <p>(iii) The DPRs will also contain details of anticipated direct & indirect employment generation, enhancement of fish production and productivity, improvement of</p>
1.2.3	Integrated Development of Reservoirs (Area: less than 1000 hectares)	No	300	180	270	300	

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>economic status of locals, specific time lines for the implementation of the project etc.</p> <p>(iv) The integrated reservoir development project will have relevant sub-components/activities such as construction of cages with floating working station (large and medium reservoir only), storage shed, purchase of boats with ice holding boxes and necessary gear, construction of landing centre including berthing platforms cum auction centre, establishment of hatchery of appropriate capacity, seed rearing ponds near the reservoirs, establishment of rearing cage for rearing of fingerlings, establishment of small feed mill, Post-harvest infrastructure for management of processing (depending</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							on the production), marketing in hygienic condition, establishment of ice plant of appropriate production capacity, refrigerated and insulated trucks, auto rickshaw with ice boxes, Motor cycle with ice boxes, setting of fish retail outlets, setting of movable fish retail outlet etc. (v) Pen culture facilities will be provided for fish seed rearing.
1.3	Integrated Aqua Parks (IAPs)	No	10000	6000	9000	10000	(i) End Implementing Agency (EIA) will submit Detailed Project Report (DPR) with justification, detailed cost estimate, technical specifications of the sub-components/activities of the Integrated Aqua Park (IAP), anticipated income, recurring cost involved, anticipated direct & indirect

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>employment generation, and specific time lines for completion of the project etc.</p> <p>(ii) The quantum of land required for the IAP depends on the proposed activities, facilities, future expansion, project size, location etc. Accordingly, the requirement of land would be a minimum of 100 acres for establishment of IAPs. However, the DoF may relax the quantum of requirement of land in case of Northeast and Himalayan States/UTs.</p> <p>(iii) Cost estimates of the IAP will be based on the latest SoRs/prevaling market rates.</p> <p>(iv) EIAs shall provide</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>documentary evidence of availability of requisite land free from encroachment and encumbrances, necessary clearances/permissions from the concerned State/UT/authority as may be required.</p> <p>(v) IAP may be developed on a hub and spoke model integrating clusters/areas with end to end solutions based on local needs and specific themes.</p> <p>(vi) IAP may comprises of hubs of multifarious fisheries activities/facilities covering production of quality seed, feed, seed rearing, fish culture, pre and post-harvest infrastructure, business model,</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>logistics, marketing, export promotion, innovations, technology incubation, knowledge dissemination, recreation etc.</p> <p>(vii) The EIAs will come up with a suitable model for the post construction Operation and Management (O&M) of IAPs. It is expected that the IAP would be run as a self-sustaining entity.</p> <p>(viii) The EIAs will confirm to the effect that all operational, maintenance and post construction management costs of the IAP shall be borne by them and the IAP will be kept in operational condition.</p> <p>(ix) DoF may prescribe</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							any other additional conditions as may be required for smooth implementation and O&M of the IAPs.
2	Development of fisheries in the Himalayan and North-Eastern States/UTs						
2.1	Support to states for import of germplasm.			Need based			The project will be taken up on project mode. The State Government will submit a Detailed Project Report (DPR) with justification, fish species, techno-financial details.
B	INFRASTRUCTURE AND POST-HARVEST MANAGEMENT						
3	Development of fishing harbours and fish landing centres						
3.1	Construction/Expansion of Fishing Harbours.	No	20000	12000	---	20000	The concerned State government/UT is required to complete the followings: (i) Identification and selection of suitable site/location, keeping in view relevant parameters like need for fishing harbour, available marine fishery resources, operational fishing vessels, fishermen

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>population in the locality, stakeholder consultations, infrastructure gaps, and preliminary techno-economic and social viability of the identified site etc.</p> <p>(ii) Completion of necessary engineering and socio-economic investigations and surveys.</p> <p>(iii) Planning and designing of the Fishing Harbour</p> <p>(iv) Completion of hydraulic model studies, wherever required.</p> <p>(v) EIA/EMP studies as may be required for obtaining environmental clearance.</p> <p>(v) Acquisition of land if any required for development of the Fishing Harbour</p> <p>(vi) Formulation of</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>detailed cost estimates based on latest SoRs admissible in the project area/locality.</p> <p>(vii) The concerned States Government/UT will be required to submit Detailed Project Report (DPR) including documentary evidence of (i) to (vi) above for availing the financial assistance.</p> <p>(vii) Dovetailing with Sagarmala program of Ministry of Shipping will be explored wherever feasible</p> <p>(viii) The concerned State/UT shall also confirm that post construction operation, maintenance and management will be done by them at their own cost.</p> <p>(ix) The concerned state/UT government should indicate the existing management model of the fishing</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							harbours and the system it would put in place for revamping the operation and management of the fishing harbour and running it on a self-sustainable mode. This would be one of the key conditions wherever the fishing harbours are taken up for Expansion. Similar arrangements should be indicated even for construction of New harbours with regard to post construction Operation and Management.
3.2	Modernization/ Up-gradation of existing Fishing Harbours	(No)	5000	3000	---	5000	(i) The concerned State/UT government is required to complete the followings: Identification of the existing fishing harbor (FH) for modernization/up-gradation based on a post construction evaluation of the FH. (ii) The post

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>construction evaluation should broadly cover, assessment of functional utility of the existing facilities, operation of fishing fleet of various category against the designed capacity, fish landings and revenue accrued, direct and indirect benefits accrued on account of facilities created in terms of quantum of value of fish and growth of ancillary industries around the FH, impact on the economic growth of the hinterland in terms of revenue, employment generation, demand for up-gradation etc.</p> <p>(iii) The Concerned States Government/UT shall be required to submit Detailed Project Report (DPR) based on detailed surveys, planning and designing of facilities and detailed cost</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>estimate etc.</p> <p>(iv) The concerned State/UT shall also confirm that post construction operation, maintenance and management will be done by them at their own cost.</p> <p>(v) The concerned state/UT government should indicate the existing management model of the fishing harbours and the system it would put in place for revamping the operation and management of the fishing harbour and running it on a self-sustainable mode. This would be one of the key conditions.</p>
3.3	Modern Integrated Fish Landing Centres	(No)	2500	1500	2250	2500	(i) The Modern Integrated Fish Landing Centres will be developed both in marine and inland States/UTs including NE and Himalayan region.

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>The Fish Landing Centres may be located along the sea coast, estuary, rivers, and reservoirs etc. as per the requirements and feasibility.</p> <p>(ii) The concerned State Government/UT will submit Detailed Project Report (DPR) formulated based on detailed engineering and economic investigations, surveys, planning and designing and detailed cost estimate.</p> <p>(iii) The State Government/UT shall confirm availability of land, necessary clearances and budgetary resources (wherever required) for construction of the fish landing</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>centers.</p> <p>(iv) The concerned State/UT shall also confirm that post construction operation, maintenance and management will be done by them at their own cost.</p> <p>(v) The concerned state/UT government should indicate appropriate operation and management model for the fishing landing centres it would put in place for the operation and management of the landing centre on a self-sustainable mode. This would be one of the key conditions wherever the fish landing centres are taken up for construction.</p>
3.4	Maintenance of Dredging of	(No)	500	300	---	500	(i) For dredging projects, the

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
	existing FHs						<p>concerned State Government/UT is required to complete the following formalities:</p> <p>a) Necessary engineering investigations and surveys</p> <p>b) Assessment of quantum of maintenance dredging & preparation of cost estimates based on latest SoRs admissible in the project area</p> <p>c) Submit self-contained/details project report including documentary evidence of (a) and (b) above to avail of the assistance</p>
4	Markets and marketing infrastructure						
4.1	Construction of state of art whole sale fish market.	No	5000	3000	4500	5000	(i) End Implementing Agency (EIA) shall submit Detailed Project Report (DPR) with justification,

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>detailed cost estimate, detailed planning and design of the infrastructure facilities, recurring cost involved, anticipated direct & indirect employment generation to local population, and specific time lines for completion of the project etc.</p> <p>(ii) Preference would be given for Metropolitan/State Capital Cities.</p> <p>(iii) EIA shall provide documentary evidence of availability of requisite land, necessary clearances/permissions from the concerned authority.</p> <p>(iv) The EIA shall confirm to the effect that all operational, maintenance and post construction management costs of the fish market facilities shall be borne</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>by them and the fish market will be kept in operational condition.</p> <p>(v) EIA will display a board permanently at the infrastructure facilities to the effect that the fish market is constructed with Government financial assistance under the PMMSY of the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying.</p> <p>(vi) The EIA shall ensure maintenance of hygienic conditions in the fish market and supply of quality fish to the consumers at affordable price.</p> <p>(vi) The EIA will abide by the government regulations, if any in development, operation and management including food quality standards etc. at the</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							fish market. (vii) EIA should indicate in the DPR an appropriate management model for the market and also indicate the system it would put in place for its operation on a self-sustaining mode. This would be one of the key conditions for consideration of the project.
4.2	Organic Aquaculture Promotion and Certification			DPR/SCP based			The EIAs will submit Detailed Project Report or Self-Contained Proposals with cost estimates and techno-financial details. The projects would be approved on DPR/SCP. The unit cost would be decided by DoF on case to case basis as per essentiality.
4.3	Promotion of Domestic fish consumption, branding, Fish mark, GI in fish, Himalayan Trout-Tuna branding, Ornamental fishes promotion and branding etc.			DPR/SCP based			
5	Development of deep-sea fishing						
5.1	Promotion of technologically	No.	5000	3000	---	5000	(i) The State/UT/EIA will submit a Detailed

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
	advanced vessels to marine fishermen/fishermen groups through State/UT Governments						<p>Project Report (DPR) indicating the resource availability, techno-financial viability, mode of implementation and operation of the advanced fishing vessels etc.</p> <p>(ii) The projects would be approved on DPR basis by DoF on case to case basis as per essentiality.</p> <p>(iii) States/UTs will submit the DPR along with a viable operation and management model.</p> <p>(iv) The EIA shall confirm to the effect that all operation, management and maintenance cost of the advanced fishing vessel(s) shall be borne by them and the vessels(s) would be kept in proper operational condition.</p> <p>(v) The Advanced Fishing Vessel(s)</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							should be for the overall benefit of the fishermen/fishermen groups
6 Integrated modern coastal fishing villages							
6.1	Integrated modern coastal fishing villages	No	750	450	---	750	<p>(i) Integrated modern coastal fishing villages will be developed under PMMSY to leverage Blue economy/Blue growth with an aim to maximize economic and social benefits to coastal fishers while minimizing environmental degradation through sustainable fishing practices. Fishers of these villages would be empowered for securing their livelihoods and equal participation along the fisheries value chain.</p> <p>(ii) The core strengths of the villages would be leveraged and channelized for amplifying the economic benefits in a sustainable manner.</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>Innovations and convergence with Schemes and Programmes of other Ministries/Departments, wherever feasible will be strongly encouraged for integrated and sustainable development.</p> <p>(iii) The State/UT will identify and submit a list of potential coastal fisher villages for inclusion under this component along with a concept note/strategy. The broad criteria for identification of village <i>inter alia</i> include fishermen population, vulnerable communities, prevalence of best fishing practices and sustainable fishing practices, numbers of fishing vessels, social indicators of these villages like efforts made in the village towards promotion of education of especially</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>girl child, health and social wellbeing, fishing related infrastructures, public amenities, fish landings, scope for diversification of fishing, tourism activities and their scope, willingness to accept change, progressive outlook of the villagers especially youth, participatory fisheries management system etc.</p> <p>(iv) DoF will constitute a Committee or engage an agency for selecting the villages. Villages would be ranked and selected on the basis of a set of criteria formulated by DoF to enable inter-village comparison of the potential villages. The states/UTs will also submit a concept/approach with innovative themes and the concept/approach proposed by the states/UTs would be</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>one of the criteria for selection. It is important to note that backwardness of the village would not be the prime criterion for identification of these village. In fact, the villages which have attained a degree of development and having capability to become self-reliant with minimum degree of effort would be the ones which would be focused upon. These villages are expected to become 'champions' of conservation and management and set new benchmark/standards for other villages to emulate.</p> <p>(v) This activity would offer flexibility to take up any innovative activities in the larger interest of the fisher communities.</p> <p>(vi) For effective implementation of this</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>activity and optimal outcomes it is expected that the District Collector/Deputy Commissioner would take a proactive lead in handholding and fostering convergence with the other ongoing schemes and programmes for amplifying the outcomes. Devolatilizing with additional resources pooled from various resources including CSR activities will be strongly encouraged.</p> <p>(vii) Proposal for development of modern coastal fishing village may include developmental projects identified based on local needs and priorities in a participatory and integrated approach. Activities like creation of facilities for eco-tourism, assistance to sustainable fishing devices like TEDs,</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							facilities for sustainable harvest, reduction in post-harvest losses and complete utilization of high-quality harvests, fish by-product industries, cold chain, processing, packaging and marketing facilities including modern logistics and E-marketing platforms, community shed for Net webbing/Mending, common fish processing centers, alternative livelihoods like seaweed cultivation, Cage culture, Ornamental fisheries, fish drying/storing, modern fish retail outlet/Marketing facilities, waste (both solid and liquid) management systems, hatcheries, seed rearing facilities, activities for Women empowerment, etc. need based gap filling infrastructure facilities like drinking water

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>supply, sanitation facilities, Social Infrastructure- Community Halls, disaster resilience, Cyclone/ Tsunami shelters, Disaster resilient houses, road connectivity, landscaping & Green Belt Development, can be taken up.</p> <p>While identifying activities for Integrated coastal fisher villages development States/UTs are free to include various other activities enlisted under the PMMSY for making an integrated DPR.</p> <p>As far as possible, activities that are funded under other schemes of Gol and/or States/UTs should be avoided for seeking assistance under the earmarked allocation/fund under PMMSY for Integrated coastal fisher villages.</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>(viii) Mainstreaming and employment for weaker sections including alternative employments and women empowerment would be promoted. Strong convergence will be fostered with NRLM of Ministry of Rural Development to strengthen and empower the SHGs.</p> <p>(ix) The DoF, GoI would do continuous evaluation of this activity and may further revise/update the activities and elements of this evolving scheme, as per review, assessment and needs.</p>
7	Aquatic Health Management						
7.1	Aquatic Referral Labs for Quality Testing and Disease Diagnostics.	No	1000	600	900	1000	(i) PMMSY recognizes need for maintaining the quality standards of fish & fishery products both for domestic and international trade,

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							and aims to establish 20 numbers of State-of-the-art Aquatic Referral Laboratories (ARL) for Quality Testing and Disease Diagnosis in the next 5 years. This is to establish a strong network of referral laboratories for strengthening aquatic animal health services, strengthen the National disease surveillance programme, improving reporting requirements of World Organization for Animal Health (OIE), such as half yearly reporting on WAHIS (World Animal Health Information System) and Quarterly Aquatic Animal Disease Reports (QAADR) to NACA(Network of Aquaculture Centre In Asia-Pacific)/OIE Regional Representative for Asia and the Pacific (OIE-RR). This will enhance level of

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>compliance to international obligations.</p> <p>(ii) Each ARL may broadly consist of (a) General Laboratory Infrastructure (b) Disease diagnosis laboratory including Molecular Biology lab (c) Microbiology lab (d) Water and soil quality analysis laboratory (e) Immunodiagnostic laboratory. (f) Feed quality analysis lab (Protein analysis, feed stability) (g) Wet laboratory to conduct fish experiments and pathogen challenge studies and (h) Any other facility based on essentiality and justification.</p> <p>(iii) The ARL should be manned with at least two qualified technical personnel with suitable experience in the related field to manage, operate and maintain the ARL with</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>required support of other lab technician and lab attendant.</p> <p>(iv) State/UT shall submit Detailed Project Report (DPR) along with detailed cost estimate for required infrastructure, equipment, manpower requirement, and operational cost along with implementation plan.</p> <p>(v) State/UT shall confirm availability of requisite building with adequate built up/plinth area (not less than 3000 sq.ft) at appropriate location to set up the ARL, necessary clearances/permissions from concerned authority(if any).</p> <p>(vi) Up to 20% of the unit cost may be used for essential civil and electrical works, furniture and fixtures, etc.</p> <p>(vii) The State/UT shall</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>undertake that all operational, maintenance and management costs, including wages/salaries & establishment costs of the ARL shall be borne by them and the Laboratory will be kept in operational condition all the time.</p> <p>(viii) The State/UT may enter into an MoU with entities such as ICAR Institutes/State Agricultural Universities/State Fisheries Colleges in the State/UT for technical backstopping and for establishment, operation and management of ARL, wherever feasible. Further, ARL can be established by States/UTs in collaboration with NFDB/RGCA wherever feasible on mutually agreed terms and conditions.</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>(ix) The ARL shall have Quality Improvement Programme (QIP) to train and conduct refresher courses for the technical staff of laboratories, government officials, staff of Disease diagnostic and quality testing labs, and Disease diagnostic and quality testing Mobile labs/clinics.</p> <p>(x) The ARL shall play a proactive role in National Surveillance Programme for Aquatic Animal Disease (NSPAAD) through networking with other labs in within the State/UT as well as National Level Laboratory. ARL shall handhold the Disease diagnostic and quality testing labs, and Disease diagnostic and quality testing Mobile labs/clinics in the State/UT by way of following a uniform SOPs for preventive measures, field level</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							disease diagnosis and control/containment method. (xi) State/UT is required to submit progress report at regular interval (half yearly basis), indicating performance of the Referral lab, revenue generated, manpower in place etc. to DoF.
C FISHERIES MANAGEMENT AND REGULATORY FRAMEWORK							
8 Monitoring, Control and Surveillance (MCS)							
8.1	Common Infrastructure for MCS including Hub stations, towers, IT based software, peripherals, networks and operations etc.	No		DPR Based			(i) The State Government/UT administration shall submit Detailed Project Report (DPR) indicating the infrastructure requirements, viability assessment, detailed cost estimate, operational modalities, timeline for completion of the project. The State/UT shall also confirm availability of land and clearance and state budgetary resource

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>wherever required.</p> <p>(ii) States/UTs may also include Installation and Operationalization of Electronic Display Boards including their maintenance in the fishing harbours and fishing landing centers for effective surveillance, dissemination of information various aspects concerning marine fisheries including disaster, weather forecast advisories, marketing information, networking of harbours and landing centers, etc.</p>
9	Fisheries extension and support services						
9.1	Multipurpose Support Services – Sagar Mitra (performance based incentives along with requisite IT/Communication support like Tablet/mobile	No	12.4	7.44	---	12.4	<p>(i) It is envisaged to engage a total of 3477 Sagar Mitras and deploy them at the rate of one Sagar Mitra per marine coastal fishing village in the maritime States/UTs.</p> <p>(ii) Sagar Mitra shall be</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
	telephony etc. would be provided to Sagar Mitras)						<p>fisheries professional possessing a minimum Bachelor degree in Fisheries Science/Marine Biology/Zoology. He/She will be preferably a local person of age not more than 35 years, who has effective communication skills in local language. Knowledge of Information Technology (IT) would be essential.</p> <p>(iii) The State/UT Governments will engage Sagar Mitra purely on contractual basis preferably through outsourcing agencies on an annual basis with provision for extension of their services based on performance review.</p> <p>(iv) The primary roles and responsibilities of Sagar Mitras are, (a) interface between the Government and fishers and act as first</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>person of contact for any marine fisheries related demands/services of fishers, (b) to create awareness among the local fishers on various schemes and programmes (c) promote participatory management of fisheries resources, (d) sensitize the local fishers about the government policies, programmes and regulations, (e) dissemination of information on weather forecast, PFZ, natural calamities, (f) create awareness about the hygienic handling of fish, personal hygiene, healthy living and working conditions, (g) to create awareness on sustainable utilisation of fisheries resources and relevant regulation including CCRF, importance of ocean and coastal ecosystem conservation,</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>prevention of IUU fishing etc., (h) to promote women empowerment through alternative livelihood, post harvest and marketing activities, (i) to compile information/data on daily fish production, fishing vessels including their entry and exist, fish price and marketing information and provide such data to the government (j) to mobilize fishers for training or impart training and (k) perform any other tasks as may be entrusted by central and State/UT governments.</p> <p>(v) Sagar Mitra will report to the designated Fisheries officer within the district.</p> <p>(vi) The Sagar Mitras will be provided with a performance incentive of Rs. 10000 per</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>month against a set of predetermined tasks. Further, additional performance incentives up to Rs 5000/- in a month may be given to Sagar Mitra against additional tasks entrusted from time-to-time.</p> <p>(vii) Since Sagar Mitras are engaged under PMMSY Scheme, after closure of the PMMSY scheme, the Department of Fisheries, Government of India will not pay performance incentives to Sagar Mitras. Further, the Department of Fisheries, Government of India shall not be responsible for continuation of services of Sagar Mitras.</p> <p>(viii) After the end of the PMMSY Scheme and if the States/UTs desire, the Sagar Mitras may continue</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							<p>as self-earning multipurpose service providers to fisheries stakeholders. In such case, the States/UTs may device appropriate modalities, guidelines etc.</p> <p>(ix) Requisite IT/Communication support like Tablet/mobile telephone, etc. would be provided to Sagar Mitras.</p> <p>(x) Sagar Mitras will reside in the village of his/her engagement or in the vicinity of the village of engagement.</p> <p>(xi) States/UT may provide office space for functioning of the Sagar Mitra.</p> <p>(xii) Sagar Mitra would be imparted requisite training under PMMSY from time to time by center and/or state government.</p> <p>(xiii) DoF, GoI will</p>

Sl. No	Name of activities	Unit	Unit Cost (Rs. in lakhs)	Central Assistance (Rs in lakhs)			Terms and Conditions
				General States	Northeastern & Himalayan States	UTs	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
							monitor and evaluate the performance of Sagar Mitra scheme at regular intervals and may undertake necessary mid-course corrections if required.

ANNEXURE-IV

No. J-117012-2/2020-Fy
Government of India
Ministry of Fisheries, Animal Husbandry and Dairying
Department of Fisheries

Krishi Bhavan, New Delhi
Dated the 8th June, 2020

ORDER

The Government of India has approved the "Pradhan Mantri Matsya Sampada Yojana(PMMSY) - A scheme to bring about Blue Revolution through sustainable and responsible development of fisheries sector in India" at a total investment of Rs. 20050 crores for its implementation for a period of 5(five) years from FY 2020-21 to FY 2024-25 in all the States and Union Territories(UTs). PMMSY *inter-alia* envisages constitution of a Central Apex Committee (CAC) under the Chairpersonship of Secretary, Department of Fisheries (DoF), Government of India (GoI) with members drawn from relevant line Ministries/Departments/Organizations of GoI including DoF to steer the overall implementation of the PMMSY including its monitoring and review.

2. Accordingly, a Central Apex Committee (CAC) under the Chairpersonship of Secretary, Department of Fisheries, Government of India (GoI) is hereby constituted with the following composition and Terms of References to steer the overall implementation of the PMMSY including its monitoring and review:

2.1 Composition

(i)	Secretary, Department of Fisheries, Government of India	Chairperson
(ii)	Secretary, Department of Agriculture Research and Education or his/her representative	Member
(iii)	Secretary, Ministry of Shipping or his/her representative	Member
(iv)	Secretary, Department of Agriculture, Cooperation and Farmers Welfare or his/her representative	Member
(v)	Secretary, Ministry of Rural Development or his/her representative	Member
(vi)	Special/Additional Secretary & Financial Advisor, Integrated Finance Division(IFD), Department of Fisheries, GoI	Member
(vii)	Joint Secretaries, Marine and Inland Fisheries, Department of Fisheries, Government of India	Members
(viii)	Advisor(Agriculture), NITI Aayog	Member
(ix)	An officer of the rank of Director or equivalent in-charge of PMMSY, Department of Fisheries, Government of India	Member – Secretary

2.2 Terms of References (ToRs)

2.2.1 The Roles and Responsibilities of CAC

- (a) Approve the Operational Guidelines of PMMSY and also undertake necessary modification to the Operational Guidelines within the broad framework of the scheme based on sectoral needs and feedback from End Implementing Agencies (EIAs) during the course of implementation of PMMSY and for removing difficulties in implementation.
- (b) Approve the unit costs of the sub-components/activities under PMMSY based on the indicative unit costs of various sub-components/activities considered for estimation of PMMSY cost as indicated at Annexure-V to Annexure-VIII of the Note for the Cabinet.
- (c) Approve differential unit costs for Islands, Himalayan States/UTs and the North Eastern States.
- (d) Approve necessary revisions to the unit costs of the sub-components/activities during the course of implementation of PMMSY based on field situations, requirements and feedbacks from EIAs so as to remove difficulties in implementation of PMMSY since the unit costs may vary depending on several factors such as price escalations over time, project location, site conditions, availability of materials, labour wages, design and specifications, proposed facilities, technology, project/unit size, revision of SoRs of states, changes in statutory levies and taxes, etc.
- (e) Approve revision of physical targets and financial allocations of the sub-components/activities including revision of the year-wise physical targets of individual sub-components/activities within the overall financial allocations of the Central Sector Scheme or Centrally Sponsored Scheme Components, based on the sectoral demands, local priorities and pace of fund off-take. Further, the CAC to the extent possible may frontload the long gestation period infrastructure projects envisaged under PMMSY like fishing harbours/fish landing centers, aqua parks, referral laboratories, aquatic quarantine facilities, state of the art modern fish markets etc. during the initial years of implementation of PMMSY for timely completion and accrual of benefits.
- (f) Approve need-based changes to the sub-components/activities both under Central Sector Scheme or Centrally Sponsored Scheme Components within

the broad framework of the scheme based on the sectoral priorities, requirements and feedbacks from EIAs, fund off take, local needs, etc. so as to remove difficulties in implementation and for optimal outcomes.

- (g) Approve the Annual Action Plan of PMMSY of Dept. of Fisheries indicating physical and financial targets including anticipated outcomes of the year under the PMMSY. The Annual Action plan will be prepared within the broad framework of the PMMSY, based on the progress of preceding year(s), pipeline proposals (in hand), annual budgetary allocation, financial liability of previous years, demands and needs of the sector, inputs/preparedness of States/UTs and other EIAs etc.
- (h) To recommend to DoF for fixing an upper ceiling of the governmental financial assistance for individual sub-components/activities especially the beneficiary-oriented ones which in any case shall not exceed 40% of the project cost for General category and 60% of project cost for SC/ST and Women as envisaged in the Funding Pattern of the PMMSY.
- (i) To recommend to DoF for fixing an upper ceiling on the total cost of the individual activity/project especially the beneficiary-oriented ones that would be supported under the relevant sub-components of the Central Sector Scheme.
- (j) The CAC taking into consideration the sectoral needs and demands, will be competent to approve inclusion of devices/units of new and/or cost effective technologies, and exclude devices/units of obsolete/unviable technologies. Further, CAC may also expand the scope of technology based interventions including aforesaid devices/units to cover any deserving/needy class of beneficiaries/vessels etc.
- (k) The CAC would finalize the cost norms, guidelines and modalities, etc. for setting up and handholding of Fish Farmers Producer Organizations/Companies (FFPOs/Cs) as per the specific needs and requirements of fisheries sector. For this purpose, the CAC may take the cost norms and guidelines of Farmers Producer Organization scheme being implemented by the Department of Agriculture, Cooperation and Farmers Welfare as the basis. Further, the CAC would be competent to decide on the upper ceiling of the total area/number of units of a particular activity that would be supported/assisted under PMMSY for taking up by FFPOs/Cs in order to optimize the outcomes of FFPOs/Cs.

- (l) The DoF on the recommendations of CAC will earmark the extent of funds under administrative expenses that would be released to the NFDB & End Implementing Agencies.
- (m) Support to NFDB for undertaking need-based fisheries development activities under the Central Sector Scheme Component will be based on Annual Action Plan submitted by NFDB which will be approved by DoF upon the recommendations of the CAC.
- (n) To recommend the activities/projects under Central Sector Scheme Component of PMMSY to the DoF for its approval. The activities/projects will be appraised through the Project Appraisal Committee (PAC) of the NFDB or such other entities as may be decided by DoF before placing in the CAC.

2.2.2. The aforesaid approvals of CAC from 2.2.1 (a) to (f) in turn will be issued by the DoF with the approval of the Hon'ble Minister of Fisheries, Animal Husbandry and Dairying, Government of India. In respect of approvals/recommendations of CAC at 2.2.1 (g) to (n), the same will be issued by DoF with the approval of Secretary, DoF as per the extant financial delegation issued by Ministry of Finance, Government of India.

2.2.3 The Chairperson of the CAC may **co-opt** domain expert(s) as members of CAC.

2.2.4 The Chairperson of the CAC may invite the MD, National Cooperative Development Corporation (NCDC), the Chief Executive, NFDB, the representative of NABARD to CAC meetings as Special invitee(s) as and when required. Further, the Chairperson of the CAC may also invite representatives of any other Central Government Ministry/Department/Agency to CAC meetings as Special invitee(s).

2.2.5 The CAC may entrust additional responsibilities to the Project Monitoring and Evaluation Unit (PMEU) headed by Joint Secretary, Department of Fisheries to be set up in the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying.

3. The CAC would be assisted by such committees/bodies as may be constituted by the Department of Fisheries for smooth execution of its roles and responsibilities.

4. TA/DA of the official members for attending the meetings will be met by their respective Departments/Organisations. However, the TA/DA in respect of co-opted members shall be met under the PMMSY.

5. It is requested that the Ministries/Departments/Organisations indicated in the composition (SI-2.1 above) may please nominate their representative to serve as a member in the CAC and forward contact details of the nominated official.

6. This issues with the approval of Competent Authority.

Sd/-

(Kham Khan Suan)

Under Secretary to the Government of India

(Tel No. 011-23386099)

Distribution:

1. All members of the CAC
 2. All the State Governments, UTs and other concerned organisations
 3. PS to Hon'ble Minister of Fisheries, Animal Husbandry and Dairying, Government of India.
 4. PS to Hon'ble MOS for Ministry of Fisheries, Animal Husbandry and Dairying, Government of India.
- (v) Sr. PPS to Secretary, DoF
- (vi) PS to Joint Secretary (MF)/Joint Secretary(IF)
- (vii) Guard file

ANNEXURE-V

No. J-117012-3/2020-Fy
Government of India
Ministry of Fisheries, Animal Husbandry and Dairying
Department of Fisheries

Krishi Bhavan, New Delhi
Dated the 23rd June, 2020

ORDER

The Government of India has approved the "Pradhan Mantri Matsya Sampada Yojana(PMMSY) - A scheme to bring about Blue Revolution through sustainable and responsible development of fisheries sector in India" at a total investment of Rs. 20050 crores for its implementation for a period of 5(five) years from FY 2020-21 to FY 2024-25 in all the States and Union Territories (UTs).

PMMSY *inter-alia* provides that the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying shall constitute a Project Appraisal Committee (PAC) comprising of domain experts and headed by the Chief Executive, National Fisheries Development Board(NFDB) for appraisal of the projects/proposals under the component of Centrally Sponsored Scheme sent by States and Union Territories(UTs) with the prior approval of the respective State Level Approval and Monitoring Committee (SLAMC) as well as appraisal of the projects/proposals under Central Sector Scheme Component of the PMMSY as and when received from the Department of Fisheries, Government of India.

2. Accordingly, a Project Appraisal Committee (PAC) comprising of domain experts and headed by the Chief Executive, National Fisheries Development Board (NFDB) is hereby constituted with the following composition and Terms of References:

2.1 Composition

(i)	Chief Executive, National Fisheries Development Board	Chairperson
(ii)	Executive Director (Tech), NFDB	Member
(iii)	Executive Director (Infrastructure), NFDB	Member
(iv)	Domain Experts (two)	Members
(v)	Representative of Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying	Member
(vi)	Senior official of NFDB to be nominated by CE, NFDB	Member Secretary

2.2 Terms of References (ToRs)

2.2.1 The Roles and Responsibilities of PAC are

- a) To undertake the appraisal of the projects/proposals under the Centrally Sponsored Scheme Component of the PMMSY received from States and Union Territories and recommend viable projects/proposals for approval of Department of Fisheries, Government of India and release of admissible central assistance.
- b) To undertake appraisal of the projects/proposals under Central Sector Scheme Component of the PMMSY as and when received from the Department of Fisheries, Government of India and make necessary recommendations for placing in the Central Apex Committee (CAC) of PMMSY.
- c) Perform any other tasks entrusted by the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying DoF.

2.2.2 In fulfilling its aforesaid Roles and Responsibilities, the PAC would

- a) Examine the Fisheries Annual Action Plans received from States/UTs under Centrally Sponsored Scheme Component of the PMMSY and ensure their correctness and conformity to the PMMSY Scheme, and its Operational Guidelines.
- b) Undertake examination of the Detailed Project Reports (DPRs) and/or Self-Contained Proposals (SCPs) received from States/UTs under the Centrally Sponsored Scheme Component of the PMMSY from technical, economic and financial point of view and ensure compliance with approved Operational Guidelines, unit costs, cost norms and any other terms and conditions of PMMSY. Similarly, under take examination of the DPRs/SCPs received under the Central Sector Scheme Component of the PMMSY on the aforesaid lines.
- c) Prepare comprehensive appraisal notes after examination and scrutiny of the proposals and make recommendations to Department of Fisheries (DoF), Government of India.
- d) Develop appraisal formats and templates as per the framework and Operational Guidelines of PMMSY and intimate to the States/UTs from time to time.

- e) Handhold States/UTs in establishing proper procedures for preparation of Fisheries Annual Action Plans, DPRs, and SCPs both *suo moto* and as and when requested by States/UTs.
- f) Make recommendations to Department of Fisheries (DoF), Government of India and States/UTs from time to time for continuous improvement of implementation of the PMMSY.

2.2.3 The Chairperson of the PAC may invite the representatives of National Cooperative Development Corporation (NCDC)/NABARD to PAC meetings as Special invitee(s) as and when considered essential.

2.2.4 The PAC shall invite the concerned State/UT for the PAC meeting when their Annual Action Plans, DPRs and SCPs are taken up for Appraisal.

2.2.5 The representative of DoF may participate in the PAC meetings through Video Conference from Delhi if required. His/her participation through Video Conference will be valid for all purposes.

2.2.6 The CE, NFDB will prepare a panel of Domain Experts from fields of Inland, Marine Fisheries, Aquaculture, Fish Seed and feed, disease, Post Harvest and Value Addition, Fishing Harbour and Land Centres, Livelihoods, Ornamental Fisheries, Seaweed Cultivation, Mariculture, Cold Water Fisheries Bivalve Cultivation, Reservoir Development, Cold Chain, Processing, Marketing, Traceability, Certification and Accreditation, Fisheries Resource Management, etc. and the panel must be approved by the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying. The Panel will be valid for 2 years. The Chairperson of PAC will invite the Domain Experts on rotation basis as and when the specific subject project(s)/proposal(s) are taken up for appraisal. The invited Domain Experts would form part of that PAC sitting for which he/she has been invited for.

2.2.7 TA/DA of the official members for attending the meetings will be met by their respective Departments/Organisations. However, the TA/DA in respect of Special invitees/Domain Experts will be met by NFDB from funds released/earmarked under Administrative Expenses of PMMSY.

2.2.8 This issues with the approval of Competent Authority.

(Kham Khan Suan)
Under Secretary to the Government of India
(Tel No. 011-23386099)

Distribution:

5. All members of the PAC
 6. All the State Governments, UTs and other concerned organisations
 7. PS to Hon'ble Minister of Fisheries, Animal Husbandry and Dairying, Government of India.
 8. PS to Hon'ble MOS for Ministry of Fisheries, Animal Husbandry and Dairying, Government of India.
- (v) Sr. PPS to Secretary, DoF
- (vi) PS to Joint Secretary (MF)/Joint Secretary(IF)
- (vii) Guard file

ANNEXURE-VI

No. J-117012-3/2020-Fy
Government of India
Ministry of Fisheries, Animal Husbandry and Dairying
Department of Fisheries

Krishi Bhavan, New Delhi
Dated the 23rd June, 2020

ORDER

The Government of India has approved the "Pradhan Mantri Matsya Sampada Yojana (PMMSY) - A scheme to bring about Blue Revolution through sustainable and responsible development of fisheries sector in India" at a total investment of Rs. 20050 crores for its implementation for a period of 5(five) years from FY 2020-21 to FY 2024-25 in all the States and Union Territories (UTs).

PMMSY *inter-alia* provides that Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying shall constitute a Project Monitoring and Evaluation Unit (PMEU) comprising of domain experts and headed by the Joint Secretary, Department of Fisheries to monitor and evaluate the implementation of the PMMSY periodically. PMMSY also provides that the Central Apex Committee (CAC) may entrust any other responsibilities to PMEU. The recommendations of Central Apex Committee of PMMSY in its first meeting held on 22/6/2020 have been suitably incorporated.

2. Accordingly, a Project Monitoring and Evaluation Unit (PMEU) comprising of domain experts and headed by the Joint Secretary DoF is hereby constituted with the following composition and Terms of References:

2.1 Composition

(i)	Joint Secretary, Department of Fisheries responsible for PMMSY Policy matters	Chairperson
(ii)	Joint Secretary, Inland Fisheries, Department of Fisheries	Co-Chair
(iii)	DDG, Fisheries ICAR (Domain Experts)	Member
(iv)	ADGs Inland & Marine, ICAR (Domain Experts)	Members
(iv)	Fisheries Development Commissioner, DoF	Member
(v)	Directors, Fisheries Statistics & Fisheries Economics	Members
(vi)	An officer of the rank of Director or equivalent in-charge of PMMSY, Department of Fisheries, Government of India	Member Secretary

2.2 Terms of References (ToRs)

2.2.1 The Roles and Responsibilities of PMEU are

- d) To undertake periodic monitoring and evaluation of implementation of PMMSY.
- e) To undertake monitoring of activities/projects implemented under the Central Sector Scheme Components of the PMMSY including that of National Fisheries Development Board (NFDB).
- f) To perform the responsibilities of Coordination of PMMSY activities at National level.
- g) To perform the role of supervision, monitoring and review functioning and performance of State Program Units, District Program Units and arrangements at Sub-District level or any entity/experts/consultants including project management consultants/advisories and others what so ever engaged under PMMSY.
- h) To perform the responsibilities as one of the project appraising entities for appraisal of projects/proposals received under Central Sector Scheme Component of PMMSY to any other entities as may be decided by DoF.
- i) Perform any other responsibilities as entrusted by the Central Apex Committee of PMMSY from time to time.

2.2.3 In fulfilling its aforesaid Roles and Responsibilities, the PMEU would

- g) Coordinating and preparation of the National Fisheries Annual Action Plan and seeking approvals of CAC and Department of Fisheries
- h) Undertake examination of the Annual Action plan of NFDB, Detailed Project Reports (DPRs) and/or Self-Contained Proposals (SCPs) received from EIAs under the Central Sector Scheme Component of the PMMSY from technical, economic and financial point of view and ensure compliance with approved Operational Guidelines, unit costs, cost norms and any other terms and conditions of PMMSY in accordance with the paragraph - 2.2.1 (e) above of this Order.

- i) Prepare comprehensive appraisal notes after examination and scrutiny of the proposals and make recommendations to Department of Fisheries (DoF) Government of India for posing the same to the CAC of PMMSY.
- j) To coordinate with NFDB/States/UTs/Fisheries Institutes etc. to develop appraisal formats and templates for PMMSY as per the framework and Operational Guidelines of PMMSY from time to time.
- k) To coordinate with NFDB/States/UTs/Fisheries Institutes etc. develop monitoring and evaluation formats for PMMSY as per the framework and Operational Guidelines of PMMSY from time to time.
- l) Make recommendations to the Department of Fisheries (DoF), Government of India from time to time for continuous improvement of monitoring and evaluation of implementation of the PMMSY.

2.2.3 The Chairperson of the PMEU may invite the representatives of National Cooperative Development Corporation (NCDC)/NABARD to PMEU meetings as Special invitee(s) as and when considered essential. The Chairperson of the PMEU may also invite additional Domain Experts as and when required. The invited Domain Experts would form part of that PMEU sitting for which he/she has been invited for.

2.2.4 The PMEU shall invite the concerned NFDB/EIA for the PMEU meeting when their Annual Action Plans, DPRs and SCPs are taken up for Appraisal/Examianiton

2.2.5 TA/DA of the official members for attending the meetings will be met by their respective Departments/Organisations. TA/DA in respect of Special invitees/Domain Experts will be met by PEMU from funds released/earmarked under Administrative Expenses of PMMSY.

2.2.6 This issue with the approval of Competent Authority.

(Kham Khan Suan)
Under Secretary to the Government of India
(Tel No. 011-23386099)

Distribution:

- (i) All members of the PMEU
- (ii) All the State Governments, UTs and other concerned organisations
- (iii) PS to Hon'ble Minister of Fisheries, Animal Husbandry and Dairying, Government of India.

- (iv) PS to Hon'ble MOS for Ministry of Fisheries, Animal Husbandry and Dairying, Government of India.
- (v) Sr. PPS to Secretary, DoF
- (vi) PS to Joint Secretary (MF)/Joint Secretary(IF)
- (vii) Guard file

ANNEXURE VII

No. J-117012-3/2020-Fy
Government of India
Ministry of Fisheries, Animal Husbandry and Dairying
Department of Fisheries

Krishi Bhavan, New Delhi
Dated the 23rd June, 2020

ORDER

The Government of India has approved the "Pradhan Mantri Matsya Sampada Yojana (PMMSY) - A scheme to bring about Blue Revolution through sustainable and responsible development of fisheries sector in India" at a total investment of Rs. 20050 crores for its implementation for a period of 5(five) years from FY 2020-21 to FY 2024-25 in all the States and Union Territories (UTs).

PMMSY *inter-alia* provides that Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying shall constitute a Project Monitoring Unit (PMU) comprising of domain experts and headed by the Chief Executive, National Fisheries Development Board (NFDB) to monitor the implementation of the PMMSY.

2. Accordingly, a Project Monitoring Unit (PMU) comprising of domain experts and headed by the Chief Executive NFDB is hereby constituted with the following composition and Terms of References:

2.1 Composition

(i)	Chief Executive, National Fisheries Development Board (NFDB)	Chairperson
(ii)	Executive Director (Tech), NFDB	Member
(iii)	Executive Director (Infrastructure), NFDB	Member
(iv)	*Domain Experts (two)	Members
(v)	Senior official of NFDB to be nominated by CE, NFDB	Member Secretary

* Refer para 2.2.3 of this order

2.2 Terms of References (ToRs)

2.2.1 The Roles and Responsibilities of PMU are

- j) To undertake regular monitoring of implementation of Centrally Sponsored Scheme of PMMSY.

- k) To undertake monitoring of activities/projects implemented under Central Sector Scheme Components of the PMMSY.
- l) Perform any other responsibilities as entrusted by the Department of Fisheries, Government of India from time to time.

2.2.4 In fulfilling its aforesaid Roles and Responsibilities, the PMU would

- m) Prepare comprehensive monitoring templates based on best practices being followed by other Ministries of GoI/States/UTs
- n) Develop monitoring formats and templates as and when required for Centrally Sponsored Scheme as well as Central Sector Scheme Component of the PMMSY as per the framework and Operational Guidelines of PMMSY.
- o) Make recommendations to the Department of Fisheries (DoF), Government of India and States/UTs from time-to-time for continuous improvement of monitoring of implementation of the PMMSY.

2.2.3 The Chairperson of the PMU may invite the representatives of National Cooperative Development Corporation (NCDC)/NABARD to PMU meetings as Special invitee(s) as and when considered essential. The Chairperson of the PMU may also invite additional Domain Experts as and when required from the approved panel of Domain expert panels proposed to be created in NFDB with approval of DoF for PMMSY. The invited Domain Experts would form part of that PMU sitting for which he/she has been invited for.

2.2.4 TA/DA of the official members for attending the meetings will be met by their respective Departments/Organisations. However, the TA/DA in respect of Special invitees/Domain Experts will be met by NFDB from funds released/earmarked under Administrative Expenses of PMMSY.

2.2.5 This issue with the approval of Competent Authority.

(Kham Khan Suan)
Under Secretary to the Government of India
(Tel No. 011-23386099)

Distribution:

- (i) All members of the PMU

- (ii) All the State Governments, UTs and other concerned organizations
- (iii) PS to Hon'ble Minister of Fisheries, Animal Husbandry and Dairying, Government of India.
- (iv) PS to Hon'ble MOS for Ministry of Fisheries, Animal Husbandry and Dairying, Government of India.
- (v) Sr. PPS to Secretary, DoF
- (vi) PS to Joint Secretary (MF)/Joint Secretary(IF)
- (vii) Guard file

ANNEXURE –VIII

No. J-117012-2/2020-Fy
Government of India
Ministry of Fisheries, Animal Husbandry and Dairying
Department of Fisheries

I. State Level and Union Territory Level Approval and Monitoring Committee (SLAMC) for PMMSY

The Government of India has approved the “Pradhan Mantri Matsya Sampada Yojana (PMMSY) - A scheme to bring about Blue Revolution through sustainable and responsible development of fisheries sector in India” at a total investment of Rs. 20050 crores for its implementation for a period of 5(five) years from FY 2020-21 to FY 2024-25 in all the States and Union Territories(UTs). PMMSY *inter-alia* envisages constitution of a State Level Approval and Monitoring Committee (SLAMC) in each State for smooth implementation of the PMMSY at the State Level including its supervision and monitoring. Similar arrangement is also envisaged at Union Territory Level under PMMSY.

A. State Level Approval and Monitoring Committee (SLAMC) for PMMSY

1. The State Level Approval and Monitoring Committee (SLAMC) under the Chairpersonship of Secretary In-charge of Fisheries, State Fisheries Department is hereby constituted with the following composition and Terms of References:

1.1 Composition

1	Secretary, In-charge of Fisheries of the State	Chairperson
2	Secretary (Agriculture)	Member
3	Secretary(Irrigation/Water Resources)	Member
4	Secretary (Panchayati Raj and Rural Development)	Member
5	One Representative of leading academic/research institution in fisheries sector at State level(to be decided by Secretary, In-charge of Fisheries of the State)	Members
6	Convener Bank of State Level Bankers Committee (SLBC)	Member
7	Director/Commissioner of Fisheries	Member – Secretary

1.2 Roles and Responsibilities of State Level Approval and Monitoring Committee (SLAMC)

(a) The State Level Approval and Monitoring Committee (SLAMC) will be responsible for consolidation of District Annual Fisheries Plans and preparation and approval of the State Annual Fisheries Plan and recommending to the

Department of Fisheries, Government of India/National Fisheries Development Board (NFDB), Hyderabad.

- (b) The SLAMC will be responsible for implementation of the PMMSY at the State Level including its supervision and monitoring.
- (c) The SLAMC would be assisted by the State Programme Unit (SPU) for PMMSY.
- (d) The SLAMC will undertake convergence of activities under PMMSY with activities/interventions other Schemes and programmes at the State level.
- (e) The SLAMC will facilitate fostering of linkages with Banks/Financial Institutions for smooth implementation of beneficiary orientated Sub-components/activities under PMMSY.

1.3 The Chairperson may nominate additional state level officials as felt necessary.

1.4 The Chairperson may also nominate a maximum of one or two non-official eminent persons of the state preferably having knowledge of or associated with fisheries sector.

2. The aforesaid roles and responsibilities of SLAMC are for sub-components/activities under the Centrally Sponsored Scheme Component of PMMSY.

3. The State Government in Fisheries Department will issue necessary notification of constitution of SLAMC, based on the above.

B. Union Territory Level Approval and Monitoring Committee (UTLAMC) for PMMSY

1. The Union Territory Level Approval and Monitoring Committee (UTLAMC) under the Chairpersonship of Secretary In-charge of Fisheries of the Union Territory is hereby constituted with the following composition and Terms of References:

1.1 Composition of the Union Territory Level Approval and Monitoring Committee (UTLAMC) for PMMSY

1	Secretary, In-charge of Fisheries of the Union Territory	Chairperson
2	Secretary (Agriculture)	Member
3	Secretary(Irrigation, Water Resources)	Member
4	Secretary (Panchayati Raj and Rural Development)	Member
5	Representatives of Fisheries Colleges of Central/State Agriculture/Fisheries Universities or Fisheries Institutions/Representatives of ICAR Institutes	Members
6	Convener Bank of Union Territory Level Committee	Member
7	Director of Fisheries or In-charge of Fisheries Directorate in Union Territory	Member – Secretary

1.2 Roles and Responsibilities of Union Territory Level Approval and Monitoring Committee (UTLAMC)

- (a) The Union Territory Level Approval and Monitoring Committee (UTLAMC) will be responsible for preparation and approval of the Annual Union Territory Fisheries Plan and recommending to the Department of Fisheries, Government of India/National Fisheries Development Board (NFDB), Hyderabad.
- (b) The UTLAMC will be responsible for implementation of the PMMSY at the Union Territory Level including its supervision and monitoring.
- (c) The UTLAMC would be assisted by the Union Territory Programme Unit (UTPU) for PMMSY.
- (d) The UTLAMC will undertake convergence of activities under PMMSY with activities/interventions other Schemes and programmes at the Union Territory level.
- (e) The UTLAMC will facilitate fostering bank linkages to the beneficiaries under PMMSY.

1.3 The Chairperson may nominate additional Union Territory level officials as felt necessary.

1.4 The Chairperson may also nominate a maximum of one or two non-official eminent persons of the Union Territory preferably having knowledge of or associated with fisheries sector.

2. The aforesaid roles and responsibilities of UTLAMC are for sub-components/activities under the Centrally Sponsored Scheme Component of PMMSY

3. The Union Territory Administration in Fisheries Department will issue necessary notification of constitution of UTLAMC, based on the above.

II. District Level Committee (DLC) for PMMSY

The Government of India has approved the "Pradhan Mantri Matsya Sampada Yojana (PMMSY) - A scheme to bring about Blue Revolution through sustainable and responsible development of fisheries sector in India" at a total investment of Rs. 20050 crores for its implementation for a period of 5(five) years from FY 2020-21 to FY 2024-25 in all the States and Union Territories (UTs). PMMSY *inter-alia* envisages constitution of a District Level Committee (DLC) normally headed by the District Collector/Deputy Commissioner of District for implementation of the PMMSY at the District Level including its supervision and monitoring.

1. Accordingly, District Level Committee (DLC) under the Chairpersonship of District Collector/Deputy Commissioner of District is hereby constituted with the following composition and Terms of References:

1.1 Composition of the District Level Committee

1	District Collector/Deputy Commissioner of District	Chairperson
2	CEO, Zilla Parishad	Member
3	District Heads of Line Departments such as Agriculture, Water Resources, Irrigation, DRDA,ITDA etc.	Members
4	One progressive fisher or fish farmer of the District (Traditional fisher or Aquaculture farmer) to be nominated by Chairperson of DLC	Members
5	District Lead Bank Manager	Member
6	District Head of Krishi Vigyan Kendra (KVK)	Member
7	One Representative from Fisheries College or Fisheries Research Institute at the District level (to be nominated by Chairperson of DLC)	Member
8	District Head of Fisheries	Member - Secretary

1.2 The Chairperson may nominate additional district officials as felt necessary.

1.3 The Chairperson may also nominate a maximum of 2 non-official eminent persons of the district preferably having knowledge of or associated with fisheries sector.

2.0 Roles and Responsibilities of District Level Committee (DLC)

- a) The DLC will be responsible for preparation and approval of the Annual District Fisheries Plan and recommending to the State Level Approval and Monitoring Committee (SLAMC).
- b) The DLC will be responsible for implementation of the PMMSY at the District Level including its supervision and monitoring.
- c) The DLC will be responsible for approval of beneficiaries for Beneficiaries oriented individual/group activities of PMMSY.
- d) The DLC would be assisted by the District Programme Unit (DPU) in such districts wherever created by Government of India, Department of Fisheries.
- e) The DLC will undertake convergence of activities under PMMSY with activities/interventions other Schemes and programmes at the District level.
- f) The DLC will facilitate fostering of linkages with Banks/Financial Institutions to the beneficiaries under PMMSY.

3. The aforesaid roles and responsibilities of DLC are for sub-components/activities under the Centrally Sponsored Scheme Component of PMMSY.

4. The State Government in Fisheries Department will issue necessary notification of constitution of DLC, based on the above.

ANNEXURE –IX

Table showing Details of contractual manpower to be engaged by States/UTs for Operating State Programme Unit (SPU)/Union Territory Programme Unit (UTPU), District Programme Unit (DPU) and Institutional Arrangements at Sub-District Level including monthly office expenses under PMMSY

(Department of Fisheries (DoF), Government of India (GoI) will issue separate instructions with regard to the number of contractual personnel to be engaged in each State/UT for SPU/UTPU and DPU, the number of districts where the DPU will be established, the date of commencement of the engagement process, job description of the personnel, etc.).

SI No .	Designation	No of positions	Consolidated Remuneration	Qualifications
I	II	III	IV	V
State Programme Unit (SPU)/Union Territory Programme Unit (UTPU)				
1.	Contractual manpower			
(i)	State Programme Manager (SPM)/ Union Territory Programme Manager (UT PM)	1(one)	Up to Rs 70,000/- per month (Rs Seventy Thousand only)	<p>Essential: Masters in Fisheries Science/M.Sc in Zoology/M.Sc in Marine Sciences/M.Sc in Marine Biology/Masters in Fisheries Economics/Industrial fisheries/Fisheries Business Management.</p> <p>Desirable: (i) Doctorate in the above disciplines. (ii) A degree in Management. Preference will be given for Agri Business Management (i) Knowledge of Information Technology (IT)/Computer Applications</p> <p>Experience: a) Minimum 7 years domain experience in any area of Fisheries and Aquaculture in respect of State Program Manager. b) Minimum 5 years domain experience in any area of Fisheries and Aquaculture in respect of Deputy State Program Manager.</p> <p>Age : Not more than 45 years</p>
(ii)	* Deputy State Programme Manager	1(one)	Up to Rs 55000/- per month	

* Deputy State Programme Manager will be engaged in about 12 large states with high fisheries potential if needed only from second year of implementation of PMMSY based on assessed needs and response from states/UTs. This shall be done only with prior approval of Department of Fisheries, Government of India				
(iii)	State Data cum MIS Manager (Only for States)**	1(one)	Up to Rs 50000/- per month	<p>Essential: a) M.Sc/MA in Statistics/Mathematics/Masters in Fisheries Economics</p> <p>b) Minimum a Diploma in Information Technology(IT)/Computer Applications</p> <p>Experience: a) Minimum 5 years domain experience in the area of large scale data processing and management</p> <p>Age: Not more than 45 years</p>
** Engagement of Data cum MIS Manager for Union Territories is not envisaged.				
(iv)	Multi Tasking Staff (MTS)	1 (one)	Up to Rs 15000/- per month	<p>Essential: Class – X</p> <p>Age: Not more than 35 years</p>
2.	Office Expenses for SPU/UTPU	lump sum	Rs 25000/- per month	---
District Programme Unit (DPU)				
(In select Districts to be communicated by Dept of Fisheries, Government of India)				
1.	Contractual manpower			
(i)	District Program Manager (DPM)	One (1)	Up to Rs. 45000/- per month	<p>Essential: a) Masters in Fisheries Science /M.Sc in Zoology/M.Sc in Marine Sciences/M.Sc in Marine Biology/Masters in Fisheries Economics/Industrial Fisheries/Fisheries Business Management.</p> <p>b) Minimum a Diploma in Information Technology (IT)/Computer Applications.</p> <p>Desirable: A degree in Management. Preference will be given for Agri Business Management.</p>

				Age : Not more than 35 years Experience : Minimum 3 years domain experience in any area of Fisheries and Aquaculture
2.	Office Expenses for DPU	Lump sum	Rs. 10000/- per month	
<p>Institutional Arrangements at Sub-District Level [Sub-District Program Unit (SDPU)] Establishment of institutional arrangements/structures under PMMSY at sub-district level will be considered by Department of Fisheries (DoF), Government of India only from second year of the implementation of the PMMSY in some potential districts as per the needs assessed by Department of Fisheries, Government of India including initiatives taken up by the States/UTs for fisheries development both under PMMSY or any other Schemes of Center/States/UTs in these districts. Further, the Institutional Arrangements at Sub-District Level would be called as Sub-District Program Unit (SDPU).</p>				
1.	Contractual manpower			
(i)	Sub-District Program Manager (SDPM)	1(one)	Rs 35000/- per month	<p>Essential: a) Bachelor in Fisheries Science /M.Sc in Zoology/M.Sc in Marine Sciences/ M.Sc in Marine Biology.</p> <p>b) Knowledge of IT/Computer Applications</p> <p>Age : Not more than 35 years</p> <p>Experience : Minimum 2 years domain experience in any area of Fisheries and Aquaculture</p>
2	Office Expenses for SDPU	lump sum	Rs 5000/- Per month	

ANNEXURE-X**(For State /UT implemented projects)**

Government of.....
 Department of Fisheries

No. dated

CERTIFICATE

This is to certify that the land proposed for construction/development of.....
 (name of the intended facility) at(location) admeasuring in
 survey/patta/plot no..... is free from encroachments and encumbrances.

The said land is a Government earmarked/owned/purchased/ taken on lease
 for a period of years for construction/development of

It is further certified that the above said land is in the possession of
 (implementing Agency).

Secretary to Government (Fisheries)
 (With official seal)

Place :.....

Date:.....

ANNEXURE -XI**(For the project other than State /UT implemented projects)**

Name of the agency (or official letter pad)

No. dated**CERTIFICATE**

This is to certify that the land (or) water body proposed for construction/development of..... (name of the intended facility) at(location) admeasuring in survey/patta/plot no..... is free from encroachments and encumbrances.

*The said land is owned (or) taken on lease for a periodfrom the date of submission of Detailed Project Report/Self Contained Proposal under PMMSY (or) allotted by government for construction/development of

**The said Water body is leased/permitted by government for a period of for construction/development of

*in case of land

** in case of water body

Authorized signatory
(With official seal if any)

Place :.....

Date:.....

ANNEXURE-XII-A**GFR 12 – C**

[(See Rule 239)]

FORM OF UTILIZATION CERTIFICATE (FOR STATE GOVERNMENTS)**(Where expenditure incurred by Govt. bodies only)**

Sl. No	Letter No. and date	Amount	Certified that out of Rs. of grants sanctioned during the year in favour of under the Ministry/Department Letter No. given in the margin and Rs on account of unspent balance of the previous year, a sum of Rs..... has been utilized for the propose of for which it was sanctioned and that the balance of Rs remaining unutilized at the end of the year has been surrendered to Government (vide No. dated .....)/will be adjusted towards the grants payable during the next year
	Total		

2. Certified that I have satisfied myself that the conditions on which the grants-in-aid was sanctioned have been duly fulfilled/ are being fulfilled and that I have exercised the following checks to see that the money was actually utilized for the propose for which it was sanctioned.

Kinds of checks exercised

- 1.
- 2.
- 3.
- 4.
- 5.

Signature.....

Designation.....

Date.....

PS: The UC shall disclose separately the actual expenditure incurred and loans and advances given to suppliers of stores and assets, to construction agencies and like in accordance with scheme guidelines and in furtherance to the scheme objectives, which do not constitute expenditure at the stage. These shall be treated as utilized grants but allowed to be carried forward.

ANNEXURE-XII-B**GFR 12 – A**

[(See Rule 238 (1)]

**FORM OF UTILIZATION CERTIFICATE
FOR AUTONOMOUS BODIES OF THE GRANTEE ORGANIZATION**

UTILIZATION CERTIFICATE FOR THE YEAR..... in respect
of recurring/non-recurring
GRANTS-IN-AID/SALARIES/CREATION OF CAPITAL ASSETS

1. Name of the Scheme.....
2. Whether recurring or non-recurring grants.....
3. Grants position at the beginning of the Financial year
 - (i) Cash inHand/Bank
 - (ii) Unadjusted advances
 - (iii) Total
4. Details of grants received, expenditure incurred and closing balances: (Actuals)

Unspent Balances of Grants received years [figure as at Sl. No. 3 (iii)]	Interest Earned thereon	Interest deposited back to the Government	Grant received during the year			Total Available funds (1+2-3+4)	Expenditure incurred	Closing Balances (5-6)
			Sanction No. (i)	Date (ii)	Amount (iii)			
1	2	3	4			5	6	7

Component wise utilization of grants:

Grant-in-aid– General	Grant-in-aid– Salary	Grant-in-aid–creation of capital assets	Total

Details of grants position at the end of the year

- (i) Cash inHand/Bank
- (ii) Unadjusted Advances
- (iii) Total

Certified that I have satisfied myself that the conditions on which grants were sanctioned have been duly fulfilled/are being fulfilled and that I have exercised following checks to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained as prescribed in the relevant Act/Rules/Standing instructions (mention the Act/Rules) and have been duly audited by designated auditors. The figures depicted above tally with the audited figures mentioned in financial statements/accounts.
- (ii) There exist internal controls for safeguarding public funds/assets, watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of relevant Act/Rules/standing instructions and scheme guidelines.
- (iv) The responsibilities among the key functionaries for execution of the scheme have been assigned in clear terms and are not general in nature.
- (v) The benefits were extended to the intended beneficiaries and only such areas/districts were covered where the scheme was intended to operate.
- (vi) The expenditure on various components of the scheme was in the proportions authorized as per the scheme guidelines and terms and conditions of the grants-in-aid.
- (vii) It has been ensured that the physical and financial performance under.....(name of the scheme) has been according to the requirements, as prescribed in the guidelines issued by Govt. of India and the performance/targets achieved statement for the year to which the utilization of the fund resulted in outcomes given at Annexure – I duly enclosed.
- (viii) The utilization of the fund resulted in outcomes given at Annexure – II duly enclosed (to be formulated by the Ministry/Department concerned as per their requirements/specifications.)
- (ix) Details of various schemes executed by the agency through grants-in-aid received from the same Ministry or from other Ministries is enclosed at Annexure –II (to be formulated by the Ministry/Department concerned as per their requirements/specifications).

Date
Place

Signature

Name

Chief Finance officer
(Head of Finance)

Signature

Name.....

Head of the organization

Most Immediate

F. No. 11015/2/2019-M-II/397-438

Government of India

Ministry of Agriculture & Farmers' Welfare

Department of Agriculture, Cooperation & Farmers' Welfare
(Agricultural Marketing Division)

Shastri Bhawan, New Delhi

Dated: 08.03.2019

To,
Chief Secretaries of all States/UTs
(As per list attached)

Subject: Scheme Guidelines of Agri-Market Infrastructure Fund (AMIF) for Development and Up-gradation of Agricultural Marketing Infrastructure in Gramin Agricultural Markets (GrAMs) and APMC Markets - reg.

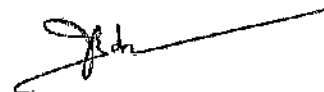
Madam/Sir,

It is to invite your kind attention to the announcement in the Union Budget, 2018-19 to develop and upgrade existing 22,000 rural Haats into Gramin Agricultural Markets (GrAMs). In these rural haats physical infrastructure is to be strengthened by MGNREGS and other Government Schemes. Marketing Infrastructure in these rural haats is to be strengthened through Agri-Market Infrastructure Fund (AMIF).

2. The Government of India has approved setting up of Agri-Market Infrastructure Fund (AMIF) with a corpus of Rs. 2000 crore with NABARD for development and upgradation of marketing infrastructure in 10,000 GrAMs and 585 APMCs. States may access AMIF for development and upgradation of marketing infrastructure in rural haats.

3. Development of existing village haats into GrAMs with modern marketing and value addition facilities will substantially enhance the market accessibility of farmers including SC/ST and women farmers near to their farm gate and will also facilitate remunerative prices by enabling them to sell their produce directly to consumers and bulk consumers.

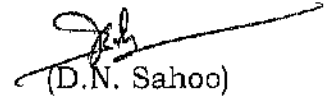
4. The Government has formulated Scheme Guidelines of Agri-Market Infrastructure Fund (AMIF) for Development and Up-gradation of Agricultural Marketing Infrastructure in Gramin Agricultural Markets (GrAMs) and APMC Markets.



2/-

5. A copy of the aforesaid scheme guidelines is enclosed herewith with request to kindly forward the same to the concerned Departments of the State/UT (Agriculture/ Horticulture/ Marketing/ Cooperation/ Rural Development/ Panchyati Raj) for taking necessary action in this respect.
6. The Scheme will take effect from the date of issue i.e., 08.03.2019.

Yours faithfully,



(D.N. Sahoo)
Deputy Secretary to the Government of India
Tel. No. 011-23388861

Enclosure: As above.

Copy to:

1. Secretary, Ministry of Rural Development, Krishi Bhawan, New Delhi.
2. Secretary, Ministry of Panchyati Raj, Krishi Bhawan, New Delhi.
3. Secretary, Ministry of Tribal Affairs, Shastri Bhawan, New Delhi
4. Secretary, Department of Financial Services, New Delhi.
5. Chairman, NABARD
6. Joint AMA, DMI, Faridabad.



**Agri-Market Infrastructure Fund (AMIF)
for Development and Up-gradation of Agricultural Marketing
Infrastructure in Gramin Agricultural Markets (GrAMs) and
APMC Markets**

Scheme Guidelines

**Department of Agriculture , Cooperation & Farmers' Welfare
Ministry of Agriculture & Farmers' Welfare
Government of India**

Index

S.No.	Particulars	Page No.
1.	Introduction	3-4
2.	Rationale of the Scheme	4-5
3.	Objectives of Scheme	5
4.	Fund Corpus and Cost of Fund	5-6
5.	Implementation Period of Scheme	6
6.	Financial Implication	6
7.	Eligible Projects	6-7
8.	Eligible Beneficiaries	7-8
9.	Priority and Investment Limits	8
10.	Implementation Mechanism and Routing of Proposal/DPR	8-10
11.	Duties and Function of Screening Committee	10
12.	Utilisation of Loan	10-11
13.	Payment of Interest Subvention and Repayment of Loan	11
14.	Monitoring & Evaluation of the Scheme	11-12
15.	Project Completion Report/Certificate	12
16.	Sanction and Recovery of loan	12
17.	Memorandum of Agreement	13
18.	Annexure – I to IV	14-19

Scheme Guidelines of Agri-Market Infrastructure Fund (AMIF) for Development and Up-gradation of Agricultural Marketing Infrastructure in Gramin Agricultural Markets (GrAMs) and APMC Markets.

1.0 Introduction

1.1 Farmers either sell their produce to the aggregators/ local traders at prices dictated by them or sell in the nearby rural *haats* or are generally required to bring their produce to wholesale markets, which are regulated under the provisions of respective States' Agricultural Produce Marketing (Regulation) Acts/Rules , popularly called Agricultural Produce Market Committee (APMC) Act/Rules . As on 31.03.2017, there are 6630 regulated wholesale markets in the country with an average density of 496 square Km. per market. Expansion of number of wholesale regulated markets may not be feasible being capital intensive and time consuming. In addition to these wholesale markets, there are reportedly 22,941 rural *haats* in the country located nearer to the farm gate. As reported by State Agricultural Marketing Departments/Boards, approximately 11,811 rural *haats* are under Rural Local Bodies i.e Panchayats , approximately 1274 rural *haats* under Agricultural Produce Market Committees (APMCs), cooperatives & other government agencies, while remaining approximately 9856 rural *haats* are under private sectors including individuals , trusts, waqf boards , etc.

1.2 Rural *haats* and Agricultural Produce Market Committee/Regulated Market Committee (APMC/RMC) markets play a crucial economic role for agrarian community in realizing prices for the commodities traded. However, the village *haats*, lacking requisite marketing and supporting infrastructure and facilities, are of paramount importance for farmers in general and for small and marginal farmers including women in particular, for better value realization of their agricultural produce. Many regulated wholesale markets also suffer from the lack of necessary marketing and auxiliary infrastructures. Inaccessibility and inadequate supporting and marketing infrastructure together lead to prevalence of avoidable intermediaries, resulting into low price realization to the producers, more so to the small & marginal ones. Hence, improving the infrastructure of rural *haats* & selected regulated wholesale markets will substantially improve the agri. value chain and will improve the market accessibility & price realisation, reduce wastages and provide opportunity

to the farmers for value addition and processing to make it more marketable and remunerative.

2.0 Rationale of the Scheme

2.1 In order to provide farmers particularly small and marginal ones with proper marketing facilities nearer to farm-gate and improve farmer- market linkages, Government announced in the Union Budget, 2018-19 to develop and upgrade existing approximately 22,000 rural *haats* into Gramin Agricultural Markets (GrAMs). In these GrAMs, physical infrastructure to be strengthened using MGNREGS and other Government Schemes; and an Agri-Market Infrastructure Fund (AMIF) with a corpus of Rs. 2000 crore is also to be set up for developing and upgrading agricultural marketing infrastructure in the 22,000 Gramin Agricultural Markets (GrAMs) and 585 Agriculture Produce Market Committee (APMC) Markets. The GrAMs are to be linked to electronic National Agricultural Market (e-NAM).

2.2 Pursuant to budgetary announcement in 2018-19 and in order to provide market facilities nearer to farm gate to the farmers to directly sell their produce to the consumers and bulk purchasers in the GrAMs and strengthen & modernize the marketing and auxiliary infrastructure/facilities in APMC markets so as to improve its marketing efficiency, this scheme has been formulated.

2.3 Against the announcement in the Union Budget ,2018-19 to develop and upgrade existing 22,000 rural *haats* , a total of 10,000 number of rural *haats* are proposed to be covered under the AMIF during 2018-19 and 2019-20 . The rationality behind proposing 10,000 rural *haats* is that as per information received from State Agricultural Marketing Departments / Boards, there are only 11,811 rural *haats* under control of local bodies i.e Panchayats ; and as per the provision of MGNAREGA , rural *haats* only under control of local bodies can be developed from its fund. Further, out of existing 11,811 rural *haats* , around 1,000 rural *haats* have already been adequately developed by States under various schemes including Agricultural Competitiveness Project of World Bank. As regards proposing 585 APMC markets, it has been considered in sync with budgetary announcement and also to modernize them in terms of infrastructure and logistic support to facilitate

value addition, temporary stocking and movement from dispatch to destination centres in inter-mandi and inter-state trade.

3.0 Objectives of Scheme

3.1 To improve marketing and supporting infrastructure in Gramin Agricultural Markets (GrAMs) as well as in regulated wholesale markets of APMC/RMC by developing marketing infrastructure so as to enhance farmers' market accessibility and reduce post-harvest losses, marketing cost and number of intermediation in supply chain, resulting into increased net income of the farmers. To link GrAMs to e-NAM portal to facilitate the farmers for on-line trade of the aggregated produce and thereby to avail the benefit of transparent online trading on e-NAM platform for a remunerative prices through better price discovery.

3.2 To provide better farmer-consumer interface through development of GrAMs as Farmer-Consumer Direct Markets.

3.3 To facilitate aggregation of the produce in GrAMs and establish forward linkages with the secondary markets of APMCs in hub and spoke mode and also in Public Private Partnership mode as well as to establish linkage with the processors, organized retailers and consumers including that with Mega Food Parks and Integrated Cold Chain etc.

3.4 To modernize the marketing, processing, storage and ancillary infrastructure/logistics including better assaying facilities in 585 regulated APMC markets to enhance marketing efficiency and promote inter-mandi and inter-State trade transactions by developing adequate logistics.

4.0 Fund Corpus and Cost of Fund

4.1 National Bank for Agriculture and Rural Development (NABARD) will set up an initial Corpus Fund of Rs.2000 crore as Agri-Market Infrastructure Fund (AMIF) through market borrowings at the prevalent rate of interest (now @8.5%). The aforesaid corpus of Rs. 2,000 crore will be developed by NABARD in two years during 2018-19 and 2019-20, however, NABARD will be free to apply its own procedure to develop the corpus.

4.2 The cost of fund would include the cost of borrowing by NABARD from market and NABARD's margin of 0.6%. The margin of 0.6 % p.a. will be added to current market cost of borrowing by NABARD towards covering processing, administrative, overheads, risk cost etc The cost of fund will be computed by NABARD through its established procedure.

4.3 The rate of interest on loan on each occasion shall be 3 % below the corresponding cost of fund. DAC&FW will provide an interest subvention of 3.0 % to enable NABARD to advance loans to State Governments/UT Administrations at concessional rate of interest .

5.0 Implementation Period of Scheme

5.1 The Scheme will be operational from 2018-19 to 2025-26 which includes moratorium period of 2 years. The proposals received from States/ Union Territories and duly approved/sanctioned upto 31.03.2020 shall be eligible for assistance under the scheme.

6.0 Financial Implication

6.1 The loans at the applicable rate will be extended by NABARD to the State Government / UT administration during the remaining period of 14th Finance Commission i.e. 2018-19 and 2019-20 with an allocation of Rs. 12.00 crore and Rs. 1988.00 crore respectively. Based on demand and other factors, the amount of loan disbursement to the State Governments / UT administrations may *inter se* vary. Total expected outgo in the form of interest subvention for the Government of India is estimated to be Rs.240 crore over the scheme period starting from 2018-19 to 2025-26.

7.0 Eligible Projects

7.1 States/ UTs will consider those rural *haats* for assistance under the Scheme wherein basic and supporting infrastructure under MGNREGS have either already been developed or at any stage of development. Those rural *haats* , with adequate basic and supporting infrastructure requiring no further need of development from

MGNREGS , may also be considered for assistance. Justification in this respect may be given either by the concerned official of MGNREGS at district level or designated nodal officer of the State/UT. A list of infrastructure /facilities prescribed under MGNREGS is at Annexure-I, which is subject to modification from time to time.

7.2 In addition to incentivizing development of marketing infrastructure in GrAMs and strengthening & modernizing marketing and auxiliary infrastructure/facilities in APMC markets under the Scheme , States /UTs, through own resources under special and innovative initiatives, may also further strengthen and improve the physical infrastructure

7.3 State Governments / UT Administrations, while preparing the Detailed Project Report (DPR)/Proposal , may prioritize those rural *haats* and APMC markets located in aspirational district(s) and also those located in notified tribal areas.

7.4 The size and dimensions of the marketing and support infrastructure may be based on the size/type of markets along with requirements therefor. Cost norms for civil structure will be based on the estimates of civil / electrical as per unit cost rate followed by respective State/UT . As regards marketing infrastructure, the unit cost norm for any component of infrastructure may be followed from the unit cost norm existing in respective State; and in the absence of such norms, Central Government cost norm will be applicable . However, for integrated market infrastructure projects and innovative marketing infrastructure component, for which no norms exist, actual cost may be taken for formulating cost estimates. No capacity ceiling is prescribed to give flexibility to state/UT to promote state of the art value chain projects involving APMCs & GrAMs in cluster mode.

8.0 Eligible Beneficiaries

8.1 The fund in the form of loan is to be accessed by the State Government / UT Administration not by the individual beneficiaries (Panchayats, State Government Departments , Marketing Boards, APMCs, Co-operative, other State agencies) as per the set procedure and guidelines in this respect applicable in NABARD.

8.1.1 For GrAMs, as loan will be advanced to State Governments/ UT Administrations, therefore, the direct beneficiary will be State Government/UT

Administration . State Government /UT Administration through its identified institutional mechanism or otherwise will transfer the fund to the real beneficiary of Panchayats for assistance to develop marketing infrastructure in Gramin Agricultural Markets (GrAMs). State Government /UT Administration can also transfer the fund to other State agencies like APMCs and Co-operatives for developing marketing infrastructure in rural *haats* controlled by them into Gramin Agricultural Markets (GrAMs) subject to the condition that such agency (ies) undertake to provide necessary basic and supporting infrastructure/facilities in rural *haats* and also undertake to deregulate such GrAMs from APMC Act reregulation.

8.1.2 For APMCs, as loan will be advanced to State Governments/ UT Administrations, therefore, the direct beneficiary will be State Government/UT Administration. The State Government/ UT Administration through State Agricultural Marketing Departments/ Boards, as the case may be, will transfer the fund to Agricultural Produce Market Committees (APMCs)/ Regulated Market Committees (RMCs) to develop marketing and auxiliary infrastructure/facilities in APMC/RMC markets.

9.0 Priority and Investment Limits

9.1 States/UTs will have full flexibility to identify the type/ size and dimension of the infrastructure with minimum of Rs. 8.00 lakh to maximum of Rs. 25.00 lakh investment per GrAM. In case of APMC market, investment ceiling is Rs. 2.05 crore per market . Investment in GrAMs is to be prioritized with more focus to the GrAMs located in the aspirational districts. However, States/UTs, while submitting DPRs/proposals to DAC&FW, have to ensure that at least 40 % of the total proposed investment should be made towards development of marketing infrastructure in GrAMs.

10.0 Implementation Mechanism and Routing of Proposal/DPR

10.1 State Government/ UT administration will designate a nodal officer in the State/ UT and will also constitute a State Level Sanctioning Committee (SLSC) chaired by aforesaid designated nodal officer and comprising members from line departments like rural development, panchayatiraj, finance, marketing, co-operation, agriculture, horticulture, animal husbandry & fisheries. The SLSC will consider and scrutinize the

DPRs/ proposals received from districts of the State/UT before forwarding compiled proposals/DPRs to the DAC &FW in prescribed pro-forma given at Annexure-II in case of proposal/DPR relating to GrAMs. The proposal/DPR is to be forwarded by the SLSC to DAC&FW in two copies. State Governments/ UT Administration for compilation of the proposals and proper coordination in the districts will identify a District Level Institutional Mechanism, which would forward the compiled proposals/DPR to SLSC. In case of proposals /DPRs relating to APMC markets , respective State Agricultural Marketing Department/Board, as the case may be, will coordinate and compile and forward the proposal to SLSC. In case of proposals relating to APMCs too, the SLSC will forward the compiled proposal/DPR to DAC&FW in two copies in the prescribed pro-forma.

10.2 Designated State Level Nodal Officer will have to ensure that at any point of time investment proposal should not be less than 40% towards GrAMs of the total investment proposed.

10.3 The Screening Committee constituted in the DAC&FW shall consider DPRs/ proposals received from States/UTs . The Screening Committee will scrutinise and recommend the DPRs/ proposals to NABARD for sanction/ release of loan along with the total cost, eligible loan amount to the State/UT.

10.4 Composition of Screening Committee shall be as under:-

- | | | |
|--------|---|-------------------|
| (i) | Additional Secretary (In-charge of Agricultural Marketing)
or as nominated by DAC&FW | -Chairman |
| (ii) | Representative of Deptt. of Financial Services, GOI | -Member |
| (iii) | Chief General Manager of NABARD or its nominee not
below the rank of DGM | -Member |
| (iv) | Representative from Ministry of Rural Development | -Member |
| (v) | Representative from Ministry of Panchyati Raj | -Member |
| (vi) | Advisor Agriculture, NITI Aayog | -Member |
| (vii) | Representative of IFD, DAC&FW | -Member |
| (viii) | Representative of concerned State/UT seeking assistance | -Member |
| (ix) | Director General, NIAM, Jaipur | -Member |
| (x) | Joint Secretary (Mktg.) & AMA | -Member Secretary |

10.5 The Chairman of the Committee may co-opt one additional Member from DMI not below the rank of Deputy Secretary to assist the committee in technical matters related thereto. Chairman may also co-opt any agriculture marketing and finance specialists having well-versed knowledge on the subject.

10.6 DMI will provide secretarial assistance to Screening Committees.

10.7 The NABARD will sanction the DPR/proposal received from DAC&FW by applying the due diligence and release the fund to the respective State Government/ UT Administration (Finance Department) in the manner & procedure applicable in NABARD and in sync with the MoU.

11.0 Duties and Function of Screening Committee

11.1 DAC&FW shall set up a Screening Committee to discharge and perform following duties and functions.

- i) To scrutinize the DPRs/ proposals and recommend the same for sanction by NABARD after applying its due diligence.
- ii) To provide recommendation to the DAC&FW, and also to the NABARD, if need arises, for formulation and changes to the guidelines for implementation of the projects.

12.0 Utilisation of Loan

12.1 The loan amount shall be given to the States /UTs in a perspective manner. The State Government/ UT Administration will ensure that loan is utilized for the purpose (s) it has been taken.

12.2 State Governments / UT Administrations may access loan for developing marketing infrastructure in GrAMs and strengthening & modernizing marketing and auxiliary infrastructure/facilities in APMC. Illustrative lists of eligible marketing infrastructure in GrAMs and marketing and auxiliary infrastructure/facilities in APMC markets are given at **Annexure- III and IV**, respectively. Based on requirements considering varied factors like infrastructure gap, nature of produce , throughput , etc, marketing infrastructure in GrAMs and marketing and auxiliary

infrastructure/facilities in APMC markets can be modified. The list is an indicative only not exhaustive.

13.0 Payment of Interest Subvention and Repayment of Loan

13.1 To keep the borrowing under AMIF attractive for the State Governments/ UT administrations, NABARD shall lend at 3 % lower interest rate than the corresponding cost of funds mobilized by NABARD from market borrowings inclusive of NABARD's margin. The interest subvention amount on claim/application by NABARD shall be quarterly payable to NABARD subject to availability of fund with DAC&FW upon submission of Audited claims. However, DAC&FW will make efforts to coincide interest subvention with the date of repayment of interest by the State Governments/ UT Administration . This cost shall be met from existing budget of sub-scheme of Agricultural Marketing Infrastructure (AMI) under the Scheme of Integrated Scheme of Agriculture Marketing (ISAM) of DAC&FW.

13.2 Borrowings from NABARD shall be paid back in 7 years including moratorium period of 2 years starting from 2018-19 to 2025-26. The year of disbursement shall also be counted for moratorium of 2 years. States/UTs shall repay the loan to NABARD as per the instructions as specified in the terms and conditions of sanction letter and disbursement advice issued by NABARD.

13.3 The NABARD will submit statement of State/UT- wise loan amount released and outstanding loan quarterly basis along with claim/application for interest subvention.

14.0 Monitoring & Evaluation of the Scheme

14.1 Monitoring of individual projects shall primarily be the responsibility of the implementing Agency/Department of the State Government.

14.2 NABARD may undertake monitoring of projects on sample basis.

14.3 Monitoring of implementation of the scheme will be done by the Government of India, through a special monitoring cell, to be set up in Directorate of Marketing and Inspection (DMI), an attached office of DAC&FW. NABARD may submit audited

UCs for Grants-in-aid released by GoI in previous FY and provisional UC for funds released in previous quarter by GoI.

14.4 A third party independent mid- term evaluation of the scheme will be carried out after the end of second year (2019-20) of the Scheme to assess the benefits such as better price realization by farmers due to improvement in the infrastructure of GrAMs and APMC markets from within the Budget of DMI.

15.0 Project Completion Report/Certificate

15.1 Project completion certificate alongwith the project completion report shall be submitted by the implementing Department through Finance Department of the concerned State Government/ UT Administration to DAC& FW through NABARD within three months from the date of completion of project. It shall be duty of NABARD to ensure that such certificate alongwith the completion report is timely received in DAC&FW. The project is to be completed within 16 months from the day of sanction of proposal by NABARD. If reason is justified, grace period for another three months can be granted by DAC&FW on recommendation by NABARD.

16.0 Sanction and Recovery of loan from AMIF

16.1 Loan sanctioned and disbursed by the NABARD to State Government /UT Administration under the scheme shall be recovered in time bound manner from the loanee State/UT Administration. The such recovery of loan shall be in the process and manner as contained in the Memorandum of Agreement and also as per the terms and conditions of loan sanction letter issued by NABARD .

16.2 However in the event of default by any State Government/UT Administration in honouring its repayment obligation with reference to AMIF as per MoU, DAC & FW may consider not to release any further amount to the extent of default to concerned State Government/UT Administration under central share from RKVY or any other scheme of DAC&FW. In addition to this, in case of any default of repayment, any other measure as deemed fit, may be initiated by DAC &FW in consultation with NABARD.

17.0 Memorandum of Agreement

17.1 States/UTs shall sign tripartite Memorandum of Agreement (MoA) with DAC&FW (GoI) and NABARD to ensure effective implementation and periodic repayment of loan and interest to NABARD. The MoA in respect of State Government/UT Administration will be signed by its Finance Department, being the “Nodal Department” for availing the loan under AMIF . The loan under AMIF will be advanced as per the terms and conditions of sanction letter and provisions contained in the aforesaid MoA, which is to be finalized in due course in consultation with NABARD. The operational guidelines for MoA for sanction and release of loan to States/UTs out of AMIF and any modifications thereto shall be read as part and parcel of this Memorandum of Agreement.

List of basic and support Infrastructure for development in Rural *haats* under MGNREGS

S.No.	Infrastructure/ Facilities
1.	Open raised, covered platform
2.	Toilets (Separate for women and Men)
3.	Drinking water facility
4.	Drains
5.	Brick/Stone soling in the moving space
6.	Garbage pits at corner
7.	Office block
8.	Storage (Small size)
9.	Boundary wall/fencing with two gates(incoming and outgoing)
10.	Parking space
11.	Drinking water facility for cattle

Annexure-II

Pro-forma for Proposal/DPR to submit DAC&FW

Name of the State/UT: _____

Name and Designation
with telephone no. and email id of the contact person: _____

Sl. No.	Particulars	Write the applicable
1	2	3
A.	Proposal/DPR relates to GrAM / APMC Markets	GrAM
1.	In case of GrAM, indicate the entity(Panchayat/Cooperative/APMC/other state agency)	
2.	Location of the GrAM (name of village,block/aluka, district)	
3.	Type of GrAM (wholesale/retail/both wholesale & retail)	
4.	Nature of GrAM (agricultural produce market/ horticultural produce market/mixed market/fish market/livestock market / specify, if other)	
5.	Status of adequacy of basic Infrastructure Yes/No If yes, provided- i) under MGNREGS with list of such basic infrastructure ii) under other than MGNREGS along with its source with list of such basic infrastructure If no, please undertake to adequately provide the basic infrastructure	
6.	Details of marketing infrastructure proposed under AMIF	
	Sl. No.	Name of the infrastructure
	Estimated cost (Rs. in	Criteria for considering cost

			lakhs)	
	1.			
	2.			

	Total cost			
7.	Financial contribution of State/UT, if any, over and above AMIF (Rs. in lakhs)			
8.	Potential to integrate with e-NAM portal			
9.	Time line for completion of project			
10.	Whether or not outside the ambit of APMC regulation			
11.	Recommendation/remark of the State Government/ UT Administration			
B.	Proposal/DPR relates to GrAM / APMC Markets			APMC market
1.	Name and address of APMC market with whether Principal Market Yard or Sub-Market Yard			
2.	Commodity specific/ general market If commodity specific, please mention the name of commodity or group of commodities traded alongwith its turnover and total turnover If general market, please mention the name of three major commodities traded along with their turnover and total turnover			
3.	Whether already integrated with e-NAM or not, if not whether any proposal is to integrate?			
4.	Details of marketing and auxiliary infrastructure/ facilities existed. Please provide the list.			
5.	Details of marketing and auxiliary infrastructure/ facilities proposed under AMIF			
6.	Details of marketing infrastructure proposed under AMIF			
	Sl. No.	Name of the infrastructure	Estimated cost	Criteria for

		(Rs. in lakhs)	considering cost
	1.		
	2.		

	Total cost		
7.	Financial contribution of State/UT, if any, over and above AMIF (Rs. in lakhs)		
8.	Time line for completion of project		
9.	Recommendation/remark of the State Government/ UT Administration		

Signature of State Government/UT Administration official with designation
Competent to forward the proposal.

Note: Above pro-forma is to be filled up individual GrAM and APMC market wise separately and also a consolidated summery sheet is to be attached indicating the total fund requirement under AMIF for GrAMs and APMC markets separately in crores along with the percentage thereof. If the proposal is for 2nd time, the summery consolidated summery sheet of previous time is also to be attached.

Annexure III

List of indicative marketing infrastructure eligible for GrAMs under the scheme.

S.No.	Indicative marketing Infrastructure
1.	1. Cleaning, sorting grading, washing, waxing, processing, packaging, pack house as required.
2.	2. Low energy cool chamber / Deep Freezer / Storage facility/Mini Reefer Vans/Solar powered Cold Storage, Freezer etc.
3.	3. IT infrastructure for integrating with e-NAM and for market information including electronic ticker board/ market information announcement system.
4.	4. Electronic weighing scales/normal weighing scales
5.	5. Other Infrastructure such as value additions machines such as Mini Dal Mill / Mini Rice Huller / Mini Millet processing unit/ Mini Oil Expeller/Deshelling/ Decorticator Machines including solar powered ones etc.
6.	6. Bagging and stitching machines and facilities

List of indicative marketing and other supporting Infrastructure

S.No.	Indicative Marketing / and other supporting Infrastructure
1.	Common Auction system and drying platform/drying equipment.
2.	Scientific warehouses including material handling and testing equipment.
3.	Ripening Chamber Cold Storages/ Pack houses/ Refrigeration Deep Freezer/ Reefer vans etc including solar powered and zero energy and with other technological innovations ones.
4.	Cleaning, grading, washing, waxing, packaging and primary processing.
5.	Electronic and normal weighing scale/ weigh bridge.
6.	Computer & IT equipments and connectivity/POS devices for e-trading and market information system
7.	Assaying equipment and assaying Laboratory.
8.	Price display board (Electronic/ Non-electronic) and / or Public announcement system
9.	Mini dal mil/oil mil/ Mini Rice Huller/flour mill/deshelling/ decorticator machine/ mini oil expeller and refining facility/Cotton ginning / Mini millet processing unit and allied facilities/spice making and other value addition machines such as drying machines & required platform etc.
10.	Bagging and Stitching Machines and facilities for packaging

K-11062/01/2017/NRLM(Livelihoods) /354415

Government of India
Ministry of Rural Development
Department of Rural Development
Rural Livelihoods Division

NDCC II, 7th Floor,
Jai Singh Marg, New Delhi-1.
Dated 2nd November, 2020.

To,

The CEOs/SMDs All States/UTs.

Subject:-Joint communiqué between Department of Animal Husbandry and Department of Rural Development.

Madam/Sir.

I am directed to share a joint communiqué signed between Secretary, Department of Animal Husbandry and Department of Rural Development detailing the activities to be carried out as part of implementation at ground level. You are requested to ensure the implementation of the same at ground level.

Enclose:- As above.


(H. R. Meena)

Deputy Secretary to Govt. of India

Government of India
Department of Rural Development
Department of Animal Husbandry and Dairying

Krishi Bhawan, New Delhi
Dated: 19th October, 2020

To,
Chief Secretaries, All states

Subject: Convergence of Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM), MoRD and Department of Animal Husbandry & Dairying (DAHD)

Madam/Sir,

Livestock plays an important role in Indian economy and provides income to almost two-third of rural community. Department of Animal Husbandry (DAHD) plays a significant role in generating gainful employment in the rural sector, particularly among the landless, small and marginal farmers and women by supporting livestock based income opportunities through various schemes. Department of Rural Development (DoRD) through its DAY-NRLM program is working with rural community with focus on women to enhance the livelihoods of each households and engaged in the promotion of livestock based activities as women play the major role in this activity. As both DAHD and NRLM are working towards improving the income opportunities from animal resources, there is a tremendous opportunity for dovetailing and build synergy between programs of the DAHD and the DORD to strengthen this sector by leveraging on the strength of each other.

2. Department of Rural Development (DoRD) under its DAY- NRLM program has reached out to 7.14 crore households and mobilized them into more than 66 lakhs women Self-help groups across country. A large part of these women SHG members are engaged in rearing of cattle, poultry and small ruminants for their livelihoods. There was a serious gap in availability of veterinary services to these women SHG members. To mitigate the problem, DAY-NRLM has developed a total of 26,674 village-based community cadre (*Pashu Sakhi*) across 26 states for providing 24 X 7 animal husbandry services at the door steps. *Pashu Sakhis* are providing services in feed and fodder management, general management, breed management and health management including preventive health care like deworming and vaccination at village level. DAY-NRLM is also promoting FPOs and Producers groups in livestock for improving market access for the produce.

3. Department of Animal Husbandry (DAHD) has launched several schemes to support the livestock sector with the primary objectives to reduce animal mortality, breed improvement, animal productivity, fodder management. Even with a large number of veterinary doctors and paraprofessionals engaged, the task taken up by DAHD is very challenging especially when the positioning of qualified Veterinary doctors is not adequate.

4. Towards these efforts, a MoU was signed by the Secretary, MoRD and Secretary, DAHD, on probable area of cooperation and implementation methodology on 21st march 2017.

5. With this context, a joint communication detailing the plan of activities to be taken up by department of animal husbandry and department of rural department to achieve the overall convergence objective is being sent to states. The activity wise plan of action for each of the Departments are as follows:

5.1 Promotion of vaccination

DAHD has announced few important schemes for animal disease control like

- a. National Animal Disease Control Program (Livestock Health & Disease Control (LH & DC))
- b. PPR Eradication Programme
- c. Classical Swine Fever Control Programme.

These schemes with effective implementation can be extremely useful in reduction in animal mortality thus helping the poor in income enhancement. DAY NRLM with its strong institutional capacity can play an important role in effective implementation by:

- a. Identification of beneficiaries: SRLMs will identify the beneficiaries with the support from the SHGs and Pashu Sakhis for animal vaccination to be taken up by DAHD.
- b. Implementation support for vaccination: As on date DAY-NRLM has developed a total of 26,674 village based community cadre (*Pashu Sakhi*) who are well trained. DAHD may utilize the services of these Pashu Sakhis on payment for animal vaccination and tagging as admissible in the scheme guidelines. SRLM will share details of the Pashu Sakhis to the state DAHD.

5.2 Livestock Artificial Insemination

Under Rashtriya Gokul Mission for breed improvement, extensive Artificial Insemination is being taken up and that require a large number of trained personnel skilled in AI technique. DAHD may utilize the Pashu Sakhi for this purpose with additional training in AI techniques. DAHD can ensure availability of necessary accessories, equipment's and other technical inputs to Pashu Sakhi and also payment the admissible service charges as per the guidelines.

5.3 Promotion of Dairy Activities

The SHGs being organized under DAY-NRLM could also be specifically for dairy activities and these SHGs could be recognized as Village Dairy Societies. State Milk Cooperative Federations could provide training to these SHGs for clean milk production. SHG of NRLM could thus become linked to Milk Unions for getting market access for their produce. Cattle Induction could be included in credit linked scheme of NRLM.

5.4 Provision of assistance for livestock insurance

Many small and marginal animal rearers don't have access to insurance of their animals. As DAHD may in convergence with SRLM strengthen their initiatives for animal insurance. SHGs can be utilized for identifying the beneficiaries and Pashu Sakhi can take up ear tagging with moderate service charges paid to them under National Animal Disease Control Programme.

5.5 Promotion of mother unit, hatchery and parent farm for poultry

DAHD has the sub-Mission on rural poultry entrepreneurship programme through convergence with DAY NRLM this sub mission can be implemented with more effectiveness. SRLMs along with DAHD can identify the entrepreneurs from among the SHG member households. The technical support and subsidy can be provisioned from DAHD and SRLMs can also negotiate for bank linkages because through its strong SG Bank Linkage program. With a strong SHG base, the forward linkage for the entrepreneurs can be assured as many SHG members are involved in poultry activities.

5.6 Promotion of sheep/goat/pig breeders

Sub-mission on sheep and goat improvement and entrepreneurship development is a scheme of DAHD designed to support entrepreneurs to take up sheep and goat breeding activities. SRLM alongwith DAHD can identify the entrepreneurs from among the SHG member households. The technical support and subsidy can be provisioned from DAHD and SRLM can also negotiate for bank linkages. With a strong SHG base, the forward linkages for the entrepreneurs can be assured as many SHG members are involved in such activities. In addition, Pashu Sakhis under NRLM can be trained to carry out AI in goats.

A large number SHG members are engaged in goat and sheep rearing strongly supported by Pashu Sakhis for animal husbandry services. Many Pashu Sakhis have taken up goat breeding activities as an income generating activities in states like Rajasthan, Maharashtra, West Bengal. Being well trained and assured of forward linkages for selling goat kids they have become profitable and sustainable ventures.

DAHD and NRLM may converge to extend this activity to all parts of the country. With technical and financial support from DAHD this can develop a large number of entrepreneurs in goat/sheep breeding.

Sub-mission on piggery breed improvement and entrepreneurship development is a DAHD program and similar approach can be taken up as described above for goat/sheep for pig breeding as well.

5.7 Promotion of feed and fodder:

Sub-mission on feed and fodder is a sub scheme under National Livestock Mission, DAY-NRLM and DAHD in convergence can unleash rural fodder entrepreneurship across the country. The entrepreneurs can ensure availability of green fodder at low cost to farmers to reduce input cost of milk production.

5.8 Identification of beneficiary: SRLMs are already promoting livestock intervention under farm livelihoods across the value chain. SRLM will identify suitable beneficiaries through SHG, PGs, FPO promoted under DAY-NRLM.

5.9 SRLMs may also share the list of villages where these interventions are already in progress for further support through state DAHD.

5.10 Promotion of FPOs under livestock:

DAY-NRLM as part of its value chain initiative is promoting FPOs under Dairy intervention with support of NDDB Dairy Services. SRLMs may share the data of the FPOs with the state DAHD for further supports.

DAY -NRLM is also promoting Producers Groups/FPOs under livestock initiative for goatery, piggery and poultry. The data pertaining to the same may be shared with the DAHD for further supports.

This is being proposed that SRLM and Animal husbandry Department of respective states may hold joint consultations for implementation of aforementioned activities and set targets for each of these schemes. Periodic monitoring of the progress of the convergence initiatives may be taken up at state, district and block level. The convergence plan and the progress may also be shared by the States regularly with DAY-NRLM, Ministry of Rural Development and Ministry of Animal Husbandry & Dairying, Government of India, New Delhi.

Yours faithfully,



(Atul Chaturvedi)
Secretary

Department of Animal Husbandry
Ministry of Fisheries, Animal Husbandry & Dairying



(Nagendra Nath Sinha)
Secretary

Department of Rural Development
Ministry of Rural Development

CC:

The Principal Secretaries (Rural Development & Panchayati Raj) all States
The Principal Secretaries (Animal Husbandry Department) all states



ATAL DULLOO

Joint Secretary

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ग्रामीण विकास मंत्रालय
ग्रामीण विकास विभाग
भारत सरकार
कृषि भवन, नई दिल्ली-110001
Ministry of Rural Development
Deptt. of Rural Development
Government of India
Krishi Bhavan, New Delhi-110001

May 1, 2017

DO No. K-11062/08/2016/NRLM(Livelihoods)

Dear Sir/Madam,

As part of overall development of the target community in rural area, the Department of Rural Development, GoI, has signed MoU with Department of Animal Husbandry, Dairying and Fisheries, Government of India for initiating convergence in the sector of:

1. Fisheries where the aim is to develop synergy between blue revolution and MNREGS for pond development both for community and individuals.
2. Dairy where the aim is to bring about synergy in dairy development with respect to providing employment through milch animals to vulnerable section of the rural population including unemployed youth through schemes such as DEDS, RGM, NLM, NRLM and SAGY.
3. Under National Livestock Mission of DADF, the scope of cooperation lies in productive enhancement, micro level infrastructure development at village level for small ruminants and poultry by converging them with NRLM.
4. Joint skill development with schemes of DDU-GKY and related skill development and extension work of DADF.
5. Joint initiative for fodder development especially in acidic and arid lands and areas of fodder shortage through NLM and NREGS synergy.

In this regard, initiative may please be taken for initiating convergence at state level and below as per the MoU directive.

NB: MoU enclosed

With regards

Yours sincerely,

(Atal Dulloo)

To

ALL State SMD/CEOs to SRLMs

MEMORANDUM OF UNDERSTANDING BETWEEN DEPARTMENT OF ANIMAL
HUSBANDRY, DAIRYING AND FISHERIES AND DEPARTMENT OF RURAL
DEVELOPMENT

Preamble

Whereas, Animal Husbandry, Dairying and Fisheries activities, along continue to play a significant role in generating gainful employment in the rural sector, particularly among the landless, small and marginal farmers and women, besides providing nutrition and food security to the country;

And, Livestock forms an important livelihood activity, supplementing incomes, offering employment opportunities, and finally being a dependable "bank on hooves" in times of need with the value of output from livestock sector at constant prices is about 27.8% of the value of output from agricultural and allied sector;

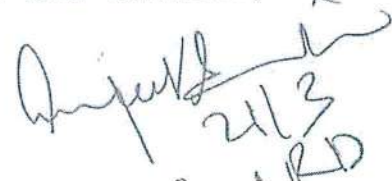
Further that, the Country has vast potential for dairy, fisheries and livestock development especially in rural areas including building infrastructure, providing employment, product value addition, etc and the Department of Animal Husbandry, Dairying and Fisheries (DADF) has been providing assistance through both central sector schemes and centrally sponsored schemes to the State Governments for sustainable development and enhancement of production and profitability of livestock and fisheries enterprises;

Notwithstanding, there is need for more financial resources so as to meet the objectives of increasing investment in the livestock sector for increasing production and productivity including value addition so as to enable higher farmers income even while creating self-employment opportunities;

Towards this end, the Department of Rural Development (DRD) has been relentlessly been working for rural upliftment through various programmes such as MNREGS, PMGSY, SAGY, NRLM, DDU-GKY, IAY, NSAP, SPMRM, Watershed Development Programme, Digital India Land Record Modernisation Programme, etc.;

While, these programmes have, over the years, resulted in highly successful outcomes pertaining to employment generation, increased outreach to poor and marginalised groups like SC/ST, Women, strengthening of natural resource based including for ponds, tanks, water conservation, rural connectivity and land


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development and these have resulted in some assured income all year round, reduction in poverty, distress mitigation, etc

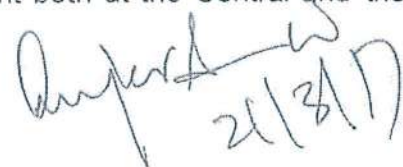
It is hereby recognised, there is need for dovetailing and synergizing efforts of the DADF and the DRD especially in the context of common objective of helping the farmers double their income through the livestock sector,

Areas of cooperation

Hence, it is hereby agreed that DADF and DRD would mutually work together in synergizing various schemes of both the departments to achieve the common goal of doubling farmers income through the synergy of efforts in various sub-sectors, such as for example -

- i. In the case of fisheries, synergy in schemes such as Blue Revolution and MNREGS for pond development both community as well as individual owned for the purpose of fish hatchery, fish seed and fingerling rearing, including increase in productivity of various water bodies as found in lakes, reservoirs, brackish water, wet lands, etc.
- ii. In the case of dairy sector, synergy in dairy development with respect to providing employment through milch animals to poor landless farmers, widows and other unsupported sections of the rural population including unemployed youth, etc. through such schemes as DEEDS, RGM and NRLM, SAGY etc
- iii. The small ruminants and poultry form the mainstay of the poorest of the poor in the rural economy and is addressed through the National Livestock Mission program of the DADF. This segment provides immense areas of cooperation in productivity enhancement, micro level infrastructure development at village household level etc by dovetailing with NRLM, etc.
- iv. In the case of joint skill development and capacity building through synergy with schemes such as DDU-GKY and related schemes of skill development and extension work of DADF
- v. Joint initiatives for fodder development especially in acidic and arid lands and areas of fodder shortage through NLM and NREGS synergy

Needless to say there are many areas of cooperation involving village level infrastructure development for farmers and village based occupation which together would lay the foundation for greater benefit of the farmer along with higher value realisation of the budgetary spend by the Government both at the Central and the State level.

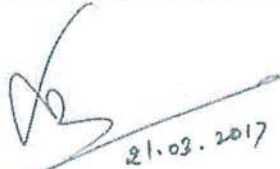


Implementation Methodology

Both the Departments would form a Joint National Level Steering Committee (JNLSC) of the Secretaries which would be supported by a Joint Implementation Task Force (JITF) for ground level project conception, formulation, finalization, implementation including monitoring and review.

Similar State Coordination and Synergy Committees (SCSC), would be established at the state level and district level (DCSC) to ensure that the projects are made as per local requirements and are dovetailed with the National level schemes in a seamless manner.

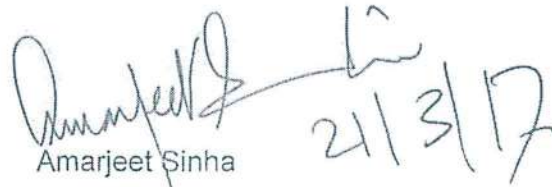
Accordingly, a Memorandum of Understanding (MoU) is hereby signed between Department of Animal Husbandry, Dairying and Fisheries and the Department of Rural Development, both in the Government of India for joint synergistic work of both the Departments towards the common goal of enhancing rural prosperity and the most efficacious use of natural resources with best value for money.



21.03.2017

Devendra Chaudhry
Secretary to the Government of India
Department of Animal Husbandry,
Dairying and Fisheries
Ministry of Agriculture and Farmers
Welfare

Date:



21/3/17

Amarjeet Sinha
Secretary to the Government of India
Department of Rural Development
Ministry of Rural Development

Date:

अमरजीत सिन्हा
AMARJEET SINHA



सचिव
भारत सरकार
ग्रामीण विकास मंत्रालय
ग्रामीण विकास विभाग
कृषि भवन, नई दिल्ली-110001
SECRETARY
Government of India
Ministry of Rural Development
Department of Rural Development
Krishi Bhawan, New Delhi-110001
Tel.: 91-11-23382230, 23384467
Fax: 011-23382408
E-mail: secyrd@nic.in

D.O.No. I-12011/23/2012-SGSY(C)

December 18, 2017

Sub: Development of Community Infrastructure under Mahatma Gandhi National Rural Employment Guarantee Scheme for Livelihood Activities Promoted under DAY-NRLM.

One of the main objectives of MGNREGA is to create durable and productive community and individual assets in order to strengthen the livelihood resource base of the rural poor. The State Missions under the aegis of DAY-NRLM are also implementing several activities to promote sustainable agriculture, livestock and Non-Timber Forest Produce based livelihoods with members of women SHGs.

In view of this shared objective of strengthening livelihoods of the poor, the Ministry of the Rural Development had issued a Notification dated 3rd January, 2014 [Schedule -I, section 4(3)] outlining the provisions for creating common assets for the benefit of DAY-NRLM compliant SHGs.

Specifically, the notification states the focus of MGNREGA in this regard as follows:-

1. Promote agricultural productivity by creating durable infrastructure required for producing bio-fertilizer and post-harvest facilities including storage facilities for agriculture produce;
2. Create common work sheds for livelihood activities; and
3. Construct buildings for women's self-help groups' federations and setting up of *haats* at village and/or block level

It is in this context, that we advise the States to take up the construction of the following types of community infrastructure:

1. **Storage shed for Custom Hiring Centres/Tool Banks:** The Custom Hiring Centres/Tool Bank managed by Village Organizations/SHGs are being established under DAY-NRLM to ensure availability of farm equipment to the *Mahila Kisans* through a sustainable model. Purchase of the machinery is being supported by DAY-NRLM and the Sub-Mission on Agricultural Mechanization of the Department of Agriculture. A storage shed for keeping the equipment may be constructed under MGNREGA.

-:2:-

2. **Godowns for Producer Groups/Companies:** Under DAY-NRLM, the Producer Groups / Producers Companies are taking up (i) aggregation and primary processing of agriculture products like Mango, Ginger, Cashew etc; (ii) Minor Forest Produces like Lac, Hill Broom, Tamarind etc.; and (iii) various medicinal plants. Procurement centres are being set up to take up these activities. Godowns may be constructed under MGNREGA so that these organizations can run their business without facing any difficulty in storage, grading etc.

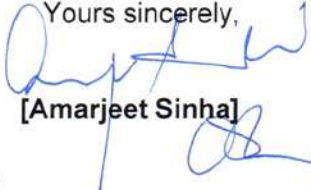
There is also a need for establishing work sheds for women SHGs/producers' groups/producers' enterprises promoted under DAY-NRLM which are involved in aggregation and value addition of locally available products / commodities / services for primary processing, aggregation, packaging, labelling and marketing.

3. **Sheds for Milk Collection Centres:** Milk collection centres at village level as part of Women Milk Producers' Company are being set up under DAY- NRLM for collection of milk, quality assessment and providing input services to women members. Support may be provided to set up the sheds under MGNREGA for these milk collection centres.
4. **Sheds/Storage Units for Tasar Interventions:** Under DAY-NRLM, *tasar* focussed interventions have resulted in a significant increase in income for the SHG members. Some of the important activities being taken up by the women producer collectives under this intervention are setting up of basic/commercial seed production units, grainage units, yarn reeling units etc. These activities would get a tremendous boost if necessary sheds and storage units are constructed under MGNREGA.
5. **Setting up of Rural haats** –Since *haats* give an opportunity to the rural poor to market their products/agricultural produce, MGNREGA resources may be utilized for developing them at the village and block headquarters. The SRLM may choose to use funds provided for infrastructure under DAY-NRLM for setting up similar facilities at the district and the State level.

Further, we advise that the States put in place an effective mechanism to coordinate between MGNREGA officials and SRLM officials to undertake the following:

- i. Identify community infrastructure required and their location for the women SHG / Producers Groups / Producers Company / other Producers Collectives under DAY-NRLM. The SRLM (State/District unit) would facilitate in identifying SHG/ Producers Groups with possible locations and share the information with NREGA functionaries;
- ii. Inclusion of works identified in the labour budget duly approved through special / supplementary Gram Sabha;
- iii. Preparation of technical documents and work estimates by BDO/PO & seek approval of DPC;
- iv. Joint monitoring of the work through NREGA Soft and NRLM Portal. At the State level, nodal persons from MGNREGA division and SRLM may be nominated for continuous supervision of the activities.

The States are requested to prepare a joint annual action plan after making an assessment of requirements of DAY-NRLM. A quarterly progress report on the rollout may be shared with MoRD.

Yours sincerely,

 [Amarjeet Sinha]

O/C

To:
Principal Secretaries of Deptt. of Rural Development of States and UTs.
 (As per the list enclosed)

1	Dr. K.S. Jawahar Reddy, Principal Secretary, Department of Panchayati Raj and Rural Development, Government of Andhra Pradesh, Block-5, Ground Floor, AP Secretariat, Velagapudi, Amaravati (Guntur District) - 522238. [Andhra Pradesh]
2	Sh. Rinchin Tashi, Secretary, Department of Rural Development, Government of Arunachal Pradesh, Civil Secretariat, Itanagar – 791111. [Arunachal Pradesh]
3	Sh. M.G.V.K.Bhanu, Additional Chief Secretary, Department of Rural Development and Panchayati Raj, Government of Assam, Dispur, Guwahati – 781005. [Assam]
4	Sh. Arvind Kumar Choudhary, Secretary, Department of Rural Development, Government of Bihar Secretariat, Patna – 800001. [Bihar]
5	Sh. R.P.Mandal, Additional Chief Secretary, Department of Rural Development, Government of Chhattisgarh, Secretariat, Raipur – 492001. [Chhattisgarh]
6	Sh. Sanjay Goel, Secretary, Department of Rural Development, Government of Goa, Panjim – 403001. [Goa]
7.	Smt. Mona Kandhar, Commissioner-cum-Secretary, Government of Gujarat, Dr. Jivraj Mehta Bldg., Block -16, 3 rd Floor, Secretariat, Gandhinagar – 382 010. [Gujarat]

	<p>8 Sh. Anurag Rastogi, Principal Secretary, Department of Irrigation, Rural Development and Panchayati Raj, Government of Haryana, Room No.406, 4th Floor, New Haryana Civil Secretariat, Sector – 17, Chandigarh – 100 017. [Haryana]</p>
9.	<p>Sh. Omkar Sharma, Principal Secretary, Department of Rural Development and Panchayati Raj, Government of Himachal Pradesh, A-520, Himachal Pradesh Secretariat, Shimla – 171 009.</p>
10	<p>Sh. Khursheed Ahmed Shah, Secretary, Department of Rural Development, Government of Jammu & Kashmir, Srinagar – 190008. [Jammu & Kashmir]</p>
11	<p>Sh. Avinash Kumar, Principal Secretary, Department of Rural Development, Government of Jharkhand, Ranchi – 834001. [Jharkhand]</p>
12	<p>Dr.(Smt.) Nagambika Devi, Principal Secretary, Department of Rural Development, Government of Karnataka, 3rd Gate, 3rd Floor MS Building Bangalore -560001. [Karnataka]</p>
13	<p>Sh. P.K. Baby, Special Secretary, Department of Rural Development Government of Kerala, Room No.404-A, 4th Floor, Annxe-I, Secretariat, Thirvananthapuram – 695001.</p>
14	<p>Sh. Iqbal Singh Bains, Additional Chief Secretary, Department of Rural Development, Government of Madhya Pradesh, Bhopal – 462004. [Madhya Pradesh]</p>

15	Sh. Aseem Gupta, Secretary, Rural Development & Water Conservation Department, Government of Maharashtra, Mumbai – 400032. [Maharashtra]
16	Sh. Sumant Singh, Commissioner, Department of Rural Development, Government of Manipur, Imphal – 795001. [Manipur]
17	Sh. P. Sampath Kumar, Secretary, Department of Rural Development Government of Meghalaya, Room No.104, Addl. Secretariat Building,IGP Point, Shillong – 793001. [Meghalaya]
18	Sh. Lalhmingthanga, Secretary, Department of Rural Development, Government of Mizoram, Aizawl – 796001. [Mizoram]
19	Sh. Kelei Zeliang, Secretary, Department of Rural Development, Government of Nagaland, Kohima – 797001. [Nagaland]
20	Sh. Deoranjana Kumar Singh Secretary, Department of Rural Development and Panchayati Raj Government of Odisha, Odisha Secretariat, Sachivalaya Marg, Bhubaneswar – 753001. [Odisha]
21	Sh. Anurag Verma, Secretary, Department of Rural Development and Panchayati Raj, Government of Punjab, Vikas Bhavan, Sector – 62, Mohali - 180062. [Punjab]

22	Sh. Sudarshan Sethi, Additional Chief Secretary, Department of Rural Development, Government of Rajasthan, Uttari Paschimi Building, Sachivalaya, Jaipur – 302001. [Rajasthan]
23	Sh. D. R. Nepal, Secretary, Department of Rural Development, Government of Sikkim, Gangtok – 737101. [Sikkim]
24	Sh. Hansraj Verma, Secretary, Department of Rural Development, Government of Tamil Nadu, Secretariat, Fort, St. George, Chennai – 600009. [Tamil Nadu]
25	Sh. Vikas Raj, Principal Secretary, Department of Rural Development, Government of Telangana, Hyderabad – 500002.[Telangana]
26	Sh. M. Nagaraju Principal Secretary, Department of Rural Development Government of Tripura, New Capital Complex, Secretariat, Agartala – 799006. [Tripura]
27	Sh. Anurag Srivastava, Principal Secretary, Department of Rural Development, Government of Uttar Pradesh, Lucknow – 226001. [Uttar Pradesh]
28	Smt. Manisha Panwar, Secretary, Department of Rural Development Government of Uttarakhand, Dehradun – 248001. [Uttarakhand]
29	Sh. Saurabh Kumar Das, Additional Chief Secretary, Department of Rural Development and Panchayati Raj, Government of West Bengal, Jt. Admn. Buildings, HC-7, Sector-III, Salt Lake, Kolkata – 700106. [West Bengal]

311472/2017/O/o SECRETARY (RD)

30	Sh. Udit Prakash, Secretary, Department of Rural Development, Andaman & Nicobar Administration, Port Blair. [Andaman & Nicobar]
31	Sh.B.L. Sharma, Commissioner-cum-Secretary, Department of Rural Development, Chandigarh Administration, UT Secretariat, Room No.312, 4th Floor, Deluxe Building, Sector – 9, Chanidgarh – 160 009.
32	Sh. Deepak Kumar, Secretary, Department of Rural Development, Dadra & Nagar Haveli Administration, First Floor, Secretariat, Silvassa. [Dadra & Nagar]
33	Sh. Deepak Kumar, Secretary, Department of Rural Development, Daman & Diu Administration, Secretariat, Fort Area, Daman. [Daman & Diu]
34	Ms.Manisha Saxena, Commissioner (Development), Department of Rural Development, Government of National Capital Territory of Delhi 5/9, Under Hill Road, Delhi – 110054. [Delhi]
35	Dr. Tariq Thomas, Secretary, Panchayat and Rural Development Department, Lakshadweep Administration, Kavaratti-682 555. [Lakshadweep]
36	Sh. P.Parthipan, Secretary, Department of Rural Development, Government of Puducherry, 2nd Floor, Pondicherry Housing Board Building, Anna Nagar, Puducherry – 605 005. [Puducherry]

BP-120511/2018

No.9-79/2017-Org. Fmg.(49094)

Government of India

Ministry of Agriculture and Farmers Welfare
Department of Agriculture and Cooperation and Farmers Welfare
(INM Division)

Krishi Bhawan, New Delhi

Dated the ...9.11.2018....

To,

The Principal Secretaries (Rural Development & Panchayati Raj) all States
The Principal Secretaries (Agriculture) all states

Subject: Convergence of Mahila Kisan Sashakthikaran Pariyojana (MKSP) of Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM), MoRD and Paramparagat Krishi Vikas Yojana (PKVY) of Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture and Farmer's Welfare.

Madam/Sir,

This is in continuation with the joint letter No- 1-7/2015-NGRCA dated 8th November, 2016 and the joint letter no- I-2011/23/2012-SGSY(C) dated 28th October, 2015 issued on the above subject (copy enclosed).

1. **Mahila Kisan Sashakthikaran Parlyojana (MKSP)** is a program under Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM) under Ministry of Rural Development, GOI.

MKSP is being implemented in 1188 blocks of 183 districts in 19 states and covering 32.40 lakh women farmers. Projects will be implemented in three more states soon. Core strength of MKSP program is mobilizing women farmers and building social capital on sustainable agriculture at village level.

A. Important Intervention under MKSP in promoting Agro-ecological practices:

- i. **Soil Health:** Improve the organic carbon content, through addition of well decomposed biomass. It provides suitable medium for harboring microorganisms that facilitates nutrient uptake.

Specific interventions: 1) NADEP, 2) Vermin Compost, 3) Ghana Jeeva-mrut 4) Green manuring 5) Azolla in rice cultivation, 6) Tank silt application

- ii. **Seeds:** The small and marginal farmers have constraints in access to quality seeds. So seeds they use are sorted through winnowing and brine solution and purified using cow urine and cow dung (*Beejamrut*) which have fungicidal properties and helps control seed borne diseases.

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Specific interventions: 1. *Physical inspection for uniformity in colour, size and shape*, 2. *Brine solution treatment* 3. *Germination test* 4. *Treatment in Beejamrut* 5. *Seed production preservation*

iii. **Production-nurturing Young and Healthy Seedlings for Optimization of Plant Population:** Several easy to adopt agricultural practices have been promoted.

Specific interventions: 1. *Direct seeded rice* 2. *Nursery- split type, raised bed nursery, poly house/shade net* 3. *Provision of temporary water harvesting structure- Jalkund, mobile pumping* 4. *Trauma less-transplantation in Line and spacing* 5. *Minimize competition for resource during vegetative growth*

iv. **Weed control:** Timely Weeds control make nutrients available to field crops and the final yield.

Specific interventions: 1. *Mulching* 2. *Weeding*

v. **Disease and pest control:** The overall strategy is to understand the nature dynamics and popularize practices that control and bring back balance between the harmful and harmless organisms (insects and pest).

Specific practices: 1. *summer plough* 2. *5% Neem Seed Kernal Extract* 3. *Neemastram*, 4. *Agniastrm*, 5. *Brahmastram* 6. *Panchgavya*

B. Important Interventions to roll out the MKSP program:

- i. **Training and Capacity Building:** These activities are rolled out through Social Capital Building at village level. National Resource Persons are engaged (NRP) train the State Resource Pool and Community Resource Persons (CRP-LH) are trained by SRPs.
- ii. **Custom Hiring Center (CHC):** Custom Hiring Centers are set up with Agricultural implements for drudgery reduction of Mahila Kishans.

2. **Paramparagat Krishi Vikas Yojana (PKVY)** is a comprehensive scheme under National Mission of Sustainable Agriculture (NMSA) of Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture and Farmer's Welfare to promote organic farming through a cluster approach. This centrally sponsored scheme is being implemented by the state governments on farmers' field.

A. Major Components and pattern of support of Paramparagat Krishi Vikas Yojana (PKVY).

i. **Adoption of Participatory Guarantee System (PGS) certification through cluster approach**

➤ ***Mobilization of farmers / local people to form cluster in 50 acre for PGS certification***

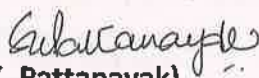
- *Conducting of meetings and discussions of farmers in targeted areas to form organic farming cluster*
- *Exposure visit to member of cluster to organic farming fields*

- Formation of cluster, farmer pledge to PGS and Identification of Lead Resourceful Person (LRP) from cluster
- Training of cluster members on organic farming
- **PGS Certification and Quality control**
 - Training on PGS Certification in 2 days
 - Training of Trainers/ Lead Resource Persons
 - Online Registration of farmer
 - Soil sample collection and testing
 - Process documentation of conversion into organic methods, inputs used, cropping pattern followed, organic manures and fertilizer used etc.,
 - Inspection of fields of cluster member
 - Certification Charges
 - Administrative expenses for certification
- ii. **Adoption of organic village for manure management and biological nitrogen harvesting through cluster approach**
 - **Action plan for Organic Farming for one cluster**
 - Conversion of land to organic
 - Introduction of cropping system; Organic seed procurement or raising organic nursery
 - Traditional organic Input Production units like Panchagavya, Beejamruth and Jeevamruth etc.
 - Biological Nitrogen Harvest planting (Gliricidia, Sesbania, etc)
 - Botanical extracts production units (Neem cake, Neem oil)
 - **Integrated Manure Management**
 - Liquid Biofertilizer consortia (Nitrogen fixing / Phosphate Solubilizing/ potassium mobilizing bio-fertilizer)
 - Liquid Bio-pesticides (Trichoderma viridae, Pseudomonas fluorescens, Metarhizium , Beauveria bassiana, Paecilomyces, verticillium)
 - Neem Cake/ Neem Oil
 - Phosphate Rich Organic Manure / Zyme Granules
 - Vermi-compost pit preparation
 - **Custom Hiring Centre (CHC) charges**
 - Agricultural implements - Power tiller, Cono-weeder, Paddy thresher, Furrow opener, Sprayer, Rose can, Top Pan balance
 - Cattle shed / poultry / piggery for animal compost
 - **Packing, Labeling and Branding of organic products of cluster**
 - Packing material with PGS logo + Hologram printing
 - Transportation of organic produce
 - Organic Fairs
- 3. This is being observed that there are lot of synergy between MKSP and PKVY programs interventions. And both the programs focus on the small and marginal farmers. These two programs have been found highly suitable for immediate convergence. Women farmers of MKSP projects can be supported by the PKVY program in all the areas where MKSP has been rolled out.

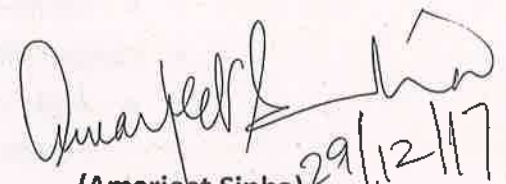
4. **Scope of convergence between these two programs:**

- i. Exposure visit and training of women farmers and Community Resource Persons
 - ii. Soil collection and testing
 - iii. Organic certification
 - iv. **Input support in:**
 - **Land:** Land preparation, Jeevamruth preparation, Liquid Bio-fertilizer consortia supply
 - **Seed:** cropping system, organic seed procurement, raising organic nursery, Beejamruth preparation
 - **Plantation of Gliricidia, Sesbania etc; creation of Azola pits etc**
 - **Disease and pest control:** Setting up of botanical extracts production units: Neem cake, Neem oil etc ; Panchagavya preparation, Liquid Biopesticides supply
 - v. Custom Hiring Centre (CHC) setting up and supporting existing CHCs with additional Agricultural implements
 - vi. Creation of cattle shed / poultry shed / pig sty
 - vii. Packing, labeling and branding of organic products: packing material, transportation of produce
5. This is being proposed that SRLM and Agriculture Department of respective states may hold joint consultation to prepare a comprehensive plan with clear timelines for convergence between PKVY and MKSP in the areas where MKSP is being implemented. SRLMs may share the list of Blocks and Mahila kishans with state agriculture department.
6. The convergence plan may also be shared with DAY-NRLM, Ministry of Rural Development and Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture and Farmer's Welfare.

Yours faithfully,


(S.K. Pattanayak)
Secretary

Department of Agriculture, Cooperation & Farmers Welfare,
Ministry of Agriculture and Farmer's Welfare.


(Amarjeet Sinha) 29/12/17
Secretary

Department of Rural Development
Ministry of Rural Development

o/c
issued
22/02/18



ग्रामीण विकास मंत्रालय
ग्रामीण विकास विभाग
भारत सरकार
कृषि भवन, नई दिल्ली-110001
Ministry of Rural Development
Deptt. of Rural Development
Government of India
Krishi Bhavan, New Delhi-110001

ATAL DULLOO, IAS
Joint Secretary
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March 12, 2018

DO No. K-11067/17/2017/NRLM(Livelihoods) (358317)

Sub: Collaboration with TRIFED

Dear Madam /Sir,

As you know DeenDayalAntyodaya Yojana (DAY-NRLM) is an important poverty alleviation programme under the Ministry of Rural Development, Government of India. One of the objective of DAY-NRLM is to increase household level income of the rural poor through sustained livelihood enhancements and improved access to financial and non-financial services. DAY-NRLM believes in building collaboration with various ministries and agencies for improving the efficacy of implementation of the Mission. As part this approach, an MoU with TRIFED have been signed on 10th February 2018 during the workshop held at NCUI Auditorium, New Delhi. Copy of the MoU and minutes of the workshop are attached herewith for reference.

Followings are the broad areas of collaboration between TRIFED and DAY-NRLM

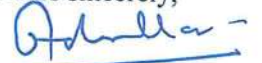
1. Minor Forest Produces

- a. Taking services of Self Help Groups and/or Producers Collectives promoted DAY-NRLM for procurement, processing and /or marketing of MFP commodities under the scheme "Minimum Support Price for Minor Forest Produce (MSP for MFP)". The scheme "MSP for MFP" is being implemented by TRIFED.
 - b. Establishment of "Procurement and/or Value addition Centre" to be owned by Self Help Groups / Producers Collectives at field level by making resources available to Self Help Groups/primary level Societies/collectives as the case may be, through a business plan.
 - c. Establish backward and forward linkage for successful management of such value addition centres and provide necessary guidance/handholding.
2. Marketing of handloom, handicraft and processed packed food/organic products of *tribals* through the TRIBES INDIA outlets.

I would like to request you to submit your plan along with the details of clusters, active SHGs/Producers Collectives having majority tribal members by 23rd March 2018. State nodal agency of your state declared by TRIFED for the scheme "MSP for MFP" may be consulted.

With regards

Yours sincerely,


(Atal Dulloo)

To

The CEO/SMD of SRLMs,

Odisha, Chhattisgarh, Rajasthan, Gujarat, Maharashtra, Jharkhand, Andhra Pradesh, Madhya Pradesh, Telangana, Karnataka, Nagaland, Manipur, Uttar Pradesh, Tamilnadu, Kerala, West Bengal, Tripura, Assam, Mizoram, Himachal Pradesh, Meghalaya.



सत्यमेव जयते

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MEMORANDUM OF UNDERSTANDING

This MOU is executed at New Delhi on 10th February, 2018 between Tribal Cooperative Marketing Development Federation of India Ltd a national-level apex organization functioning under the administrative control of Ministry of Tribal Affairs, Government of India having its registered and Head Office at NCUI Building, 2nd Floor, 3, Siri Institutional Area, August Kranti Marg, HauzKhas, New Delhi-110016 and a network of 14 Regional

Prakash *Adhikari*

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Office located at various places in the country through its Managing Director (hereinafter referred to as the "TRIFED" which expression shall unless repugnant to the context means and include its predecessors and successors in interest and assigns of the one part.

AND

Department of Rural Development, Ministry of Rural Development, Government of India, 6th Floor, Hotel Samrat, Kautilya Marg, Chanakyaपुरi, New Delhi 110021 (herein after referred as an MORD of the project which expression shall unless repugnant to the context mean and include its successors or assigns, on the other part).

PREAMBLE

Whereas for economic pursuits Tribals are very much dependent on nature, especially forest and forest produce, to eke out their livelihoods. An important sources of livelihoods for people living in forested areas, are non-wood forest products, generally termed 'Non-Timber Forest Product (NTFP)'. These include bamboo, canes, fodder, leaves, gums, waxes, dyes, resins and many forms of food including nuts, wild fruits, honey, etc. The NTFP provide both subsistence and cash income for people who live in or near forest. They form a major portion of their food, fruits, medicines and other consumption items and also provide cash income through sale. MFPs comprises a huge variety of products in terms of usage, availability, value and quality.

And the Minor Forest Produce has significant economic and social value for the forest dwellers as an estimated 100 million people derive their source of livelihood from the collection and marketing of Minor Forest Produce (Report of the National Committee on Forest Rights Act 2011). Tribals derive 20-40% of their annual income from Minor Forest Produce on which they spend major portion of their time. This activity has strong linkage to women's financial empowerment as most of the Minor Forest Produces are collected and used /sold by women. Minor Forest Produce sector has the potential to create about 10 million workdays annually in the country.

Whereas, for protecting the tribal gatherers in the trade of minor forest produces against the unfair practices of unscrupulous market operative the scheme "Mechanism for marketing of Minor Forest Produce (MFP) through Minimum Support Price (MSP) and Development of value chain for MFP" is being implemented by TRIFED (Tribal Cooperative Marketing Development Federation of India Limited), an agency under Ministry of Tribal Affairs. The scheme is also called as "MSP for MFP". Twenty four forest produces have been included under the scheme. The scheme "MSP for MFP" is being implemented by TRIFED in partnership with State nodal departments. Initially, started with eight PESA States now the scheme is operational in all areas of India.

Whereas TRIFED aims to improve the livelihoods of the tribal communities by creating a sustainable market and new business opportunities for them based on their culture, knowledge and traditional skills whilst ensuring fair and equitable remuneration. In pursuance of its objectives, TRIFED has been undertaking marketing development of tribal products through its Retail Marketing Activity under the scheme of "Institutional Support for Development & Marketing of tribal products/produce" of the Ministry of Tribal Affairs, Government of India. TRIFED has also been appointed as Nodal Agency by the Ministry of Tribal Affairs, Government of India, for implementation of the Scheme of Minimum Support Price (MSP) for Minor Forest Produce (MFP) of the Ministry of Tribal Affairs, Government




of India. The scheme was initiated with 12 MFPs, which has now been expanded to 24 MFPs to be provided throughout the country under scheme of MSP for MFPs.

Whereas DAY-NRLM the program being implemented by department of Rural Development, Ministry of Rural Development envisages to reduce poverty by enabling the poor households to access gainful self-employment and skilled wage employment opportunities, resulting in appreciable improvement in their livelihood on a sustainable basis, through building strong grassroots institutions of the poor. Under the programme, poor women have been mobilized to form their own institutions like Self Help Groups and higher order community institutions at village, panchayat, cluster, block as well as district level to carry out various social activities and delivery of services. Activities of these community institutions are like strengthening financial and livelihoods support services, imparting skills to the rural population.

Whereas for livelihood promotion DAY-NRLM focuses to stabilize and promote existing livelihoods portfolio of the poor, in farm and in non-farm sectors. Farm sector livelihoods interventions are being made through MahilaKisanSasktikaranPariyojana (MKSP) whereas value chain interventions are being made through SVEP (Startup village Entrepreneurship). Under MKSP, 32.40 Lakhs mahilakisan of 19 states have already been covered for interventions and also promoted 18,000 + community cadres such as KrishiMitra, PasuSakhi, VanaMitra, MatsyaSakhi and UdyogMitra. For value chain interventions under special fund projects 1.55 lakhs mahilakisan of 7 states have been covered. Under SVEP it is expected to promote 1.82 lakh individual enterprises in 125 blocks in 24 states in 4 years and create employment for 3.78 lakh rural poor in four years from 2015- 2019.

Whereas there is large scope for collaboration and co-operation between Department of Rural Development and TRIFED to undertake economic support programmes relevant to the aspirations of Tribal Gatherers of Minor Forest Produce and Tribal Artisans. The synergy of schemes and programmes of the both the departments can help protect the tribal gathers against the unfair practice of unscrupulous market operatives in the trade of minor forest produce by implementing the scheme of MSP on MFPs & also by providing marketing support of tribal artisans through sales outlet of TRIFED by engaging the community institutions like Self Help Groups and/or Producers Collectives promoted under DAY-NRLM.

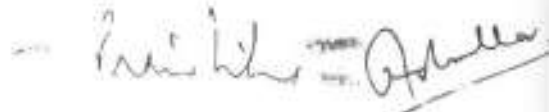
The Broad terms and conditions of the MOU are as under:

1. AREA OF COOPERATION

Hence, it is hereby agreed that Ministry of Rural Development (Rural Livelihoods Division) and Ministry of Tribal Affairs – TRIFED would mutually work together in synergizing various programs of both the departments to achieve the common goal of enhancing the livelihoods of tribal people.

1.1 MINOR FOREST PRODUCE

- a) For protecting the tribal gatherers in the trade of Minor Forest Produces against the unfair practices of unscrupulous middlemen and establish market operatives synergy between the State nodal agency of concerned State which is implementing the scheme of "MSP for MFP" and the community institution such as Self Help Groups and /or



- producers collective as the case may be made for procurement of MFPs through a business plan.
- b) Services of Self Help Groups and/or Producers Collectives promoted under the Scheme of DAY-NRLM or any other scheme of Ministry of Rural Development would be utilized for procurement, processing and /or marketing of MFP commodities under the Scheme MSP for MFP.
 - c) The Self Help Groups and/or Producers Collectives so identified for such purpose shall be appropriately empowered jointly /severally by both the parties to undertake such functions.
 - d) Both the parties shall establish "Procurement and/or Value addition Centre" to be owned by Self Help Groups / Producers Collectives at field level by making resources available to Self Help Groups/primary level Societies/collectives as the case may be, through a business plan.
 - e) Establish backward and forward linkage for successful management of such value addition centers and provide necessary guidance/handholding.

1.2 HANDLOOM/HANDICRAFTS

RESPONSIBILITY OF TRIFED

- a) On receipt of recommendations of MORD on SHGs/Producers Collectives having majority tribal members who are engaged in livelihood activity of production of finished products of handloom, handicraft and processed packed food /organic products, TRIFED's concerned Regional Office shall empanel the SHGs/Producers Collective and select their marketable products for sale through its chain of TRIBES INDIA outlets. The marketable products shall be sourced by TRIFED and payments made directly to the Aadhar Linked Accounts of the SHG/producers collective members or the account of SHG/producers collective.
- b) Wherever TRIFED finds necessary, TRIFED Regional Office shall recommend to MORD to undertake imparting training of Skill and Design development of existing SHGs/Producers Collectives, having majority tribal members, developed under NRLM or TRIFED programmes for upgrading the skills of women SHGs/producers collective, development of new design aimed at enabling them to produce finished products of handloom, handicrafts and processing packed food /organic products with better market acceptability.

RESPONSIBILITY OF DEPARTMENT OF RURAL DEVELOPMENT:

- a) MORD shall recommend and share with TRIFED details of the SHGs/Producers Collectives having majority tribal members formed under their programs who are engaged in livelihood activity of production of finished products of handloom, handicraft and processed packed food/organic products that can be sold from Tribes India outlets of TRIFED.
- b) MORD shall undertake imparting training of skill and design development of existing SHGs/Producers Collectives, having majority tribal members, already developed under their programmes for upgrading their skills, development of new designs aimed at empowering them to produce finished products of handloom, handicrafts and process- packed food/organic products with better market acceptability.

Handwritten signature

- c) MORD shall undertake imparting training of Skill and design development of existing MIP (products) collectives, having majority tribal members from rural population as developed under TRIFED programmes and recommended by TRIFED, for upgrading their skills, development of new designs aimed at empowering them to produce finished products of handloom, handicrafts and process packed food/organic products with better market acceptability.

1.3 Both the parties shall identify other areas of cooperation for the benefit of tribal which may be also be included as part of the MOU on mutually agreed terms and condition.

2. JOINT COORDINATION COMMITTEE (JCC)

The parties agrees that there will be a Joint Coordination Committee (hereinafter referred to as JCC) constituted of representatives from TRIFED and Department of Rural Development. The terms of reference of this Committee would be to plan, monitor and oversee the entire activities of this MoU in accordance with the schemes and programmes of TRIFED and Department of Rural Development for development of MFP and tribal handicraft/handloom sector. The JCC will meet at least once in a quarter and periodically monitor and review the progress. TRIFED and Department of Rural Development will nominate Nodal Officers for managing and implementing the decision of JCC and the objective of this MoU.

The decisions taken by the JCC shall be implemented through respective Regional/State Offices of TRIFED and Ministry of Rural Development.

3. VALIDITY

The MOU shall remain valid for a period of one year effective from 10th February, 2018 (hereinafter referred to as the 'Effective Date') and can be renewed further on terms and conditions mutually agreed upon by the parties in writing.

4. DISPUTE SETTLEMENT & JURISDICTION

That all disputes or differences arising between the parties shall be referred to Arbitrator as per the provisions of Arbitration and Conciliation Act 1996 as amended. The venue and place of Arbitration shall be New Delhi. The language for arbitration shall be English.

5. TERMINATION

This MoU can be terminated by either of the parties on a six-month notice from either side. However, if the MoU is terminated for whatsoever reason, the responsibility of each party shall continue to exist till the completion of the programmes.

6. MATTERS NOT PROVIDED IN THE MOU

If any doubt arises as to the interpretation of the provisions of this MoU or as to matters not provided therein, the Parties to this MoU shall consult each other for each instance and resolve such doubts in good faith.

Mishra, Ashish

AMENDMENT

All alterations or amendments to this MoU shall be mutually discussed and agreed upon in writing. No amendment for change thereof shall be effective or binding on the parties hereto unless set in writing and executed by the respective duly authorized representatives of each of the Parties hereto.

8. NOTICES

All notices, requests or other communication hereunder shall be sent in writing and addressed to the parties as follows:

TRIFED	TRIFED 2 nd Floor, NCU Building, 3, Siri Institutional Area, August Kranti Marg, New Delhi -110 016.
Department of Rural Development.	Department of Rural Development, Ministry of Rural Development, 6 th Floor, Hotel Samrat, Kautilya Marg, Chanakyapuri, New Delhi 110021.

9. FORCE MAJEURE

Neither TRIFED nor MORD shall be liable to each other for failing or delay in the performance of any of its obligations under this Agreement to the extent such failure or delay is caused by riots, civil commotions, war, hostilities between nations, government laws, orders or regulations, embargoes, actions by the Government or any agency thereof, acts of God, storms, fires, accidents, strikes, sabotages, explosions or other similar or different contingencies beyond the reasonable control of the respective parties.

Notwithstanding anything contained herein above, the decisions of the Board of Directors of TRIFED shall prevail over and above the clauses mentioned in this MoU.

IN WITNESS WHEREOF, the parties hereto affixed their signatures this the day and year first above written.

For and on behalf of
Department of Rural Development
Ministry of Rural Development

For and on behalf of
Tribal Cooperative Marketing
Development Federation of
India Limited (TRIFED).

(Atal Dulloo)
Joint Secretary

(Pravir Krishna)
Managing Director

प्रवीर कृष्ण, भा.प.से.
PRAVIR KRISHNA, I.A.S
प्रबंध निदेशक / Managing Director
टाइफेड / TRIFED
जनजातीय कार्य मंत्रालय, भारत सरकार
Ministry of Tribal Affairs, Govt. of India
नई दिल्ली-16 / New Delhi-16

Witness

1.
(Nita Rajwade)

2.
P. G. Kulkarni

Witness

1.
(S. Mahesh)

2.



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भारत सरकार
कृषि भवन, नई दिल्ली-110114
Ministry of Rural Development
Deptt. of Rural Development
Government of India
Krishi Bhavan, New Delhi-110114

DO. No. I-12011/23/2012-SGSY(C) (Livelihoods)

06 December, 2016

Dear Sir/Madam,

A joint letter has been issued (letter enclosed) by JS, RL and JS, MGNREGA on 3rd August, 2016 to bring synergy between NRLM and MGNREGA program to facilitate creation of durable and productive asset to emphasis natural resource management (NRM) and sustainable agriculture for the mahilakishans identified under Mahila Kishan Sashaktikaran Pariyojna(MKSP) and other sustainable agriculture based intervention taken up by NRLM.

In this regard, a monitoring sheet has been prepared for the SRLMs to map the progress of assets creation.

Name of productive asset	Name of the District	Name of the Block	Name of the village	Number of units created for individual MahilaKishan (August-November, 2016)
Vermi compost pit				
Nadep compost pit				
Farm pond				
Cattle shed				
Poultry shed				
Goat shed				
Pig sty				
Dug well				

I, hereby, request you to look into this matter and ensure the data collection and submission of updated report every month.

With regards,

Yours sincerely,

(Atal Dulloo)

Encl: joint letter from NRLM and MGNREGA

To all CEOs and SMDs of SRLMs

To

The Principal Secretary/ Secretary
Rural Development Department/ Panchayati Raj (in charge of MGNREGA)
States of Andhra Pradesh, Telangana, Kerala, Bihar, West Bengal, Odisha,
Rajasthan, Gujarat, Karnataka, Assam, Maharashtra and Chhattisgarh

Sub: Creating synergy between NRLM and Mahatma Gandhi NREGA programme to facilitate construction of Vermi/ NADEP compost pits for Mahila Kisan Sashaktikaran Pariyojna (MKSP) farmers under Mahatma Gandhi NREGA.

One of the major objectives of Mahatma Gandhi NREGA is creation of durable and productive assets of which at least sixty percent should be related to Agriculture. To ensure this there is renewed emphasis on works related to Natural Resource Management (NRM) and agriculture, both on public land as well as individual land.

States have set themselves a target of creation of 10.40 lakh Vermi/ NADEP compost pits/ tanks and 8.82 lakh Farm ponds on individual lands in FY 2016-17. It is imperative that such assets are not only created but also put to productive use and further go on to augment the incomes of small and marginal farmers apart from increasing the agriculture productivity of the farm lands.

To achieve the national target of Vermi / NADEP compost tanks/ pits under MGNREGA, the Ministry has decided to utilise the synergy of National Rural Livelihood Mission and Mahatma Gandhi NREGA programmes, by facilitating the farmers identified under Mahila Kisan Sashaktikaran Pariyojna (MKSP) and other sustainable agriculture based interventions taken up under NRLM to create and access these assets under Mahatma Gandhi NREGA.

There are 34 lakh farmers identified under MKSP. The majority of them are in Andhra Pradesh (1396479), Telangana (1303041), Kerala (310535), Bihar (130773), West Bengal (58060), Odhisha (37547), Rajasthan (26641), Gujarat (32670), Karnataka (19000), Assam (12105), Maharashtra (5507), Chhattisgarh (3499), Jharkhand (26339), Madhya Pradesh (35087) etc. While some successful efforts have already been made in some states like Andhra Pradesh and Telangana to provide Vermi/ NADEP compost pits/ tanks to MKSP farmers through other programmes, a concerted effort to facilitate these households (HHs) to get these assets under Mahatma Gandhi NREGA will not only help in achieving the targets but will also ensure productive use of these assets by these small and marginal farmers.

These States are therefore requested to put in place an effective coordination mechanism between MGNREGA officials, SRLM officials and MKSP NGO partners to/ for:-

- a. **identify beneficiaries** from among the MKSP farmers and farmers covered under livelihoods interventions through Annual Action Plan route being implemented by the SRLMs. SRLMs would involve the MKSP partners in identifying the beneficiaries in areas where the NGO is the implementation partners;
- b. **map the existing Job card holder families** among these identified farmers;
- c. **issuance of new Job Card** to those MKSP farmer household that are not registered under Mahatma Gandhi NREGA but are willing to take up work under it;
- d. **generation of Demand** through mobilisation of such farmers in campaign mode;
- e. **inclusion of work and demand** in Annual Action Plan of the Labour Budget through special/ supplementary *Gram Sabhas*;
- f. **allocation of works to the MKSP/NRLM farmers with Job Cards in camp mode** with involvement of all key stakeholders in well coordinated way so that work allocation information is shared with the beneficiaries and SRLM/ MKSP partners straightway;
- g. **training** of MKSP farmers on construction of Vermi/ NADEP compost pit/ tank in such camps relating to material to be used, labour component, design, timeline, muster rolls, measurement, wage and material payment, etc. (The typical Designs of Vermi/ NADEP compost tanks are enclosed as Annexure -1. Since it is to be conducted in campaign mode, hence there should be minimum divergence from standard designs, shared);
- h. **facilitation** in getting the work started, procurement of materials (the HHs may take loans from their SHG for procurement purpose and repay as per their existing norms), arrangement of masons, technical supervision, timely measurement and timely payment of wages and material bills and **ensuring** that **minimum standardised designs** as per Annexure-1 are maintained ;

- i. **joint monitoring** of the whole campaign on NREGASoft and MIS of NRLM with requisite modification of the database and reports to help track these MKSP beneficiaries (A provision in **Job card Registration/ updation** module of the NREGASoft has been made to update status of Job Card HHs as 'MKSP Farmer HHs');
- j. **development and dissemination of relevant IEC materials;** and
- k. **adherence to non negotiables** like
 - i. the farmer household should be a registered job card holder on NREGASoft,
 - ii. it should belong to at least one of the eligible categories specified in paragraph-5 of the Schedule-I of the Act. (The list of eligible HHs is annexed as annexure-2),
 - iii. wage payments will be paid only through Bank/ Post Office Account unless exempted by the MoRD etc.

Role of the Key Stakeholders

The role of the key stakeholders for effective roll out of this campaign is listed below against the important activities:-

Sl. No.	Activity	Responsibility
1	State level coordination meeting between MGNREGA commissioner, CEO SRLM, MKSP partners, DPCs of concerned districts and other relevant officials.	MGNREGA Commissioner in consultation with CEO SRLM.
2.	Finalisation of roll out plan discussed in the meeting and sharing it with all DPCs and DPMs.	MGNREGA Commissioner in consultation with CEO SRLM.
3.	District level coordination meeting with DPM, BPMs, POs, representatives of MKSP partners, etc.	DPC
4.	Calendar for conducting camps for generation of demand	DPC
5.	Identification and mobilisation of MKSP farmers to the camps, preparation of list and sharing it with concerned PO	BPM/ MKSP NGO Partners. GRS will help in dissemination of information relating to camp dates as well as mobilisation.

6.	Mapping of the farmers in the list with Job card holders list	MKSP partner in consultation with PO/ GRS
7.	Updation of status of identified MKSP partners in NREGASoft under category 'MKSP Farmer HHS' and registration of farmers HHS willing to work under MGNREGA but not registered as Job card holder	PO/ GRS
8.	Issuance of notice for special/ supplementary Gram Sabha	Block Development Officer/ authorised Official/ GP President
9.	Conduct of special/ supplementary GS to include the demand for work as well as schemes in the AAP of the Labour Budget of the Gram Panchayat	GP President supported by Secretary and GRS of the Gram panchayat.
10.	Work allocation to eligible MKSP farmers with JC in camp approach.	PO. The camp should be held in coordination with BPMs/ MKSP NGO partners and the complete list of MKSP farmer HH to whom the Vermi/ NADEP compost pits/ tanks work has been allocated will be shared with them.
11.	Facilitation for getting the work started, procurement of materials through loans from their SHG and bulk purchasing in group, arrangement of masons etc.	BPMs/ MKSP NGO partners. The TAs and GRS will extend full support.
12.	Technical supervision to ensure minimum standardised designs are followed and timely measurement done.	TAs. MKSP partners technical resources may help.
13.	Timely payment of wages and material component.	GRS/ PO
14.	Monitoring	As per joint mechanism developed by States and districts.

These states are therefore requested to plan a joint campaign for construction of Vermi/ NADEP compost pits/ tanks on a priority basis as per the targets set by them. The SRLMs would ensure complete support in this endeavor

especially with respect to identification and mobilisation of beneficiaries, their facilitation to enable them to construct the Vermi/ NADEP compost pits/ tanks and timely payment of wages and material bills.

A meeting will be scheduled in last week of August, 2016 to discuss and initiate the process of convergence to achieve the above mentioned objectives.


(Aparajita Sarangi)
Joint Secretary, MGNREGA

3/8/16


(Atal Duloo)
Joint Secretary, RL

File # I-12011/23/2012-SGSY(C)
Government of India
Ministry of Rural Development

Krishi Bhawan, New Delhi
Dated the 28th October, 2015

To,

The Principal Secretaries (Rural Development & Panchayati Raj) all States
The Principal Secretaries (Agriculture) all states

**Subject: Convergence of National Rural Livelihoods Mission (NRLM),
MORD and the Schemes/Programmes/Missions of Department of
Agriculture, Cooperation and Farmers Welfare, MOA&FW.**

Madam/Sir,

In line with the National Policy for Farmers (2007), Department of Agriculture, Cooperation and Farmer Welfare (DAC&FW), Ministry of Agriculture and Farmers Welfare is implementing several Schemes/Programmes/Missions aimed at enhancing agricultural production and productivity through optimum utilization of natural resources. All the schemes require a strong and long term engagement with the farmers including women farmers to build their capacities and improve their access to inputs and resources.

2. Ministry of Rural Development is implementing the National Rural Livelihoods Mission (NRLM), a poverty alleviation program in all the States of the country with the aim of mobilizing one woman member from each rural poor family into women Self Help Groups (SHGs) and higher level federations of these SHGs and linking them with banks for their credit needs and build the capacities of these institutions of the rural poor to take up sustainable livelihoods activities including agriculture, livestock and other vocations for enhancing their income levels

3. NRLM has created a nationwide network of women SHGs and their federations in more than 2700 blocks in an intensive manner. A lot of investment has also been made on creating social capital in the form of Community Resource Persons (CRPs) under NRLM for taking the programme forward with the aim of making the programme community managed and community driven.

4. Mahila Kisan Sashaktikaran Pariyojana (MKSP), a program to empower the women farmers, has been launched in 2010 as a sub component of NRLM. The core objective of MKSP is to build the capacity of women farmers. More than 33 lakh women farmers are now being supported under MKSP in 1067 blocks in 15 States. MKSP is promoting sustainable agro ecological practices like *in situ* moisture

conservation, non-pesticide management, multi-tier farming, promotion of Farmers' Fields Schools (FFS), promotion of producers' groups, soil fertility management practices like composting etc. The Primary focus of MKSP is also to create a large pool of CRPs, chosen from the best practicing farmers, who would work as front line station workers for upscaling the interventions piloted under MKSP Projects.

5. A National Gender Resource Centre in Agriculture (NGRCA) set up in the DAC&FW, as a part of its mandate, has been able to engender majority of the Programmes/Schemes/Missions of the Department by way of getting 'pro-women initiatives' and 'special provisions favouring women' built in to them. A glimpse of such provisions is given at **Annexure-A**.


6. The guidelines of various Sub-Missions/Missions such as Sub-Mission of Agricultural Extension (SAME) with special reference to ATMA; Sub-Mission on Agricultural Mechanization; Sub-Mission for Seed & Planting Material; National Food Security Mission; National Mission on Oil Seed and Oil Palm; National Mission on Sustainable Agriculture and Mission for Integrated Development of Horticulture (MIDH) stipulate that States and other Implementing Agencies are required to incur at least 30% expenditure on Women Farmers. About 32.61 lakh women (26.86% of the total farmers) have been benefitted in 652 Districts of 29 States and 3 UTs during the XII Plan period through farmer - oriented activities such as SHG formulation, Trainings, Demonstrations, Study Tours, Exposure Visits, Farm Schools etc. under ATMA intervention alone.

7. A meeting was convened on 6th August, 2015 to explore the opportunities for convergence among D/o Agriculture, Cooperation and Farmers Welfare (DAC&FW), Department of Animal Husbandry, Dairying & Fisheries (DAHD&F), MoA&FW and Ministry of Rural Development (NRLM Division). It was observed that all major programs and schemes have been designed to improve the livelihoods of the poor and have huge scope to benefit women farmers besides having focus on enrolling them as 'target group'. A decision has, therefore, been taken to promote convergence among all the schemes and programs of the aforesaid Departments which offer very high level of synergy and complementarity. A note on possible areas of convergence and the role of NRLM is attached at **Annexure-B**.

8. Besides facilitating women to derive benefits of Schemes of both- Agricultural and Rural Development Sector as per details at Annexure A & B, all States are, also requested to prepare a Convergence Plan between DAC&FW and NRLM Schemes, especially with MKSP. States may hold convergence meeting and prepare the details of the Action Plans at State, District and Block level with clear roles and responsibilities for functionaries from both - Agriculture Department and NRLM. Functionaries from Centre from both the Departments can be deputed to participate in these meetings.

9. MoRD is also planning to create a separate window and would earmark dedicated fund under NRLM to give an impetus to the convergent planning among all these programs. The State Rural Livelihoods Missions (SRLM) having significant progress made in building the SHGs and SHG Federations and also in implementation of MKSP may submit specific proposals in this regard. The proposal may also be developed in a comprehensive manner to include sustainable agriculture, build value chains of important crops of the poor, building producers' organizations/companies, building market linkages etc. the capacity building components can be met from NRLM and subsidy elements from the schemes of Departments of Agriculture and Animal Husbandry. It is also being envisaged that the expertise of all the concerned Departments to be at the disposal of the community based organizations to make this project a success.

Yours faithfully,


—(Siraj Hussain)

Secretary

Government of India

Department of Agriculture, Cooperation &
Farmers Welfare, MoA&FW



(J K Mohapatra)

Secretary

Government of India

Department of Rural Development
Ministry of Rural Development

Annexure - A

Special Provisions for Women under Different Schemes/Mission of DAC&FW,
MOA&FW

S. No	Scheme / Mission & Component	Provisions
A.	National Mission on Agricultural Extension & Technology (NMAET) – Sub-Mission on Agricultural Extension (SAME)	
1)	Agriculture Technology Management Agency (ATMA)	
a)	Specific provisions (only for Women)	
	i) Support for Women Food Security Groups (FSGs)	<ul style="list-style-type: none"> ✓ Groups exclusively of women farmer established and supported under ATMA Cafeteria as a mandatory activity @ Rs.0.10 lakh per group/year to achieve food security at the domestic/house hold level through setting up of kitchen garden, promoting off farm activities such as piggery, goat-rearing, bee-keeping etc. ✓ Support available for at least 2 FSGs/Block.
	ii) Support for Gender Coordinator	<ul style="list-style-type: none"> ✓ one '<i>Gender Coordinator</i>'/State in the team of committed extension personnel under ATMA to ensure that funds and benefits for training/ capacity building and extension support etc. are provided to them in proportion to their numbers.
	iii) Representation of Women farmers in decision making bodies	<ul style="list-style-type: none"> ✓ Provision for mandatory representation of Women Farmers in <ul style="list-style-type: none"> ✓ State, District, Block Farmer Advisory Committees ✓ ATMA Governing & ATMA Management Committee at District Level
	iv) As Beneficiary	<ul style="list-style-type: none"> ✓ At least 30% of total scheme beneficiaries are to be women; and ✓ minimum 30% of resources meant for programmes and activities are to be allocated to women farmers and women extension functionaries.
b)	Provisions (where women get benefits either over & above/along with men)	
	v)) Provision of Seed money /Revolving Fund	<ul style="list-style-type: none"> ✓ Rs. 0.10 Lakh per group (of men & women) (to viable groups on competitive basis)
	vi) Capacity building, skill development and support services	<ul style="list-style-type: none"> ✓ Rs. 0.05 lakh Per group / year (of men & women) (Upto 20 groups per block)
	vii) Farmer Friend @ 1 over every 2 villages	<ul style="list-style-type: none"> ✓ Rs. 6000/per year/ farmer friend ✓ Women to be preferred over men as 'Farmer Friends'

2)	Agri-Clinics & Agri-Business Centers (ACABC)	
	Provisions (where women get benefits either over & above/along with men)	
	i)	Back-ended Composite Subsidy ✓ 44% Back-ended composite subsidy towards cost of project to women as compared to 36% to men
3)	Mass Media Support to Agricultural Extension	
	Provisions (where women get benefits either over & above/along with men)	
	i)	Outreach to women ✓ One day specially allocated to cover areas of core competence women farmers in programmes of All India Radio & Doordarshan.
B.	Mission for Integrated Development of Horticulture (MIDH)	
	a)	Provisions (only for Women)
	i)	As Beneficiary ✓ Specific coverage of Scheduled Caste, Scheduled Tribe and women beneficiaries for programmatic interventions. ✓ Assistance for horticulture mechanization also available grower associations/ farmer groups/ Self Help Groups/ Women farmer groups having at least 10 members, who are engaged in cultivation of horticultural crops, provided the balance 60% of the cost of machines and tools is borne by such groups. SHM to enter in to MoU with such association/groups to ensure proper upkeep, running and maintenance of the machines and tools.
	b)	Provisions (where women get benefits either over & above/along with men)
1.	Procurement of Agricultural Machinery & Equipments (Subsidy Pattern)	
1.1	Tractor	
	i)	Tractor (upto 20 PTO HP) (Cost Norms- Rs. 3.00 lakh/unit) ✓ 35% of cost, subject to a maximum of Rs. 1.00 lakh per unit for women as compared to 25% of cost, subject to a maximum of Rs. 0.75 lakh/unit for men
	ii)	Power Tiller
		Power tiller (below 8 BHP) (Cost Norms- Rs. 1.00 lakh per unit) ✓ Subject to a maximum of Rs. 0.50 lakh/unit for women as compared to a maximum of Rs.0.40 lakh/unit for men
		Power tiller (8 BHP & above) (Cost Norms- Rs. 1.50 lakh per unit) ✓ Subject to a maximum of Rs. 0.75 lakh/unit for women as compared to a maximum of Rs.0.60 lakh/unit for men
	iii)	Tractor/Power tiller (below 20 BHP) driven equipment

	Land Development, tillage & seed bed preparation equipment (Cost Norms- Rs. 0.30 lakh per unit)	✓ Subject to a maximum of Rs.0.15 lakh/unit for women as compared to a maximum of Rs.0.12 lakh/unit for men
	Sowing, planting reaping and digging equipment (Cost Norms-Rs. 0.30 lakh per unit)	✓ Subject to a maximum of Rs. 0.15 lakh/unit for women as compared to a maximum of Rs.0.12 lakh/unit for men
	Plastic mulch laying machine (Cost Norms- Rs. 0.70 lakh per unit)	✓ Subject to a maximum of Rs. 0.35 lakh/unit for women as compared to a maximum of Rs.0.28 lakh/unit for men
	Self - propelled Horticulture Machinery (Cost Norms- Rs. 2.50 lakh per unit)	✓ Subject to a maximum of Rs. 1.25 lakh/unit for women as compared to a maximum of Rs. 1.00 lakh/unit for men
	Plant Protection equipment Manual sprayer: Knapsack/foot operated sprayer. (Cost Norms-Rs. 0.012 lakh/unit)	✓ Subject to a maximum of Rs. 0.006 lakh/unit for women as compared to a maximum of Rs.0.005 lakh/unit for men
	Powered Knapsack sprayer/ Power Operated Taiwan sprayer (capacity 8 – 12 lts) (Cost Norms- Rs. 0.062 lakh/unit)	✓ Subject to a maximum of Rs. 0.031 lakh/unit for women as compared to a maximum of Rs.0.025 lakh/unit for men
	Powered Knapsack sprayer/ Power Operated Taiwan sprayer (capacity above 12- 16 lts) (Cost Norms- Rs. 0.076 lakh/unit)	✓ Subject to a maximum of Rs. 0.038 lakh/unit for women as compared to a maximum of Rs.0.03 lakh/unit for men
	Powered Knapsack sprayer/ Power Operated Taiwan sprayer (capacity above 16/ltr) (Cost Norms- Rs. 0.20 lakh/unit)	✓ Subject to a maximum of Rs. 0.10 lakh/unit for women as compared to a maximum of Rs.0.08 lakh/unit for men
	Tractor mounted /Operated Sprayer (below 20 BHP) (Cost Norms- Rs. 0.20 lakh/unit)	✓ Subject to a maximum of Rs. 0.10 lakh/unit for women as compared to a maximum of Rs.0.08 lakh/unit for men
	Tractor mounted / Operated Sprayer (above 35 BHP) / Electrostatic Sprayer (Cost Norms- Rs. 1.26 lakh/unit)	✓ 50% of cost, subject to a maximum of Rs. 0.63 lakh per unit for women as compared to 40% of cost, subject to a maximum of Rs. 0.50 lakh/unit for men
	Eco Friendly Light Trap	✓ Subject of a maximum of Rs. 0.014 lakh/unit for women as compared to a maximum of Rs.0.12 lakh/unit for men

		(Cost Norms- Rs. 0.086 lakh/unit)	
2.	Area expansion under Bamboo Mission (MIDH)		
	Forest areas / Public land (Through JFMC / Panchayati Raj Institutions / SHGs, Women group etc.		✓ 100% of cost in 3 installments (50:25:25) (Max. Subsidy per unit area Rs. 42,000/ha) both for women & men
3.	Coconut Development Board (CDB) under MIDH		
	Adoption of technologies (Back-ended credit capital subsidy)		✓ 33.3% of the project cost for women as compared to 25% of the cost for men
C) National Mission on Oilseeds & Oil Palm (NMOOP)			
	a)	Provisions (only for Women)	
	i)	Promoting Women Groups	<ul style="list-style-type: none"> ✓ SHGs/ FIGs/FPOs/Women groups/Co-operatives etc. to be involved by the States in distribution of Certified Seeds. ✓ State Governments to setup/ start joint venture/lease out seed gardens to farmers' Self Help Groups/FIGs/Women Group / Cooperative Societies/FPOs. ✓ States to support Farmer's association/Self Help Groups / Farmer Groups / Women Groups / Cooperative Societies for this component under AAP. ✓ Farmers associations / FPOs/ FIGs / SHGs / Women Groups, cooperatives /federations would be eligible for assistance for installation of Pre-processing, Processing and oil extraction equipment / devices under Mini Mission-III for the prescribed TBOs. ✓ Provision available under the Mission for involvement of Co-operative Societies, Self Help / Women Groups / FIGs / FPOs etc., in implementation of the Mission.
	b)	Provisions (where women get benefits either over & above/ along with men)	
	ii)	For manual sprayers: Knapsack/foot operated sprayers, eco friendly light trap (NCIPM)	✓ Rs. 800/- per unit for women as compared to Rs. 600/- per unit for men
	iii)	For Knapsack and Taiwan power sprayers (capacity below 16 litres) @ 50% of the cost of procurement	✓ Rs.3800/- per unit for women (additional 10% assistance) as compared to Rs. 3000/- per unit for men
	iv)	For Knapsack and Taiwan power sprayers (capacity above 16 litres) @ 40% of the cost of procurement	✓ Rs. 10000/-per unit. For women (additional 10% assistance) as compared to Rs. 8000/- per unit for men
	v)	Manually/Bullock drawn implements	✓ Rs. 10000/-per unit for women (additional

		including Chiseller (@ 40% of the cost)	10% assistance) as compared to Rs. 8000/- per implement for men.
	vi)	Tractor driven, farm implements like Rotavator / Seed Drill/Zero Till Seed Drill/ Multi-Crop Planter/Zero Till Multi-Crop Planter/ Ridge furrow Planter/ Raised bed planter/ Power weeder/ Groundnut digger and Multi crop threshers	✓ Rs. 63000/-per unit for women (additional 10% assistance) as compared to Rs. 50000/- per unit for men.
	vii)	Small tractor with trolley (25% of the cost of procurement)	✓ Rs. 1.00 lakh/ unit for women (Additional 10% assistance) as compared to Rs. 0.75 lakh/unit for men.
	viii)	Distribution of pre- processing, processing and oil extraction equipment to Farmers associations / FPOs/ FIGs / SHGs / Women Groups , cooperatives / federations.	✓ Back ended credit linked subsidy (30% subsidy, 50% loan, 20% own share) with assistance restricted to 30% of project cost with a ceiling of Rs. 6.50 lakhs for setting up one unit/project per organization/individual.
	ix)	Establishment of Seed Gardens Support through the States' Department of Agriculture /Horticulture (75:25) for setup/ start joint venture/ lease out seed gardens to farmers' SHGs / FIGs/ Women Group / Cooperative Societies/ FPOs.	✓ One time assistance for a max. Rs.10.00 lakh as subsidy for setting up a new seed garden in 15 ha area by oil palm farmer's association /co-operative etc. through State Government. ✓ The seed garden may be developed over an area of 15 ha each as a Revolving Fund Scheme with the assistance of Rs 30.00 lakh, with a breakup of Rs. 10 lakh (first year) & Rs. 2 lakh each for 2nd, 3rd, 4th, 5th and 6th year. In 7th year, a block grant of Rs.10 lakh is provided. From 8th year onwards the scheme is likely to become self-supportive.
D)	Integrated Scheme for Agricultural Marketing (ISAM)		
	i)	Storage Infrastructure Projects under Agriculture Marketing infrastructure (AMI) for Registered FPOs, Panchayats, Women , Scheduled Caste (SC)/ Scheduled Tribe (ST) beneficiaries or their cooperatives/Self-help groups.	✓ 33.33% Subsidy (on capital cost) for women as compared to 25% for men. ✓ Subsidy ceiling (Up to 1000 MT is Rs. 1166.55), More than 1000MT and up to 30000 MT is Rs. 1000.00, Maximum ceiling of Rs 300.00 Lakhs) for women and Subsidy ceiling (Up to 1000 MT in Rs/MT-875.00, More than 1000MT and upto 30000 MT in Rs /MT-750.00), Maximum ceiling (Rs 225.00 Lakhs) for men.
	ii)	For Infrastructure Projects Other than Storage Infrastructure for Registered FPOs, Women, Scheduled Caste (SC)/ Scheduled Tribe (ST) beneficiaries or their cooperatives.	✓ 33.33% Rate of Subsidy (on capital cost) for women as compared to 25% for men ✓ Maximum Subsidy Ceiling is Rs. 500.00 lakhs for women as compared to Rs. 400.00 lakhs for men.
E)	National Food Security Mission (NFSM)		

	a)	Provisions (only for Women)	
	i)	As Beneficiary	✓ At least 30% allocation of the funds is for women farmers.
	b)	Provisions (where women get benefits either over & above/ along with men)	
	ii)	Promotion of Farmer Producer Organizations (FPOs) and marketing support for value chain integration (to un-registered farmer groups, SHGs of Women & others etc. for local marketing of pulses and millets)	✓ Rs.2.00 lakh per group of 15 farmers, for one time support only)
F)	National Mission for Sustainable Agriculture (NMSA)		
	a)	Provisions (only for Women)	
		Soil & water conservation; Water use efficiency; Soil health management and Rain-fed Area Development.	✓ At least 50% of the allocation is to be utilized for small, marginal farmers of which at least 30% are women beneficiaries/ farmers.
G)	Sub-Mission on Agricultural Mechanization (SMAM)		
	a)	Provisions (only for Women)	
	i)	Training Programme	✓ Training Programmes on Gender friendly Equipment for Women farmers are to be conducted by Farm Machinery Training & Testing Institutes.
	ii)	As Beneficiary	✓ At least 30% allocation of the fund is to be made for women farmers.
	b)	Provisions (where women get benefits either over & above/ along with men)	
	iii)	Tractor	
		Tractor (08-20 PTO HP)	✓ Rs. 1.00 lakh for women as compared to Rs. 0.75 lakh for men.
		Tractor (Above 20-70 PTO HP)	✓ Rs. 1.25 lakh for women as compared to Rs. 1.00 lakh for men.
	iv)	Power Tillers	
		Power Tiller (below 8 BHP)	✓ Rs. 0.50 lakh for women as compared to Rs. 0.40 lakh for men.
		Power Tiller (8 BHP & above)	✓ Rs. 0.75 lakh for women as compared to Rs. 0.60 lakh for men.
	v)	Rice Trans-planter	
		Self-Propelled Rice Trans-planter (4 rows)	✓ Rs.0.94 lakh for women as compared to Rs. 0.75 lakh for men.
		Self-Propelled Rice Trans-planter (i) above 4-8 rows	✓ Rs. 2.0 lakh for women and men both.

	(ii) above 8-16 rows	
	Self-Propelled Machinery Reaper cum Binder	✓ Rs. 1.25 lakh for women as compared to Rs. 1.00 lakh for men.
vi)	Specialized Self Propelled Machinery	
	Reaper/Post Hole Digger/Augur/Pneumatic / other Planter	✓ Rs. 0.63 lakh for women as compared to Rs. 0.50 lakh for men.
vii)	Self-Propelled Horticultural Machinery	
	Fruit Puckers/ Tree pruners/ Fruit Harvesters/ Fruit Graders /Track Trolley/ Nursery Media Filling Machine/ Multipurpose Hydraulic System / Power operated horticulture tools for pruning, budding, grating, shearing etc.	✓ Rs. 1.25 lakh for women as compared to Rs. 1.00 lakh for men.
viii)	Land Development, tillage and seed bed preparation equipments	
	MB Plow/ Disc Plow/ Cultivator/Harrow/leveler Blade / cage wheel/ Furrow opener/Ridger/ Weed slasher / Laser Land Leveler/ Reversible Mechanical plough	✓ Rs. 0.15 lakh for women as compared to Rs. 0.12 lakh for men (Below 20 BHP driven). ✓ Rs. 0.19 lakh for women as compared to Rs. 0.15 lakh for men (Above 20-35 BHP driven).
	Rotavator/ Rotopuddler / Reversible Hydraulic plough	✓ Rs. 0.35 lakh for women as compared to Rs. 0.28 lakh for men (Below 20 BHP driven). ✓ Rs. 0.44 lakh for women as compared to Rs. 0.35 lakh for men (Above 20-35 BHP driven).
	Chisel Plough	✓ Rs. 0.08 lakh for women as compared to Rs. 0.06 lakh for men (Below 20 BHP driven). ✓ Rs. 0.10 lakh for women as compared to Rs. 0.08 lakh for men (Above 20-35 BHP driven)
ix)	Sowing, Planting, Reaping and Digging Equipment	
	Post Hole digger/ Potato Planter/Potato Digger /Ground nut digger/Strip till drill/Tractor drawn reaper/Onion harvester /Rice straw Chopper/Zero till seed cum fertilizer drill/ Raised Bed Planter/ Sugar cane cutter/ Stripper/Planter/Seed drill/Multi crop planter / Zero-till multi crop planter/Ridge furrow planter	✓ Rs. 0.15 lakh for women as compared to Rs. 0.12 lakh for men (Below 20 BHP driven). ✓ Rs. 0.19 lakh for women as compared to Rs. 0.15 lakh for men (Above 20-35 BHP driven)

		Turbo Seeder/ Pneumatic Planter /Pneumatic vegetable transplanter /Pneumatic vegetable seeder/ Happy seeder/Plastic Mulch Laying Machine	<ul style="list-style-type: none"> ✓ Rs. 0.35 lakh for women as compared to Rs. 0.28 lakh for men (Below 20 BHP driven). ✓ Rs 0.44 lakh for women as compared to Rs. 0.35 lakh for men (Above 20 BHP driven).
	x)	Inter Cultivation Equipment;	
		Grass Weed Slasher/ Rice Straw Chopper/ Power Weeder (engine operated below 2bhp)	<ul style="list-style-type: none"> ✓ Rs. 0.15 lakh for women as compared to Rs. 0.12 lakh for men (Below 20 BHP driven). ✓ Rs. 0.19 lakh for women as compared to Rs. 0.15 lakh for men (Below 20 to 35 BHP driven .
	xi)	Equipment for Residue management / Hay and Forage Equipments	
		Sugarcane thrash Cutter /Coconut Frond Chopper /Rake/ Balers/ Straw reaper	<ul style="list-style-type: none"> ✓ Rs. 0.15 lakh for women as compared to Rs. 0.12 lakh for men (Below 20 BHP driven) ✓ Rs. 0.19 lakh for women as compared to Rs. 0.15 lakh for men (Above 20 BHP driven)
	xii)	Harvesting & Threshing Equipments	
		Ground Nut Pod Stripper/ Thresher/ Multi crop Threshers/ Paddy Thresher/ Brush Cutter	<ul style="list-style-type: none"> ✓ Rs. 0.2 lakh for women as compared to Rs. 0.16 lakh for men (Operated by engine/ electric motor below 3 HP and by power tiller and tractor below 20 BHP) ✓ Rs. 0.25 lakh for women as compared to Rs. 0.2 lakh for men (Operated by engine/ electric motor 3-5 HP and by power tiller and tractor below 35 BHP)
		Chaff Cutter (Operated by engine/electric motor below 3 hp and by power tiller and tractor of below 20 BHP tractor)	<ul style="list-style-type: none"> ✓ Rs. 0.2 lakh for women as compared to Rs.0.16 lakh for men (Operated by engine / electric motor below 3 HP and by power tiller and tractor below 20 BHP). ✓ Rs. 0.25 lakh for women as compared to Rs. 0.2 lakh for men (Operated by engine / electric motor 3-5 HP and by power tiller and tractor below 35 BHP).
		Tractor (above 35 BHP) Driven Equipment	
	xiii)	Land Development, tillage and seed bed preparation equipment	
		MB Plow/Disc Plow/Cultivator/ Harrow/ Leveler Blade / Cage Wheel/Furrow opener / Ridger/ Reversible Mechanical plough	<ul style="list-style-type: none"> ✓ Rs. 0.44 Lakh for women as compared to Rs. 0.35 lakh for men.
		Weed slasher /Laser and Leveller / Rotavator / Roto-puddler/Reversible Hydraulic plough/Sub - soiler / Trench makers (PTO operated) / Bund former (PTO operated) /Power Harrow (PTO operated)/Backhoe	<ul style="list-style-type: none"> ✓ Rs. 0.63 Lakh for women as compared to Rs. 0.50 lakh for men.

		Loader Dozer (Tractor operated)	
	xiv)	Sowing , Planting , Reaping and Digging Equipment	
		Zero till seed cum fertilizer drill/Raised Bed Planter/ seed drill/ Potato Digger/ tractor drawn reaper/ onion harvester	✓ Rs. 0.44 lakh for women as compared to Rs. 0.35 lakh for men
		Post Hole digger/ Potato Planter/ Ground nut digger/ Strip till drill/ Rice straw Chopper, Sugar cane cutter/ Stripper/planter/ multi crop planter /zero -till multi crop planter/Ridge furrow planter /Turbo Seeder/ Pneumatic Planter/ Pneumatic vegetable trans-planter / Pneumatic vegetable seeder/ Happy seeder /Cassava Planter /Manure spreader /Fertilizer Spreader – PTO operated /Plastic Mulch Laying Machine/ Automatic rice nursery sowing machinery	✓ Rs. 0.63 lakh for women as compared to Rs. 0.50 lakh for men.
	xv)	Inter Cultivation Equipment	
		Grass/ Weed Slasher / Rice straw Chopper/ Weeder (PTO operated)	✓ Rs. 0.63 Lakh for women as compared to Rs. 0.50 lakh for men.
	xvi)	Harvesting & Threshing Equip. (Operated by engine/electric motor above 5 hp and tractor of above 35 BHP tractor)	
		Ground-Nut Pod Stripper / Thresher / Multi crop Threshers / Paddy Thresher/ Chaff Cutter/ Forage/ Harvester/Birds Scare	✓ Rs. 0.63 Lakh for women as compared to Rs. 0.50 lakh for men.
	xvii)	Equipment for Residue mgmt. /Hay and Forage Equipment	
		Sugarcane thrash Cutter/ Coconut Frond Chopper/ Hay Rake/ Balers (Round)/ Baler (Rectangular) Wood chippers/ Sugarcane ratoon manager / Cotton stalk uprooter/ Straw reaper	✓ Rs. 0.63 Lakh for women as compared to Rs. 0.50 lakh for men.
		All manual/animal drawn equipment/implements/Tools	
	xviii)	Land Develop., tillage and seed bed preparation equipment	
		MB Plow/ Disc Plow/ Cultivator /Harrow/ Leveler Blade/ Furrow opener/ Ridger/ Puddler	✓ Rs. 0.10 Lakh for women as compared to Rs. 0.08 lakh for men.
	xix)	Sowing & Planting Equipment	

	Paddy planter/ Seed cum fertilizer drill/ Raised Bed Planter/ Planter/ Dibbler/ Equipment for raising paddy nursery	✓ Rs. 0.10 Lakh for women as compared to Rs. 0.08 lakh for men.
	Drum Seeder (Below 4 Row)	✓ Rs. 0.015 Lakh for women as compared to Rs. 0.012 lakh for men.
	Drum Seeder (Above 4 Row)	✓ Rs. 0.019 Lakh for women as compared to Rs. 0.015 lakh for men.
	Harvesting & Threshing Equipment	
	Ground Nut Pod Stripper/ Thresher/Winnowing fan/Tree climber/ Horticulture Hand tools	✓ Rs. 0.10 Lakh for women as compared to Rs. 0.08 lakh for men.
	Chaff Cutter (upto 3 feet)	✓ Rs. 0.05 Lakh for women as compared to Rs. 0.04 lakh for men.
	Chaff Cutter (above 3 feet)	✓ Rs. 0.063 Lakh for women as compared to Rs. 0.05 lakh for men.
xx)	Inter Cultivation Equipment	
	Grass Weed Slasher/ Weeder/ Conoweeder / Garden Hand Tools	✓ Rs. 0.006 Lakh for women as compared to Rs. 0.005 lakh for men.
xxi)	Plant Protection Equipment	
	Manual sprayer: Knapsack /foot operated sprayer	✓ Rs. 0.006 Lakh for women as compared to Rs. 0.005 lakh for men.
	Powered Knapsack sprayer/Power Operated Taiwan sprayer (capacity 8-12Its)	✓ Rs. 0.031 lakh for women as compared to Rs. 0.025 lakh
	Powered Knapsack sprayer/Power Operated Taiwan sprayer (capacity above 12-16Its)	✓ Rs. 0.038 lakh for women as compared to Rs. 0.03 lakh
	Powered Knapsack sprayer/Power Operated Taiwan sprayer (capacity above 16Its)	✓ Rs. 0.10 lakh for women as compared to Rs. 0.08 lakh
	Tractor mounted /Operated Sprayer (below 20 BHP)	✓ Rs. 0.10 lakh for women as compared to Rs. 0.08 lakh
	Tractor mounted /Operated Sprayer (below 35 BHP)	✓ Rs. 0.13 lakh for women as compared to Rs. 0.10 lakh
	Eco Friendly Light Trap	✓ Rs. 0.014 lakh for women as compared to Rs. 0.012 lakh
	Tractor mounted/operated sprayer (above 35 BHP)	✓ Rs. 0.63 lakh for women as compared to Rs. 0.50 lakh
	Electrostatic Sprayer	✓ Rs. 0.63 lakh for women as compared to Rs. 0.50 lakh

	xxii)	Post Harvest Technology	
		Establishment of PHT units for transfer of primary processing technology, value-addition, low cost scientific storage, packaging units and technologies.	✓ Rs. 1.50 lakh/ unit for women as compared to Rs. 1.25 lakh/ unit for men.
H) Agricultural Insurance			
	a)	Provisions (only for Women)	
			✓ Ensuring maximum coverage of SC / ST / Women farmers with budget allocation and utilization for these category of farmers to be in proportion to their population in the respective state.
	b)	Provisions (where women get benefits either over & above/along with men)	
	1.	Modified National Agricultural Insurance Scheme (MNAIS)	
		Insurance protection for notified food crops, oilseeds and annual horticultural /commercial crops.	<ul style="list-style-type: none"> ✓ Actuarial Premium rate for notified crops subject to maximum premium up to 11% & 9% for food & oilseeds crops of Kharif and Rabi seasons, respectively. For annual commercial / horticultural crops, it is capped at 13%. ✓ Subsidy up to 75% of premium is provided to all types of farmers depending on the slab of premium. <ul style="list-style-type: none"> a. Upto 2% - Nil, b. More than 2-5% : 40% subject to minimum net premium of 2%, c. More than 5-10% : 50% subject to minimum net premium of 3%, d. More than 10-15% : 60% subject to minimum net premium of 5%, e. More than 15% : 75% subject to minimum net premium of 6% ✓ If the sowing is not done due to adverse weather / climate, claims / indemnity up to 25% of sum insured will be paid for prevented sowing/planting risk. ✓ When the crop yield is less than the guaranteed yield of notified crops, the indemnity payment equal to short fall in yield

			<p>is payable to all insured farmers in the notified areas.</p> <ul style="list-style-type: none"> ✓ However, on-account advance payment, up to 25% of likely claims will be paid as immediate relief in those notified areas where yield losses are at least 50% of Threshold Yield (TY). ✓ Besides, postharvest (upto2weeks) losses due to cyclone are also covered. ✓ Losses due to localized risks of hail storm and landslide are assessed on individual basis and claims to affected insured farmers are paid accordingly.
	2.	Weather Based Crop Insurance Scheme(WBCIS)	<ul style="list-style-type: none"> ✓ Insurance protection for notified food crops, oilseeds and horticultural / commercial crops. ✓ Actuarial Premium rate for notified crops, subject to maximum premium up to 10 % & 8 % for food & oilseeds crops of Kharif and Rabi seasons, respectively and 12 % for annual commercial / horticultural crops. It is capped at 12%. <ul style="list-style-type: none"> a. Up to 2% - Nil subsidy, b. More than 2 to 5 %-25 % subsidy subject to minimum net premium of 2%, c. More than 5 to 8% -40 % subsidy subject to minimum net premium of 3.75 %, d. More than 8% -50 % subsidy subject to minimum net premium of 4.8% and maximum net premium of 6% payable by farmers. ✓ When the Weather indices (rainfall/temperature/relative humidity/wind speed etc) differ (less/ higher) from the Guaranteed Weather Index of notified crops, the indemnity payment equal to deviation / shortfall is payable to all insured farmers of notified crops in notified area.
	3.	Coconut Palm Insurance Scheme (CPIS)	<ul style="list-style-type: none"> ✓ Premium rate per palm ranges from Rs.9.00 (in the age group of 4 to 15 years) to Rs. 14.00 (in the age group of 16 to 60 years). ✓ 50-75 % subsidy of premium is provided to all types of farmers. ✓ When the Palm trees are damaged, the indemnity payment equal to sum insured / damage is payable to the insured farmers in notified areas.

Possible areas of convergence and Role of NRLM

The following schemes of DAC&FW have been found to be highly suitable for immediate convergence with NRLM:

1. National Mission on Sustainable Agriculture (NMSA)
2. National Food Security Mission(NFSM)
3. Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)
4. Sub-Mission on Agricultural Extension & Technology (SMAE) under National Mission on Agriculture Extension and Technology (NMAET)
5. Sub-Mission on Agricultural Mechanization (SMAM) under National Mission on Agriculture Extension and Technology (NMAET)
6. Sub-Mission on Plant Protection (SMPP) under National Mission on Agriculture Extension and Technology (NMAET)
7. National Mission on Oilseeds and Oil Palm (NMOOP)

Many of the above schemes require 50% of the beneficiaries to be small and marginal farmers and 30% of these beneficiaries to be **women farmers** and offer a strong challenge for proper targeting.

Point for Convergence

- Agriculture is the principal source of livelihood for more than 58% of the population of this country. Agriculture and farmers are backbone of our economy and strengthening their position is the ultimate objective of DAC&FW.
- DAC&FW is working towards Farmers' skill trainings and field extension through 4 Sub Missions of NMAET- SMSP, SAME (with convergence under similar farmer-oriented activities under ATMA), SMAM and SMPP; NMSA, NFSM, NMOOP).
- DAC&FW is working with farmers with special provisions already built in for the farmers belonging to SC/ST, **women** and small and marginal farmers.
- MKSP is primarily working with small & marginal farmers under rainfed conditions and all are women farmers
- MKSP is organizing farmers into producers' groups and Farmers' Field Schools
- MKSP is creating a cadre of CRPs as extension workers
- MKSP focuses on capacity building of the farmers
- MKSP has strong experience of using innovative extension tools like pico projectors and developed community films for training on wide range of subjects
- MKSP is working with a large number of NGOs

Scope under Convergence

- Soil Health Card to all the women farmers
- Effective utilization of committed extension functionaries available under ATMA
- Training and capacity building of MKSP farmers and other community professionals and extension workers under ATMA/MKSP/SMAM
- MKSP women getting subsidy at higher rates as specified under various Sub-Missions/Missions of DAC&FW as per provisions reflected in Annexure A under majority Partnerships with NGO partners of MKSP
- Establishing Custom Hiring Centres
- Establishment of Farm machinery Banks
- Holding demonstrations in the plots of MKSP farmers

Similarly there is an immense scope to support the livelihoods of the rural poor who are highly dependent on livestock through convergent planning between National Livestock Mission (NLM) and National Rural Livelihoods Mission (NRLM) being implemented by the State Governments. One of the stated objectives of NLM is to establish convergence and synergy among ongoing Plan programmes and stakeholders for sustainable livestock development and a convergent planning approach would help both these programs in terms of outreach and serve the poor effectively.

Possible Role of NRLM

SRLMs would support in identification of women farmers and support the department with CRPs/staff in the field-ensuring the outreach and proper training

Institutional network of SHGs can be used for reaching out to poor farmers

For many activities NRLM can bring in/facilitate the loan component against the subsidy components

Summary of the Schemes/ Programmes/Missions of Department of Agriculture & Cooperation & Farmers Welfare with high relevance for NRLM

Specific Scheme	Salient features of the scheme relevant to MKSP/NRLM	Department	Convergence Head	Key points of convergence	Benefits to community
National Mission on Sustainable Agriculture (NMSA)	<p>Focus on integrated farming systems – Agri, livestock, Fisheries, NTFP</p> <p>50% would be small and marginal farmers</p> <p>30% of the above beneficiaries would be women farmers (that means 15% of the total beneficiaries)</p> <p>Components:</p> <p>Rain-fed Area Development</p> <p>On farm water management</p> <p>Soil Health Management</p> <p>Climate Change and</p>	State Agriculture Department	Producers Groups promoted under NRLM and MKSP/Village Organization as implementing partners	<p>SRLMs/ATMA to support selection of farmers and support the Department with CRPs/staff in the field</p> <p>Institutional network of SHGs can be used for reaching out to poor farmers</p> <p>Better outreach and targeting</p>	<p>Poor women can benefit immensely from the Integrated Farming System.</p> <p>MKSP is primarily working with small & marginal farmers under rain-fed conditions.</p> <p>Capacity building of the MKSP farmers on the key components of the schemes will be extremely helpful.</p>

	Sustainable Agriculture Representative from MoRD is a member of the National Advisory Committee (NAC) of NMSA				
Soil Health Card		Centrally sponsored Scheme	Soil Health card for MKSP farmers Soil health cards for SHG members engaged in agriculture Training in soil health analysis.	SRLMs/ATMA would mobilize the farmers Identify resource persons to be trained in soil health analysis from among the CRPs	MKSP farmers will have soil health cards CRPs will be trained in soil health analysis
National Food Security Mission (NFSM)	30% of the beneficiaries would be women farmers Focus on pulses and coarse cereals	Agriculture Department	Demonstration of new varieties/PVSP seeds/cropping systems in the fields of MKSP farmers	The Department may work with SHG/farmers groups for taking up demonstration SRLMs can mobilize the women farmers	MKSP farmers would be trained in better farming practices

				SRLMs along with the NGO partners of MKSP can actively partner in planning and field implementation	
National Mission on Oilseeds and Oil Palm (NMOOP)	<p>The mission envisages increase in production of vegetable oils sourced from oilseeds, oil palm and Tree Borne Oilseed (TBOs)</p> <p>SHGs/ FIGs/FPOs/Women groups/Co-operatives etc. could also be involved by the States in distribution of Certified Seeds.</p> <p>State Governments may also setup/ start joint venture/lease out seed gardens to farmers' Self Help Groups/FIGs/Women Group / Cooperative Societies/FPOs.</p> <p>States can support Farmer's Association/Self</p>	State Agriculture Department	Producers Groups/SHGs/Women Groups promoted under NRLM and MKSP/Village Organization as implementing partners	<p>SRLMs would support in identification of farmers and support the department with CRPs/staff in the field</p> <p>Institutional network of SHGs/FPOs/Women Groups can be used for reaching out to poor farmers</p> <p>Better outreach and targeting</p>	MKSP farmers/FPOs/SHGs/Women Groups will be benefitted under the Scheme in several components and subsidy provisions

	<p>Help Groups/Farmer Groups/Women Groups/Cooperative Societies for this component under AAP.</p> <p>Farmers Associations / FPOs/ FIGs / SHGs / Women Groups, Cooperatives /Federations would be eligible for assistance for installation of Pre-processing, Processing and oil extraction equipment /devices under Mini Mission-III for the prescribed TBOs.</p> <p>A provision has been made under the Mission for involvement of Co-operative Societies, Self Help/Women Groups/FIGs/FPOs etc., in implementation of the Mission.</p>				
Sub-Mission on Agricultural Extension & Technology (SMAE)	<p>At least 30% scheme beneficiaries are to be women farmers;</p> <p><i>Women Food Security Groups @ 2 women FSGs/block to ensure food and</i></p>	<p>Agriculture Department</p> <p>ATMA</p>	<p>Ensuring an integrated, broad based extension delivery mechanism consistent</p>	<p>Adopting group approach to extension in line with the identified needs and requirements of</p>	<p>MKSP members engaged in agriculture activities will be capacitated</p>

	<p>nutritional security</p> <p><i>Gender Coordinator</i> in each State</p> <p>Representation of Women in decision making bodies at State, District and Block level</p> <p>Preferential involvement of women as 'Farmer Friends' for the extension delivery mechanism below the block level (@1 Farmer Friend/2 Villages)</p> <p>Capacity building and exposure visits</p> <p>Farm Schools</p> <p>Promotion of Commodity Interest Groups (CIG), Farmer Interest Group (FIG) and Food Security Groups (FSG)</p> <p>Demo plots</p>		<p>with farming system approach.</p>	<p>the farmers in the form of CIGs & FIGs</p> <p>Addressing gender concerns by mobilizing farm women into groups and providing training to them.</p> <p>Strengthening the extension machinery through re-training and retooling of existing extension personnel.</p> <p>Sharing of training material</p> <p>Mobilizing and organizing the farmers into groups</p> <p>Training of CRPs, both Agriculture and Animals can be taken up</p>	<p>in better practices</p> <p>Capacity of the CRPs will be upgraded regularly</p> <p>Participation of the women farmers in various decision making bodies and governance</p> <p>Food Security Groups for Household nutritional security</p>
Sub Mission	Focus on small &	Agricultur	Supply of	Village	Tools and

on Agriculture Mechanization (SMAM)	<p>marginal farmers</p> <p>Establishing Custom Hiring Centres</p> <p>Establishment of Farm machinery Banks</p> <p>Higher rate of subsidy for women</p>	e Departme nt	Agriculture implements	Organizations/ Producers groups promoted under MKSP/NRLM may be funded for CHCs.	implements will be available to the small and marginal farmers and women farmers at a higher subsidy rates
Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)	<p>Promotion of scientific moisture conservation</p> <p>Capacity building, training and exposure visits of the famers</p> <p>Irrigation equipment-pumps, drip etc</p>	State Agricultur e Departme nt	Producers Groups promoted under NRLM and MKSP/Villa ge Organizatio n as implem t ing partners	<p>SRLMs would support in identification of farmers and support the department with CRPs/staff in the field</p> <p>Institutional network of SHGs can be used for reaching out to poor farmers</p>	Capacity building of the farmers in scientific moisture conservatio n

Components of National Livestock Mission highly relevant for convergence with NRLM

S.No.	Specific Schemes and components	Scope for convergence between NLM and NRLM
1	Sub-Mission on Livestock Development	
	Interventions towards Productivity Enhancement	Rural Backyard Poultry Development;
	Risk Management and Insurance	Animal insurance for SHG members
2	Sub Mission on Pig Development in the NER	
	Propagation of Reproductive Technologies	Partnership with SRLM for health cover of pigs
	Health Cover	Partnership with SRLM for health cover of pigs
3	Sub-Mission on Fodder and Feed Development	
	Fodder Seed Production/Procurement and Distribution	Distribution of improved fodder seeds to SHG members
	Conservation of Fodder through Post Harvest Technologies	Distribution of Chaff cutters, establishment of silage making units etc
	Training and Human Resource Development	Training of SRLM project staff, MKSP partners and farmers/SHG members
	Sub-Mission on Skill Development, Technology Transfer and Extension	
4	IEC Support for Livestock Extension	Production of extension materials with MKSP partners

भारत सरकार/Government of India
ग्रामीण विकास मंत्रालय/Ministry of Rural Development
ग्रामीण विकास विभाग/Department of Rural Development
ग्रामीण आजीविका विभाग/ Rural Livelihoods Division
(<https://rural.nic.in>)

सातवीं मंजिल, एन.डी.सी.सी-II भवन/7th Floor, N.D.C.C -II Building
जय सिंह मार्ग, नई दिल्ली-01/Jai Singh Road, New Delhi-01
दिनांक/ Dated: 15th March, 2024

To,


The State Mission Director/Chief Executive Officer,
State Rural Livelihoods Mission,
Bihar, Jharkhand, Maharashtra, Madhya Pradesh, Rajasthan,
Tamil Nadu & Uttar Pradesh,

Madam/Sir,

I am directed to enclose the Memorandum of Understanding (MoU) between Ministry of Rural Development, Government of India and Bharat Financial Inclusion Limited (BFIL), New Delhi for information and further necessary action.

Yours faithfully,

Encl.: As above.


रमन वाधवा/ (Raman Wadhwa)
उप-निदेशक (प्रशासन)/Deputy Director (Admin)

Copy to:

1. PPS to Additional Secretary (RL), MoRD Government of India, New Delhi.
2. PPS to Joint Secretary, Rural Livelihoods-II, MoRD, Government of India, New Delhi.

MEMORANDUM OF UNDERSTANDING

BFIL
15/3/2024

BETWEEN

THE MINISTRY OF RURAL DEVELOPMENT (MoRD)
GOVERNMENT OF INDIA

AND

BHARAT FINANCIAL INCLUSION LIMITED (BFIL)
MOU No: MORD/NRLM/FLH/MOU/2024/001)

File No.: K-11060/30/2023-24/FL/IB-CSR (Comp. No.: 386521)

This Memorandum of Understanding (MoU) is entered at New Delhi on this 15th day of March, 2024.

Between

The Ministry of Rural Development (MoRD), Government of India, having its office of Rural Livelihoods Division, 7th Floor, NDCC Building II, Jai Singh Marg, New Delhi (herein referred to as "MoRD" which expression shall, unless it be repugnant to the subject or context thereof, include its successors and assigns) of the FIRST PART)

AND

Bharat Financial Inclusion Limited - BFIL (A 100 % Subsidiary of IndusInd Bank), a company incorporated under the Companies Act 2013 and having its



Page 1 of 12

चरणजीत सिंह / CHARANJIT SINGH
अपर सचिव / Additional Secretary
भारत सरकार / Government of India
ग्रामीण विकास मंत्रालय / Ministry of Rural Development
कृषि भवन, नई दिल्ली / Krishi Bhawan, New Delhi

Page 1667 of 1852

(CIN-U65999MH2018PLC312539), registered office at One World Centre, Tower 1, Floor 8, 841 Senapati Bapat Marg, Elphinstone, Mumbai – 400 013 and head office at 3rd Floor, My Home Tycoon, Block A, 6-3-1192, Kundanbagh, Begumpet, Hyderabad- 500 016 (“BFIL”, which expression shall, unless it be repugnant to the subject or context thereof, include its successors and assigns) as the SECOND PART.

“MoRD” and ”BFIL” may hereinafter be individually referred to as the “Party” and collectively referred to as the “Parties.”

WHEREAS the Parties have agreed to collaborate, in principle, on binding on various social development initiative and projects without financial commitment that may arise from time to time.

WHEREAS the Parties are executing the present MOU to record broad principle and guidelines for the above collaboration.

Article 1. Background and Purpose

The Bharat Financial Inclusion Limited (hereinafter referred to as BFIL) approached MoRD and apprise that BFIL in discharge of its “Corporate Social Responsibility” desires to develop some System in the field of “Animal Husbandry” in Rural Areas. It was further informed by the officials of BFIL that it wants to perform the following in collaboration with MoRD:-

1. Setting up of Centralized Project Monitoring Unit at National Level at Ministry of Rural Development (MoRD) supporting Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM) & State level at SRLM piloting in three states (Maharashtra, Madhya Pradesh & Jharkhand)
2. Livestock Cluster Facilitation
3. Developing IT enabled ecosystem for tracking of deliverables of Pashu Sakhis.



Page 2 of 12

4. Convergence with Bharat Sanjeevani in Madhya Pradesh, Maharashtra & Jharkhand.

WHEREAS Deendayal Antyodaya Yojana-National Rural Livelihood Mission (DAY-NRLM) is a flagship programme of the MoRD, Government of India for promoting poverty reduction through building strong community institutions of the poor women, and enabling these institutions to access a range of financial services and livelihoods.

Bharat Financial Inclusion Limited (BFIL) is already working in the sphere of livestock intervention by promoting “Bharat Sanjeevini” a digital platform for supporting the livelihoods activity and is a one-of-its-kind initiative which provides doorstep veterinary quality care services to the farmer including free essential medicines for his livestock and taking care for other needs like illness treatment, emergency care and vaccination as part of the project.

Now, THEREFORE, both Parties in good and bonafide faith, mutually agree to enter into this non-binding, non-financial, principle base Memorandum of Understanding (herein after the “MoU”) to work together for the collaboration in the manner provided in this MoU.

In addition to the activities referred in this MoU, the Parties may mutually agree to explore new collaborative efforts in furtherance of the below given objectives (collectively referred to as the “Objectives”).

Article 2. Objectives

The Key objectives of the MoU promotion are as under:

1. Setting up of Centralized Project Management Unit at the National and Project Management Unit (PMU) at State level
2. Facilitation in development of livestock clusters
3. Hand holding support through technical resources



4. Developing IT enabled ecosystem
5. Scaling up of good practice
6. Build a specific management information system (MIS)

Article 3: Areas of Operations

BFIL will set up CPMU (Centralized Project Management Unit) at national level and PMU in 7 or more states to support the objectives meant under this MoU. Indicative states for this may include the following – Maharashtra, Madhya Pradesh, Jharkhand, Uttar Pradesh, Rajasthan, Tamil Nadu & Bihar.

Article 4: Roles and Responsibilities of the parties

- I. MoRD (DAY-NRLM) will endeavor to:
 - i. To allow the BFIL to share the existing office of NMMU (National Mission Management Unit) and State office as per the terms to be agreed to some limited extent as approved by the competent authority, without any right on the space whatsoever.
 - ii. At National Level BFIL will deploy seven personnel at NRLM office and they will report to an official earmarked by Additional Secretary (RL) viz. Specialist in Dairy, Goatry, Fishery, Poultry, Piggery and Agri –Business and market linkage and Govt. Liaisoning & Young Professional.
 - iii. To support BFIL CSR Team for all day-to-day activities and services to ensure comprehensive effective of the program & to review progress on regular interval.
 - iv. Extending the necessary support and converging the available resources.
 - v. Mobilizing and providing necessary government support to conduct various capacity building program like trainings and workshops of different stakeholders organized by BFIL.



- vi. Institutionalize the grievance redressal mechanism on matters pertaining to Program implementation at different level.

II. BFIL will endeavor to:

- i. Fund and monitor the implementation of CSR program “Bharat Sanjeevani” in order to provide support to DAY-NRLM program of MoRD
- ii. Setting up of Centralized Project Management [CPM] Unit at National Level at Ministry of Rural Development (MoRD) supporting (DAY-NRLM) & State level piloting in states of (Maharashtra, Madhya Pradesh, Jharkhand, Uttar Pradesh, Rajasthan, Tamil Nadu & Bihar) that may be upscaled in other states. BFIL will provide veterinary care experts in Dairy, Goatry, Poultry, Fishery etc domain for supporting mission of DAY-NRLM.
- iii. Livestock Cluster Facilitation
- A. BFIL will support in enhancing Capacity building of Pashu Sakhis (the Community Resource Person under DAY-NRLM).
- B. Development & Management of Livestock clusters/ FPO's in states. Project locations will be mutually decided by BFIL & DAY- NRLM
- C. BFIL will provide veterinary care experts in Dairy with qualifications (BVSc& AH/ MVSc) , Goatry with qualifications (BVSc& AH/ MVSc), Poultry with qualifications (BVSc& AH/ MVSc), Fishery with qualifications (BFSc / MFSc) , Agri Business with Qualifications(PGDM/MBA-Agri-Business/Rural Management or equivalent), Young Professional (MBA/B.VSc or Equivalent) at National level. Similarly at the State level based on the need of expert required and as per the mutually agreeable terms the human resources in the aforementioned domain area will be deployed. BFIL will also deploy Project Manager (Any Graduate/ Postgraduate with experience of handling Social sector projects) each in Maharashtra, Madhya Pradesh, Jharkhand, UP,



Rajasthan, Tamil Nadu & Bihar state HQ to coordinate & Monitor day to day activities.

- D. To review existing training module of NRLM & to suggest any modifications for the same
- E. Will support in adoption of sustainable livestock practices & improved technology & its extension (in convergence with Department of Animal Husbandry (DAHD) & Krishi Vigyan Kendra (KVK)
- i. Developing Information Technology (IT) enabled ecosystem for tracking of deliverables of Pashu Sakhis.
 - ii. Convergence for providing doorstep Veterinary Services
 - iii. Join hands with the DAY-NRLM, Ministry of Rural Development for the project duration and collaboration of resources towards implementing Bharat Sanjeevani for supporting livestock-based livelihood.
 - iv. Liaison with stakeholders of the Project at the field level and ensure effective implementation and achieving deliverables as set out in the Project proposal.
 - v. Organize and facilitate review meeting organized at different levels involving concern stakeholders of the Project.
 - vi. Provide guidance, expertise and mentorship for effective knowledge management, smooth program delivery, adherence to timelines, and achievement of milestones and take responsibility for corrective action when required.
 - vii. To review and progress the programs on quarterly basis as a part of the Working Group.
 - viii. Identify, assess and manage risks arising out of uncertainty of the program strategy, design or delivery.
 - ix. Reporting and documentation; Progress Reports, and impact studies.



Article 5: Intellectual Property Rights (IPR)

5.1 All intellectual property including trademark, copyright, drawings, technology, trade secret, know how, software, data, codes, information concerning operational and activities and any other proprietary information, whether registered as intellectual property or not ("IP") held, owned and used by either party to this MoU, prior to entering into this MoU or disclosed shall remain the property of the party introducing or disclosing it.

5.2 Nothing in this MoU shall be construed as a license or transfer or an obligation to enter into any agreement with respect to any IP currently licensed to or belonging to either party.

5.3 MoRD along all its affiliates, neither hold any proprietary stake in the innovations shortlisted by it under the collaboration nor endorses any innovation.

BFIL while engaging its member community must consider this and refrain from making such claims and/or promises on behalf of MoRD or its affiliates.

5.4 This clause shall be binding on the parties, notwithstanding the non-binding nature of the MoU.

5.5 The best practices and the knowledge gained in connection with activities deemed under this MoU will be made available and accessible to both the parties.

5.6 Any reports/search report/data etc. pertaining to present project will be pertained to MoRD only and BFIL will have no right to share the same with anyone. If BFIL needs to publish/share it, then BFIL shall take pre-written approval of the MoRD.



Page 7 of 12

Article 6: Research Agreements

6.1 The Parties may, on a case by case basis, negotiate and agree on the terms of collaboration for specific joint projects through legally binding agreements.

6.2. The Parties shall select, develop, plan and jointly implement the specific activities through such agreements. Such agreements shall be expressed in English and shall only be effective and binding on the Parties if signed by their duly authorized signatories.

6.3 It is mutually agreed between the parties that in case MoRD is not inclined to associate with BFIL for any further agreement which is part of the subject matter of present MoU , then BFIL shall not perform the same with any other agency using Reports/Data of MORD, without the pre-written permission of MoRD.

Article 7: Communication and Publications

7.1 Any communication under or in connection with this MoU is to be in the English language and signed by or on behalf of the party giving it.

7.2 Any publication of activities in the media by BFIL under this MoU only shall be done after written consensus and mutual consultation between both parties. BFIL will seek permission at least one week in advance and the process will be through Government channel with the final authority being Additional Secretary (RL)

7.3. Parties may not use the other's logo without explicit consent to do so, recorded in writing. In the event such consent is provided, the party using the logo must enquire official policies and procedures regarding the same and strictly adhere to it. This provision is equally applicable to all offices that fall within the definition of MoRD.



Article 8: Funding

8.1. This MoU carries no financial commitment from either Party. However, the Parties are free to use their own funds or seek funding sources to support the objectives of this MoU. The funding under this agreement should be legal and any transfer of funds to be governed by the Indian Laws. BFIL will not allow any of its sponsors to use/misuse the name of MoRD or any of its division/officials etc. Further BFIL must disclose the source and purpose of fund received/to be received from some third agency for the present project. The source of fund must be legal.

8.2. MoRD is not liable to contribute any fund in the said project.

8.3 Source of funding is through CSR fund of BFIL & IndusInd Bank

Article 9: Amendments

9.1. Variations or amendments to this MoU shall be effective only in writing, upon the mutual consent of the Parties and signed on behalf of each Party by a duly authorized signatory.

Article 10: Legal Effect

10.1. This MoU is entered into in good faith as a basis for establishing an institutional collaboration for the benefit of excluded households, community organizations and also other stakeholders interested in poverty alleviation.

10.2 The MoU is not intended by the Parties to be legally binding upon them. In case of failure to enter into any subsequent agreement, the non-entering into any such agreement shall not be construed as a breach capable of causing any legal liability on the part of either Party.

Article 11: Modalities of Execution

11.1 The Parties shall, in accordance with the objectives of this MoU, encourage the establishment of contact and cooperation between the Parties of this MoU in the areas contemplated in Article 3.



Page 9 of 12

चरणजीत सिंह / CHARANJIT SINGH
अपर सचिव / Additional Secretary
भारत सरकार / Government of India
ग्रामीण विकास मंत्रालय / Ministry of Rural Development
कृषि भवन, नई दिल्ली / Krishi Bhawan, New Delhi

Page 1675 of 1852

11.2 The Parties commit themselves to cooperate in best possible manner without any financial commitment with regard to each and every aspect required for the completion of all objectives contemplated in this MoU.

Article 12: Severability

12.1 If any provision of this MoU is invalid or unenforceable for any reason whatsoever, such invalidity or unenforceable shall not affect the validity or enforceable of any or all of the remaining provisions of this MoU which will continue in full force and effect and be constructed as if this MoU had been executed without the invalid or unenforceable provisions.

Article 13: Fairness

13.1 In entering into this MoU, the Parties agree and hereby declare their intention that the MoU shall operate between them with fairness and without damage to the interest of any of the Parties and the general public.

Articles 14: Dispute Resolution

14.1. Any disagreement between the Parties arising out of the interpretation or implementation of this MoU shall be settled amicably through consultations and negotiations between the Parties. In case both the parties cannot resolve their disputes, then Hon'ble Courts of Delhi only, will have appropriate jurisdiction to adjudicate the matter of dispute between the parties.

Article 15: Term and Termination of MoU

15.1. This MoU shall commence on the effective date and shall remain in force for a period of 3 years with an option to extend for further periods as mutually agreed by both the parties.

15.2 Either party may terminate this MoU by giving at least two (02) month's prior written notice to the other party.



Page 10 of 12

15.3 The MoU shall not affect the completion of any unfulfilled objective at the time of termination, unless otherwise agreed upon by the Parties.

15.4 That MoRD/BFIL may terminate present MoU by giving two months notice in advance, however, a fair reason for the same should be tendered by MoRD/ BFIL.

15.5 In case of termination of MoU, BFIL officials using office premises of any SRLM, then the said SRLM is empowered to ask officials of BFIL to vacate their premises as per clause 15.4. In such a case, officials of BFIL will not raise any dispute

Article 16: Privileges and Immunities

16.1. Nothing in this MoU or any document or arrangement relating thereto shall be construed as constituting a waiver of any statutory privileges, rights or proprietary interests of the Parties or conferring any such rights or privileges to either Party.

Article 17: Force Majeure

17.1. For the purposes of this MoU, “**Force Majeure Event**” means an event beyond the reasonable control of either of the Parties including but not limited to strikes, lock-outs or other industrial disputes (whether involving the workforce of the Party or any other party), failure of a utility service or transport network, act of God, war, riot, pandemics, epidemics, quarantine, decrees lock down, mandatory closure of cities and areas civil commotion, malicious damage, compliance with any Law or governmental order, rule, regulation or direction, accident, breakdown of plant or machinery, fire, flood, storm or default of suppliers /subcontractors.

17.2 BFIL shall not be liable to MoRD/DAY-NRLM, and MoRD/DAY-NRLM shall not be liable to BFIL as a result of any delay or failure to perform its obligations under this MoU as a direct result of a Force Majeure Event.

Article 18: Confidentiality:

18.1 Except with the prior written consent of disclosing party, receiving party shall not at any time communicate to any person or entity any confidential information acquired in the course of the Services, nor shall receiving party and its Personnel make public the data/reports/records collected in the course of, or as a result of, the



services. If the data is misused, necessary action shall be initiated as per the provision of the Law.

Article 19: Indemnity:

19.1. Both parties hereby undertake and agree to indemnify each party and hold each party harmless and keep at all times fully indemnified and hold harmless from and against all actions, proceedings, claims, liabilities, penalties, demands and costs, awards, damages, losses and/or expenses howsoever arising directly or indirectly as a result of this MOU.

THIS MEMORANDUM OF UNDERSTANDING is executed by the duly appointed representatives of each Party as of the date written below in the English language.

Place : New Delhi

Date : 15th March, 2024

(Charanjit Singh)
Additional Secretary, Rural Livelihoods
Ministry of Rural Development
Govt. of India,
New Delhi

चरणजीत सिंह / CHARANJIT SINGH
अपर सचिव / Additional Secretary
भारत सरकार / Government of India
ग्रामीण विकास मंत्रालय / Ministry of Rural Development
कृषि भवन, नई दिल्ली / Krishi Bhawan, New Delhi

(J. Sridharan)
Executive Vice Chairman
Bharat Financial Inclusion Limited
Hyderabad



Witness:

(Raman Wadhwa)
Deputy Director
NRLPS, MoRD
New Delhi

रमन वाघवा
Deputy Director (Administration)
उप निदेशक (प्रशासन)
National Rural Livelihood Promotion Society
राष्ट्रीय ग्रामीण आजीविका संवर्धन सोसायटी
Ministry of Rural Development, New Delhi-1
ग्रामीण विकास मंत्रालय, नई दिल्ली-1

Witness:

(Kishore Sambasivam)
Chief People Officer
& Head CSR, BFIL
Hyderabad



भारत सरकार/Government of India
ग्रामीण विकास मंत्रालय/Ministry of Rural Development
ग्रामीण विकास विभाग/Department of Rural Development
ग्रामीण आजीविका विभाग/ Rural Livelihoods Division
(<https://rural.nic.in>)

सातवीं मंजिल, एन.डी.सी.सी-II भवन/7th Floor, N.D.C.C -II Building
जय सिंह मार्ग, नई दिल्ली-01/Jai Singh Road, New Delhi-01
दिनांक/ Dated: 11th September, 2023

To,

The State Mission Director/Chief Executive Officer,
State Rural Livelihoods Mission,
All States/UTs.

Subject: Memorandum of Understanding (MoU) Between Ministry of Rural Development and Buddha Institute, New Delhi.

Madam/Sir,

I am directed to enclose the Memorandum of Understanding (MoU) between Ministry of Rural Development, Government of India and Buddha Institute, New Delhi for information and further necessary action.

Yours faithfully,

Encl.: As above.


रमन वाधवा/ (Raman Wadhwa)
उप-निदेशक (प्रशासन)/Deputy Director (Admin)

Copy to:

1. Mr. Ved Arya, Director, Buddha Institute, New Delhi
2. PSO to Secretary (RD), MoRD Government of India, New Delhi.
3. PPS to Additional Secretary (RL), MoRD Government of India, New Delhi.
4. PPS to JS RL (Livelihoods), MoRD, Government of India, New Delhi.
5. Dr. Vivek Kunj, NMM-FL, DAY-NRLM, New Delhi

Memorandum of Understanding (MoU)

Between

Ministry of Rural Development (MoRD) and Buddha Institute (BI)

For

Building Development Entrepreneurs (DE) for Enhancing Incomes and Creating Jobs in Rural Areas towards the Goal of Impacting 5 million Rural Poor Families in India.

This MoU is entered into in New Delhi this 29th day of August Month of Two Thousand and Twenty-Three.

By and between:

1. Ministry of Rural Development through DAY-NRLM having its office at 7th Floor, NDCC-II, Building, Jai Singh Road, New Delhi – 110 001, represented by Shri Charanjit Singh, Additional Secretary, Rural Livelihoods, Government of India, Ministry of Rural Development (to be called MoRD henceforth).

And

2. Buddha Institute (BI) anchored by SRIJAN and Education for Employability Foundation (E2F) having its office at 1st Floor, CSC, Anupam Apartments, Mehrauli-Badarpur Road, New Delhi -110 068, represented by Shri Ved Arya, Director, Buddha Institute (to be called BI, henceforth)
3. Whereas Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM) is a centrally sponsored program under MoRD, GoI, that aims at eliminating rural poverty through mobilization of rural poor women into Self-help groups (SHGs) and their various institutions (like Village Organizations, Cluster Level Federations (CLFs), Producer Groups (PG), Producer Enterprises (PEs), among others).

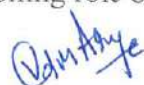
More than 93.6 million rural poor women have been mobilized in about 8.71 million SHGs. There are estimated 6 million SHGs which have taken bank loans. DAY-NRLM has built a cadre of more than three lakh community resource persons (CRPs) including *Agriculture (Krishi Sakhi)*, *Livestock (Pashu Sakhi)*, *Banking Correspondent/ Bank Sakhi*, Enterprise Promotion etc.

Whereas DAY-NRLM is (a) promoting producer groups (PG) and companies and farmer-producer organizations (FPOs) that aggregate and process the farm produce and non-farm products and strive to market the same, and (b) is extending financial grants or facilitating finance arrangements with State and other schemes to PGs and PEs/FPO. There are more than 1.36 lakh Producers groups and 492 (PE/FPOs) developed and facilitated under DAY-NRLM.

4. And whereas Buddha Institute and SRIJAN have quality experience in rural livelihoods promotion and in building an ecosystem for Development Entrepreneurs in India. Development entrepreneur (DE) is defined as someone who sets up a for profit or not for profit enterprise with an aim to positively impact the lives of vulnerable communities, particularly at the bottom half of the socio-economic pyramid, living in rural and urban areas, and/ or to address the challenge of climate change. Buddha Institute has impacted lives of 25,000 marginalized families in the last five years, via mentoring 23 Development Entrepreneurs in 25 districts in 10 States. These Development Entrepreneurs have brought innovative solutions to tackle the problems of low crop and livestock productivity, unfair price for farm produce or non-timber forest produce, lack of processing and marketing, labour shortage and unemployment in rural India, and absence of waste segregation leading to huge dumping sites in cities.

BI with Education for Employability Foundation (E2F), in last three years has trained more than 4,600 rural youth on various employability skills such as those required to address groundwater extraction. Through Buddha Fellowship program, E2F has built capacity of 23 Buddha Fellows in creating rural jobs and enhancing rural people's income.

5. The two partners namely DAY-NRLM and BI have decided to come together to build a model of Development Entrepreneurs in 100 districts of 12 States of India thus impacting five million poor families in 03 years.
6. The objective of this Memorandum of Association is to promote rural entrepreneurship among local youth by building their capacities (emphasis on skills and attitude not just knowledge), linking them to financial institutions (in addition the regular Bank Linkage program of the DAY-NRLM), introducing new and appropriate latest and need based technologies (say, for preserving perishables), thus establishing a local entrepreneurial ecosystem, leading to employment generation and income enhancement of the poor.
7. Whereas detailed guidelines related to implementation strategy and financial implications will be designed jointly, mentioning role of all stakeholders.



8. Whereas all the joint actions will be integrated at State level through setting-up coordination units, initially in the identified districts (to be selected on the basis of the study) and may be further expanded in other districts with mutual consent.
9. Whereas resources from relevant schemes of MoRD (like IFC, SVEP, RISE, NRETP) and other Ministries like MSME, MOFPI, MoA&FW, DPIIT, Ministry of Skill Development & Entrepreneurship will be dovetailed under this broad initiative to expand the funding sources to augment entrepreneurial activities for local communities. The registration of enterprises in MSME or in relevant schemes, training and financing will be leveraged for all Development Entrepreneurs.
10. Now, therefore, the MoRD and BI have decided to join hands for an invigorated and coordinated effort to promote rural entrepreneurship and employment through Development Entrepreneurs. This is a Non-Financial Memorandum of Understanding for the purpose and activities defined in this document. MoRD or DAY-NRLM or any of its subsidiary institutions shall not pay or will be liable for any payments for activities performed in the MoU.

11. Broad Activities and Roles to be taken up in this initiative:

A. MoRD/NRLM:

- a) Seek pro-active involvement of concerned senior Officials and experts of National and State Unit in promoting the program and selection of potential candidates of Development Entrepreneurs from selected districts.
- b) Support BI in identifying DEs among FPOs, CLFs and CRPs (e.g. *Krishi Sakhi, pashu sakhi*) and positioning their role and contribution towards the goals of income and employment enhancement vis-a-vis other entities in DAY-NRLM.
- c) Explore funding via CLF, community institutions or other such platforms which could finance the enterprise activities, based on stated terms and conditions.
- d) Support in leveraging Mudra loans to Development Entrepreneurs.
- e) Help in seeking convergence for skill development/capacity building of Development Entrepreneurs.
- f) Enhance participation of experts and mentors from industry accrediting them as is being done to enlist support of National Resource Persons (NRPs) in NRLM.
- g) Adopt measures for monitoring evaluation and learning (MEAL) of the program. Regular monitoring of the progress will be undertaken by MoRD/NRLM

B. Buddha Institute:

- a) Conduct an in-depth study, develop scope for Development Entrepreneurs working with existing value-chains of different commodities, assessing demand for entrepreneurial services, where joint venture or win-win relationship with Cluster Level Federations and FPOs is possible.



- b) Select high chance of success value chains' (farm, non-farm, livestock) among the existing programs supported by DAY-NRLM and build them further and their market led interventions.
- c) Accordingly, sign joint venture agreements between the development entrepreneurs and CLFs/PGs/PEs etc. for execution.
- d) Promote program at various levels with in the States to create greater enthusiasm and interest among rural communities for their participation and organize various kick-off meetings and promotional events.
- e) Recruit and assign dedicated staff to implement the project.
- f) Jointly plan and select Development Entrepreneurs at community and State level on the basis of potential sectors and sub-sectors, geography, product-market combination, while giving high priority to candidates who already have a proof of concept. Broad criteria to be detailed out after further consultations with districts and States. This could have State specificity as well.
- g) Provide seed-capital/grant (to the extent possible) to Development Entrepreneurs, give them mentors and thematic experts, and build their network for regular guidance and support for a period of maximum two years.
- h) Specify and measure the social and environmental impact of Development Entrepreneurs in the following terms – i) employment generation (job created), ii) income enhanced, iii) empowerment, and (iv) mitigation of climate change etc. This is to be done in order to evaluate the direct impact of Development Entrepreneurs on the lives and livelihoods of the rural poor.
- i) Start the work in identified districts, phasing to be discussed with DAY-NRLM aiming to promote entrepreneurs in 100 districts. Find synergies to work in aspirational districts and blocks where feasible.
- j) Regularly monitor the progress of the projects and document lessons from experiences for broader policy change and program effectiveness.
- k) Provide regular information to DAY-NRLM for the activities undertaken.

12. **Duration:** This MoU comes into effect from the date of signing by MoRD and BI and will be in force for three years from the date of signing. It will be extendable on satisfactory performance of support by BI. Both parties may terminate the MoU at any time by giving a two months written notice.

13. **Confidentiality:** Both the parties shall acknowledge its own and the partner's intellectual property rights (IPRs), as a result of entering into or performing this MoU and shall not



disclose to any third party except its employees on need-to-know basis but shall be bound to disclose if needed by operation of law or by judicial authorities.

14. In witness whereof, the MoRD and BI have executed this MoU on 29th August, 2023 at Krishi Bhawan, New Delhi.



Charanjit Singh
Additional Secretary, Rural Livelihoods,
Government of India,
Ministry of Rural Development



Ved Arya
Director,
Budha Institute

Witness:



1. Shri Raman Wadhwa, Deputy Director (Administration), NRLPS, Ministry of Rural Development, New Delhi.

2. Ms. Shipra Singh, Budha Institute, New Delhi.



फाइल संख्या/ File No. K-11060/17/2023-24/FL (e-385706)

भारत सरकार/Government of India

ग्रामीण विकास मंत्रालय/Ministry of Rural Development

ग्रामीण विकास विभाग/Department of Rural Development

ग्रामीण आजीविका विभाग/ Rural Livelihoods Division

(<https://rural.nic.in>)

सातवीं मंजिल, एन.डी.सी.सी-II भवन/7th Floor, N.D.C.C -II Building

जय सिंह मार्ग, नई दिल्ली-01/Jai Singh Road, New Delhi-01

दिनांक/ Dated: 22nd September, 2023

To

The State Mission Director/ Chief Executive Officer,
State Rural Livelihoods Mission,
All States/UTs

Subject: Technical Support to SRLMs in strengthening the value chain development activities through promotion/supporting the Producer Collectives - Recognizing M/s Intellicap Advisory Services Private Limited as DAY-NRLM Support Organization (NSO)

Madam/Sir,

I am directed to enclose the Memorandum of Understanding (MoU) between Ministry of Rural Development, Government of India and Intellicap Advisory Services Private Limited, New Delhi as DAY-NRLM Support Organization (NSO) for supporting in Farm & Non-Farm activities.

The NSO will support in promoting/strengthening of FPOs/Producer Enterprises, scaling up of enterprises capacity building of staff and producer collectives, identification and adoption of technologies, developing innovative financial structure to enhance access to capital, establish partnerships, studies and developing monitoring mechanism.

You are requested to make the best use of this opportunity and seek technical support from the NSO on the mutually agreed areas among others.

Yours faithfully,

Encl.: As above.


रमन वाधवा/ (Raman Wadhwa)

उप-निदेशक (प्रशासन)/Deputy Director (Admin)

Copy to :

1. PPS to Additional Secretary, Rural Livelihoods, MoRD, New Delhi
2. PPSs to Joint Secretary, Rural Livelihoods, MoRD, New Delhi.
3. The Director, M/s. Intellicap Advisory Services Private Limited, Mumbai, Maharashtra

Part I: Preamble

This Memorandum of Understanding (MoU) is signed between Ministry of Rural Development, Government of India with Rural Livelihoods Division has its office at NDCC II Building, Jai Singh Marg, New Delhi (hereafter referred as **First Party** or “**MoRD**”).

and

Intellecap Advisory Services Private Limited having its registered office at Unit No. 201, 2nd Floor, Naman Centre, G Block, Bandra-Kurla Complex, Bandra (East), Mumbai 400 051, Maharashtra, India (hereafter referred as **Second Party** or “**Intellecap**”)

“MoRD” and “Intellecap” are individually referred to as “Party” and collectively as “Parties”.

WHEREAS

MoRD is implementing a key program, Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY - NRLM) launched in 2011 to address multidimensional poverty through mobilising rural women into Self Help Groups (SHGs) and their federations. DAY-NRLM seeks to reach out to around 10 crore rural households in the country, providing them with opportunities to improve their livelihoods through a range of livelihood interventions, access to credit, and marketing support amongst others. To support the women SHG member augment their livelihoods by strengthening their existing livelihoods, the mission is supporting the women farmers in strengthening their existing livelihoods for reduction of cost of cultivation, enhancement in production/yield through the adoption of improved/scientific cultivation/collection practices like in Agriculture, Livestock and NTFPs. Further, to support the women farmers for better market access they have been support to establish producer collectives for post farm gate activities like aggregation, value addition, packaging, processing, labelling, branding, technology adoption and marketing. In non-farm sector, the SHG members are supported to be developed into individual and group entrepreneurs. This is done through a structured program called Start-up Village Entrepreneurship Program (SVEP) & Micro Enterprise Development (MED) program. Further, in select states OSF (One Stop Facility) is being implemented to support bigger enterprises. Cluster development program are also developed to promote large producer enterprises on non-farm sector.

Intellecap is the advisory arm of The Aavishkaar Group. The Aavishkaar group works to build businesses that can benefit the underserved segments across Asia and Africa. Intellecap focuses on building ecosystems to make markets more inclusive by providing spectrum of services to build businesses that benefit the underserved. Intellecap takes an ecosystem approach that combines knowledge, capital and networks, to provide environmental and social innovations with a continuum of support throughout their life-cycle and to address systemic barriers. Intellecap is a thought leader in the sustainable agriculture development space with 150+ professionals across five high-impact sectors. Intellecap adopts 4S approach i.e., Search, Seed, Support, and Scale innovations and business solutions that have the potential to change the lives of low-income families. Intellecap supports FPOs



Raman Vaidya
रमन वाधवा
Deputy Director (Administration)
उप निदेशक (प्रशासन)
National Rural Livelihood Promotion Society
राष्ट्रीय ग्रामीण आजीविका संवर्धन सोसायटी
Ministry of Rural Development, New Delhi-1
ग्रामीण विकास मंत्रालय, नई दिल्ली-1



across States in their business journey through upstream optimization, market entry strategies, enabling technology adoption and ensuring access to innovative financing.

CONSIDERING the mutual interest in the field of rural development through strengthening agriculture and non-agriculture based livelihoods the Parties agreed to cooperate and collaborate with each other with a view to achieving their common objectives, in particular with regard to enhanced scope for small and marginal farmers to access and adopt technology through Collectives/Farmer Producer Companies/ Producer Cooperatives/Producer Groups etc. in farm sectors and for non-farm through collectives/clusters/incubators etc. **THUS**, the Parties within the context of their respective mandates, objectives, and procedures, shall cooperate in building enabling ecosystems and channelizing capital to create and nurture sustainable enterprises.

PART- II: Responsibilities of the Parties

This is a Non-Financial MoU between both the Parties. The second party will provide technical support as NRLM Support Organisation (NSO). The key areas of collaboration will include and not limited to:

- **Building Skill and Knowledge:** Dedicated and futuristic exploration across key sectors, map industry landscape, document the insights for support, capacity building activities. Data-backed analysis to understand production ecosystems and market landscapes, design program, build relevant partnerships and value-addition capabilities.
- **Facilitate Access to Capital:** Develop innovative financial structures to facilitate leveraging suitable capital instruments such as debt, equity, and grants, public and private financing for the enterprises, engage on policy shifts where ever required. Create innovative partnerships to promote access to credit for farm/ non-farm/agroforestry value chain development.
- **Scaling up and Stabilisation:** Knowledge sharing, building sectoral institutions, broadcasting, replication and contextualisation. Support farm/non-farm enterprises on collectivization, improved access to finance, better market linkages for value addition, information sharing, promotion and adoption of suitable technology for productive, sustainable and resilient value chains (farm/non-farm).

Ministry of Rural Development

To inform the States about the MoU, for taking relevant technical support around enterprise promotion. It will facilitate the availability of platform created under DAY-NRLM to implement the activities, organizing training, mobilizing SHG members/ PG / PE members. It will provide relevant data, reports, guidelines, access to MIS etc. Review regularly for smooth implementation and the necessary coordination between SRLMs and Intellecap.

Intellecap Advisory Services Private Limited

Intellecap is responsible for providing technical support to the national as well as state units of DAY-NRLM to build enabling ecosystems and facilitate access to capital and technology to create and



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Ministry of Rural Development, New Delhi-1
ग्रामीण विकास मंत्रालय, नई दिल्ली-1



nurture sustainable collectives by providing services around their transformation utilizing the existing network of Producer Collectives. The specific areas of support may cover;

- a. Support promotion/strengthening of FPO/Producer Enterprises and develop an efficient coordination network at the National level and State level.
- b. Support scaling up of enterprises, enhancement of value chain knowledge, and value addition processes.
- c. Strengthening the institutional architecture, value chains, and market access through branding, packaging, labelling, and value addition for farm and non-farm value chains.
- d. Capacity building of mission staff on enterprise promotion and collectives.
- e. Facilitate identification & adoption of technologies for strengthening the adaptive capacity of farmers on sustainable agriculture, value addition & climate resilient actions.
- f. Support in developing innovative financial structures and mechanisms to enhance access to capital (debt, equity, grants) leveraging public and private financing for an enterprise. The support will also include conducting carbon market trends, analysis, and developing financing mechanisms to mobilize carbon finance
- g. Support in establishing partnerships for enhancing access to technology, markets, finance, and value-addition capabilities.
- h. Support in studies around value chain development/ landscaping for developing programs and strategic /operational interventions for FPOs/ Producer enterprises, leveraging policy instruments for productive, sustainable, and resilient value chains (farm /non-farm). Exchanging relevant analytical reports, publications, technical materials, expert services, and other information
- i. Support in developing/strengthening Monitoring Mechanisms to ensure timely implementation of the interventions.

PART III: Duration and Termination of the MoU

This MoU shall be effective from the day it is signed and remains active until Three (3) years. Any extension or significant modification of this MoU shall be matured by agreement of the Parties. The changes will be contained in an addendum to this MoU, describing the precise terms and conditions that apply to the extended MoU. The MoU may be terminated by any of the Parties by giving a one-month written notice.

Part IV: Dispute Resolution

Any dispute arising in connection with the interpretation or application of the MoU shall be settled through consultation and mutual agreement. This MoU shall be governed and construed in accordance with the laws of India

Part V: Force Majeure

Neither Party will be liable for any act, omission, or failure to fulfill its obligations under this MoU to the extent that such act, omission, or failure arises from any cause reasonably beyond its control



Raman Wadhwa
रमन वाधवा
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नियंत्रण (प्रशासन)
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including acts of God, strikes, lockouts, riots, acts of war, epidemics, governmental action, fire, earthquakes or other disasters (called "Force Majeure"), after the date of this MoU. This MoU constitutes the entire Agreement of the Parties on the subject hereof and supersedes all prior understandings and instruments on such subject. This MoU shall be governed and construed in accordance with the laws of India.

Part VI: Relationship

Notwithstanding the understandings reached in this MoU, the Parties are and shall remain independent parties and nothing herein shall be construed to create a legal partnership, agency or joint venture between the Parties. Nothing herein shall be construed as implying that either Party's employees are employees of the other Party.

Part VIII: Effective Date

This Specific Memorandum of Understanding between, MoRD and Intellectap is signed on this day **4th September 2023** in two copies and each party shall receive a copy of the fully executed Memorandum of Understanding which is deemed as original.

Part IX: Confidentiality

The Parties shall hold in confidence all Confidential and Proprietary Information, as defined below, disclosed by one Party to the other. They agree not to disclose the information to third parties, and only to release and disclose such information to individuals within the Receiving Party's corporation that are directly involved with the Scope, on a need-to-know basis.

Notwithstanding the above, the Parties agree that either Party, subject to Confidentiality Agreements, may share information with third party organizations that are contracted to support the Scope of this MoU and where such third parties have executed Confidentiality and Proprietary Information agreements with the Parties with terms least as stringent as those in this MoU.

Such Confidential and Proprietary Information shall include, but is not limited to, supplier information, know-how, trade secret, patent, patent application, copyright, inventions, devices, improvements, or other intellectual property, software or computer program, data, process technique, program, design, drawing, formula or test data relating to any project, work in progress, future development, engineering, manufacturing, marketing, servicing, financial or personnel matter relating to the present or future business of the Providing Party, whether in oral, written, graphic or electronic form or copies thereof. Confidential and Proprietary Information which is orally or visually disclosed may only be protected under this MoU if it is identified as Confidential and Proprietary Information at the time of such disclosure or if it is presumed to be Confidential and Proprietary Information.

The term "Confidential and Proprietary Information" shall not include materials or information that:

- Are generally known to the public;
- Are already known to the receiving Party at the time of disclosure, as evidenced by verifiable written records;



Deputy Director (Administration)
रमन वाघवा
उप निदेशक (प्रशासन)
National Rural Livelihood Promotion Society
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Ministry of Rural Development, New Delhi-1
ग्रामीण विकास मंत्रालय, नई दिल्ली-1



- c. Become known to the Receiving Party from a third Party lawfully entitled to disclose the same and that the Receiving Party informs the Disclosing Party within 30 days of the receipt;
- d. Are independently known or developed by the Receiving Party; and
- e. Are required to be discovered by law.

Unless otherwise agreed in writing, all Confidential and Proprietary Information remains the property of the Disclosing Party.

Authorised Signatory
Deen Dayal Upadhyay Antyodaya Yojana -
National Rural Livelihoods Mission (DAY-
NRLM)
Ministry of Rural Development (MoRD),
New Delhi, India

Authorised Signatory
M/s Intellecap Advisory Services Pvt Ltd
Mumbai, Maharashtra
India

Raman Wadhwa
रमन वाधवा
Deputy Director (Administration)
उप निदेशक (प्रशासन)
National Rural Livelihood Promotion Society
राष्ट्रीय ग्रामीण आजीविका संवर्धन सोसायटी
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Signature and Seal
Name: **Raman Wadhwa**
Designation: **Deputy Director (Admin)**
Place: **New Delhi**
Date: **4th September 2023**

Jayesh Bhatia
Signature and Seal
Name: **Jayesh Bhatia**
Designation: **Director, Intellecap**
Place: **New Delhi**
Date: **4th September 2023**

Witness
Name: **VINOD KUMAR**
Place: **New Delhi**
Date: **04/09/2023**

विनोद कुमार/VINOD KUMAR
अवर सचिव/Under Secretary
भारत सरकार/Government of India
ग्रामीण विकास मंत्रालय/Ministry of Rural Development
कृषि भवन, नई दिल्ली/Krishi Bhawan, New Delhi

Witness
Name: **RAHUL AGRAWAL**
Place: **DELHI**
Date: **04/09/2023**

भारत सरकार/Government of India
ग्रामीण विकास मंत्रालय/Ministry of Rural Development
ग्रामीण विकास विभाग/Department of Rural Development
ग्रामीण आजीविका विभाग/ Rural Livelihoods Division
(<https://rural.nic.in>)

सातवीं मंजिल, एन.डी.सी.सी-II भवन/7th Floor, N.D.C.C -II Building
जय सिंह मार्ग, नई दिल्ली-01/Jai Singh Road, New Delhi-01
दिनांक/ Dated: 18th September, 2023

To,

The State Mission Director/Chief Executive Officer,
State Rural Livelihoods Mission,
All States and UTs.


Subject: MoU with Harvest Plus for promotion of Bio fortified Millets.

Dear Madam/ Sir,

I am directed to enclose and share the MoU signed with Harvest Plus, India for promotion of Bio fortified Millets for information and further necessary action.

Encl.: As above

Yours faithfully,


रमन वाधवा/(Raman Wadhwa)
उप-निदेशक (प्रशासन)/Deputy Director (Admin)

Copy to :

1. PPS to Additional Secretary, Rural Livelihoods, MoRD, New Delhi
2. PPS to Joint Secretary, Rural Livelihoods, MoRD, New Delhi.



सत्यमेव जयते

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Government of National Capital Territory of Delhi

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 HARVESTPLUS INDIA
 MINISTRY OF RURAL DEVELOPMENT GOVT OF INDIA
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 (One Hundred only)



Please write or type below this line

Memorandum of Understanding (MoU)

For promotion of biofortified Iron Pearl Millet & Zinc Wheat Value Chain Activities

Between

Ministry of Rural Development, Government of India

Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY - NRLM)

And

HarvestPlus, India,

CG Block, NASC Complex, DPS Marg, PUSA Road, New Delhi | Delhi110012

New Delhi, 26th July 2023

Page 1693 of 1852

Statutory Alert:

- 1 The authenticity of this Stamp certificate should be verified at 'www.shoestamp.com' or using e-Stamp Mobile App of Stock Holding
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Handwritten signature

PART- I

Areas of Cooperation

This Memorandum of Understanding (MoU) is signed among HarvestPlus (IFPRI/ HarvestPlus), having its registered address at c/o IFPRI 1201 Eye Street, NW, Washington, DC 20005, USA and in India the office address is CG Block, NASC Complex, DPS Marg, PUSA Road, New Delhi 110012 hereafter referred as the First Party

Ministry of Rural Development, Government of India, Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY - NRLM), NDCC -II building, Jaisingh Marg, New Delhi hereinafter referred as Second Party.

HarvestPlus and Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY - NRLM) are hereinafter referred to individually as "Party" and collectively as "Parties".

Where as

HarvestPlus is a pioneering organization and leads a global movement to improve human nutrition in Asia, Africa and Latin America to develop and disseminate biofortified staple food crops that are rich in micronutrients like zinc, iron, and vitamin A. Nutrition studies has established that these crops are efficacious and makes a measurable impact when consumed daily on the reduction of micronutrients deficiency and improvement in cognitive and physical functional outcomes and reduction in health-related morbidity. HarvestPlus collaborates with National Agricultural Research Systems (NARES)- ICAR, State Agricultural Universities (SAU), Government Institutions, FPOs and Community Organizations to scale biofortified crops.

Page 1694 of 1852

Ravindra Gowry



In India program, iron pearl millet and zinc wheat are the crops where HarvestPlus works on scaling approach.

Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY - NRLM) was launched by the Ministry of Rural Development (MoRD), Government of India in June 2011. Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM) is a flagship scheme implemented by the Ministry of Rural Development, Government of India to address multidimensional poverty through Self Help Groups (SHGs) and federations of women. DAY-NRLM seeks to reach out to around 10 crore rural households in the country, providing them with opportunities to improve their livelihoods through a range of livelihood interventions, access to credit, and marketing support.

DAY - NRLM organizes all poor households (women) into aggregate institutions of the poor that provide them with voice, space and resources. These platforms 'of the poor' and 'for the poor' would partner with local self-governments, public service providers, banks, private sector and other mainstream institutions to facilitate delivery of social and economic services to the poor.

CONSIDERING the mutual interest in the field of rural development through strengthening agriculture-based livelihoods the Parties agree to cooperate and collaborate with each other with a view to achieving their common objectives, in particular with regard to the promotion /strengthening of biofortified iron pearl millets, zinc wheat and its value chain activities through SHG institutions and Producer Enterprises, Farmer Producer Organisations (FPOs) under the program name of "Nutri Smart Agriculture" and promoting "Nutri Khet" as a concept, where each farmer field under cultivation will be termed as "Nutri Khet".



HAVING IN MIND that fact the Parties within the context of their respective mandates, objectives, and procedures, shall cooperate in the following areas:

1. Promotion of Iron Pearl Millets and Zinc Wheat to improve the incomes of small and marginal farmers.
2. Promotion of Iron Pearl Millet and Zinc Wheat value chain activities
3. Capacity building of farmers, FPOs, leaders of SHGs and their federations and staff of DAY - NRLM and State Rural Livelihoods Missions (SRLMs)
4. Promote Nutri Smart Agriculture through Iron rich Pearl Millet and Zinc rich Wheat production and linking "Nutri Khet" to school feeding program to address the nutritional deficiency among women and children.
5. Support to SRLMs in Enterprise promotion through seed production for Iron Pearl Millet and Zinc Wheat.
6. Organizing International /Regional/National workshops, seminars and meetings jointly.
7. Promoting successful programmes for promotion of iron pearl millet, zinc wheat technology transfer, enhancing livelihoods of collectives and farmer producer company.
8. Exchanging analytical reports, publications, technical materials, expert services and other information related to the purposes of this MoU

PART- II

Responsibilities of the Parties

This is a non-financial MoU between both the parties. All the activities mentioned in the agreement would be implemented with collaborative approach with non-financial nature.

DAY - NRLM is responsible for promotion of community institutions, provide the platform of identified State Rural Livelihoods Missions (SRLMs)

Ravinder Kumar

to promote iron pearl millet, zinc wheat and its value chain activities and all related capacity building activities.

DAY NRLM is responsible for organizing trainings, mobilizing SHG members/ PG / PE members.

Regular review for smooth progress and coordination between SRLMs and HarvestPlus. HarvestPlus will share relevant data and key progress report quarterly.

DAY – NRLM and HarvestPlus will jointly identify appropriate areas for implementation of the proposed activities.

HarvestPlus is responsible for providing all the technical support required for production of iron pearl millet, zinc wheat and its value chain activities. HarvestPlus will provide the capacity building support to SRLMs to develop producer enterprises through facilitation of seed production and consumer end products development from iron pearl millet and zinc wheat.

The partnership will focus on promotion of 200,000 farmers under biofortified iron pearl millet and zinc wheat production with close coordination of SRLMs. The key component of the collaboration will emphasize on capacity building programs, soft skill development, promotion of producer enterprise and forward linkage support.

The interventions will focus on the states with considerable area under Iron Pearl Millet / Zinc Wheat cultivation. In addition, HarvestPlus will support to all states for national and state level professional capacity

Page 1697 of 1852



Ravinder Grewal

building activities by engaging need based professionals and technical agencies.

Human Resource Development and Institutional capacity building.

Facilitate for Iron Pearl Millet and Zinc Wheat grain procurement, aggregation, segregation and forward linkage establishment with close association of SRLMs.

HarvestPlus will develop appropriate knowledge products for building the capacities of Krishisakhis and Farmers on package of practices etc.

The output of this efforts will be owned by both the parties and the exchange of information would be subject to data protection and indemnity clause safeguarding MoRD.

Key deliverables: HarvestPlus:

Sl No.	Activities	Total Target	Y-I	Y-II	Y-III	Y-IV
1	Number of farmers enrolled in iron pearl millet and zinc wheat production through SRLMs.	200,000	10,000	50,000	1,00,000	2,00,000
2	ToT to master CRPs (Provide the Soft skill trainings)	40,000	200	1,000	2,000	4,000
3	Support to SRLM in Enterprise promotion through consumer product development	50	10	30	50	50
4	Support to SRLMs in Enterprise promotion through seed production and FPOs	10	5	10	10	10

Page 1698 of 1852

* Cumulative targets

Parvathy Ghosh

Steering committee will be constituted under the Chairmanship of AS, RI for reviewing the progress and provide necessary guidance. Steering committee will be meeting on quarterly basis.

PART III

Duration and Termination of the MoU

The Parties resolve that this MoU shall be effective for a period of four (4) years from the date of signing of this MoU. This MoU shall enter into effect on the day that is signed and remain active until and unless mutually agreed on and amended by any of the Party in writing only. Any extension or significant modification of this MoU shall be by agreement of the Parties. The changes will be contained in an addendum to this MoU, describing the precise terms and conditions that apply to the extended agreement. The MoU may be terminated by any of the Parties by giving a three-month written notice. Any dispute arising in connection with the interpretation or application of the MoU shall be settled through consultation and mutual agreement.

This Specific Memorandum of Understanding between, Harvest Plus, and Ministry Of Rural Development is signed on this day 26th July 2023 in two copies and each party shall receive a copy of the fully executed Memorandum of Understanding which is deemed as original.

Date: 26/07/23

Place: New Delhi

For DAY - NRLM

Raman Wadhwa,

Raman Wadhwa

Director, DAY - NRLM

Ministry of Rural Development,

Government of India

For Harvest Plus

Ravindra Grover,

Regional Head, Asia

Page 1699 of 1852

[Signature]

Government of India

Witness:

Jayara

भारत सरकार/Government of India
ग्रामीण विकास मंत्रालय/Ministry of Rural Development
ग्रामीण विकास विभाग/Department of Rural Development
ग्रामीण आजीविका विभाग/ Rural Livelihoods Division
(<https://rural.nic.in>)

सातवीं मंजिल, एन.डी.सी.सी-II भवन/7th Floor, N.D.C.C -II Building
जय सिंह मार्ग, नई दिल्ली-01/Jai Singh Road, New Delhi-01
दिनांक/ Dated: 14th November, 2023

To,


The State Mission Directors/ Chief Executive Officers,
State Rural Livelihoods Mission,
Assam, Karnataka & Andhra Pradesh

Madam/Sir,

I am directed to enclose the Memorandum of Understanding (MoU) between Ministry of Rural Development, Government of India and India Hub Private Limited (IDH), New Delhi for information and necessary action.

Yours faithfully,

Encl.: As above.


रमन वाधवा/ (Raman Wadhwa)
उप-निदेशक (प्रशासन)/Deputy Director (Admin)
14/11/23

Copy to:

1. PPS to Additional Secretary (RL), MoRD Government of India, New Delhi.
2. PPS to JS RL (Livelihoods), MoRD, Government of India, New Delhi.

Memorandum of Understanding (MoU)
Between
Ministry of Rural Development (MoRD) and IDH India Hub Private Limited (IDH)

For
Institutionalizing Climate Action Through Landscape Production-Protection-Inclusion Partnerships For Enhanced Resilience And Gender-Transformative Business Models.

1. This MoU is entered into in New Delhi this 2nd day of November month of Two Thousand and Twenty-Three.

2. By and between:

Ministry of Rural Development, Government of India (Deendayal Antyodaya Yojana- National Rural Livelihood Mission -DAY-NRLM) having its office at 7th Floor, NDCC- II, Building, Jai Singh Road, New Delhi – 110 001 represented by Shri Charanjit Singh (Additional Secretary- Rural Livelihoods), Ministry of Rural Development (to be called MoRD henceforth)

And

3. IDH India Hub Private Limited having its office at Time Tower, 3rd floor, Unit 318, MG Road, Gurgaon 122002 represented by Mr. Jagjeet Kandal, Country Director – India, IDH (to be called IDH, henceforth)

Article 1 : Background and Purpose

- 1.1. Whereas MORD through its Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM) a centrally sponsored program, aims at eliminating rural poverty through Self-help groups (SHGs) and their various institutions (like Village Organizations, Cluster Level Federations (CLFs), Producer Groups (PG), Producer Enterprises (PEs), Farmer Producer Organisations (FPO) among others.
- 1.2. More than 9.80 crore million rural poor women have been mobilized in about 8.8 million SHGs. There are more than 1.38 lakh Producers Groups and 606 PE/FPOs developed and facilitated under DAY-NRLM. DAY-NRLM has built a cadre of more than three lakh community resource persons (CRPs) including Agriculture (*Krishi Sakhi*), Livestock (*Pashu Sakhis*), Banking Correspondent/ Bank Sakhi, Enterprise Promotion CRP (EP) etc. Whereas DAY-NRLswM is (a) promoting producer groups (PG) and companies [(Producer Enterprise(PE)/Farmer-Producer organizations-FPOs] that aggregate and process the farm produce and non-farm products and strive to market the same, and (b) is extending financial grants or facilitating finance arrangements & other schemes to PGs and PEs/FPO.
- 1.3. And whereas through its Landscapes Program, IDH brings together key stakeholders to build areas where agricultural products are grown sustainably (Production), forests and natural resources are safeguarded (Protection), and communities thrive

Jagjeet Kandal
1

(Inclusion). It then connects these areas to markets by establishing models towards sustainable sourcing at scale, making it easier for companies to source large volumes of sustainably produced commodities and therefore meet their sustainability commitments. Local-multi stakeholder ownership and good governance of community institutions in the landscape, markets development and linkages, and innovative blended financing are the three pillars or systems through which enable this impact. Today, IDH convenes 23 such landscape partnerships in 12 countries, including (States of Madhya Pradesh and Karnataka) India.

- 1.4. In India, IDH has worked with over 125 government and private sector and supply chain partners in 14 States on approximately 40 projects, which have reached 1.7 million small farmers, 2 million hectares and 1.9 million metric tons of sustainably produced commodities. IDH convenes commodity platforms for sustainable production and consumption in the cotton, tea, apparel and spices sectors. IDH has been the convenor and co-funder for programs such as trustea (with partners accounting for nearly 70% of packed tea market in India) and the National Sustainable Spices Platform (in collaboration with World Spice Organisation and the Spices Board of India). IDH's flagship landscape program in India is in Madhya Pradesh - launched in 2021, the program works with the Department of Agriculture, over 12 private sector partners, 5 CSO partners and many service providers to build an ecosystem towards regenerative agriculture.
- 1.5. IDH integrates the theme of gender equality and empowerment at three levels: sector governance, field level sustainability and business practices.
 - i. At a sector governance level, the interventions are aimed to create inclusive private-public platforms, leading to improved and inclusive policies, standards and regulations, and greater representation of the producer community in governance.
 - ii. At the field level, IDH aims to improve gender equity through gender sensitization and safety trainings, and a focus on improving womens' access to decision making at the household and community level, and the opportunity to access markets/ services, finance.
 - iii. At a business level, IDH strengthens gender integration by working with partners to highlight the business case on integrating a gender lens in designing, and to strengthen HR systems, and develop an internal reporting and grievance mechanism process.

Article 2. Collaboration:

- i. Now, therefore, the MoRD and IDH have decided to join hands for an invigorated and coordinated effort to promote the landscape approach in the public sector machinery by setting up a national level knowledge secretariat to support the building of capacities for DAY-NRLM and State Rural Livelihoods Missions (SRLMs) to host and participate in landscape-level approaches towards inclusive and resilient value chain development. This is a Non-Financial Memorandum of Understanding for the purpose and activities defined in this document. MoRD or

DAY-NRLM or any of its subsidiary institutions shall not pay or will be liable for any payments for activities performed in the MoU.

- ii. The two partners namely DAY-NRLM and IDH have decided to come together through a national-level knowledge secretariat set up by IDH for 2 years initially, to support the building of capacities for DAY-NRLM and SRLMs to host and participate in landscape-level approaches towards inclusive and resilient value chain development and; support institutional building linked to investment and market readiness (the “Project”).

Article 3. Aims:

- i. Develop community-based institutions with capacities matched to deliver on market needs: efficiency, value-addition, fair value distribution
- ii. Contribute to Intended National Determined Contributions (INDC) on climate change adaptation, resilience and mitigation
- iii. Attract new and emerging markets looking to source responsibly and sustainably
- iv. Potentially brand regions/ hubs for sustainable and quality production by building strong credibility and assurance systems
- v. Build capacity for private sector to engage in Public Private Partnership (PPPs) and co-invest in their supply chains and in smallholders
- vi. Attract more investments for farmers and communities based on de-risked and supported Agri-production areas

Article 4. Key objectives:

- i. Improving Incomes towards Resilient and Living Income
- ii. Developing enterprise and a network of Local Agri-Service Delivery
- iii. Adaptation to Climate change and reversing degradation of land
- iv. Increased visibility, inclusion and participation in value chains
- v. Developing credit profiles at household and landscape level to enable investments to be facilitated where production and restoration activities take place at source and facilitate them to become Lakhpati (Having an Income of at least Rupees One Lakh per annum).

Article 5. Activities to be undertaken:

- i. Work towards climate mitigation & resilience of agriculture and livestock communities
- ii. Collaborate with the private sector, civil society, Government and research institutions in multi-stakeholder partnerships
- iii. Unlock the potential of private sector investment by building the common infrastructure for sustainable production, landscape restoration and supply chain development
- iv. Integrate learnings in policies, Standard Operating Procedures (SoPs) introduced in production and sourcing regions to enable scale in outreach, uptake and monitoring

- v. Scale-up the model countrywide, thus establishing local entrepreneurial ecosystem, leading to employment generation and income enhancement of agricultural and livestock communities. Whereas detailed guidelines related to implementation strategy and financial implications will be designed jointly, mentioning role of all stakeholders.
- vi. Whereas all the joint actions will be integrated at State level through setting-up coordination units, initially in the identified districts (to be selected on the basis of the study) and may be further expanded in other districts with mutual consent.
- vii. Whereas resources from relevant schemes of MoRD (like IFC, SVEP, RISE, NRETP) and other Ministries like MoA&FW, MoEFCC, MSME, MoFPI, DPIIT, Ministry of Skill Development & Entrepreneurship will be dovetailed under this broad initiative to expand the funding sources to augment entrepreneurial activities for local communities.

Article 6 : Roles and responsibilities

A. MoRD.

- i. Seek pro-active involvement of concerned senior Officials and experts of National and State Units in the States and districts shortlisted to test the various models.
- ii. Support IDH in identifying States which work with FPOs, CLFs and CRPs (*e.g. Udyog Sakhi, Krishi Sakhi, pashu sakhi, CRP-EP*) and positioning their role and contribution towards the goals of income and employment enhancement vis-a-vis other entities in DAY-NRLM.
- iii. Explore funding via CLF, community institutions or other such platforms which could finance the enterprise activities, based on stated terms and conditions.
- iv. Help in seeking convergence or facilitate access to program budgets allocated for skill development/capacity building and trainings of State and National rural livelihood missions.
- v. Enhance participation of experts and mentors from industry accrediting them as is being done to enlist support of National Resource Persons (NRPs) in DAY-NRLM.
- vi. Adopt measures for monitoring evaluation and learning (MEAL) of the program.

IDH :

- vii. Recruit, place and support resources to form the knowledge secretariat in collaboration with the National Mission Management Unit of MoRD (NMMU) to implement the Project.
- viii. Jointly plan and select regions and States based on potential sectors and sub-sectors, geography, product-market combination, while giving high priority to candidates who already have a proof of concept. Broad criteria to be detailed out after further consultations with districts and States. This could have State specificity as well.

- ix. Propose and select high chance of success value chains' (farm, non-farm, and livestock) among the existing programs supported by DAY-NRLM and build them further and their market led interventions.
- x. Promote program at various levels within 2-3 States in depth to create greater enthusiasm and interest among rural communities for their participation and organize various kick-off meetings and promotional events.
- xi. Specify and measure the social and environmental impact of the model in the following terms – i) income enhanced, iii) empowerment, and (iv) mitigation of climate change etc.
- xii. Start the work in identified districts, (phasing as decided) with DAY-NRLM/SRLMs.
- xiii. Regularly monitor the progress of the Project and document lessons from experiences for broader policy change and program effectiveness.
- xiv. Develop the landscape implementation frameworks, policy based on evidence-based insights and outcomes.
- xv. Provide regular information to DAY-NRLM for the activities undertaken

Article 7 : Intellectual Property

- i. Both the parties shall acknowledge its own and the partner's intellectual property rights (IPRs), as a result of entering into or performing this MoU and shall not disclose to any third party except its employees on need-to-know basis but shall be bound to disclose if needed by operation of law or by judicial authorities. All IPR's that will be developed ("Arising IPR") as a resulting of performing this MoU will be vested in the MoRD, however MoRD will grant IDH the right to access, use and further develop the Arising IPR's.

Article 8 : Communication and Publications

- i. Any communication under or in connection with this MoU is to be in the English language and signed by or on behalf of the party giving it.
- ii. Any publication of activities in the media by IDH shall be done after written consensus and mutual consultation between both parties.
- iii. Parties may not use the other's logo without explicit consent to do so, recorded in writing. In the event such consent is provided, the party using the logo must enquire official policies and procedures regarding the same and strictly adhere to it. This provision is equally applicable to all offices that fall within the definition of MoRD.

Article 9: Funding

- i. This MoU carries no financial commitment from either Party. However, the Parties are free to use their own funds or seek funding sources to support the

objectives of this MoU. The funding under this agreement should be legal and any transfer of funds to be governed by the Indian Laws.

Article 10: Amendments

- i. Variations or amendments to this MoU shall be effective only in writing, upon the mutual consent of the Parties and signed on behalf of each Party by a duly authorized signatory.

Article 11: Legal Effect

- i. This MoU is entered into in good faith as a basis for establishing an institutional partnership for the benefit of excluded households, community organizations and also other stakeholders interested in poverty alleviation.
- ii. The MoU is not intended by the Parties to be legally binding upon them. In case of failure to enter into any subsequent agreement, the non-entering into any such agreement shall not be construed as a breach capable of causing any legal liability on the part of either Party.

Article 12: Modalities of Execution

- i. The Parties shall, in accordance with the objectives of this MoU, encourage the establishment of contact and cooperation between the Parties of this MoU
- ii. The Parties commit themselves to cooperate with regard to each and every aspect required for the completion of all objectives contemplated in this MoU.

Article 13: Severability

- i. If any provision of this MoU is invalid or unenforceable for any reason whatsoever, such invalidity or unenforceable shall not affect the validity or enforceable of any or all of the remaining provisions of this MoU which will continue in full force and effect and be constructed as if this MoU had been executed without the invalid or unenforceable provisions

Article 14: Fairness

- i. In entering into this MoU, the Parties agree and hereby declare their intention that the MoU shall operate between them with fairness and without damage to the interest of any of the Parties and the general public.



Articles 15: Dispute Resolution

- i. Any disagreement between the Parties arising out of the interpretation or implementation of this MoU shall be settled amicably through consultations and negotiations between the Parties.

Article 16: Term and Termination of MoU

- i. This MoU shall commence on the effective date and shall remain in force for a period of 2 years with an option to extend for further periods as mutually agreed by both the parties.
- ii. Either party may terminate this MoU by giving at least two (02) month's prior written notice to the other party.
- iii. The MoU shall not affect the completion of any unfulfilled objective at the time of termination, unless otherwise agreed upon by the Parties.

Article 17: Privileges and Immunities

- i. Nothing in this MoU or any document or arrangement relating thereto shall be construed as constituting a waiver of any statutory privileges, rights or proprietary interests of the Parties or conferring any such rights or privileges to either Party.

Article 18: Force Majeure

- i. For the purposes of this MoU, "**Force Majeure Event**" means an event beyond the reasonable control of either of the Parties including but not limited to strikes, lock-outs or other industrial disputes (whether involving the workforce of the Party or any other party), failure of a utility service or transport network, act of God, war, riot, pandemics, epidemics, quarantine, decrees lock down, mandatory closure of cities and areas civil commotion, malicious damage, compliance with any Law or governmental order, rule, regulation or direction, accident, breakdown of plant or machinery, fire, flood, storm or default of suppliers /subcontractors.
- ii. IDH shall not be liable to MoRD, and MoRD shall not be liable to IDH as a result of any delay or failure to perform its obligations under this MoU as a direct result of a Force Majeure Event Article.

Article 19: Confidentiality:

- i. In principle, the Parties do not intend to share confidential information for the purpose of this MoU. The Parties agree that, should they receive or become aware of information that is sensitive and confidential in nature in the context of this MoU; they intend and aim to treat such information confidentially in the spirit of a good cooperation. The Parties agree that if they have the intention to share (highly) confidential information, they will consider signing a Non-Disclosure Agreement to properly protect such information.

Article 20 : Indemnity:

- i. Both parties hereby undertake and agree to indemnify each party and hold each party harmless and keep at all times fully indemnified and hold harmless from and against all actions, proceedings, claims, liabilities, penalties, demands and costs, awards, damages, losses and/or expenses howsoever arising directly or indirectly as a result of this MOU.

In witness thereof, the MoRD and IDH have executed this MoU in New Delhi

Authorized signatory for MoRD



(Charanjit Singh)

Additional Secretary (PS)
अपर सचिव / Additional Secretary
भारत सरकार / Government of India
ग्रामीण विकास मंत्रालय / Ministry of Rural Development
कृषि भवन, नई दिल्ली / Krishi Bhawan, New Delhi

Authorized signatory for IDH





(Jagjeet Kandal)

Country Director – India- IDH



Witness

1.  Jasmeet Singh, Director Programs - IDH
2.  Raman Wadhwa, Deputy Director, NRPS - G.O.L.

भारत सरकार/Government of India
ग्रामीण विकास मंत्रालय/Ministry of Rural Development
ग्रामीण विकास विभाग/Department of Rural Development
ग्रामीण आजीविका विभाग/ Rural Livelihoods Division
(<https://rural.nic.in>)

सातवीं मंजिल, एन.डी.सी.सी-II भवन/7th Floor, N.D.C.C -II Building
जय सिंह मार्ग, नई दिल्ली-01 /Jai Singh Road, New Delhi-01
दिनांक/ Dated: 30th August, 2022

To,

The State Mission Director
Bihar, Chhattisgarh, Jharkhand,
Madhya Pradesh, Odisha, SRLM

Subject: **Signed copy of the MoU with NRLM Support Organization, PRADAN for your reference and necessary action**

Dear Sir/Madam,

I am directed to enclose the copy of the memorandum of understanding (**MoU**) between the DAY-NRLM, MoRD, Govt. of India and PRADAN, New Delhi.

You are requested to initiate the process of implementation of livelihoods based activities in collaboration with PRADAN, based on the shared MoU.

Yours faithfully,

Encl.: As above


रमन वाधवा/ (Raman Wadhwa)
उप-निदेशक (प्रशासन)/Deputy Director (Admin)
30/08/22



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Government of National Capital Territory of Delhi**e-Stamp**

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 Purchased by : PROFESSIONAL ASSISTANCE FOR DEVELOPMENT ACTION
 Description of Document : Article 5 General Agreement
 Property Description : Not Applicable
 Consideration Price (Rs.) : 0
 (Zero)
 First Party : MINISTRY OF RURAL DEVELOPMENT GOI
 Second Party : PROFESSIONAL ASSISTANCE FOR DEVELOPMENT ACTION
 Stamp Duty Paid By : PROFESSIONAL ASSISTANCE FOR DEVELOPMENT ACTION
 Stamp Duty Amount(Rs.) : 100
 (One Hundred only)

**Memorandum of Understanding (MoU)**

THIS MEMORANDUM OF UNDERSTANDING is made on ... 4th August 2022 ...

BETWEEN

The Ministry of Rural Development, 7th Floor, NDCC-II Building, Jai Singh Marg, New Delhi- 110 001, (Called the MORD hereafter) for implementing Deendayal Antyodaya Yojana- National Rural Livelihood Mission (DAY-NRLM) through Mr. Charanjit Singh, Additional Secretary (RL) "THE FIRST PARTY"



AND

Professional Assistance for Development Action (PRADAN), a society registered under Societies Registration Act, 1860 and having its registered office at 3, Community Shopping Centre, Niti Bagh, New Delhi - 110 049 and Corporate office at 2nd Floor, A-22, Sector 3, NOIDA - 201 301, Uttar Pradesh, through its Executive Director, Mr. Saroj Kumar Mahapatra which shall mean and include its successors and permitted assigns referred as the **THE SECOND PARTY**

WHEREAS

- To address the issue of rural poverty, the Ministry of Rural Development (MoRD) launched National Rural Livelihood Mission (NRLM) in the year 2010, which later became Deendayal Antyodaya Yojana – National Rural Livelihood Mission (DAY-NRLM) in 2016. The objective of the DAY-NRLM is “To reduce poverty by enabling the poor households to access gainful self-employment and skilled wage employment opportunities, resulting in appreciable improvement in their livelihoods on a sustainable basis, through building strong grassroots institutions of the poor.”
- Professional Assistance for Development Action (PRADAN) has been engaged as NRLM Support Organisation (NSO) since August 2013 in strengthening NRLM’s livelihood efforts. This Memorandum of Understanding (MoU) is to extend the partnership between MORD and PRADAN with an objective of impacting livelihoods of 5 lakhs rural households from five States, i.e., Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh and Odisha. To support this partnership, Axis Bank Foundation (ABF) came forward to support NSO PRADAN financially for the required human resources and overheads for the agreement period. Apart from financial support, the ABF has agreed to extend support around developing an effective monitoring and evaluation system for strengthening the objective of the partnership between MORD and NSO, PRADAN.

NOW, THEREFORE, in consideration of mutual promises and undertakings herein contained and other good and valuable considerations, the receipt and sufficiency of which is hereby acknowledged, The First Party and Second Party agree as follows:

ARTICLE 1: Objective

The objective of the partnership is Strengthening Livelihoods Support in States of Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, and Odisha under Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM) a flagship scheme of Government of India. It is expected that about five lakh SHG members will be groomed to adopt market driven livelihoods models. The key deliverables are as under:

- a. Develop and disseminate approaches, methodologies and tools developed for livelihoods enhancement.
- b. Orient and train the staff on the key components including Institution and Capacity Building, Multiple Livelihoods domain, financial inclusion for livelihoods



engagement. About 1,000 mission staff including those from National, State and Block units and about 5,000 livelihood CRPs will be trained for both perspective and the technical aspects

- c. Create Knowledge products and platforms, ensure their utilization with support of the established systems of DAY-NRLM. The knowledge products will encompass the use of technology like artificial intelligence, Wiki livelihoods etc.
- d. Develop and demonstrate Effective pilot sites with high impact livelihood prototypes around Farm Livelihood interventions
- e. Ensure development of effective learning and feedback mechanisms to assimilate and replicate successful lessons of pilot sites.
- f. Enable community-based organization (CLFs and VOs) to spearhead the livelihood interventions for its members, so that at least 2,50,000 families can earn a gross annual income of more than INR 1,00,000/- on sustainable basis.
- g. Mobilize funds for rural livelihood strengthening
- h. Enable about 60% of the families in livelihood intervention to adopt Integrated Livestock Rearing (ILR) model
- i. Facilitate creation of Assets and other livelihoods through convergence with MGNREGA

ARTICLE 2 –Scope of Work.

The interventions will be facilitated in about 7,000 villages of 156 Blocks in 56 districts of 05 States namely Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, and Odisha. It will cover five lakh families in 400 Village Organizations of 100 Cluster Level Federations (CLFs).

ARTICLE 3: DURATION OF PARTNERSHIP

The duration of this partnership is for a period of three years commencing from 1st August 2022 to 31st July 2025.

ARTICLE 4- RESPONSIBILITIES OF THE FIRST PARTY – Ministry of Rural Development (MORD)

- a. On boarding of SRLMs and facilitating orientation to concerned staff of SMMUs, DMMUs and BMMUs
- b. District/Block wise work plan preparation
- c. Facilitate SRLMs to have requisite mechanism including formation of committees chaired by CEO/SMD/ACEO with livelihood personnel from State and NSO.
- d. Facilitate convergence with line departments to foster linkages for skill buildings, arrangement of capital and livelihood assets creation

3



- e. Developing systems and processes for data tracking around Bank linkage, mobilization through convergence and community contribution for livelihood interventions
- f. Making provisions of required training and exposure visit.
- g. Guiding States through advisories or other sources for taking initiatives of the livelihoods and best practices
- h. Facilitate creating guidelines for involvement of women collectives like CLF and VOs in planning, implementing and monitoring the initiative.
- i. Any change in the important program related staff/ Contact Person like project team leader, change in office address shall be intimated to all the concerned parties.

ARTICLE 5- RESPONSIBILITIES OF THE SECOND PARTY – Professional Assistance for Development Action (PRADAN)

- a. Development of contextualized prototypes building on the knowledge of the women collectives, local resource persons, concerned cutting edge-staff and NSO professionals.
- b. Standardizing package of practices though testing it with a critical mass for consecutive 2-3 cycles. Post successful implementation of the same, document the models for scaling up in other areas.
- c. Knowledge material development for the reference of the SRLM staff, local CRPs and institution leaders
- d. Training and capacity building of SRLM staff, CRPs, CLF leaders and VO leaders around livelihood perspective, gender, nutrition, inclusion and other technical package of practices.
- e. Provide Support to organize convergence workshops at the block level, district level and State level.
- f. Facilitate Building partnership with other CSOs working and promoting an informal forum at the local level for regular discussion and learning sharing.
- g. Coordinate with organizations like Axis Bank Foundation to seek partnership, facilitation and support for enhancing livelihoods in DAY-NRLM
- h. Supporting respective State Mission to strengthen the system for regular review.
- i. Supporting Mission in setting up system and processes for accurate data tracking and analyzing it in a periodic manner for strengthening the field operations further.
- j. Facilitating exposure visits of women collectives, cadres and staff of SRLM to relevant Line departments and thus, fostering a culture pursuing the initiative through multi-stakeholder approach.
- k. Organizing and Facilitating Exposure visits to established and successful farm livelihood models for the cadres, institution leaders and, concerned National and State staff

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- i. Supporting the concerned State missions in preparation of the Annual Action Plans and effective roll out the same.
- m. Attending strategic meetings with the MORD teams as and when required for the effective roll out of the initiative and also, its further improvements.
- n. Reporting to the first party, i.e., MORD, as per the agreed upon reporting intervals.
- o. Communicating to the external world the experience of the initiative for the reference of the larger development sector

ARTICLE 6: ADMINISTRATIVE AND FINANCIAL

- This is a Non-Financial MOU between PRADAN and MORD and does not place any financial liability whatsoever on MORD.

ARTICLE 7: REPORTING and REVIEW MECHANISMS

- The Committee chaired by the Additional Secretary /Joint Secretary will monitor and review the day-to-day working of the NSO. It will consist of experts/officials from NMMU, State Mission (including CEO/SMD) and representatives of NSO.
- At the State levels, bi-monthly review meeting under chairperson-ship of the SMD/CEO where the concerned State steering committee members, representative from FL team, National Mission Management Unit (NMMU) and representative from NSO central team may be present.
- A Half Yearly review cum experience consolidation event will be organized under the chairperson-ship of Joint/ Additional Secretary, where all the concerned State steering committees members, other key livelihood staff from the NMMU and representative from NSO central team may be present.
- MORD & NSO team will create mechanisms for providing such information for the reporting periods from its internal MIS system
- PRADAN will submit adequate written reports to inform about the progress and achievements made in the project. It would submit a half yearly narrative report and detailed annual report.
- The publications and photographs pertaining to the initiative are also to be enclosed with the annual and half yearly report. Photographs of all works undertaken under the initiative shall be made available to be uploaded on the MORD website.
- PRADAN agrees to submit a yearly plan of action on different thematic intervention to the MORD.

ARTICLE 8: REPRESENTATIONS, RIGHTS, WARRANTIES and INDEMNITIES

- This MoU is on a principal-to-principal basis between the parties hereto. Nothing contained in this MoU shall be construed or deemed to create any association, partnership or joint venture or employer-employee relationship or principal-agent relationship in any manner whatsoever between the parties.

5



- The Parties represent and warrant that they have full capacity, power and authority to enter into, execute, deliver and perform this MoU, that such execution, delivery or performance do not violate or conflict with any law applicable to the Parties, any provision in their constitutional documents, any order or judgment of any court or other agency of government applicable to them or any of their assets, or any contractual restriction binding on or affecting them or any of their assets.
- PRADAN has the obligation to acknowledge MORD support by referring to their name in any relevant publications, reports, brochures, online material, equipment or any other support material as the case may be with the prior permission of both the parties.
- This MoU represents the current intentions of the Parties and is subject to any changes that may take place in the laws relating to the conduct of financial services or the activities of not-for-profit organizations in India, and is also subject to all laws, rules and regulations presently applicable, and to obtaining all licenses, permissions, consents, approvals and execution of such arrangement as may be necessary.
- Any provision of this MoU may be amended or waived if, and only if, such amendment or waiver is evidenced by a written instrument signed by duly authorized representatives of the Parties.
- PRADAN shall at all times indemnify and keep MORD indemnified against all claims/damages etc. for any infringement of any Intellectual Property Rights (IPR) while providing its services under the Project

ARTICLE 9: DISPUTE RESOLUTION and TERMINATION of MoU

- This MoU shall be governed by and construed in accordance with Indian law and the Parties submit to the exclusive jurisdiction of courts/tribunals at New Delhi.
- It is expressly agreed to by the Parties hereto that the formation, interpretation and performance of this Agreement, and any disputes arising there from will be resolved through a two-step Alternate Dispute Resolution ("ADR") mechanism. In the event that the Parties are unable to amicably resolve a dispute by mediation, said dispute will be referred to arbitration by the Secretary (RD), MORD or an official appointed by him/her and the award passed by him/her shall be final and binding by all the Parties.
- This MoU may be terminated jointly by all the Parties with a three-month notice period to terminate this Arrangement.

ARTICLE 10: CONFIDENTIALITY

- Except with the prior written consent of MORD, PRADAN and its Personnel shall at any time communicate to any person or entity any confidential information acquired in the course of the Services, nor shall PRADAN and its Personnel make public the data, reports, decisions, recommendations, documentation, etc, generated/ received as a result of, the Services.



This agreement is signed by both the parties in presence of the Honorable Secretary, Rural Development Mr. Nagendra Nath Sinha and Chief Executive Officer, Axis Bank Foundation, Ms. Dhruvi Shah.

Authorized Signatory for

Ministry of Rural Development
(MORD)

Signature and Seal:

CHARANJIT SINGH
Additional Secretary
Government of India
Ministry of Rural Development
Krishi Bhawan, New Delhi

Name: Charanjit Singh

Place:

Date: 04/08/2022

Witness for

Ministry of Rural Development
(MORD)

Signature:

Name: Sri N.M. Sinha.

Place: Krishi Bhawan, New Delhi

Date: 04/08/2022

Authorized Signatory for

Professional Assistance for
Action (PRADAN)

Signature and Seal:

S.K. Mahapatra
Name: Saroj Kumar Mahapatra

Place: Krishi Bhawan, New Delhi

Date: 04/08/2022

Witness for

Professional Assistance for Development
Action (PRADAN)

Signature:

M. Mukherjee
Name: Monisha Mukherjee

Place: Krishi Bhawan

Date: 04/08/2022

Dhruvi Shah
AXIS Bank Foundation.





LEENA JOHRI, IAS
Joint Secretary
☎ – 23438014
@ – jsrl-mord@gov.in

No. K-11060/05/2018/NRLM(Livelihoods) (e-362658)

ग्रामीण विकास मंत्रालय
ग्रामीण विकास विभाग
7वीं मंजिल, एनडीसीसी. बिल्डिंग-11
जय सिंह रोड़ जंतर मंतर, नई दिल्ली-110001
MINISTRY OF RURAL DEVELOPMENT
Deptt. of Rural Development
Government of India
7th Floor, NDCC Building-II,
Jai Singh Road (Opp. Jantar Mantar)
New Delhi-110001
July 29, 2020

Subject: Technical support to SRLM in promotion of Producer Enterprises in farm and non-farm sector – Recognizing Foundation of Rural Value Chains (FDRVC) as DAY NRLM Support Organization (NSO)

Sir/Madam,

Value Chain development for rural farm and non-farm produce to ensure remunerative price for the rural producers is one of the core components of DAY NRLM. With a larger focus of government on rural enterprise promotion and promotion of Farmer Producer Organizations under various schemes this initiative of DAY NRLM assumes greater importance. Recently launched World Bank supported NRETP also has a large component on value chain development for farm and non-farm sectors.

2. Ministry has signed an MoU with TATA Trusts to set up a professional organization to support the producer enterprises promoted through value chain initiatives taken up under DAY NRLM. A not for profit company named Foundation for Development of Rural Value Chains (FDRVC) has been incorporated to support SRLM in value chain promotion.

3. FDRVC with its head quarter in New Delhi has set up four regional offices in Ranchi, Lucknow, Bhopal and Guwahati. FDRVC has built a team of quality business professionals from top management schools with relevant experiences who are already engaged in supporting several SRLMs in development of proposals under NRETP in both farm and non-farm sectors.

4. To enable the SRLMs to further develop long term association with FDRVC in extending support in producer enterprises promotion, DAY NRLM has recognized FDRVC as a DAY NRLM Support Organization (NSO). SRLMs may engage with FDRVC as Technical Support Agency (TSA) for promotion of Producer Companies.

Role of FDRVC as Technical Support Agency to SRLMs

5. FDRVC will be in a position to support and work closely with SRLM and some of the specific areas of technical support to SRLM as TSA will be:

1. Identifying opportunity for value chain development through promotion of producer enterprises in farm and non-farm sectors in consultation with SRLM involving secondary research on production scenario, taking up value chain studies, identifying business models.
2. **Preparation of Business plan and proposal for funding under DAY NRLM – NRETP, MKSP (Value Chain), Innovation Fund among others.** This will include
 - a. Developing procurement, marketing, value addition strategies and plans
 - b. Working out financial viability of proposed producer enterprise by analysis fund requirement, Break even analysis and detailed budget estimates.

- 3. Providing Implementing support to Producer enterprises (PE) including:**
- a. Preparation of DPR
 - b. Establishing Producer Enterprise – member mobilization, registration of the enterprise
 - c. Establishing standard operating processes (SOP) for key functions of PE – procurement, storage, financial and accounts, purchases etc.
 - d. Establishing MIS and IT systems
 - e. Recruitment of professionals and staff for the producer enterprises
 - f. Ensuring all statutory compliances – holding board meetings, acquisition of licenses and certification among others
 - g. Identification of location and setting up of the procurement centres
 - h. Setting up of processing units
 - i. Purchase of equipment, consumables
 - j. Establishing market linkages and distribution network
- 4. Capacity Building of member/shareholders, staff of PE, Directors of the company**
- 5. Handholding of PE – FDRVC will closely work with PE staff and BOD members in running the company.**

In addition to the above SRLMs and FDRVC may Mutually agree on other areas of collaboration.

With warm regards

Yours sincerely



(Leena Johri)

To,

**The Chief Executive Officer/State Mission Directors
of all SRLMs States/UTs**

Copy to:

The Chief Executive Officer, FDRVC

K-11060/03/2019-20/NRLM(Livelihoods) (e-369778)

Government of India
Ministry of Rural Development
Department of Rural Development
Rural Livelihoods Division

7th Floor, NDCC II building
Jai Singh Marg, New Delhi, 1.
Dated 9th September 2020

To

The State Mission Director,
All States

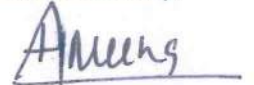
Subject: Support from FDRVC to States on farm & non-farm value chain development.

Madam / Sir,

As you know, Foundation for Development of Rural Value Chain (FDRVC) promoted by MoRD in collaboration with TATA Trusts has been recognized as NRLM Support Organisation (NSO) vide this Ministry even letter dated 29th July 2020. FDRVC will support states in identifying opportunities, prepare business plan for promotion of PE, providing implementation support to the PEs, facilitate capacity building activities for PE & its member and handholding support to PE.

You may take necessary technical support from FDRVC for farm and non-farm value chain development activities with a formal request to the Ministry and FDRVC. While carrying out the activities for scoping or business plan development by FDRVC in the State/ UTs, the local travel & stay of the professionals of the FDRVC may be arranged by the concerned State / UT as per NMMU norms.

Yours faithfully,



(H. R. Meena)

Deputy Secretary to the Govt. of India

J-11060/19/2019-RL/363174
National Rural Livelihoods Mission
Ministry of Rural Development
Rural Livelihood Division

7th Floor, NDCC-II Building,
Jai Singh Marg, New Delhi – 1.
Dated 2nd March, 2021

To,
The CEO/SMD,
All States

**Subject: Guidelines to operationalize the non-financial tripartite MoU among NRLM-
ICAR-RCRC for Rural Economic Transformation**

Ma'am/Sir,

I am directed to say that the "Guidelines to operationalize the non-financial tripartite MoU among NRLM-ICAR-RCRC for Rural Economic Transformation" have been finalized and attached herewith for further necessary action. You are requested to initiate the interventions based on the previously shared MoU and the attached Guidelines.

Enclosure :- As above.

Yours faithfully



(H.R. Meena)
Deputy Secretary to the Govt. of India

Copy to ICAR and RCRC for information

Guidelines to operationalize the non-financial tripartite MoU among NRLM-ICAR-RCRC for Rural Economic Transformation

Background:

The DAY-NRLM, ICAR and RCRC (the coalition of prominent CSOs) have come voluntarily to address the overarching objective of bring in economic transformation in rural economy through implementation of various government programmes, enhancing outreach, creating awareness etc., signed a non-financial tripartite MoU on 25th September 2020 in the presence of Honorable Union Minister of Rural Development and pledged to work together towards this stated endeavor. One of the pathway initially chosen to begin with to work together towards achieving the overarching objective is enhancement of income of small and marginal farmers through promotion of diversified value chain intervention based livelihoods (production, processing and market linkages) and entrepreneurship in clusters through capacity building, skilling and transfer of technologies following the route of field demonstrations and establishment of model innovation hub for learning, this will be expanded in due course based on the emerging need and experience of working together.

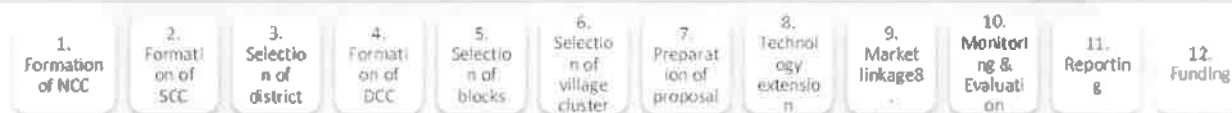
All of the above partners together in tandem can enhance the efficacy of various programmes of the Government and bring about economic transformation in rural areas. The three agencies, ICAR, through its network of KVKs, Ministry of Rural Development with the funds available under several of its programmes on economic empowerment, livelihood, skilling etc. and RCRC coalition of Civil Society Organizations (CSO) with their mobilization and communication skills, capacity to reach out to far-flung areas can provide a strong edifice of driving economic transformation in rural areas.

The collaboration has been established not targeting implementation of specific project / programme but is visualized as a long term vehicle / mechanism for refurbishing the delivery system of programme implementation.

Moreover, bringing in synergy, building on each other's strength, working together to achieve the stated objectives require more intense and prolonged engagements among the partners. Detailing of such engagement with development of process flow, integration and differentiation of roles at different functional nodes helps strengthen the collaboration. In this context this guideline is prepared to operationalize the mandate of the MoU and achieve the stated objective of working together to transform rural economy.

The process flow:

To achieve the broad objective of the collaboration the following process flow may be adopted. Each of the steps has been described in detail:



1. Formation and function of National Co-ordination Committee (NCC):

For providing overall broad guidance, oversight, co-ordination among the three partners during implementation, a National Co-ordination Committee may be formed. The committee will initially comprise of one representative each from (a) MoRD, (b) ICAR and (c) RCRC. The committee may invite others (Ministry, SRLM) / expand as and when required. Each of the three partners will be represented as mentioned below:

- a. From ICAR:
 - i. AS/Secretary, ICAR
 - ii. DDG- Extension
- b. From RCRC:
 - i. Ved Arya - Founder Buddha fellowship Program & Convenor RCRC,
 - ii. D. Narendranath- ED PRADAN,
 - iii. Prasanna Khemariya - CEO, SRIJAN
- c. From NRLM:
 - i. AS (RD)
 - ii. JS (RL I)

The NCC will be the national level apex body to provide broad strategic guidance to operationalize the MoU. It will decide the frequency of meetings and other modalities in due course. The NMMU of NRLM will play a support role & provide secretariat services for NCC in its smooth functioning.

2. Formation of State Co-ordination Committee (SCC):

The NCC will form a State Co-ordination Committee in each state / UT, comprising of representatives from

- KVK
- CSO partners
- The SMD / CEO of SRLM (Chair the Committee)
- One or two representatives of the SRLM

The number of members in each SCC should not exceed 10. It will function in close co-ordination with NCC. Some of the key functions of SCC are:

- Identification and recommendation of the districts to NCC. NCC will take a final call on the district.
- Formation of DCC
- Appraisal and recommendation of proposals.
- Release of funds
- Review and monitoring of progress
- Reporting to NCC

In addition to above, NCC may assign any role, function to SCC.

3. Selection of districts:

The presence of KVK is at district level, thus implementing districts will be the point of convergence for action among the partners. The NCC, in consultation with relevant stakeholders will identify initial 100 districts for piloting from among the districts with overlapping presence of all the three partners (SRLM, KVK and RCRC members). About 4 - 5 blocks per districts and in about 10,000 villages this pilot will be implemented.

4. Formation and function of District Co-ordination Committee (DCC):

The SCC will form a District Co-ordination Committee in each of the implementation district. Initially each DCC may comprise of the following members which may be expanded later on based on the emerging need:

- i. The CEO of Zilla Parishad (Chairperson)
- ii. In-charge of Krishi Vigyan Kendra
- iii. District head of the RCRC partner CSO
- iv. District official from department of Agriculture, Animal Husbandry and one / two district officials of other relevant line department

Whereas, the NCC will provide strategic guidance, applicable for the whole country, the DCC may develop of its own with more granular activities within the broad strategy framed by NCC as well as SCC. Some of the suggestive activities of DCC are mentioned below for reference:

- Function in close co-ordination with the SCC, SRLM and line departments of the state
- Strengthen co-ordination among the partners within.

- Build a common perspective for the development of the district amongst the partners.
- Selection of blocks, village clusters to intervene.
- Allocation of geography for implementation works to CSO and SRLM
- Guidance to the block team in development of proposals
- Review of proposals for each cluster / block, apprise SCC and recommend suitable proposals for consideration to SRLM.
- Prepare roadmap and pursue with different line departments / agencies for leveraging resources through convergence.
- Regular tracking and review of progress (qualitative and quantitative) of activities proposed, support needed and extend supports.
- Reporting to the SCC, seeking guidance.
- Will meet monthly, submit key action points and ATR to SCC.
- Other roles as assigned by the SCC

5. Selection of blocks:

Among the three partners, SRLM (NRLM) and the RCRC partner will be directly implementing the livelihood activities whereas KVK (ICAR) will act mainly as knowledge, capacity building, and extension partner. It will also bring in materials, inputs from its on-going schemes. A critical number of intervention households and proximity is important for meaningful engagement of an operational unit, scale of economy for aggregation, value addition and market linkages and creating impacts on local economy. Keeping it in mind initially for piloting the in 100 districts the NCC will select geography and allocate based on following criteria:

- Select minimum four contiguous (preferably) / nearby blocks.
- At least two of the blocks will be selected where SRLM has already initiated livelihood interventions.
- These two blocks will be allocated to the block unit of SRLM for piloting the initiative, taking supports from ICAR and CSO partner.
- The SRLM will depute dedicated livelihood staff in these blocks
- The other two blocks will be selected where the partner CSO has its presence
- These two blocks will be allocated to the partner CSO for piloting this initiative taking supports from ICAR and SRLM.
- The RCRC partner will deploy dedicated, trained livelihood promotion staff in these two blocks.

6. Selection of Village Clusters

For promotion of Integrated Farming Cluster (IFC), the cluster of villages will be selected based on the criteria described in the guideline for implementation of IFC (annexure-1) issued by DAY-NRLM (refer para 6).

7. Preparation of proposal:

All proposals will be prepared as per the guideline issued by DAY-NRLM / Ministries. Activities in a cluster will be decided as per emerging opportunities, however, initially activities for IFC should be selected based on the recommendations of ICAR (vide para 11 of the IFC guideline of DAY-NRLM).

8. Technology extension – training, capacity building, entrepreneurship promotion:

ICAR (KVK/research institute) will bring in improved technologies (production, post-harvest, processing etc) into the intervention village clusters. Technology extension will take place through either or both of the two avenues (a) through Livelihood CRPs and (b) Agri-entrepreneurs.

In case of livelihood CRPs route, in addition to modular training from NRLM, one of the CRP per village will be selected by the DCC and will be provided with continuous training (in-house conceptual, on-field practical, exposure) and handholding support by ICAR on various livelihood interventions planned in that village. She will be promoted as village level technology extension agent by the implementing agency (CSO/SRLM) and will be provided with all extension material developed through this pilot initiative.

In case of entrepreneurship mode, based on the planned activities, the DCC will select (in consultation with SIIGs) activity based entrepreneurs and their number in a cluster. For example, in case of backyard poultry, entrepreneurs for poultry mother unit is required to be promoted. The number of such entrepreneurs to be decided based on check and balance method on the demand and supply situations of hardened chicks. These mother unit owners in a cluster will create a healthy competition among themselves and provide poultry rearing related technological extension service supports along with the 25 days' old chicks to his/her customers (the beneficiaries, i.e. SHG women). Such entrepreneurs will be trained by ICAR and / or RSETI (if available) and incubated by the CSO / SRLM / RCRC or support from incubator may also be drawn. This method of extension is found to be sustainable but need separate investment in incubation of entrepreneurs. For this RCRC may depute its fellow in each district who in turn will act as incubator for agri-preneurs and may set up its own aggregation, value addition and marketing operations.

In addition to the above roles, each KVK / ICAR institution in the identified district will improve its existing training infrastructure, adopt one of the village in each cluster and develop these villages as learning hub for improved technologies / practices for the other villages of that cluster.

Development of suitable IEC material for each state will be another important activities of KVK that the DCC will use for technology dissemination / training. The following points may be considered during development of IEC material:

- IEC materials will be developed by KVK and CSO based on local context, practices and knowledge in simple & less technical form and in local language.
- These material will be available for its use by all the three partners
- Digital form of IEC materials to be considered suitably as penetration of smartphones and internet access by SHG women has increased significantly.

Dissemination strategy for IEC material:

Materials	Dissemination strategy
Video tutorials	Smartphones, pico-projector and screening at SHG/PG
Integrated voice response	Toll free number and SMS
SMS	Messages to all beneficiaries on step by step

9. Market linkages:

For market linkages of marketable surplus of SHG women in the cluster of villages, all options will be explored to avail the maximum price of the produces in the short and long run through (a) aggregation and promotion of Producers Groups (PG) at local level and FPOs in a larger geography, (b) market linkages through marketing entrepreneurs (RCRC Fellow), (c) contract farming with corporates and (d) direct selling by the producers in local *haat* / market where traders may be invited.

10. Reporting, Monitoring & Evaluation:

An MIS software will be developed by ICAR, which will used for tracking the progress on implementation of IFCs in the identified villages through a dashboard at the NCC level. Besides, the following monitoring activities using the on-line progress data will be undertaken:

- There will be on-field monitoring through field visits by the SCC, DCC, NRLM, National Resource Persons (NRPs) as well as NCC. The actionable points of field visits will be submitted to DCC for its implementation.
- There will be monthly review meeting at block level, at least one of the DCC members will participate in each block level review meeting.
- There will be monthly review meeting at DCC level. Key issues of the meeting will be shared with SCC.

- There will be monthly review meeting at SCC level. The key actionable points will be shared with NCC.
- Initially there will be monthly, later quarterly review meeting at NCC level

Process and output indicators will be developed along with the project / activity proposal, which will be tracked periodically through NRLM MIS. At national level a dashboard will be created to get continuous updated progress on key deliverables.

There will be baseline, mid-term and end-term evaluation of the projects by external evaluators for internal learning and programme improvement.

11. Knowledge management

The following activities will be undertaken under knowledge management:

- NRLM / SRLM and RCRC will document and publish the best practices and experiences.
- Audio-visuals materials for dissemination of case studies will be undertaken jointly by RCRC and NRLM.
- National level knowledge management workshops will be organized jointly by the partners once in a year.
- **Funding:**

12. **Fund sources:** There are five broad categories of expense heads that requires funding (a) Programme investment (b) Training and Capacity building cost (c) Implementation cost (d) documentation and (e) review, monitoring and evaluation cost. Possible sources of funding is shown below:

Sl	Particulars	Possible sources of fund
1	Programme investment	Convergence, Funding avenues of NRLM (SRLM-AAP, MKSP, NRETP), loan from (CIF, bank linkage), self-contribution.
2	Training and capacity building of entrepreneurs, SHG women, SRLM staff, CRPs, incubators.	DAY-NRLM training and capacity building budget, convergence.
3	Training material development (one time).	DAY-NRLM
4	Implementation cost	For CSO, own contribution; for SRLM (DAY-NRLM budget).
5	Documentation	DAY-NRLM budget
6	Review, monitoring and evaluation	DAY-NRLM budget

The detailed budget heads will depend on the funding avenues and will be prepared as per the approved budget template for each funding avenues (NRETP, SRLM-AAP, MKSP etc.).

13. **Routing of Funds:** ICAR may prepare proposal for training material development, creation of learning hub, strengthening of existing KVK and providing incubation supports to agri-entrepreneurs / marketing entrepreneurs and submit to MoRD for consideration. Routing of funds is presented below:

Programme fund (based on project)	Routed through State
Credit 13.	CLF (CIF) / SHG (bank linkage)
Training content development, creation of learning hub, strengthening of existing KVK and providing incubation supports to agri-entrepreneurs / marketing entrepreneurs by KVK	Directly MoRD to ICAR based on existing norms and guidelines of NRLM funds.

Government of India
Ministry of Rural Development
Department of Rural Development
(RL Division)

6th Floor, Hotel Samrat,
Kautilya Marg, Chanakyapuri,
New Delhi -110021

6th March, 2018

To

All CEOs/ SMDs of SRLMs.

Sub: Support to SRLMs for Tasar based Livelihoods Interventions – Recognition of Tasar Development Foundation as DAY-NRLM Support Organization (NSO)

Sir/Madam,

As you are aware Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM) is an important poverty alleviation programme under the Ministry of Rural Development, Government of India. One of the objectives of DAY-NRLM is to increase household level income of the rural poor through sustained livelihood enhancements and improved access to financial and non-financial services. DAY-NRLM believes in building partnerships with various stakeholders for improving the efficacy of implementation of the Mission. As part of this partnership approach, DAY-NRLM has recognized Tasar Development Foundation as National Support Organization (NSO) under DAY-NRLM.

Tasar Development Foundation is an experienced organization in the field of Tasar based livelihoods promotion and I believe that it will be in our interest to leverage their experience and insights for activities under DAY-NRLM. I request you to make the best use of this opportunity and establish contact with the professionals from TDF and take this forward.

For taking support from TDF as NSO, SRLM will need to sign an MoU with Tasar Development Foundation directly as per partnership guidelines of DAY-NRLM. If there is any requirement of funds by TDF then it is to be approved by the EC of the respective State Government and the funds may be provided on task/activity based requirement. The training, capacity building and other activities to be undertaken by the State Government will be as per the cost norms approved under DAY-NRLM.

TDF would support the SRLMs to promote tasar based livelihoods interventions by providing technical and/or implementation support in the States and the support may cover the followings.

1. **Project preparedness** – Assist SRLM in developing projects for promotion of tasar based livelihoods intervention, preparation DPR & inception report, value chain studies etc.
2. **Implementation Support** – Support the SRLMs in implementation of tasar projects such as designing technical protocol, provide supply of nucleus seed and basic seed, assist in disease monitoring, assist promotion of producers' groups, assist in implementation of ICT intervention, project documentation.

3. **Capacity Building** – Preparation of training materials/modules, give exposure to the livelihood anchor persons of SRLMs viz., Young Professionals, Block/District/State Project Managers on *tasar* cultivation, identification of consultants /resource persons / trainers for various training program, assist conducting trainers training program, awareness program for primary producers.
4. **Value Chain development** – assist SRLM in procurement and setting up of infrastructure for collection and storage of *tasar* cocoons.
5. **Market linkage** – assist SRLM in establishing tie-ups for forward linkages.
6. **Monitoring and MIS** – assist the SRLMs monitoring of various activities being undertaken, assist SRLM to developing MIS, quarterly review meeting in consultation with NMMU and SRLM.

Besides, the SRLM and TDF may mutually agree on other compatible areas of collaboration.

Yours faithfully,



(Nita Kejrewal)

Joint Secretary to the Govt. of India

Copy to: Managing director, *Tasar* Development Foundation, Sundar Sadan, 1st Floor, Opposite D C Residence, near Chetna Apartment, Barmasia, Deoghar, Jharkhand – 814112.



ग्रामीण विकास मंत्रालय
ग्रामीण विकास विभाग
भारत सरकार
कृषि भवन, नई दिल्ली-110114
Ministry of Rural Development
Deptt. of Rural Development
Government of India
Krishi Bhavan, New Delhi-110114

ATAL DULLOO

Joint Secretary

☎ – 24122936

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@ – jsrl-mord@gov.in

Do No: K-11062/09/2016/NRLM (Livelihoods)

Date: 12th September, 2016

Dear Sir/Madam,

As you are aware, the central objective of Deen Dayal Antyodaya Yojna- National Rural Livelihoods Mission (DAY-NRLM) is to bring about increase in the household incomes of the rural poor through sustained livelihood enhancements and improved access to financial and non- financial services. In this context, DAY- NRLM has always believed in building partnerships with various stakeholders for improving effectiveness of the implementation of the Mission. As part of this partnership approach, the NRLM has recognized Central Silk Board as DAY- NRLM Support Organization.

The tribal communities across the country are dependent on Non Timber Forest produce (NTFP) such as sericulture (Tasar) as a major source of their livelihoods. The implementation of tasar based livelihood interventions requires expertise. Central Silk Board has demonstrated expertise and technical knowledge to develop a sustainable model for livelihood promotion around Tasar for primary collectors. The model involves regeneration of host plant species to improve the bio diversity and enhanced productivity, local value addition of tasar to ensure higher returns, development of market linkages, building capacity of the community in sustainable harvesting and post harvesting techniques, development of a pool of community resource persons and to promote the use of ICT to improve the livelihoods opportunities of the primary collectors.

CSB is now coordinating MKSP Projects for Tasar development in Jharkhand, Odisha, West Bengal and Chhattisgarh in coordination with PRADAN, in Maharashtra in coordination with BAIF, in Andhra Pradesh & Telangana in coordination with SERP & Kovel Foundation and in Bihar in coordination with BRLPS & PRADAN.

Central Silk Board is a well-experienced organization in the field of Tasar based livelihoods promotion and I believe that it will be in our interest to draw on their experience and insights in our work. I request you to make the best use of this opportunity and establish contact with the professionals from CSB and take this forward.

CSB would be facilitating the SRLMs, to promote tasar based livelihoods interventions by providing technical support and implementation assistance in the States. SRLMs can enter into a MoU with Central Silk Board directly. CSB is expected to support the SRLM in the following areas

1. Project formulation – Assisting the SRLMs in developing projects for promotion of sericulture as a livelihood promotion intervention.
2. Implementation Support – Support the SRLMs in implementation of Sericulture projects such as designing technical protocol, value chain studies, project documentation.
3. Capacity Building – Preparation of training modules, to give exposure on tasar cultivation to the livelihood anchor persons of SRLMs viz., Young Professionals, Block/District/State Project Managers

Besides, the SRLM and CSB can mutually agree on other areas of collaboration.

Best regards

Yours Sincerely



(Atal Dulloo)

To all the CEOs/ SMDs of SRLMs

CC: Member Secretary, Central Silk Board

No. J-11014/01/2020-RL (FMS-371340)
Government of India
Ministry of Rural Development
Department of Rural Development
(Rural Livelihoods Division)

7th Floor NDCC-II Building.
Jai Singh Road New Delhi -01
Dated the 18th April, 2022

To

The SMDs/CEOs of all States/UTs

Subject: Shift in booking of Professional support staff cost at district level.

Sir/Madam,

Kindly refer to this office letter of even number dated 31st March, 2022 communicating the approval of Government of India for continuation of Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM) umbrella scheme along with some modifications, beyond March, 2021 and up to March, 2026.

In continuation of the said letter, I am directed to convey that in view of modifications approved by Government of India, there is shift in booking of the 'Professional support staff cost of district level' from Component B1 to B2.

Presently the "Professional support staff cost of district level" is booked under component B1 and reported in IUFR along with professional support staff cost of State level (activity B1.1.1 – Staff cost - includes travel and related costs). From 1st of April, 2022 the 'Professional support staff cost of district level' has to be booked under Component B2 for which a separate activity is created in IUFR (activity B2.1.6 District Professional support staff cost - including travel and related cost). This activity will also be created in PFMS.

You are requested to take note of the above shift in booking of expenditure towards 'Professional support staff cost of district level' and start booking the same under Component B2 (activity B2.1.6 District Professional support staff cost - including travel and related cost), for the expenditure incurred from 01/04/2022.

This issues with the approval of competent authority.


Vinod Kumar
18/4/2022

Under Secretary to the Govt. of India

No. J-11014/01/2020-RL (FMS-371340)
 Government of India
 Ministry of Rural Development
 Department of Rural Development
 (Rural Livelihoods Division)

7th Floor NDCC-II Building,
 Jai Singh Road New Delhi -01
 Dated the 31st March, 2022

To

The Principal Secretary
 Department of Rural Development
 All States/UTs

Subject: - **Continuation of Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM) umbrella scheme along with some modifications, beyond March, 2021 and up to March, 2026.**

Sir/Madam,

I am directed to say that the Government of India has approved continuation of Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM) umbrella scheme along with some modifications, beyond March, 2021 and up to March, 2026. Following are the modifications/amendments approved by Government of India for more effective and smoother implementation of the programme:

I. Revision in Existing components/norms:

S. No.	Indicator	Existing Provision	Revised approved Provision	Remarks
1	Institution Building cost under NRLM	An amount of ₹10,000/- per SHG is paid towards group formation to the facilitator	This has been revised as ₹15,000/- per SHG	This will be operational from 1 st April, 2022
2.	Revolving Fund (RF) under NRLM	Revolving Fund (RF) of ₹10,000/- to ₹15,000/- per SHG	This has been revised to ₹20,000/- - ₹30,000/- per SHG.	This will be operational for from 1 st April, 2022
3.	The Professional support cost at district level	The Professional support staff costs incurred at District level is considered as part of administrative cost within the overall	The professional support staff costs incurred at District level be treated as expenditure under the overall costs of institution building and capacity	This will be operational for from 1 st April, 2022

S. No.	Indicator	Existing Provision	Revised Provision approved	Remarks
		ceiling of 6% of allocation of DAY-NRLM	building	
4.	Infrastructure grant towards cost of construction of RSETI	[a] Grant Assistance of ₹ 1.00 Crore for construction of RSETI building [b] This grant assistance is generally paid in 2 tranches of 50% each.	[a] Grant Assistance is revised from existing ₹ 1.00 Crore to ₹ 2.00 Crore for construction of building [b] RSETIs which have been issued only first 50% installment of ₹ 50 Lakh, can now be allowed escalation on balance part (2 nd Instalment) to ₹ 1 Crore instead of ₹ 50 Lakhs	Refer to Letter No. J-12011/17/2015 - NRLM (RSETI) of Rural Skills Division dt. 18/02/2022 enclosed herewith
5	Ceiling of maximum expenditure per block under SVEP	The Maximum permissible amount towards Training and Capacity Building of Entrepreneurs, Seed capital and honorarium to Community Resource Person-Enterprise Promotion (CRP-EP) per SVEP block is ₹ 597.77 lakhs	The Maximum permissible amount towards Training and Capacity Building of Entrepreneurs, Seed Capital and honorarium to CRP-EP per SVEP block is now revised to ₹ 650.00 lakhs	This will be operational for the new SVEP blocks approved from 1 st April, 2022
6	Implementation of Interest Subvention for women Self Help Groups	Category I interest subvention scheme being implemented centrally in 250 districts and Category II interest subvention scheme being implemented in rest of the districts through the SRLMs	A uniform interest subvention scheme will be implemented for women Self Help Groups across all districts in the country under DAY-NRLM	Detailed guidelines will be issued soon

II. **New components approved:** The following new interventions / components have been approved by Government of India which will benefit the beneficiaries under DAY-NRLM:

S. No.	New Component approved	Provision	Remarks
1.	Viability Gap Funding to Model CLFs	Provision of a maximum amount of ₹ 20 lakh per Model CLF as Viability Gap Fund (VGF) under NRLM sub scheme	Detailed operational guidelines will be issued soon
2.	Integrated Farming Clusters	Provision for promotion of Integrated Farming Cluster (IFC), @ 5 IFC / block @ ₹ 40 lac per IFC under the existing sub-scheme of MKSP.	Detailed operational guidelines will be issued soon
3.	Aajeevika Grameen Express Yojana (AGEY)	Provision of ₹ 156.40 crore of funding for AGEY to ensure its smooth implementation and sufficient funds under the existing sub-scheme of SVEP	Detailed operational guidelines will be issued soon
4.	Formation of One Stop Facility (OSF)	Provision for setting up of One Stop Facility (OSF) Centres in blocks at a cost of ₹ 350 Lakh per block, to support higher level enterprises that have the potential to grow under the existing sub-scheme of SVEP	Detailed operational guidelines will be issued soon
5.	Micro-Enterprise Development (MED)	Provision to form mechanism for Micro-Enterprise Development with the cost of ₹ 10,000 per enterprise under the existing sub-scheme of SVEP	Detailed operational guidelines will be issued soon
6.	Cluster Promotion	Provision for promotion of clusters of non-farm entrepreneurs with financial support up-to ₹ 500.00 lakhs per cluster under the existing sub-scheme of SVEP	Detailed operational guidelines will be issued soon
7.	Women Enterprise Acceleration Fund	Provision of ₹ 1225.00 crore for creation of a dedicated 'Women Enterprise Acceleration Fund' to ensure medium term to long term financing to women entrepreneurs	Detailed operational guidelines will be issued soon

S. No.	New Component approved	Provision	Remarks
		from financial institutions, so as to enable them invest in viable enterprises	

You are requested to take all necessary action to operationalise the above decisions.

Yours faithfully,

(Charanjit Singh)

Joint Secretary (RL)

Enclosure: as above

Copy to:

PS to MRD/PPS to Secretary (RD)/PPS to AS & FA/PPS to AS (RD)/PS to JS (Skills)

SMDs/CEOs of all States/UTs

No. I-12011/17/2015-NRLM (RSETI) E.345412
Government of India
Ministry of Rural Development
Department of Rural Development
(Rural Skills Division)

7th Floor, NDCC-II Building,
Jai Singh Road, New Delhi- 110001
Dated: 18th February, 2022.

To

1. Secretary/ Principal Secretary (RD) of all States/UTs
2. Mission Director/CEO, SRLM of all States/UTs
3. General Manager of all RSETI Sponsor Banks
4. Convenor, SLBC of all Banks
5. Director General, NIRD & PR, Hyderabad
6. Director General, National Academy of RUDSETIs, Bengaluru
7. National Director of RSETIs, NACER, Bengaluru
8. Controller (A & C), Bengaluru
9. State Director of RSETIs of all States/ UTs

Subject: Enhancement in grant assistance to RSETIs for meeting expenditure on construction of building regarding.

Sir/ Madam,


I am directed to say that as per the extant guidelines this Ministry has been providing grant assistance @ ₹ 1.00 crore in two instalments of ₹ 50 lakh each to one RSETI in a district for construction of building to concerned RSETI sponsor Bank through NIRD & PR.

2. The grant assistance amount of ₹ 1.00 crore for construction of RSETI building was decided in 2009 and since then, the construction cost has escalated considerably over the years. Requests from RSETI sponsor banks have also been received to increase the grant assistance amount of ₹ 1 crore on account of escalation in construction cost.

3. Therefore, the matter to enhance the amount of grant assistance for construction of RSETI building has been considered in the Ministry in consultation with various agencies. Keeping in view the inflation in construction cost and to cover it up, it has been decided with the approval of Competent Authority:

- (a) To increase the amount of grant assistance from existing ₹ 1.00 crore to ₹ 2.00 crore for construction of RSETI building.
 - (b) RSETIs which have been issued only first instalment of ₹ 50 Lakh, can be allowed escalation on balance part (2nd) Instalment) and will now be given ₹ 1 Crore instead of ₹ 50 Lakhs.
4. The above decision will come in force with immediate effect.
 5. This is for information and necessary action of all stake holders.

Yours faithfully,


(Virendra Sharma)
Director, Skills

537588/2020/768

K-11060/01/2019/NRLM(Livelihoods) (E- 366609)

Government of India
Ministry of Rural Development
Department of Rural Development

7th Floor, NDCC II Building,
Jai Singh Road, New Delhi – 110001

Date: 15th April, 2020

To

The SMDs/CEOs,
All Rural Livelihood Missions of States / UTs.

Sub: Advisory on Diversification of Livelihoods under DAY-NRLM.

Madam / Sir,

I am directed to say that DAY-NRLM has made significant stride in mobilizing women from rural poor and vulnerable households into their institutions with various tiers. DAY-NRLM has also supported these women SHGs through provisioning of Revolving Fund (RF) and Community Investment Fund (CIF) to take up livelihood activities, additional credit need has been arranged through linking the SHGs with the banks. The poor households in rural areas pursue diverse and multiple livelihoods to manage unforeseen in their life and livelihoods. The most common livelihoods of the poor are wage labour, cultivation on small and marginal landholdings or as tenants, cattle rearing, collecting forest produce, fishing etc.

The need for diversification of Livelihoods is a core strategy under DAY-NRLM to minimize the livelihoods risks and reduction of vulnerability of poor and enhance their resilience towards various shocks. DAY-NRLM has consistently promoting livelihoods diversification by strengthening Livestock, NTFP along with Agro Ecological Practices with SHG members. A copy of the advisory on "Diversification Farm Livelihoods Intervention under DAY-NRLM" is enclosed herewith for reference document for supporting the SHG women in diversifying their livelihood portfolio and bring in stability.

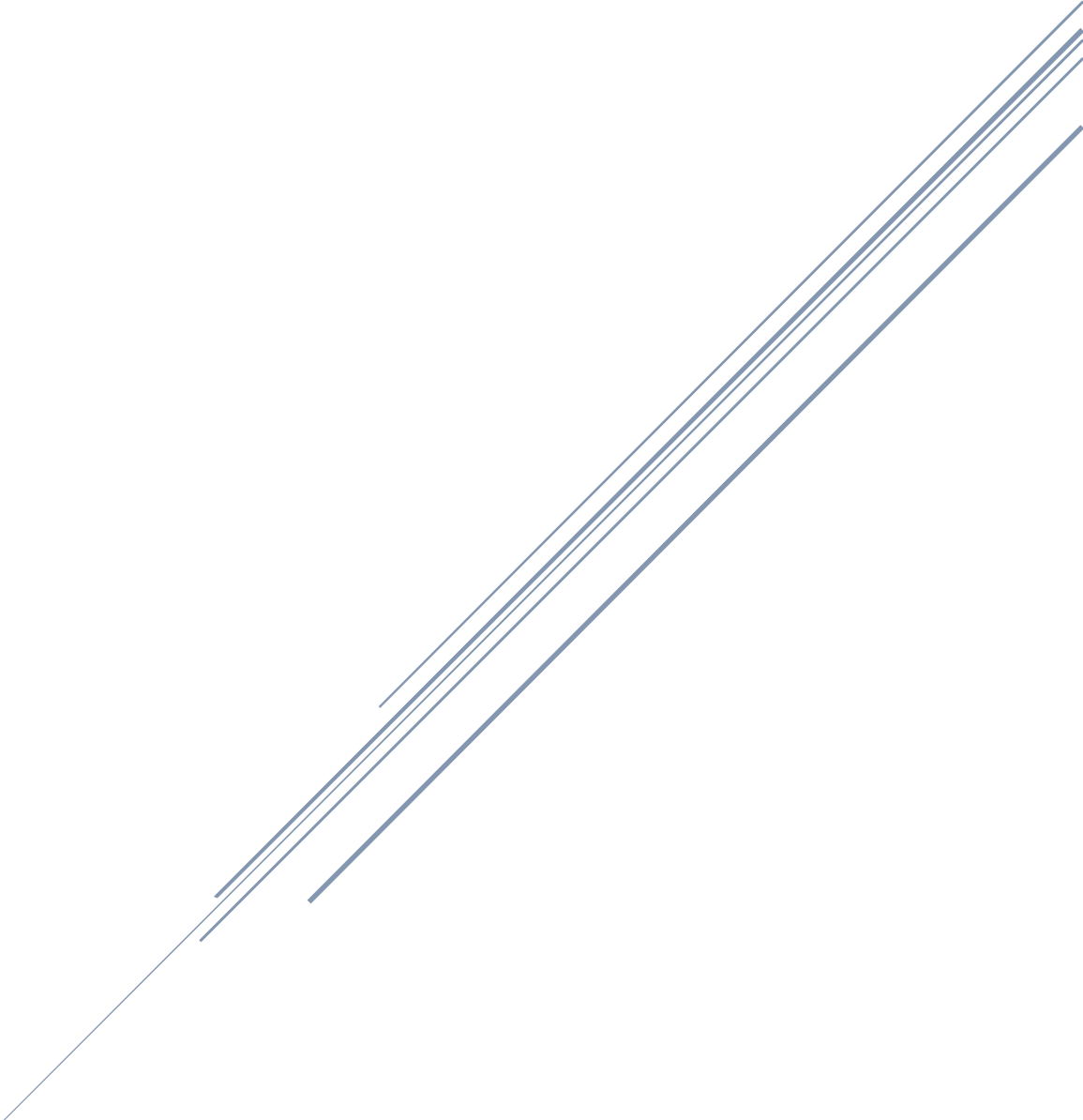
Yours faithfully

Enclosure: as above.



(H. R. Meena)
Deputy Secretary to Govt. of India

ADVISORY ON DIVERSIFICATION OF FARM LIVELIHOODS UNDER DAY-NRLM



Contents

Farm Livelihood intervention Strategy.....	2
Implementation strategy:	4
Village level:.....	4
Household level:	5
Training and capacity building architecture:	6
Convergence:.....	7
Human Resource:.....	7
Block Team.....	7
State Team:.....	7
Review and monitoring:.....	8
Knowledge management:.....	8
Roll out strategy at SRLM:.....	9

Advisory on diversification of livelihoods under DAY NRLM

Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM), is a flagship programme of the Ministry of Rural Development, Government of India. It has been working towards improving social status and economic capabilities of rural women through formation of collectives, intensifying and expanding their existing livelihoods, bringing in new farm, non-farm and other economic opportunities by access and linkages through their collectives.

Since its inception, DAY-NRLM has made significant progress in mobilizing rural poor and vulnerable women into their institutions at various tiers. DAY-NRLM has also supported these women SHGs through provisioning of Revolving Fund (RF) and Community Investment Fund (CIF) to take up livelihood activities, additional credit need has been arranged through linking the SHGs with the banks.

As a coping strategy, poor households pursue diverse and multiple livelihoods. The most common livelihoods of the poor are wage labour, cultivation on small and marginal landholdings or as tenants, cattle rearing, collecting forest produce, fishing etc. The most common non-farm livelihoods are the traditional occupations – weaving, carpentry, black-smithy, washing clothes etc. The poor are also looking for new alternative livelihood options in the employment continuum.

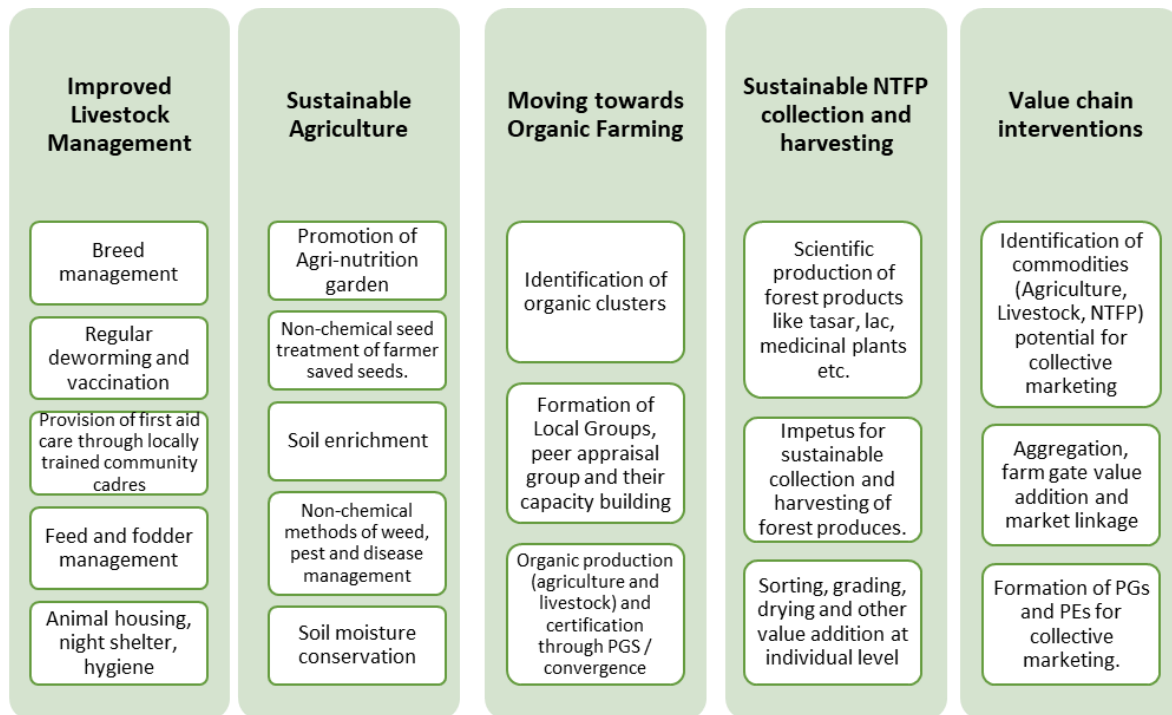
In this context DAY NRLM Implementation Framework outlines the livelihoods promotion strategy: “DAY-NRLM would look at the entire portfolio of livelihoods of each household and facilitate support for the activities at the individual/household level, or in a collective, or at both levels.”

Farm Livelihood intervention Strategy

Farm Livelihoods interventions under DAY NRLM are designed to address three important elements of livelihoods of a poor SHG household; asset, access and skill. The interventions are to address these issues in a comprehensive manner so that the asset quality is improved and/or poor acquiring new assets, their access to credit, market and government schemes and entitlements are improved and they are skilled into use of improved farm based production practices to get optimum return from their farm assets.

In DAY-NRLM, livelihoods promotion includes interventions in both farm (on-farm and off-farm) as well as non-farm livelihood activities. In farm livelihoods some of the important intervention areas are; promotion of Agro Ecological Practices (AEP), improved livestock management practices, sustainable Non Timber Forest Produce (NTFP) collection practices among others. Under agro-ecological practices focus is on stabilizing productivity in agriculture, with reduced cost of cultivation thereby increasing the net income along with taking care of local ecology and transiting to organic certification. Promotion of improved practices to reduce the mortality and morbidity in

ruminants, non-ruminants and poultry through improved feed and breed management, preventive healthcare, ethno-veterinary practices, better housing, improved management practices are the essential livestock interventions. Promotion of improved harvesting practices, improved cultivation, sorting, grading, short term storage, value addition and collective marketing are major interventions to augment NTFP based livelihoods. Under the value chain intervention, activities are carried out with selected farm and NTFP commodities, bringing in improved technology, value addition, aggregation and market linkages for better price realization through promotion of need based informal Producers Group (PG) and formal Producers Enterprise (PE). This can be summarized as shown below:



The back bone of the intervention is a strong extension service delivery architecture to help poor access the services 24X7 at their door steps which is built by creating a community cadre of extension workers.

Besides, creation of social capital is an overriding strategy and cut-across all themes through identification, capacity building, deployment and monitoring of experienced practitioners from the community in all the above activities as Community Resource Persons (CRP) for last mile door step delivery of extension services through FFS, Pashu Pathsala and similar learning platforms. This in turn will enhance skill, knowledge, awareness on their livelihoods among the participating SHG women.

DAY-NRLM for Farm Livelihood promotion is focused on developing the livelihood basket of rural poor consisting of multiple livelihood sources

- (a) Diversifying livelihood portfolio of rural poor with minimum two farm livelihood activities from among the agriculture, horticulture, livestock, fishery and NTFP
- (b) Assured food and nutrition security from own production
- (c) Assured incremental income stream throughout the year and
- (d) Creation of social capital from the best practitioners as extension service providers.

A diversified livelihood with income coming from more than one livelihood source will help poor to minimize risk and build resilience from various shocks including shock from climate change.

All intervention plan of DAY-NRLM will proactively pursue this objective and will adopt a household centric approach rather than a sector based approach in livelihoods promotion. So, a marginal farmer will not only be supported into agro ecological practices but also into strengthening her livestock based activities or a NTFP collector will not only be supported in NTFP activities but also into AEP and livestock activities. While planning for farm livelihoods interventions in a village, diversification of livelihoods will be the foremost objective.

Diversification and intensification of livelihood interventions are overriding objective under DAY-NRLM and all SRLMs are expected to steer the agenda on priority. This advisory will guide the SRLMs to work towards this endeavor.

Implementation strategy:

To achieve the above objectives and implement the strategy of farm livelihood promotion under DAY-NRLM, at programme management level each activities are managed as separate themes for its enrichment whereas these verticals are integrated at Village level or more precisely at individual household level of participating SHG woman.

Village level:

A typical NRLM farm livelihood intervention village must have active Village Organization (VO), a functional VO livelihood sub-committee, active Producer Groups (PGs) with updated records and relevant trained livelihood CRPs along with the following:

- A functional Custom Hiring Centre or a Tool Bank with all useful machineries
- Operational NPM shops where all NPM materials are available
- Availability of social capital (Krishi/Pashu/Van/matsya/Udyog sakhi etc)
- Functional FFS and / or Pashu Pathsala with updated records covering all the Mahila Kisans
- Public disclosures in the form of wall writings in VO highlighting the DAY-NRLM livelihood interventions

- Seed bank of local and indigenous seeds
- Access to First Aid care facility (for livestock) by trained Pashu Sakhi
- Access to veterinary facilities like Artificial Insemination (AI), Castration and vet-medicines
- System of pricing through live weight basis for sellable animals and poultry birds
- Access to mineral bolus and enhanced fodder production.
- The VO office should have the following updated records displayed in its wall:
 - Social and livelihood map of the village
 - Livelihood interventions plan for the village
 - Progress / achievements in key indicators
 - An animal vaccination and de-worming calendar
 - FFS/Pashu Pathsala training calendar
 - Name of PGs and commodities dealing in.
- Common facilities for NTFP produces like drying, storage etc
- PGs dealing in selected potential commodities (agriculture, livestock and NTFP) for better market access.
- The PGs should have updated records related to physical and financial transactions.
- Functional Local Groups (LGs) with trained LG leader and Peer Appraisal Groups in organic cluster villages.
- Shops / retail outlets for organic produces

Household level:

A farm livelihood intervention household should have an Agri-nutrition garden and supported on more than one livelihood activities among Agro-ecology, livestock, NTFP, Organic Farming, Value Chain interventions and adopt the respective multiple practices as described below:

- *Agri-nutrition Garden (ANG)*: Each Mahila Kisan must have an ANG at her backyard with proper layout, planning of crops and backyard animal/birds, innovative techniques for higher productivity of land, NPM practices, compost pits to supply year-round nutritious, fresh and organic vegetables, fruits and animal protein primarily for home consumption.
- *Seed treatment*: Adopted at least one of the practices of non-chemical seed selection (Brine), treatment with *Beejamrut*, cow urine, etc., seed inoculation with *Rhizobium*, *Trichoderma*, any other traditional methods for better germination, prevention of seed-borne pests, diseases and increased productivity.
- *Soil enrichment*: Adopted at least one of the soil enrichment practices - composting (NADEP, vermi etc) to convert cow dung into composts before uses and / or green manuring, green leaf manuring, *Azolla* and / or preparation and use of *Jeevamruth / Ghanjeevamruth*, use of local materials like tank silt, biogas slurry etc.
- *Non-chemical pest management (NPM) practices*: Adoption of one of the non-chemical weed, pest and disease management practices which includes but not limited to – preparation and uses of *Agnayastram*, *Neemastram*, *Brhmastram*, summer ploughing, crop

rotation, trap crop, cover crop, alley, bird perches, sticky traps, use of brush cutter, mulching, cover crop etc. All these will slowly leading to complete stoppage of use of any chemical in pest, disease and weed management to transit to organic production.

- *Soil moisture conservation*: Adopted one of the practices like – mulching, sowing across the slope, corner pit etc.
- *Preventive (livestock) health care*: All the cattle and poultry birds are periodically vaccinated and de-wormed– FMD, *Ranikhet*, swine fever etc. Adoption of Ethno-veterinary practices.
- *Feed and fodder*: Cultivation of fodder, making of silage, use of locally available materials to prepare balanced ration for cattle and other livestock animals and birds.
- *Animal Housing and Hygiene*: Should have proper housing for cattle and other livestock, proper night shelter for poultry and other birds.
- *Breeds*: Adopted proper breeds of livestock.
- *Value addition of NTFP (for NTFP households)*: Adopted at least one of the practices that includes but not limited to – sorting, grading, drying, processing etc.
- *Organic Farming*: In organic cluster villages, some of the Mahila Kisan will be member of LG, peer appraisal group, LG leader, get organic certificate through PGS or convergence mode (PKVY, MoVCD-NER) to get premium price of their farm produces – agriculture, horticulture and livestock.
- *Value chain*: Contribute their produces after proper cleaning, sorting and grading at individual level to their respective PGs dealing in farm produces (agriculture, horticulture, livestock), NTFPs and Organic produces.

Training and capacity building architecture:

Enhancement of knowledge, awareness and skill of individual Mahila Kisan through the livelihood Community Resource Persons (CRP) is one of the focus of DAY-NRLM farm livelihood intervention. Each SRLM needs to create a pool of State Resource Persons (SRPs) drawn from among the experts from local resource / research institutions, local practitioners / entrepreneurs and selected SRLM staff after due orientation, training and screening under guidance of NMMU. The SRLM will deploy such SRPs for training and capacity building of CRPs. In addition to SRPs, each state needs to select, train, screen and create a pool of master CRPs (m-CRP¹s) from among the livelihood CRPs. These m-CRPs and block level staff of SRLM will provide skill training and on-field continuous implementation supports to the CRPs.

Further, a group of experienced rural development professionals, having field implementation experience, selected and empaneled by NIRD&PR as National Resource Person (NRP) will train the SRPs, m-CRPs and SRLM staff as per training module.

¹ M-CRPs are selected from among the practicing CRPs through three tier selection process followed by specialized trainings

Convergence:

Each SRLM has to continuously strive for drawing supports from various stakeholders relevant to the livelihood promotion strategy of DAY-NRLM. Active participation of Mahila Kisans in Gram Sabha and subsequent follow up through VO for augmentation of individual livelihood assets through MGNREGA, convergence with Animal Husbandry department for animal vaccination, deworming, AI, castration and other vet-services, convergence with department of Forest for NTFP, agriculture for strengthening CHCs etc are some of the examples each SRLM needs to take forward.

Human Resource:

The implementation of livelihood interventions of such large magnitude with high intensity and diversity require quality human resources in place with proper mix of academic excellence, management skill, right attitude and hands on experience of promotion of rural livelihoods in specific sub sectors. SRLMs need to ensure positioning of such quality human resources at cutting edge and at different integration nodes.

Block Team

Block staff are the front line staff of SRLM responsible for managing all field implementation activities - technical assistance, training and capacity building of CRPs, m-CRP and MKs, formation and nurturing of PGs, LGs, supporting VO livelihood sub-committee, livelihood CRPs are some of the examples. Each intervention block must have dedicated team of livelihood staff nested in BMMU, aligning with the livelihood interventions in that block comprising of staff with relevant thematic background (agriculture, livestock, NTFP, value chain, Organic Farming) supported by a staff for looking after data entry and MIS. Exact number of staff under each programme has been circulated separately.

State Team:

The livelihood team at state level is to be led by a full time dedicated staff as State Project Manager (SPM) – livelihoods, nested in the SMMU. S/he has to be from Agriculture, Animal Husbandry or allied field with high management skill and combined experience of 7-10 years including 2-3 years of field implementation experience at the grassroots. The primary responsibility of the SPM-LH is steering the livelihood promotion agenda of SRLM that includes planning, implementation, monitoring, documentation, reporting, building partnership, linkages, convergence etc. at state level. S/he would be supported by two to three Program Managers/Project executives from farm livelihood or non-farm livelihoods (should complement the qualification of SPM).

Based on the size of the state and number of intensive blocks the SRLM may be supported by suitable young professionals at different levels. In addition to this SRLM may draw support from

NRPs in strategizing, planning, implementation, monitoring, documenting and creation of immersion sites.

Review and monitoring:

SRLM has to develop a robust periodic internal review and monitoring mechanisms (qualitative and quantitative) for farm livelihoods at all the integration nodes at state, block and village levels namely, at SMMU, BMMU and at VO.

- All the SMMU members should be encouraged for periodic field visits in villages having livelihood interventions for assessing the quality of work done.
- The SPM-LH / PM-LH has to participate in every monitoring meeting of all BMMU.
- The BMMU should organize periodic monitoring meeting at different VO offices that will help in interaction with the VO-LH sub-committee members, CRPs, field visits, on-field inputs to the CRPs and monitor the quality of work.
- The block livelihood staff should participate in all VO level periodic monitoring meeting

Each SRLM has to give due importance to keep the national MIS updated. In addition to the MIS data following inputs needs to be used for monitoring purposes during all monitoring meetings at different level:

- Presentation by the key staff (SPM at SMMU, LH staff at BMMU and CRP at VO level) on progress against the plan
- Only consolidated MIS output data on key indicators in respective levels to be used for quantitative achievement.
- First-hand information from field during field visits by SMMU, BMMU and livelihood staff for qualitative achievement.
- Information / report from the NRPs
- Feedback from NMMU

Knowledge management:

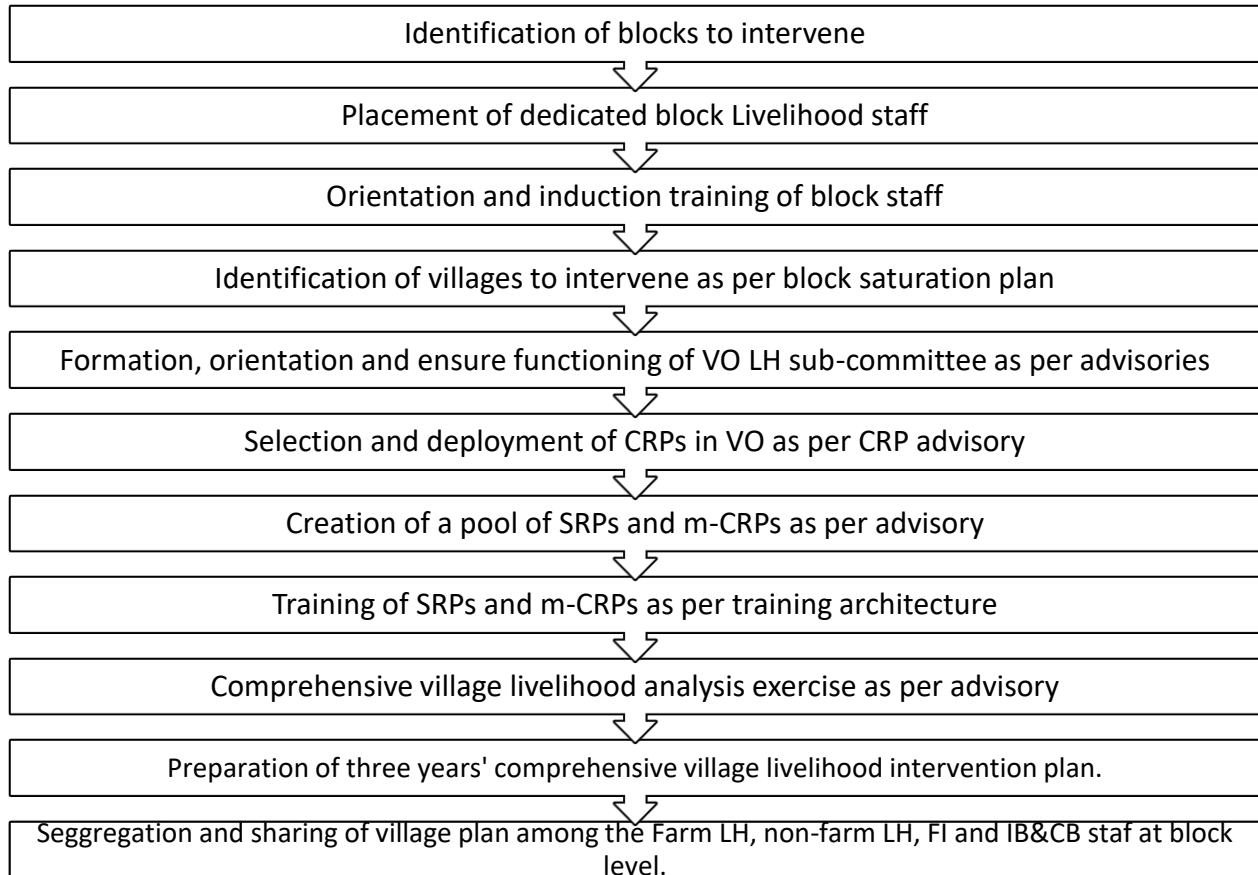
Each SRLM has to develop internal system for regular documentation of best practices of MK, creation of immersion sites, successful case studies on MKs, CRPs and m-CRPs.

SRLM should develop short video films on best practices, success stories, immersion sites to be used as training material as well as informing / influencing other departments and partners.

SRLM should utilize the state level Knowledge Management (KM) unit for developing quality KM materials on farm livelihoods.

Roll out strategy at SRLM:

Geographical coverage: Each SRLM should prepare a geographical coverage plan consists of block saturation plan (village coverage) and village saturation plan (household coverage) within a three years' timeline. Thereafter the following step by step actions need to be taken by the state to saturate a village with multiple livelihood interventions:



Finally, the Farm livelihood plan of each village needs to have components with following broad intervention plan emerged out of the exercise across verticals (agriculture, livestock, NTFP, organic and value chain):

- Training and capacity building plan
- Asset augmentation / creation plan
- Credit need and access plan
- Value addition, aggregation and market (input & output) linkage plan
- Access to technology /drudgery reduction farm machineries plan
- Reduction in cost of cultivation / production plan

Adherence to this advisory will help the SRLMs to ensure that we consistently pursue the core objectives of DAY NRLM and we continuously work towards diversification of livelihoods for the rural poor.

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DO # K-11038/06/2018-19/MKSP/Misc (363957)

October 21, 2021

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With warm regards,

Yours sincerely,



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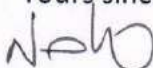
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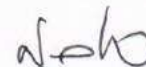
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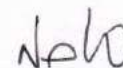
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Copy to:

The Chief Secretaries/Advisors to Administrators of States/UTs



[Nagendra Nath Sinha]

Page 1758 of 1852

Appendix-I

State: _____

District: _____

Block: _____

GP: _____

Village: _____

Sl.No.	Name of SHG Member	SHG ID	Income Estimation		
			Income for Period	Avg. Monthly Income	Income Category

Appendix-II

Advisory on promotion of 'Sustainable Livelihoods for SHG households' under DAY-NRLM.

Content

- A. Background
- B. Objective
- C. Strategy
- D. Potential Livelihoods Activities (An illustrative example)
- E. Focus Areas
- F. Non-Farm Livelihoods
- G. Formulation of Village Poverty Reduction Plan (VPRP)
- H. Key Action Areas

A. Background

Deendayal Antyodaya Yojana-National Rural Livelihood Mission (DAY-NRLM) is a flagship poverty alleviation scheme. It aims to create sustainable livelihoods by targeting the marginalised/deprived community & build a strong social capital of the poor household. The Mission has covered 7.63 crores households and mobilised them into 69.9 lakh SHGs. These have been further federated into higher community institutions like VO (Village Organizations) and CLF (Cluster Level Federation). The capitalization support of Rs. 14,071 crores have also been provided to these community institutions to reduce debt and enhance their livelihoods. Besides, linkage with Banks has been established to the tune of Rs.4.1 lakh crores.

Mission in its current phase is concentrating on creating multiple livelihood opportunities for the SHGs members. In an independent study of MKSP conducted by Nielsen (India) Private Limited, Haryana it was found that 67% SHG households are having small land holding of around 1.5 Acre. It was also observed that income from livestock stream is significant and hence with multi sector interventions like sustainable agriculture accompanied with better livestock management practices may support SHG households to earn more income.

Multiple convergence of various schemes and focused intervention in saturation mode will be able to provide synergy and catalyse higher incomes from the current level of sustenance livelihood. The objective is to unleash the capabilities of the SHG members to be confident, improve their lives with enhanced income in a sustainable manner in rural ecosystem.

In order to empower the small and marginal women farmers in agriculture "Mahila Kisan Sashaktikaran Pariyojana (MKSP)" as an intervention under NRLM is being implemented along with other components wherein around 1.30 crores Mahila Kisan have already been supported. It has unique features to bring women, "the unrecognized and disguised actors in rural economy," to the forefront, distinguishing their role as farmers, facilitating them to access resources, i.e., finance, technology and agriculture extension.

The strategy under the farm-based livelihood promotion has been to improve the production systems by adopting agro-ecological practices. The practices are around how soil works, improving seed quality, using traditional knowledge in our villages, reducing farming costs, enhancing production, and enhancing qualitative change in a wide range of agricultural commodities. Periodic cash through crops is being complemented by off-farm activities like dairy, poultry, fisheries, duckery etc. It has been well established that these activities play an important role in providing regular cash flow and increasing income of such farmers. Under the ambit of livestock management, regular vaccination and de-worming are ensured to increase production. Furthermore, better dwellings, improved feeding, sanitation, and doorstep veterinary services are provided for reduced mortality and increased production. Also, the market linkage is established for quality and quantity assurance.

Capacity building of SHGs is facilitated through a well-trained community cadre who are systematically identified, trained and skilled in livelihood nuances. This strong network of about one lakh community cadre (Krishi Sakhi, Pashu Sakhi, Van Sakhi, Udyog Sakhi) provides the last-mile extension services to the SHG households.

B. Objective

With infusion of capitalization, credit linkage and their own saving, the mission's effort have facilitated SHGs to strengthen their livelihoods and enhance food-nutrition security and family income. The families who gained the most are those which adopted three to five different activities from thematic intervention areas of sustainable agriculture, improved livestock rearing and sustainable NTFP collection & harvesting. Further, under each thematic line there are few recognized models, each having the potential to increase the income at household level. Better crop management with improved yields is bound to improve production with added marketing support through aggregation and creation of institutional support systems, women led PGs/FPOs/Producer companies have the potential of bringing about a transformational shift in earnings of the SHG Members.

The objective is to ensure sustainable livelihoods for all the SHG Households. To calculate it in monetary terms may vary from area to area. However, an income of around Rs ten thousand per month per household should be our goal. So, the interventions need to be launched with this objective in sight.

This will require a systematic approach, where SHG members will be advised to adopt two-three multi-sectoral interventions for income enhancements. The integrated production models may be developed to provide realistic opportunities to make each SHG household earn at least Rs one lakh per annum.

These models may amalgamate Agro-Ecological Practices (proper soil, good seed, proper bio-nutrient and pesticides), proper livestock management, horticulture, and Non-Timber Forest Produce (NTFP) collection. Various models have been initiated by State missions and other institutions. Also, many of these models are being

replicated by the State missions. However, in this document, some of the established models developed by ICAR (**Annexure III**) and proposed strategy to promote lakhpati SHG households are being shared. The document on the models of ICAR is available at <https://icar.org.in/sites/default/files/BulletinIFS.pdf>.

C. Strategy

In order to develop an income of more than 1 lakh, it is advised that the Small holder farmer's livelihoods and a Livelihoods of SHG household earning more than lakh be distinguished and the same can be as under:

	Normal farmer	Lakhpati SHG Households
Cropping	Single crop	Multiple crop for different seasons (Kharif/ Rabi and Summer)
Adoption of technology/ Package of Practices	Traditional way of farming	Adoption of technology and Package of Practice (Management of Productivity)
Type of Activity	Mostly Agriculture	Diversified Activities <ul style="list-style-type: none"> • Agriculture • Horticulture • Livestock • NTFP • Fisheries • Azolla

Considering the same, the strategy towards enabling the poor SHG members to become 'Lakh Pati' a comprehensive approach needs to be adopted in the mission that may comprise the following:

- Ensuring credit availability at reasonable rate of interest for acquiring livelihoods assets like farm land, livestock, farm machinery, leasing of pond, bee-box, dairy among others.
- Introducing successful income generation models in agriculture, livestock and other farm- based activities like bee keeping, horticulture, pisciculture, duckery, poultry, azolla cultivation etc. with strong support in the form of training and extension services in an integrated manner.
- Extending market services through value chain development interventions thus ensuring market access for remunerative prices for their produce. The Livelihoods CRPs (Krishi Sakhi, Pashu Sakhi, Van Sakhi, Udyog Sakhis) can act as a value chain enabler and shall be trained on building perspectives, planning for diversification, creating an activity calendar based on local resource availability. She can be trained to function as the bridge between value chain actors and Farmers.
- Focus on convergence with various government schemes and programs to ensure access to benefit from such schemes for the rural households. For taking up various interventions, funds to be mobilised through the existing schemes of the Government. Engagement with line department

established to provide access to livelihoods assets, meet inputs, post-harvest infrastructure, market channels & other requirements. Institutional arrangements need to be put in place to leverage strength of various existing Central and State Government schemes.

- **Partnerships for market access:** Buy-back arrangements secured for assured lifting by commercial entities through Producer Groups, PEs ensuring fair discovery of prices and farm-gate lifting. Institutional buyers may be encouraged to increase efficiencies for near-farm infrastructure for storage, processing, and access to transport.
- **Private players engagement:** Private players need various produces of specific qualities, so there is good potential for convergence with them. SRLMs need to engage with private players to create a win-win situation for both the SHG members as well as private players.

D. Potential Livelihoods Activities (An Illustrative Example);

To support the SHG households in achieving the annual income of at least Rs.1 lakh, an approach for multiple and diversified activities are to be adopted. It is evident that a combination of Agro Ecological practices (proper soil, good seed, proper bio-nutrient and pesticides), proper livestock management, horticulture, and Non-Timber Forest Produce (NTFP) collection can yield income of more than One lakh rupees per annum.

The following is an illustration of diversified livelihoods Activity at Household Level with an average land holding of 1.5 Acres (irrigated 1 Acre Low land and 0.5 Acre medium/upland).

In it a women farmer that practices multi crop (Paddy-Kharif with use of SRI technology and post kharif, Bengal Gram) in an acre of land and grows multiple vegetables (Kharif Chilly, Kharif brinjal and post kharif- Onion) in the 0.5 acre of land is expected to earn more than one lakh rupees in a year. In addition, with available homestead land she can enhance income through livestock activities.

Sr.	Type of Intervention	Name of Livelihood Activity	Crop Duration	Area (Acre)	Yield (Kg)	Sale Value/ Kg (INR)	Income (INR)
A	Total from Agriculture (Multi cropping)						57500
	Crop-1	SRI- Paddy	July- November	1	3000	10	30000
	Crop-2	Bengal gram (Chick pea)	March- May	1	550	50	27500
B	Total from Horticulture/ Vegetable Farming						94000
	Vegetable/ Horticulture	Kharif Chilly	June-October	0.25	1500	20	30000
		Kharif Brinjal	June-October	0.25	5500	8	44000

		Onion	December- June	0.5	2000	10	20000
C	Livestock						
	C1	Backyard Poultry of 50 birds (Harden variety)	8 Cycles in a year	100 Sqft	Egg-6000 Nos Meat-50 Kg	Egg-Rs8 Meat-300/kg	62500
	C2	Goat rearing (10 Goats)	10 improved goats- Cost of production and income is estimated in a 2 years time frame. However, for annual estimation purpose, the amount mentioned are estimated at 50%)	100 Sqft		89825	89825

Note: The Cost of production and income of the items mentioned above are placed at Annexure-I.

Multiple livelihoods interventions at household level	Income per annum (in Rupees)
Agri + Horticulture + Livestock C1	1,51,500
Agri + Livestock C1	1,20,000
Horticulture + Livestock (C1)	1,56,500
Agri + Livestock C2	1,47,325
Agri + Horticulture + Livestock (C1)	2,14,000

E. Focus areas

Thus, the focus will be on facilitating multi-pronged livelihoods activities to the SHG households. This will include adoption of high value agri/horti crops, commercial cultivation, intensive agriculture, support for irrigation, integration for livestock activities such as dairy, poultry, duck rearing, goat rearing, piggery etc., sustainable harvesting, scientific cultivation and collection of NTFPs (Tasar, Lac, Amla, Tamarind etc.). Each household would be encouraged to adopt 2-3 sectoral interventions with hand-holding support to augment existing assets (through convergence viz. MGNREGS, DAHD, MoA and other departments), build knowledge and skills, access to technology and credit, and linking to the markets.

Identification/development of the Credit Products in accordance to the need for the model to support the SHG households to access credit at reasonable rate of interest for acquiring livelihoods assets like farm land, livestock, farm machinery, leasing of pond, bee box among others need to be ensured.

Aggregation and value addition will also have a key role in supporting these women farmers to get remunerative price for their produce. Effort should be made to promote women owned producers' collectives to ensure better market, price & regular income. Also, considering the scope and potential, the State missions may plan for the creation of production clusters of high value/demand crops like Moringa, Banana, Chilli, Ground Nut, Cashew, Organic produce etc.

The State missions may also plan for development of Integrated Farming Clusters (IFC) to improve, intensify, expand & integrate the existing diversified livelihood activities, where SHG household are supported with improvement in 3 to 4 livelihoods with strong backward and forward linkages. A tripartite agreement between Indian Council of Agriculture Research (ICAR), Rapid Rural Community Response, (RCRC, a conglomerate of CSOs) and DAY-NRLM has already been signed and shared to initiate IFCs in the States.

F. Non-Farm Livelihoods: -

The non-farm livelihood is a new area but it holds immense potential for marginal and land less farmers. Interventions like Start-up Village Entrepreneurship Programme (SVEP), Clusters, One stop Facility (OSF) and Incubator components need to be specially leveraged strategically. Further, convergence with programmes like Scheme of Fund for Regeneration of Traditional Industries (SFURTI) of MSME, Pradhan Mantri Formalisation of Micro food processing Enterprises (PMFME) of MoFPI may also be used for enhancing livelihoods of members.

G. Formulation of Village Poverty Reduction Plan (VPRP): -

Formulation of VPRP is critical for realization of the dream of making every SHG member household a "Lakhpati". Guidelines have been provided and training arranged for VO in this regard, which details the livelihood aspirations of the Household, assistance needed in this regard in terms of securing livelihood assets, capacity building, credit and marketing support, support services and so on. The same should be integrated into the Gram Panchayat Development Plan (GPDP). The State Government/SRLMs should ensure that support eco-system delivers.

H. Key Action Areas

In order to achieve the goal of developing Sustainable Livelihoods for SHG households, SRLM may

- i. Enlist and create a database of the existing models for income enhancement of SHG households by State/UT Missions, ICAR, CSOs, & other organisations,
- ii. The State missions should prepare the action plan for achieving the goal to provide sustainable livelihoods to all the SHG members in the next three years and share the same with the Ministry
- iii. Replicate the established and successful models that may increase the income of SHG households.
- iv. Develop new models/Package of Practices with local experience and if needed with the support of experts from agriculture universities, ICAR, KVK, MKSP partners, CSO partner and others.

- v. The success stories & models on the SHG households (especially small and marginal women farmers) earning more than Rs.1 lakh per annum may be identified, documented and shared with the Ministry. The template is attached in **Annexure II**.
- vi. If there are any suggestions to achieve the goal of sustainable livelihoods, kindly share it with the NMMU team. Further, this should be discussed within the State team, so that the State strategy is good and everybody is on board.
- vii. Formulate the VPRP and integrate with GDP. The State Government/SRLMs/PRIs/women collectives must help Household succeed in chosen livelihood areas.

* * * * *

Annexure- I

Production cost and Profitability of Different Agri and Livestock interventions

1. Product name: SRI Paddy

Name of crop:	SRI Paddy
Area of land (in acres)	1 Medium lowland, Low land with good drainage facility, preferably with life saving irrigation source
Nature of land	
Requirement of irrigation:	Rainfed
Duration of crop in months	5
Time period of crop (from month to month)	July- Nov

Economics:			
Item	Unit	Quantity	Price(Rs)
Seed:			
Seed:	Kg	2	60
Manures and fertilisers:			
FYM/ Vermicompost	Kg		
DAP	Kg	35	875
MOP	Kg	40	400
Urea	Kg	63	630
Plant protection chemicals:			
Carbendazim for seed treatment (e.g. Bavistin)	gm	10	10
Fipronil/Sevin for Gundhi Bug control	Gm	200	500
Irrigation:			
Labour:			
One plough by tractor	Hour	3	2100
3 times with country plough ; Once acre require 3 sets / plough	Person days	9	900
Field bunds need careful mending to plug leakage; require 3 person days/ acre	Person days	3	300
Including land preparation, seed sowing etc	Person days	2	200
Transplanting	Person days	20	2000
Intercultre & hoeing 2 times	Person days	10	1000
harvesting	Person days	18	1800
Thrasing & storing	Person days	10	1000

Pesticide application	Person days	2	200
Cost total:			11975
Income			
Grain Yield	Kg	3000	27000
Straw Yield	Kg	3000	3000
Total Income:			30000
Return			18025

Food sufficiency for 400 days @ 4 kg rice/day

If all paddy is converted into Rice then

Rice yield	Kg	1666	13328
Paddy husk yield	Kg	800	800

Source: Lakhpati Kisan initiative, CINI, Tata trusts

2. Product name: Chilli- Kharif in 0.25 Acre

Name of crop:	Chilli			
Area of land (in acres)	0.25			
Varieties	OP			
Nature of land	Medium upland, medium lowland, Homestead			
Requirement of irrigation:	Yes			
Duration of crop in months	6			
Time period of crop (from month to month)	June- December			
Economics:				
Sr. No.	Particular	Unit	Rate(Rs.)	Total Amount(Rs.)
1	Seedling(Chilli)	2800	0.7	1960
2	Field Preparation	1	600	600
3	Ridge & Furrow [3 Labours]	4	200	800
4	DAP [10 Kg]	10	32	320
5	Potash [5 kg]	5	20	100
6	Urea [5 Kg]	5	10	50
7	Transplanting [2 Labours]	3	200	600
8	Redomil 200 Gm	2	210	420
9	Actara 50 Gm + confidor	12	100	1200
10	Streptocyclin	5	26	130
11	Blue copper	1	550	550
12	Fame+Coragen+ trap	6	220	1320
13	Spraying [2 Labour]	3	200	600
14	Stacking [3 Labour]	3	200	600
15	Stacking materials	10	250	2500
16	Weeding & Fertilizer[10 Labours]	10	200	2000
17	DAP [20 Kg]	20	30	600
18	Potash [15 kg]	15	20	300
19	Urea [15 Kg]	10	10	100
20	Harvesting[6 Labours]	7	200	1400

Total Cost			16150
Production in KG			1500
Unit Price/ Kg			20
Gross income			30000
Net Income			13850

Source: Lakhpati Kisan initiative, CINI, Tata trusts

3. Product name: Brinjal- Kharif in 0.25 Acre

Name of crop:	Brinjal			
Area of land (in acres)	0.25			
Varieties	Hybrid			
Nature of land	Medium upland, medium lowland, Homestead			
Requirement of irrigation:	Yes			
Duration of crop in months	6			
Time period of crop (from month to month)	June- December			
Economics:				
Sr. No.	Particular	Unit	Rate(Rs.)	Total Amount(Rs.)
1	Seedling(Chilli)	2800	0.7	1960
2	Field Preparation	1	600	600
3	Ridge & Furrow [3 Labours]	4	200	800
4	DAP [10 Kg]	10	32	320
5	Potash [5 kg]	5	20	100
6	Urea [5 Kg]	5	10	50
7	Transplanting [2 Labours]	3	200	600
8	Redomil 200 Gm	2	210	420
9	Actara 50 Gm + confidor	12	100	1200
10	Streptocyclin	5	26	130
11	Blue copper	1	550	550
12	Fame+Coragen+ trap	6	220	1320
13	Spraying [2 Labour]	3	200	600
14	Stacking [3 Labour]	3	200	600
15	Stacking materials	10	250	2500
16	Weeding & Fertilizer[10 Labours]	10	200	2000
17	DAP [20 Kg]	20	30	600
18	Potash [15 kg]	15	20	300
19	Urea [15 Kg]	10	10	100
20	Harvesting[6 Labours]	7	200	1400
	Total Cost			16150
	Production in KG			5500
	Unit Price/ Kg			8
	Gross income			44000
	Net Income			27850

Source: Lakhpati Kisan initiative, CINI, Tata trusts

4. Product name: Onion- Rabi

Name of crop:	Onion		
Varieties	Arka Niketan, N 53, Pusa red, And Arka Kalyan		
Area of land (in acres)	0.5		
Nature of land	Homestead, medium lowland		
Requirement of irrigation:	Yes		
Duration of crop in months	6		
Time period of crop (from month to month)	December-June		
Economics:			
Costs:			
Item	Unit	Quantity	Price(Rs)
Seed:			
	Kg	0.75	750
Manures and fertilisers:			
FYM/Compost	quintal		
Urea	Kg	45	450
DAP	Kg	22	550
MOP	Kg	25	250
Plant protection chemicals:			
Bavistin	gm	25	55
Carbendazim+Mancozeb (e.g. Saaf)	gm	250	300
Systemic insecticide(e.g. Actara, confidor, Pegasus) for Thrips control	gm	50	400
Irrigation:			
	Hours	25	1250
Labour:			
Tractor for 2 plough	Hours	2	500
Land Preparation	Persondays	8	800
Transplanting	Persondays	5	500
Interculture and weeding	Persondays	5	500
Irrigation:	Persondays	5	500
Pesticide application	Persondays	2	200
Harvesting	Persondays	5	500
Cost total:			
			7505
Income			
Harvested Bulbs	Kg	2000	20000
Total Income total			20000
Net return			12495

Source: Lakhpati Kisan initiative, CINI, Tata trusts

5. Product name: Bengal Gram

Name of crop:	Bengal Gram (Chick Pea)
Variety	Dollar, Katiya, KAK 1&2. Kabuli
Area of land (in acres)	1
Nature of land	Upland, Medium Land
Requirement of irrigation:	4
Duration of crop in months	4
Time period of crop (from month to month)	March-May

Economics:			
Costs:			
Item	Unit	Quantity	Price(Rs)
Seed:			
Seed:	Kg	30	2700
Manures and fertilisers:			
FYM/ Vermicompost	Tractor	2	
Lime/Doomite	Kg	400	1600
SSP	Kg	100	1000
MOP	Kg	16	160
Urea	Kg	17	170
Rhizobium and Phosphobacterin	Gm	200	30
Plant protection chemicals:			
Carbendazim for seed treatment e.g Bavistin	Gm	16	20
Management of Pod Borer (Spinosad)	ml	10	200
Irrigation:			
Irrigation after sowing, 1 week after germination, Preflowering and Pod Filling stage , 4 Irrigations	Hours	20	1000
Labour:			
Tractor for 2 plough	Hours	2	1400
Weeding	Persondays	10	1000
Sowing	Persondays	10	1000
Harvesting	Person days	18	1800
Thrasing & storing	Person days	10	1000
Pesticide application	Person days	4	400
Cost total:			
			13480
Revenue:			
Grain Yield	Kg	550	27500
Revenue total:			
			27500
Return			
			14020

Source: Lakhpati Kisan initiative, CINI, Tata trusts

6. Backyard poultry- 50 Birds (Local variety):

Estimated cost of 50 Kadaknath under backyard poultry system		
Sl	Particulars	Indigenous breed
A	Variable cost	
	Cost of day old chicks @ Rs 25 for local chicken	1250
	For local chicks, 10 kg of broken rice @ Rs 25 per kg for 50 nos chicks	1125
	Cost of vaccine @ Rs 1.60 /chick	80
	For the local chicken cost of medicine , feed supplement@ Rs. 2.40 per chick	120
	Cost of labour @20 hrs/motnh =2.5 mandays X 18 months =45 mandays X Rs 150 /- per manday = Rs 6750.5	3375
	Total variable cost	5950
B	Fixed cost	
	Land	with farmer
	Low cost poultry shed	8000
	Drinker/feeder	6500
	Total fixed cost	14500
	Total cost/value of production	20450
C	Income	
	105 eggs per bird@ Rs 8 each	42000
	Sale of birds @ Rs 410per bird	20500
	Total income	62500
	Net income	42,050

Source: Farm Livelihoods Interventions and Strategy document, MoRD- Cost norm-JSLPS

7. Goat Rearing- 10 Goats:

Assumption : 1.5 kidding per year and 1.5 kids per kidding for goats reared for meat purpose

S.nO	Particulars	Unit description	Unit cost	No of units	Cost
A	Recurring cost				
1	cost of goat	Age 1 to 2 years, 1 to 2 pair of permanent teeth	4000	9	36000
2	cost of buck	Age 1 to 2 years , well developed testicles	5000	1	5000
3	transport	Lump sum	2000	1	2000
4	feeding manager, water turf	As per requirement	200	10	2000
5	feeding cost of adult goats	150g concentrate feed per day	22	972	21384

6	feeding cost of kids - for first 6 months	Nine goats will provide 14 kids in each parturtiton in 2 years , a total of 40 kids, 75 g concentrate feed per kid	22	540	11880
7	feeding cost of new adults - for the next 7 months	Kids of 1st and 2nd parturtition will be sold at 13 months of age and kids of 3rd parturtition will be sold at 6 months of age, 150 gm concentrate feed for 27 kids	22	851	18711
8	feeding cost of buck	250 g per day concentrate feed	22	180	3960
9	vaccination, dewormer, Health care and insurance cost	PPR, ET, quarterly deworming & 3 years insurance cost	500	10	5000
10	Fodder cost	Napier grass & other			1,000
	Total A				106935
B	Other costs				
1	Interest on capital	12% per year for two years			25,664
	Total B				25,664
C	Receipts				
1	Sale of 13 month old 27 goats	the average weight of 16 kg			1,08,000
2	Sale of 6 month old kids	the average weight of 9 kg			29250
3	Rate of adult goat & buck	goats and buck purchase initial can be usedfor one more year			40000
4	Sale of manure	aprx 2 tons			2400
	Gross receipts				1,79,650
	Net profits in 24 months				47,051
	Yearly income				23,525

Source: Farm Livelihoods Interventions and Strategy document, MoRD- Cost norm-JSLPS

Annexure II

Name of the Mahila Kisan / SHG member;

Contact number;

I. Geographical details:

Name of the State:

Name of the district:

Name of the block:

Name of the village:

Agro climatic zone:

II. SHG member details:

Name of SHG;

Date of joining of SHG;

Amount of loan availed from SHG with number of times;

Current outstanding;

Member of Producers Groups / Producers Company, please name them;

III. Intervention Details:

a) Agriculture / Horticulture - Area (in Acres) covered, Crops cultivated, details on Practices adopted, preparation of bio inputs/nursery raising etc.

b) Livestock (Poultry / duckery /goat rearing / sheep rearing / milch animals /specify); mention the activity(ies), practices adopted, kid nursery, support accessed from NRLM and other line department.

c) NTFP; (Tasar, Lac, Tamarind etc.); Elaboration specific interventions like scientific cultivation, harvesting, storing, grading, marketing etc.

d) Training & other support; Details on the Training/ orientation to the mahila kisan by the CRP, please name the CRP with the contact number.

e) Any other:Details of any other intervention not covered above

IV. Output/Outcome for the year;

Please provide sector wise details (Agriculture/horticulture, livestock, NTFP)

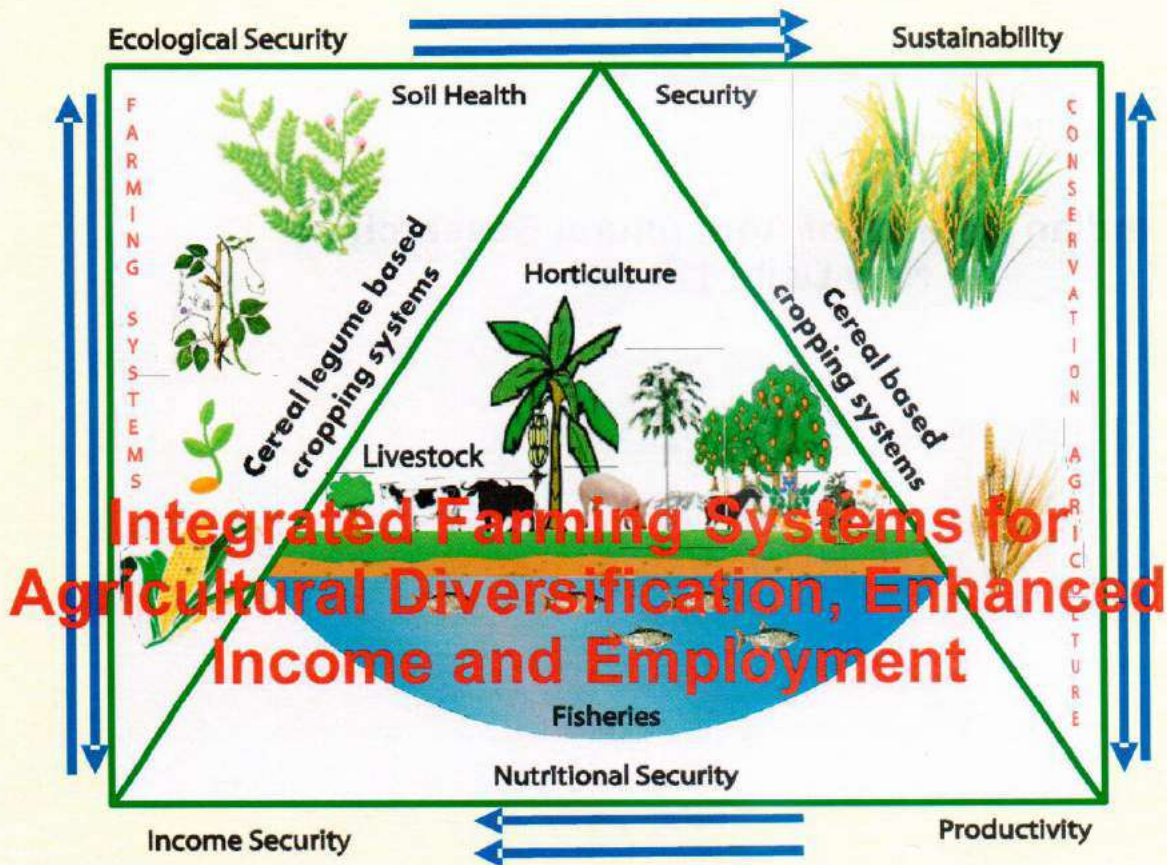
Brief on the production (increase/decrease) with quantity for each commodity/livestock/NTFP, usages of fertilizer, reduction in mortality in animal, any other specific output/outcome, source of incomes (*sale of commodity, compost, livestock etc., services*).

V. Income details

Duration (one year)	Mention the year (<i>may be financial or calendar year</i>)					
	Agriculture	Horticulture	Livestock (<i>sub- category wise</i>)	NTFP	Any other, pls mention	Total
Gross Income (<i>in Rupees</i>)						

Cost of cultivation/ Cost incurred (in Rupees)						
Net income in (in Rupees)						

Annexure III



**Indian Council of Agricultural Research
New Delhi 110 001**



Andaman and Nicobar Islands

Land configuration based IFS (0.75ha) for waterlogged ecology

Production
29t/year

Net income
Rs.2.14
lakhs/year

Employment
365 mandays

Rice based cropping systems

- z Rice-green gram
- z Rice-vegetables
- z Rice-maize
- z Rice-groundnut
- z Rice-sorghum (fodder)

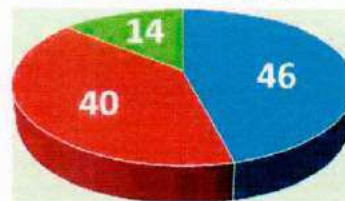
Broad bed and furrow

- z Vegetables on beds
- z Rice+fish in furrows
- z Fodder on slopes of beds

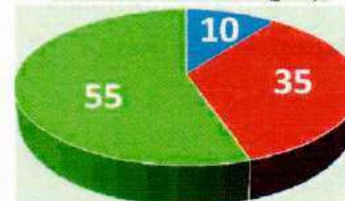
Livestock

- z 2 cows

Area share (%)



Income share (%)



- Rice based cropping systems
- Broad bed and furrow
- Livestock

Adoption: Promoted through NABARD and PMKSY



1



Meghalaya

Crop+livestockIFS(0.64ha)formicro-watersheds

Production
17t/year

Netincome
Rs.1.17
lakh/year

Employment
237mandays

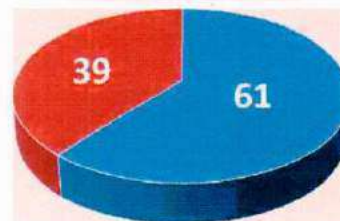
CroppingSystems

- zMaize–blackgram/greengram/
frenchbean–toria/lentil
- zMaize–groundnut/buckwheat
- zTurmeric/ginger
- zVerticalcropping(turmeric+pumpkin/
bottlegourd/squash/ridgegourd)

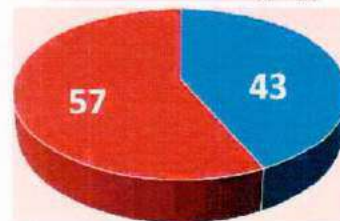
Livestock

- z3cows

Areashare{%



Incomeshare{%



—Cropping Systems —Livestock

Adoption: Popularized through trainings of extension agencies





Sikkim

**Crop+dairyintegratedorganicfarmingsystem(0.5ha)
forvalleyandmidhills**

Production
23t/year

Netincome
Rs.1.37
lakh/year

Employment
508mandays

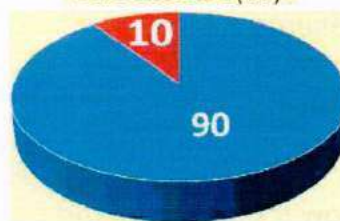
CroppingSystems

- zRice-vegetablepea
- zRice-potato-dhaincha
- zRice-toria-dhaincha
- zRice-cabbage-dhaincha
- zMaize-soybean-buckwheat
- zCoriander-radish-broccoli-
fenugreek
- zCauliflower-pea-beetroot-
spinach

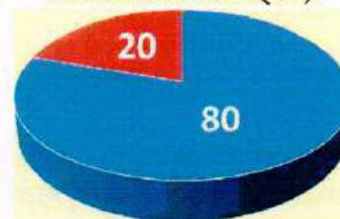
Livestock

- z2cows
- z50poultrybirds

Areashare(%)



Incomeshare(%)



- Cropping Systems - Livestock

Adoption: Popularized in 1 village through KVK, East Sikkim



3



TamilNadu

Crop+livestock+fishIFS(0.80ha)forlowlanddelta areas



CroppingSystems

- zRice-rice-blackgram
- zMaize-rice-sesame
- zOkra-rice-sunflower
- zBajranapiergrass

Horticulture

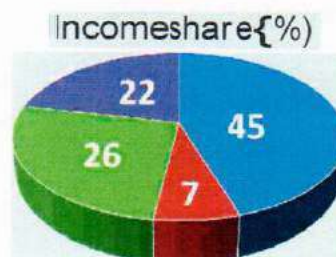
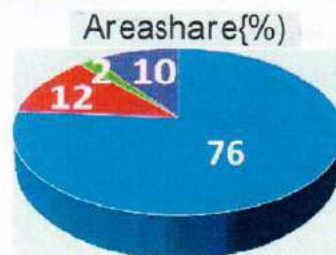
- zBanana
- zIntercroppingwithblackgramand marigold

Livestock

- z2cows
- z50poultrybirds

Fishery

- zCompositeculture(catla,rohu,mrigal)
- zDesmanthus,coconuts,curryleaf, agathi,noniandvegetables onbunds



• Cropping Systems • Horticulture
• Livestock • Fishery

Adoption:IncludedinStatepackage.Popularizedamong52farmers





TamilNadu

Crop+dairybasedIFS(0.40ha)for nutritionand income

Production
19t/year

Netincome
Rs.1.12 lakh/year

Sustainability index
0.72

Employment
464mandays

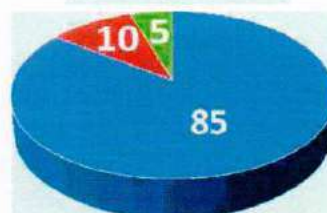
Cropping Systems

- z Sunhemp-okra-maize
- z Sunhemp-cotton-pigeonpea
- z Bajranapierhybrid, desmanthus
- z Pest repellent plants **Trees/shrubs**
 - z Neem, pongamia, mahua, jamun, melia, fig, ailanthus, wood apple, bamboo, teak, curryleaf, coconut

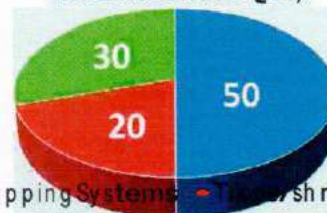
Livestock

- z 2cows

Areashare(%)



Incomeshare(%)



Legend:
■ Cropping Systems
■ Trees/shrubs
■ Livestock

Adoption: Included in State package. Popularized among farmers through 14 KVKs, 35 research stations and 5 plant clinic centers



5

537590/2020/768

K-11060/01/2019/NRLM(Livelihoods) (E- 366609)

Government of India
Ministry of Rural Development
Department of Rural Development

7th Floor, NDCC II Building,
Jai Singh Road, New Delhi – 110001
Date: 15th April, 2020

To

The SMDs/CEOs,
All Rural Livelihood Missions of States / UTs.

Sub:

Advisory on formation and functioning of Livelihood Sub-committee of Village Organisation.

Madam / Sir,

I am directed to say that DAY-NRLM has put forward an advisory on formation and functioning of Livelihood Sub-committee of Village Organization (VO). As we know that the VO is the point of integration for all thematic interventions (IB&CB, Livelihoods, FI, FN&HW etc.) at village level with its clear-cut roles in each theme where the CRPs are nested. Thus the Executive Committee of VO forms thematic sub-committees to play respective roles and appraise the EC of VO periodically.

Livelihood sub-committee should be formed as soon as VO is promoted to ensure that the focus on livelihoods is brought in since its beginning and same is pursued at SHG level. Thus the EC of each VO mandatorily has to form a livelihood sub-committee on top priority with members from among the EC members who are active, experienced practicing farmers of agriculture, livestock, NTFP, micro-enterprises and value chain. It is to be ensured that the VO livelihood sub-committee is represented by members with different key livelihoods of the SHG members of the village. Therefore, a representative livelihood sub-committee will have members having high dependence on Agriculture, Livestock, NTFP, Dairying, Fisheries, Weaving, micro-enterprises, Handicrafts etc. After the initial orientation and subsequent capacity building of VO livelihood sub-committee, it should spearhead pushing livelihood promotion agenda, planning, implementation, review and monitoring of all livelihood interventions through the CRPs. A copy of the "**Advisory on formation and functioning of livelihood sub-committee of Village Organisation (VO)**" enclosed herewith for reference document for rolling out VO livelihood sub-committee formation and its functioning in the respective State Rural Livelihood Missions.

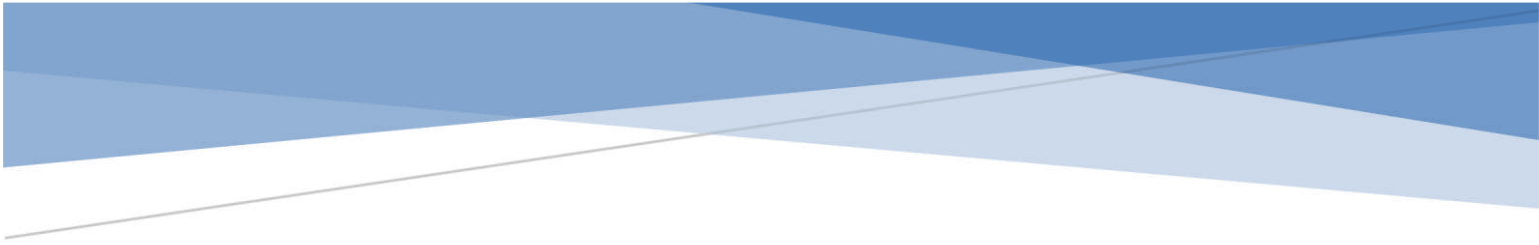
Enclosure: as above

Yours faithfully,



(H. R. Meena)

Deputy Secretary to the Govt. of India



**ADVISORY ON FORMATION AND
FUNCTIONING OF LIVELIHOOD SUB-
COMMITTEE OF VILLAGE
ORGANISATION (VO)**

Contents

DAY-NRLM Livelihoods:.....	2
The Village Organisation (VO):	3
Role of Village Organisation (VO) in livelihood promotion:.....	3
Formation of VO Livelihood sub-committee:	5
Capacity Building of VO Livelihood Sub-committee:	5
Functioning of VO Livelihood sub-committee:	6
Roll out of VO Livelihood sub-committee by the SRLM.....	9
Annexures:.....	11

Advisory on formation and functioning of Livelihood Sub-committee of Village Organisation (VO)

DAY-NRLM Livelihoods:

Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM), is a flagship programme of the Ministry of Rural Development, Government of India. It has been working towards improving the economic capacity of rural women by deepening and expanding existing livelihoods and bringing in new opportunities in farm and non-farm economic activities following the interventions on asset improvement, introduction of improved practices and skills; access to market and credit.

Rural poor have multiple livelihoods and more than a half of the rural Indian poor are dependent on agriculture either as cultivators or as agricultural labourer. Besides, livestock rearing is a key livelihood of the rural poor. People living in forest and forest fringe areas, mostly from tribal communities, Non Timber Forest Produces (NTFP) is a major livelihood source for them. Besides, a wide range of rural micro-enterprises (farm, off-farm and non-farm) with varied scale of operation strengthens the diversity in livelihoods of rural poor.

Thus in DAY-NRLM livelihoods promotion includes interventions in both farm (on-farm and off-farm) and non-farm livelihood activities. Under farm livelihoods promotion, agriculture intervention starts with promotion of various agro-ecological practices to increase productivity, with reduced cost of cultivation thereby increasing the net income, taking care of the ecology. The next logical transition is promotion of organic farming in selected areas that includes organic cultivation, its certification and establishing market linkage for better price realization. Promotion of improved practices to reduce the mortality and morbidity in ruminants, non-ruminants and poultry birds through improved feed and breed management, preventive healthcare, ethno-veterinary practices, better housing are the key in livestock intervention. Sustainable harvesting practices, sorting, short term storage, value addition and collective marketing are major interventions to enhance NTFP based livelihoods.

In non-farm livelihood promotion the primary focus is on promotion of and support to non-farm rural micro-enterprises and rural artisans.

Under the value chain intervention with selected farm and non-farm commodities, value addition, aggregation and market linkages for better price realization through promotion of need based informal Producers Group (PG) and formal Producers Enterprise (PE) are the activities carried out.

The intervention strategy of DAY-NRLM for Livelihood promotion is focused on strengthening these key livelihoods of rural poor with the objectives of intensifying and diversifying livelihood portfolio of rural poor, food and nutrition security, assured incremental income stream throughout the year and creation of social capital.

Interventions are focused on individual SHG member and is carried out through creation / augmentation of assets (individual as well as common), access to technology, credit, market and schemes / entitlements and enhancement of capabilities (knowledge, skill, awareness) around her livelihood activities.

Livelihood interventions in DAY-NRLM reaches out with quality services to individual SHG member residing in even in the remotest part of our country through community led, evidence based extension services. The Community Resource Persons (CRPs) are the backbone of such extension services. The CRPs are the best practitioners in their respective domain (agriculture, livestock NTFP, micro-enterprise etc.), selected through a structured process from among the SHG members, undergo various practice based skill and knowledge trainings. It is experienced that a CRP can serve about 100 households of a village or nearby villages in a compact geography.

It is understood that all interventions in DAY-NRLM is people centric around SHG members and their aggregations at different levels viz. village, panchayat, block etc. Building ownership through participation and involvement of SHG members and their village level aggregation or Village Organization (VO) is an integral part of the livelihood promotion process from the very beginning, starting from conceptualizing, planning, execution, monitoring and evaluation.

The Village Organisation (VO):

Village Organization (VO) is the primary federation of 5 to 30 SHGs at village / hamlet / Panchayat levels (depending on the number of SHGs). The minimum number of SHGs of a VO may further be reduced in special cases in some of the sparsely populated states. A VO has its own General Body consisting of all the members of its constituent SHGs whereas the President and the Secretary of each member SHGs of a VO constitute its Executive Committee (EC).

Role of Village Organisation (VO) in livelihood promotion:

The VO is the point of integration of all thematic interventions of DAY-NRLM at village level and it performs its role through thematic sub-committees. Livelihoods promotion is the *raison de'tre* of DAY NRLM and it is imperative that VO plays a critical role in the pursuit of enhancement of income of rural poor with clearly defined roles and responsibilities. The overriding objective of the VO livelihoods subcommittee is to ensure that every SHG household

in the village has their livelihoods strengthened and diversified as well as highlight this agenda in every VO meeting. The livelihood sub-committee through its VO will constantly pursue the agenda of livelihood promotion to its member SHGs.

Under Livelihood intervention following roles and responsibilities of a VO is envisioned:

1. Assessing the overall livelihood scenario of the village and also that of SHG members' households – resources, opportunities, constrains etc.
2. Active participation in the process of preparation and approval of village and individual livelihood intervention plan (identification of gap and intervention points in asset, access to credit, govt scheme, market and technology besides skill and knowledge upgradation) in both farm and non-farm livelihood activities.
3. Special focus on ensuring the livelihood plans of vulnerable households like SCs, STs or women headed households are included in the intervention plans
4. Integration of Micro Credit Plan (MCP) with Livelihood activities.
5. Oversight on CRPs (Krishi Sakhi, Krishi jaivik Sakhi, Pashu Sakhi, Van Sakhi, Udyog Sakhi and CRP-Enterprise Promotion (EP)) to deliver extension services related to livelihood promotion - engagement, assigning tasks, monitoring, payment, performance evaluation and also support the CRP to perform their roles.
6. Over-seeing the implementation of the livelihood plan, reviewing the livelihood plan and make course corrections.
7. Identification of MKs, enterprises and entrepreneurs under the guidance of respective SRLMs
8. Verification of assets created under programmes like SVEP
9. Ensure regular training and capacity building of the SHG members and CRPs on different livelihoods activities.
10. Manage the common facilities like CHC / Tool Bank.
11. Overseeing PGs involved in value chain activities, overseeing FFS, Pashu Pathsala and similar learning / extension forums.
12. Get access to schemes and services (MGNREGS, Departments – Agriculture, Horticulture, Animal Husbandry, Forestry etc.)
13. Identify convergence opportunities with Local Self Government (LSG) institutions and explore possibility of converting government procurements to livelihood opportunities.
14. Appraisal, approval, release and management of CIF and ensure that a large percentage of the CIF is available for taking up livelihood activities in farm and non-farm sectors for working capital and acquisition of productive assets.

15. Management of specific funds like Community Enterprise Fund (CEF) for livelihood activities including release within time limits and repayment of loans.
16. Check and authenticate all MIS and other field data collected by the CRPs

Formation of VO Livelihood sub-committee:

VO is the point of integration for all thematic interventions (IB&CB, Livelihoods, FI, FN&HW etc.) with its clear cut roles in each theme. Thus the EC of VO forms thematic sub-committees to play respective roles and appraise the EC periodically. Each sub-committee consists of a convener (non-office bearer) and 4 to 5 EC members. Livelihood sub-committee should be formed as soon as VO is promoted to ensure that the focus on livelihood promotion is brought since its beginning. EC of each VO mandatorily has to form a livelihood sub-committee on top priority with members from among the EC members who are active and willing to take up the responsibilities as outlined above. It is to be ensured that the VO livelihood sub-committee is represented by members pursuing different key livelihood activities of the SHG members. It is to be ensured that a representative livelihood sub-committee has members having high dependence on Agriculture, Livestock, NTFP, Dairying, Fisheries, Small Business, Handloom, Handicrafts etc. A CRP should not be a livelihood sub-committee member and *vice-versa*. The tenure of a livelihood sub-committee and its member will be as per the norms set by the VO for other sub-committees with guidance from SRLMs, suggestive tenure is 2 years.

Capacity Building of VO Livelihood Sub-committee:

It is understood that the members of the livelihood sub-committee are all VO EC members that means they are SHG leaders and have received various trainings related to IB&CB, Leadership etc. Thus their training needs, to function as livelihood sub-committee members are on following six broad aspects:

1. Comprehensive Village Livelihood Analysis exercise.
2. Broad understanding on different livelihood interventions promoted under DAY NRLM
3. Monitoring of CRPs.
4. Understanding on project proposal, its appraisal, economics and cost benefit analysis of various livelihood activities / projects.
5. Various government programmes having convergence potential.
6. Understanding on micro-enterprises, value chains and markets.

The details on each of the above broad aspects has been shown below:

Comprehensive Village Livelihood Analysis exercise	<ul style="list-style-type: none"> •Gap analysis of existing livelihood activities . •Village and individual HH level intervention plan on creation / augmentation of assets, access (credit, market and schemes), skill, technology
Programme understanding	<ul style="list-style-type: none"> •CHC/Tool bank •NPM shop, Seed Bank •FFS/Pashu Pathsala •Producers Group •Tasar Grainage, local NTFPs •Rural micro-enterprises
Monitoring of CRPs	<ul style="list-style-type: none"> •Assigning tasks •Reviewing, Monitoring •Approval of tasks and payment •Supporting CRP
Project appraisal and economics of LH activities	<ul style="list-style-type: none"> •Assessment and apraisal of LH project proposals. •Assessment of income potential per unit of each livelihood activities / micro-enterprises operating in the village
Government Programmes	<ul style="list-style-type: none"> •MGNREGS •Schemes of department (Ag, AH, Horti, Forest etc.) •Bank (RSETI)
Micro-enterprises, value chains and Market	<ul style="list-style-type: none"> •Basic understanding on micro-enterprises and value chains operating in the vilage •Concept of value addition on the commodities available in the village

Functioning of VO Livelihood sub-committee:

The functioning of a VO Livelihood sub-committee has been described below:

Driving LH agenda in every SHG meetings

The VO LH sub-committee will ensure that in every SHG meeting the LH issues of the SHG members are discussed and recorded in the minute book. The common issues can be the

market access, credit access, access to govt schemes, production and productivity related issues, training needs of members among others.

The VO sub-committee members will brief the VO EC about their observations emerging from the SHG meetings and the VO EC may discuss these issues and make adequate plan to resolve these issues related to livelihood promotion.

CRP identification and training:

As mentioned earlier, immediately after the formation of VO, the livelihood sub-committee will be formed. After their orientation, the first task of the livelihood sub-committee is to identify potential CRPs required, based on the criteria fixed by the SRLM.

The livelihood sub-committee will organize all village level on-field practical trainings, FFS, Pashu Pathsala or similar learning forum for capability building of MKs.

Comprehensive Village Livelihood Analysis exercise:

VO LH sub-committee will take active role in comprehensive village livelihood analysis exercise, along with the CRPs and block staff of SRLM, a comprehensive livelihood plan for the entire village and the households of SHG member will be the final output of this exercise. Once the plan is finalized, the sub-committee will get approval of the plan from the VO and the plan will be revisited every year to update it.

Convergence:

After the planning exercise, the scope for convergence will emerge with MGNREGS, banks for RSETI, departments – agriculture, animal husbandry, horticulture, forestry etc. The VO LH sub-committee along with the respective CRPs and block staff of SRLM will push forward the convergence plan with these schemes and departments directly or through Gram Sabha or other appropriate forums.

Review of CRPs:

The convener of the LH sub-committee will call review meeting initially fortnightly and later monthly where the following will be invited:

- All CRPs (Krishi Sakhi, Krishi Jaivik Sakhi, Pashu Sakhi, Van Sakhi, Udyog Sakhi, CRP-EP etc.)
- All the LH sub-committee members
- Respective managers / entrepreneurs (CHC, NPM shop, seed bank etc.)
- Block livelihood staff of SRLM (for initial support)/supporting agencies involved in projects

In the meeting review will be done on functioning of:

- CHC / Tool Bank
- FFS / Pashu Pathsala
- Producers Groups
- Farm and non-farm enterprises supported through DAY-NRLM

The decisions of the review meeting will be recorded in meeting register with signature of participants. This will be shared with the EC of VO and subsequently follow up actions will be taken on each decisions in next review meeting. The review meeting will also enable the CRPs to prepare their monthly work plan. A summary of the review and monthly plan of CRPs to be put as agenda by the Livelihood sub-committee for discussion in VO meeting.

Monitoring of CRPs¹:

- As mentioned earlier the Convener of LH sub-committee will call regular review meeting.
- The Convener can call an emergency meeting of LH sub-committee at any time if the situation demands.
- The CRPs will submit the 'Monthly plan versus achievement Report' (Annexure-2) to the LH sub-committee and take a receipt of it. The formats can also vary for other programmes like the SVEP programmes and the respective formats can be used.
- Upon receiving the 'Monthly plan versus achievement Report', the LH sub-committee will compare it with the 'Summary Plan Sheet' (Annexure-1)
- LH sub-committee will seek clarification from the CRP in case of any drastic deviation in work plan and 'Monthly plan versus achievement Report'.
- LH sub-committee will focus on the 'Monthly Plan versus Achievement Report' meticulously. Since all of the members and CRP are from the same village, the sub-committee members will be in a better position to verify the achievements claimed in the Report and actual works done.
- LH sub-committee has every right to seek clarification or ask questions on the authenticity of the 'Monthly Plan versus Achievement Report' and in each case, the CRP has to clarify to satisfy the sub-committee members.
- Once LH sub-committee members got satisfied the numbers stated in the 'Monthly Plan versus Achievement Report', the entire participants will go for an actual field visit on a sample basis to check the quality of work.

¹ *All the formats given in anexures are sample formats, which may be customized or new format may be used depending on the need of different programmes, activities and requirement of the state.*

- In case of any difference in opinion among any of the sub-committee members, CRP, block staff of SRLM on the claims by the CRP in 'Monthly Plan versus Achievement Report' with respect to the number and quality of work, the entire participants will go for census field verification where the beneficiary SHG member may be interviewed to resolve the differences in opinions.
- At the end of every quarter, in the next month's regular review meeting, in addition to the 'Monthly Plan versus Achievement Report', the CRP will submit a 'Quarterly Achievement Report' as per the format (Annexure-4) which will be discussed in details in the livelihood sub-committee meeting.
- Once the LH sub-committee is satisfied with the 'Monthly Plan versus Achievement Report' after due modifications (if required), the CRP will submit it to the VO (through the LH sub-committee) along with the application for release of payment as per prescribed format (Annexure-3).
- Once LH sub-committee is satisfied with the 'Monthly Plan versus Achievement Report', along with the application from the CRP, it will approve and submit it to the office bearer of VO. The VO, on receipt of all such Applications and Report, will keep a copy of it and submit all such reports from all the CRPs together to the BMMU with a forwarding letter.

It is extremely important to note that the LH sub-committee members will exercise the above power on LH CRPs only and only during the review meeting. Outside the meeting, they all are normal SHG members, co-exists as a member of an affinity group, neighbour etc.

Roll out of VO Livelihood sub-committee by the SRLM

Step-1: Formation of LH sub-committee:

VO livelihood sub-committee should be formed as soon as a VO is promoted. The following steps to be followed by the SRLM to form LH sub-committee. The ideal composition of a VO sub-committee has already been described above.

- One day's orientation by SRLM staff for the VO Executive Committee on:
 - Roles and responsibilities (as stated above) of LH sub-committee
 - Need for LH sub-committee
 - Tenure of office for LH sub-committee members
 - Criteria for becoming a member of LH sub-committee as mentioned above (SHG members involved in agriculture, livestock, NTFP, value chain, artisanal activities, entrepreneurial activities etc.)
- Decide the size (number of members) of the LH sub-committee
- Based on the above, the Executive Committee will be asked to select the names for the sub-committee.

- The proceedings to be recorded along with the names of LH sub-committee members.
- Fix the norms and rules on meeting interval, venue, keeping record of proceedings in every monthly meetings etc

Step-2: The Capacity Building Plan for VO Livelihood Sub-committee:

The SRLM in consultation with NMMU will develop details training module, training materials and execute training with a pre-fixed training calendar on each of the identified broad aspects viz Village planning, Orientation, Programme understanding, economics of livelihood activities, micro-enterprise, value chain and value addition, monitoring of CRP in periodic meeting, analyzing project proposals etc. Besides, exposure visits to well-functioning VOs, within as well as outside the blocks may also be considered as part of capacity building of the members of VO LH sub-committee.

Besides, the block staff of SRLM will also provide initial handholding supports to the VO LH sub-committee to put systems in place and function properly.

Step-3: Conducting regular review meeting of sub-committee:

Already discussed above.

Step-4: Keeping of records:

The key decisions and follow up plan of each meeting of livelihood sub-committee will be recorded in the minutes book that will be kept updated by the convener of sub-committee. This meeting register will be used to appraise the EC of VO as well as follow up action taken on the decisions.

Annexures:

Annexure-1

Summary of Plan Sheet

(Monthly village livelihood plan format²)

(To be prepared in triplicate, one each at VO, Block staff of SRLM and CRP)

A. FFS Plan:

Number of FFS / Pashu Pathsala planned, topics to discuss in FFS / PPS training as per calendar.

B. Adoption plan:

B.1. Agro ecological practices

Interventions	Indicators (practices to promote)	No of HHs targeted
Seed	<i>Seed treatment</i>	
	<i>Seed Production</i>	
Soil		
Water		
Plant nutrition		
Plant protection		
Agronomic practices		
Others		

B.2. Livestock

Interventions	Indicators (practices to promote)	No of HHs targeted
Vaccination	<i>Ranikhet</i>	
	<i>Swain fever</i>	
De-worming		
Sanitation		
Animal housing		
Feed and fodder		
Others		

B.3. NTFP

² Sample format subject to customization at SRLM level depending on the type of CRPs and intervention plan under each activity.

Interventions	Indicators (practices to promote)	No of HHs targeted
Tasar		
Lac		
Medicinal Plant		
Others		

B.4. Fisheries

Interventions	Indicators (practices to promote)	No of HHs targeted

B.5. Organic cluster promotion

Interventions	Indicators (practices to promote)	No of HHs targeted

B.6. Value chain intervention

Interventions	Indicators (practices to promote)	No of HHs targeted

Similar format may be developed for CRP-EP for non-farm enterprises.

(Signature of the VO office bearer) (Signature of the CRP)

Name:

Date:

Annexure-3
(To prepare in duplicate)

Application for payment of honorarium

To
The Secretary
----- VO

Dated:

Village:
Block:

Subject: Request for payment against work done.

Dear Madam

As per plan submitted, I have completed the tasks, details of which is attached as `Monthly Plan versus Achievement Report`.

Kindly release the amount to my bank account, details of it is mentioned below:

Amount (Rs) :
Name of the account holder :
Account number :
Name of the bank :
Name of the branch :
IFSC :

Thanking you
Yours sincerely

()

Name:
CRP
Village:
Block:

Enclosures:

1. Approved Plan versus Achievement Report

Annexure-4
Quarterly achievement report
 (To be submitted to the VO)

A. FFS Achievement:

Total No of FFS conducted	Minimum No of MKs participated in a FFS	Maximum No of MKs participated in a FFS	Major achievements in FFS

B. Adoption report

B.1. Agro ecological practices

Interventions	Indicators (practices to promote)	No of HHs adopted	Remarks
Seed	<i>Seed treatment</i>		
	<i>Seed Production</i>		
Soil			
Water			
Plant nutrition			
Plant protection			
Agronomic practices			
Others			

B.2. Livestock

Interventions	Indicators (practices to promote)	No of HH adopted	Remarks
Vaccination	<i>Ranikhet</i>		
	<i>Swain fever</i>		

B.3. NTFP

Interventions	Indicators (practices to promote)	No of HHs adopted	Remarks
Tasar			
Lac			
Medicinal plant			

B.4. Fisheries

Interventions	Indicators (practices to promote)	No of HHs adopted	Remarks

B.5. Organic cluster promotion

Interventions	Indicators (practices to promote)	No of HHs adopted	Remarks

B.6. Value chain intervention

Interventions	Indicators (practices to promote)	No of HHs adopted	Remarks

Similar format may be developed for CRP-EP for non-farm activities

()

Signature of CRP

Name:

Date:

K-11060/02/2019/NRLM(Livelihoods)/Part1(E-367798)
Government of India
Ministry of Rural Development
Department of Rural Development
(RL Division)

7th Floor, NDCC II Building,
Jai Singh Road, New Delhi – 110001
Dated: 27th April, 2020

To

The SMDs/CEOs,
All Rural Livelihood Missions of States / UTs.

Sub: Advisory on Engagement of Community Resource Persons in Farm Livelihood Promotion (FLH-CRPs).

Madam / Sir,

I am directed to say that enhancement of capabilities and creation of social capital around community is one of the key livelihoods intervention strategy in DAY-RNLM. This capability enhancement, innovation happens with guided supports to individual Mahila Kisans from within the community under a non-threatening microenvironment provided by various community institutions and peers.

2. The task is heavily challenging in such socio-cultural, religious and economic diversity in rural India with a given varied agro-climatic and logistic conditions.

3. In absence of any existing rural livelihood extension service delivery architecture, DAY NRLM has been to develop such service delivery system that can reach out to every village 24X7 which is community centric and completely relies on community to community learning process through Community Resource Person (CRP) in the form of Krishi Sakhi, Krishi Javik Sakhi, Pashu Sakhi, Matsya Sakhi, Van Sakhi, Krishi Udyog Sakhi among other such community cadres. Bringing in uniformity, maintain a minimum standard of such service delivery architecture is another set of challenge.

4. Thus, the Ministry has approved a guideline on engagement of CRPs in farm livelihood promotion outlining the process of selection, grooming, nesting, with well-defined roles & responsibilities, reporting and monitoring system. The Advisory on Engagement of Community Resource Persons in Farm Livelihood Promotion (FLH-CRPs) is enclosed herewith for further necessary action.

Yours faithfully,



(H. R. Meena)

Deputy Secretary in Government of India

Encl: As above.

2020

**[ADVISORY ON ENGAGEMENT OF
COMMUNITY RESOURCE PERSONS IN
FARM LIVELIHOOD PROMOTION (FLH-
CRP)]**

Contents

Farm Livelihoods Interventions under DAY-NRLM:.....	3
Farm Livelihoods Community Resource Persons (FLH CRPs):	4
Need for a Farm Livelihood CRP Policy in DAY-NRLM:.....	4
Types of Farm Livelihood CRPs:.....	5
Functions of Farm Livelihood CRPs:	6
Number of Livelihood CRPs	9
Selection of Farm Livelihood CRPs:	9
Training and capacity Building of Farm Livelihood CRPs:.....	10
Certification of Farm Livelihood CRPs:	12
Deployment of Farm Livelihood CRPs:	12
Monitoring of FLH CRPs:.....	12
Performance assessment of FLH CRPs:	13
Payment of honorarium to FLH CRPs:	13
Krishi Sakhi (KS) and Krishi Jaivik Sakhi	14
Pashu Sakhi (PS):	15
Van Sakhi	15
Krishi Udyog Sakhi	16

Advisory on Engagement of Community Resource Persons in Farm Livelihood Promotion (FLH-CRPs)

Farm Livelihoods Interventions under DAY-NRLM:

Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM), is a centrally sponsored flagship programme of the Ministry of Rural Development, Government of India. It aims at eliminating rural poverty through promotion of multiple livelihoods for each rural poor household. Launched in June 2011, the Mission seeks to reach out to 8-10 crore rural poor households by 2023-24.

More than half of the India's rural population are dependent directly or indirectly on agriculture and its allied activities. In forest and forest fringe areas, the tribal depends largely on forest based livelihoods. Besides, a wide range of rural enterprises of different size including self-employment, augment the diversity in livelihoods of rural poor.

DAY-NRLM promotes Agro Ecological Practices (AEP) with a focus on the Mahila Kisan, with the eventual aim of turning the village into an intervention unit. Intervention with AEPs have resulted in well-diversified farming systems considering local ecology, marked with low cost of cultivation, higher recycling of bio-mass, adoption of sustainable agriculture practices (in situ moisture conservation, INM, azolla, NADEP, seed treatment and preservation, NPM etc.), cultivation of vegetables as additional cash crop, and moving towards organic certification, aggregating marketable surplus and regular supply to market to facilitate the increase in net income to the Mahila Kisans.

Interventions in Non-Timber Forest Produces (NTFP) have been taken up through collection of NTFPs from natural forest by adopting sustainable harvesting practices, regeneration of resources and cultivation/production of NTFPs like medicinal plants, tasar, lac etc. followed by sorting, grading, short term storage, value addition and collective marketing of these NTFPs.

Livestock is a key income source for poor across country where women play a larger role. Better livestock management practices are promoted as a universal intervention along with both AEP as well as NTFP interventions. The program promotes - improved livestock management practices to reduce the mortality and morbidity in small ruminants and poultry birds through improved feed and breed management, preventive healthcare, ethno-veterinary practices, better housing etc. The objectives of the sustainable livestock practices is to move towards organic thus supporting in organic farming.

Focus of the livelihoods interventions are to provide improved technology, aggregation, value addition, and establishing market linkages to realize better price to producers, as well as collective enterprises, through promotion of need based Producers' Institution (PGs and PEs).

The intervention strategy of DAY-NRLM for Livelihood promotion is focused on - strengthening these key livelihoods of rural poor with the objectives to diversify livelihood portfolio of rural poor, ensure food and nutrition security, assure incremental income stream throughout the year, reduce cost of production and creation of social capital. Over the years it's been experienced that there is a need to promote more and more social capital on farm livelihoods, which would support promotion of diversified livelihood portfolio of the poor and its collectives.

Farm Livelihoods Community Resource Persons (FLH CRPs):

The Mission has endeavored to create a strong network of CRPs to ensure last mile delivery of services and to support the community in adoption of livelihood best practices. The core strategy for skill building revolves around a community driven decentralized extension architecture where best practitioners from the community are identified and trained to become trainers for others and the extension service providers at village level.

This network of livelihoods community resources person supports the implementation of the farm livelihoods interventions under DAY NRLM which primarily covers following activities:

1. Promotion and strengthening of Agro Ecological Practices
2. Promotion and strengthening of Improved Livestock practices (also fisheries)
3. Promotion and strengthening of NTFP based livelihoods
4. Promotion and strengthening of value chains for improved market access and post farm gate activities

Need for a Farm Livelihood CRP Policy in DAY-NRLM:

As mentioned above, the key livelihoods intervention strategy in DAY-NRLM is to enhance capability of individual Mahila Kisan and /or their aggregates to access schemes and entitlements, credit, market and augment livelihood assets. It is been experienced that the said capability enhancement happens through experiential learning on 'doing things differently' by individual Mahila Kisan where its aggregations (PGs, PEs, SHGs, VO, CLF etc.) promoted by DAY-NRLM creates the necessary facilitating micro-environment to individual SHG member. This task, seems to be heavily challenging in such socio-cultural, religious and economic diversity in rural India with a given varied agro-climatic condition. Creation of due customized and localized evidences and its last mile extension, door-step delivery of

services to individual SHG member is one of the pathway DAY-NRLM has adopted to address the challenge.

This requires a huge extension service delivery architecture and in the absence of a structured uniform extension system in place the biggest challenge to DAY NRLM has been to develop such service delivery system that can reach out to every village 24X7 DAY NRLM has now built a service delivery architecture which is community centric and completely relies on community to community learning process – Community Resource Person (CRP) in the form of Krishi Sakhi, Krishi Javik Sakhi, Pashu Sakhi, Matsya Sakhi, Van Sakhi, Krishi Udyog Sakhi among other such cadres.

Village based/local early adopters, the best practitioner women farmers/entrepreneurs with extension motivation in their respective domains (agriculture, livestock NTFP, enterprise etc.) have been found to be able to deliver such extension services following participatory extension methodologies like Farmers Field School / Pashu Pathsala / Producers Groups etc. Over last few years they have become an essential component of farm livelihoods implementation strategy and played key roles in a lot of innovations and quick scaling up.

Thus, framing an advisory outlining the protocol for selection, grooming, nesting, with well-defined roles & responsibilities and monitoring of such resourceful extension service providers from the local community or Community Resource Persons (CRPs) to serve fellow SHG members of her village, is one of the current requirement in the programme. This would also provide support to universalize and achieve the objectives of farm livelihoods promotion under DAY-NRLM.

Types of Farm Livelihood CRPs:

As mentioned earlier, the CRPs are local early adopters, means they are receptive enough to try and adopt new practices in their own household / farm, learn and gain confidence to convince others to do the same. Thus CRPs needs to be specialized viz. agriculture, livestock, NTFP, value chain etc.

A list of such CRPs with respective farm livelihoods domain has been presented below:

Domain	Name of the CRPs
Agriculture	Krishi Sakhi
Organic Farming	Krishi Jaivik Sakhi
Livestock	Pashu Sakhi
NTFP	Van Sakhi
Fisheries	Matsya Sakhi
Value chain	Krishi Udyog Sakhi

It is experienced that in most of the rural SHG households, agriculture and livestock are common livelihoods activities adopted. Similarly in forest areas common activities in rural household are livestock and NTFP. On the other hand, promotion of organic farming is the natural graduation from the existing agro-ecological practices.

It is also advised to consider one CRP playing multiple roles, wherever it is possible, to rationalize the number of CRPs and ensure better service delivery, besides the sustainability of CRPs. Some of the examples may be - merging the task of Krishi Sakhi and Pashu Sakhi; Van Sakhi and Pashu Sakhi; Krishi Sakhi may be graduated to Krishi Jaivik Sakhi or to Krishi Udyog Sakhi, so on and so forth. Due care should be taken to avoid any delay in service delivery or affect on quality of services due to using single CRP for multiple roles.

Functions of Farm Livelihood CRPs:

The CRPs are the cutting edge, village based, last mile extension workers. There are certain common roles that all different types of farm livelihood CRPs have to play along with some domain specific roles that they have to perform with selected Mahila Kisans.

Common roles, periodicity and time required for all kinds of farm livelihood CRPs are as follows:

Yearly: A livelihood CRP has to spend about 7 – 10 days in a year in preparation, conducting the livelihood assessment exercise, consolidation and follow up for comprehensive livelihood assessment exercise, yearly revisiting plan and various convergence works – MGNREGS, Livestock department, Forest department etc. The CRP may also participate in Gram Sabha.

- a. *Conduct comprehensive livelihood assessment, gap analysis and plan preparation exercise:* After initial training and subsequent handholding supports from SRPs, all the CRPs of a village together have to conduct the exercise with participation from all the SHG members as well as their male counterparts at the very beginning after selection of the village. The plan may be presented before the VO and consolidated at block level which the CRPs have to revisit every year. The exercise will kick start the engagement of different CRPs with respective Mahila Kisans (MKs) and village as a whole.

One important role of CRP in this regard will be to assess the credit needs of Mahila Kisans for livelihoods activities. Further she will play a facilitative role with respective SHG meetings to ensure the credit needs of mahila kisans are addressed through CIF or SHG bank Linkage.

- b. *Convergence:* The CRPs will play very important role in convergence with MGNREGA and other line departments. They will be orienting the MKs in participation of Gram Sabha for individual livelihood assets, follow up with Panchayat, update block staff on progress and draw further supports. They will organize community and co-ordinate with the Animal Husbandry department for

organizing animal health camps and other veterinary services. Co-ordinate with the other departments like Forestry, Horticulture, Fishery etc.

- c. *Identification of Mahila Kisans:* Based on the criteria fixed by the SRLM and the village planning exercise, the CRPs will identify the MKs for various interventions – AEP, Organic, Livestock, NTFP. Besides they will also identify MKs for PGs, LGs, FFS / PPS and other fora.

Quarterly: A livelihood CRP has to spend on an average about 7 to 8 days in a quarter to participate in training programme and organizing field visits (internal and external).

- d. *Attending training programmes:* The Livelihood CRPs has to participate in various trainings and capacity building events (as described later in this document) for about 20 days in a year to enhance her own skill, knowledge and awareness.
- e. *Organize and facilitate in field visits (internal & external):* The livelihood CRPs also have to organize field visits, village meetings for external and internal visitors and SRLM staff as well.

Monthly: A livelihood CRP has to spend minimum about 2 to 3 days in a month for conducting FFS/PPS and attending monthly review meeting.

- f. *Conducting FFS / PPS:* The CRPs will act as facilitator in Farmers Field School or Pashu Pathsala and trigger the process of experiential learning of new practices. Such event will take place fortnightly during peak season and monthly in lean months. A separate guidelines been issued on the process of conducting FFS/PPS
- g. *Collection of field data:* The CRPs will support the SRLM in collection of all data at village level as well as at individual MK level this includes one-time and periodic MIS data (MK profiling, Asset Profiling, periodic progress), data related to input requirement, production estimation, vaccination, de-worming, NTFP collection, baseline information, impact study etc.
- h. *Mobile based MIS:* The CRPs also operate mobile application based MIS software to capture and upload village level data on static and dynamic related to profiling, planning and periodic progress data and would update data as and when required.
- i. *Attending review meeting:* The Livelihood CRPs have to participate in VO livelihood sub-committee meeting once in a month for planning and review of her performance.

One critical role of a CRP is to ensure that livelihoods issues are discussed in the SHG meetings (Das sutra) and she may participate some of the SHG meetings to facilitate the discussions.

Daily: A livelihood CRP on an average will spend 10 days in a month in peak season to visit individual farm / field of about 10 households daily to provide on field support in adoption of practices, field training / demonstration, collection of households data / information / survey / MIS data / on-line data entry/identification of MK/asset profiling etc..

- j. *Capacity building of Mahila Kisans:* Enhancement of skill, awareness and knowledge on various improved practices promoted by DAY NRLM on key livelihood activities is one of the critical role CRPs have to play. This primarily includes on-field practice based skill trainings, field experimentation, mutual learning through extension methodology of Farmers Field School / Pashu Pathsala etc. Exposure visit to best practices within or nearby villages, on-field concept trainings using flip charts, short videos are other methods the CRPs will use to bring in the transformation among the SHG women to become Mahila Kisan.
- k. *Continuous on-field support in adoption of practices:* In addition to conducting training and capacity building events for the MKs, the CRPs will be available to each and every MKs for any technical, knowledge and logistic supports at any time during adoption of the improved practices.
- l. *Maintenance of records:* Maintenance of books of records assign to her including "a Diary of her day to day work"

The domain specific roles that the CRPs will be playing are as follows:

Name of the CRPs	Key roles to perform
Krishi Sakhi	Concept seeding at Vo level, conducting farmers field school (FFS), on-field training of Mahila Kisans (MKs) on various agro-ecological practices, promotion of Agri-nutri garden, crop calendar preparation, soil sample collection, managing a Custom Hiring Centre (CHC). They may run an NPM shop, seed bank also. Can also act as village level extension agent of other departments Agriculture, Horticulture, AMTA etc.
Pashu Sakhi	Conducting Pashu Pathsala, on-field training of MKs on various improved livestock rearing practices promoted by DAY-NRLM, organizing animal vaccination camp, animal health camp, ensure periodic de-worming, supply of mineral bricks and selection of male for breeding besides veterinary first aid service. They can also act as village level extension agent of Animal Husbandry Department.
Van Sakhi	Concept seeding and scaling up best practices on collection, processing and marketing of NTFP which includes: On-field training of MKs on various improved NTFP practices (collection/rearing/ cultivation) promoted by DAY-NRLM, act as village level extension agent of Forestry Department, support targeted households for scientific cultivation/rearing of tasar, lac etc. Database and management of plantation, grainage house, procurement/processing

Name of the CRPs	Key roles to perform
	centre, supply of quality inputs, rearing. Support producers' groups in business operations such as production estimation, procurement, storing, primary processing and market linkage.
Matsya Sakhi	On-field training of MKs on various improved fisheries promoted by DAY-NRLM. They can also act as village level extension agent of Fishery Department.
Krishi Udyog Sakhi	Seeding and scaling-up value chain interventions in the specific location which includes: Identification of potential commodities for farm-gate value addition, promotion of producers' collectives, aggregation and market linkages, identification of potential producers for formation of Producer Groups (PGs), help in business plan preparation, capacity building of producers on harvest and post-harvest management of relevant commodities being dealt by the producers group, act as the Manager of a PG for all day to day business operations of the PG, periodically appraise the VO on status of PG through VO livelihood sub-committee, maintenance of books of records of the Producers collective, may support Producers' Enterprise in management of procurement centres in the village.

Number of Livelihood CRPs:

A Livelihood CRP can support / facilitate a maximum of 80 to 100 households of a village or all the households of a village whichever is less. Thus depending on the number of SHG members (households) of a VO/primary federation of SHGs may have one or more than one livelihood CRPs.

Selection of Farm Livelihood CRPs:

Selection of right kind of SHG member as a CRP will be one of the most important activities. A good CRP is a huge asset for the program and so a lot of care should be taken while selecting a CRP. The CRP selection process has been kept very objective so that transparency is ensured in the selection process.

A list of selection criteria as mentioned below, may be adopted by the State Missions (SRLMs) with due customization, without compromising the spirit and purpose. However, the SRLMs would have to orient their staff regarding identification and selection criteria for the CRPs.

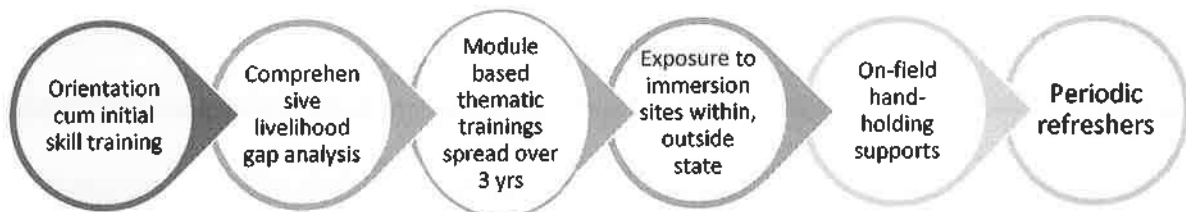
- a. A CRP has to be a member of SHG, essentially not a loan defaulter.
- b. She should be minimum 8th standard pass in case of Krishi Sakhi, Pashu Sakhi, Matsya Sakhi and Van Sakhi whereas in case of Krishi Udyog Sakhi it should be minimum 8th standard pass with good numerical skill.
- c. She should be a best practitioner of concerned domain - Agriculture, Livestock, Fisheries, NTFP, value chain (participant), for at least 2 years.

- d. She should be a good learner, able to acquire and practice skills of facilitation, maintain good interpersonal relationship with her fellow SHG members.
- e. She should have good articulation and narration skills.
- f. She should be physically fit enough to be able to travel within and outside her village, be ready to stay overnight (if required) outside her village for training and exposure purposes.
- g. She should have high extension motivation that means it is not income or power but reaching, helping and benefiting fellow SHG members without expectation of any direct virtual / material returns from them is the primary source of motivation.
- h. She should not be selected from among the office bearers or from member of any sub-committee of the VO or CLF.
- i. She should be a resident of the same village / Panchayat.

For selection of CRPs, the SRLM will orient the VO-Livelihood sub-committee on the above criteria, which in turn will generate and forward the names of potential CRPs to the SRLM. The SRLM will take a call based on the criteria from among the potential candidates as identified by the VO LH sub-committee and recommend the name to the VO. After the selection, each CRP will undergo training and capacity building events. While selecting CRPs it should be made clear to everybody involved in the selection process of CRP that it is not an employment to the SRLM of any nature.

Training and capacity Building of Farm Livelihood CRPs:

The key social capital creation strategy in DAY-NRLM is the investment on capacity building of each and every Mahila Kisan through CRPs. Each CRP (in batches) should undergo step-by-step comprehensive capacity building stream as shown below:



A. Orientation on DAY-NRLM livelihood and specific skill training:

1. Just after selection, all CRPs has to compulsorily undergo an induction-cum-orientation session on roles and responsibilities, reporting, monitoring, payments, livelihoods promotion under DAY-NRLM etc. conducted by the SRP.
2. This will be followed by initial skill trainings by m-CRP or SRPs/NRPs on specific practices so that immediately after attending the event, the CRPs can first adopt in her farm and find agenda to engage with other MKs.

3. Simple but effective practices on non-chemical seed treatment, plant nutrition management (composting, green manuring etc.), NPM (preparation of decoctions and concoctions with locally available materials), de-worming, vaccination, hygiene, survey for potential for a PG, host plants available etc. are some of the examples of such specific practices.

B. Comprehensive livelihood gap analysis: This exercise helps in assessing livelihoods scenario of the village and identifying gaps in the on-going livelihood activities and supports to frame the livelihood intervention plan at village as well as at individual MK level. The CRPs initially should participate in such exercise under the guidance of SRPs subsequently they become capable to conduct the same independently in their villages. During this phase the livelihoods CRPs has to collect the base line data.

C. Compulsory module based thematic trainings: DAY-NRLM has already developed a comprehensive training module consisting of conceptual, classroom practical as well as field practical to enhance knowledge, skill and awareness on a wide range of aspects required by a Krishi Sakhi and Pashu Sakhi to function effectively.

- (a) Apart from other skills, special emphasis has been given to sharpen the skill of facilitation so that CRPs become able to conduct FFS / Pashu Pathsala.
- (b) For Krishi Sakhi the training is spread over three years with a total of 55 days duration in 8 modules.
- (c) Similarly for Pashu Sakhi it is a total of 42 days' duration in 7 modules.
- (d) The details of the training curriculum for Krishi Sakhi and Pashu Sakhi are available in our portal (www.mksp.gov.in).
- (e) The thematic trainings will be conducted by the SRPs with initial supports from NRPs.

Similar training modules for Krishi Jaivik Sakhi, Krishi Udyog Sakhi and Van Sakhi in under process.

D. Periodic refresher: In addition to orientation and basic thematic training, the CRPs will undergo half-yearly refresher trainings to update strategy, knowledge, skill, and technology and market trend. Such refresher can be conducted by local resources, m-CRPs, SRPs depending on the need assessment and topics to be updated.

E. Exposure to immersion sites: Immersion sites may be a household, village or a cluster of villages, KVK where any improved farm practice, enterprise, value-chain intervention has been operating for some time. Exposure to immersion site is on the principle of 'seeing is believing', this will help the CRPs to stretch their imagination on new technologies,

practices and skills. Exposure to CHC is to be conducted especially where a CHC is to be established.

- F. On-field hand-holding support:** It has been found that training and exposure are not sufficient to groom a CRP, they need continuous on-field handholding supports to enhance their facilitation skill, clear doubts and confusions under the guidance of SRPs, m-CRPs, and SRLM staff.

Certification of Farm Livelihood CRPs:

Internal Certification: At the end of every module of thematic training, there will be assessment of performance. The successful CRPs in each training module will be issued with a certificate, which will be the qualification for participating in the next training module.

Third Party Certification: In addition to the internal certification stated above, the performance of each CRP will also be assessed by a third party (presently National Institute of Agricultural Extension Management or MANAGE, Hyderabad for Krishi Sakhi and Pashu Sakhi) accordingly the certificate will be issued to successful candidates.

Deployment of Farm Livelihood CRPs:

SRLMs will select, train and deploy CRPs at respective community organizations as mentioned below:

Name of CRPs	Nested with the following community institutions
Krishi Sakhi	Village Organization (VO)
Pashu Sakhi	Village Organization (VO)
Van Sakhi	Village Organization (VO)
Matsya Sakhi	Village Organization (VO)
Krishi Udyog Sakhi	Producers Group (PG) or PG promoting organization such as CLF

CRPs are not an employee of SRLM, rather it is one of the service providers and an associate of the respective community institutions (VO or PG). The livelihood sub-committee of VO acts as interface between the CRP and VO which facilitates the work environment, assigns tasks, monitor the progress, evaluate the performance and recommend for payment against the volume and quality of service provided. In case of Krishi Udyog Sakhi, the PG will pay but in other case the payment of CRPs will be routed through VO.

Monitoring of FLH CRPs:

The assessment of performance of CRP is to be done at three different levels:

- (a) At community level, the respective community organization where the CRP is nested, will assign tasks, assess the quality and volume of tasks performed, accordingly recommend for payment against the tasks.
- (b) The data captured through transaction based livelihood MIS will also help in monitoring the task accomplishment by the CRPs – number of FFS conducted, number of MKs trained by CRPs, number of MKs adopted practices etc.
- (c) The dedicated livelihood staff of SRLM at all levels, particularly the block level staff will extend necessary support to the CRP to review the performance of CRPs taking inputs from the MKs, VO leaders during field visits, MIS data and analysis of CRP reports.

Each CRP has to compulsorily maintain a daily diary of her day to day activities performed and key achievements which will be presented during above reviews.

Performance assessment of FLH CRPs:

Based on the above monitoring system, performance of each CRPs will be assessed periodically by the community organization (VO, PG etc.) with support from SFLM. Special attention (training, exposure, on-field supports) may be given to the poor performing CRPs and wherever necessary such CRPs may be replaced with a fresh selection.

Payment of honorarium to FLH CRPs:

Honorarium structure: The SRLM may adopt similar honorarium structure as applicable to other community cadre in the state. The amount of honorarium of a particular CRP is to be fixed by the SRLM. Honorarium will preferably have two components, a fixed amount, in addition to task linked variable payment system and efforts should be made at least in case of Pashu Sakhi that she gradually moves into a totally task based variable payment system. Honorarium of the CRPs may also be linked to the level of the module passed by the respective CRPs. As the CRP graduates, the honorarium should be linked with their levels. There should not be any discrimination across cadres and across themes in terms of paying honorarium.

Mode of payment: It is important to mention here that payment of honorarium to CRPs must be routed through the community organization, where the CRP is nested. Payment of honorarium preferably should be through direct bank transfers to their respective bank accounts and cash payments should be avoided completely.

Sources of fund and sustainability: Initially, the honorarium to CRPs may be booked in SRLM IBCB budget (AAP, MKSP, NRETP, Value Chain projects etc.) and later their honorarium may be borne by the hosting community organizations (VO, PG) out of its earnings. During this period different avenues to be created for different types of CRPs. Payment out of NRLM budget to livelihoods CRPs should be reduced on a tapering manner.

Krishi Sakhi (KS) and Krishi Jaivik Sakhi:

It is unlikely that small and marginal farmers will pay for services provided by the KS. To ensure their financial sustainability after the project period revenue streams for them may be explored. Plan may be prepared in such manner that she earns from multiple income streams. Following options may be looked into as possible revenue streams for the Krishi Sakhi:

- (a) *Agri-entrepreneurs:* The KS may be trained and supported to become agri-entrepreneurs like nursery owner, NPM shop owner, seed bank owner, village level aggregator/collection agent of produces, purchase of cow-dung its conversion and sale as vermi-compost, small processing unit (de-husking, de-oiling, mini dal mil' etc.), retail shop of organic produce etc. The KS may raise a small nursery in her backyard for vegetables/moringa etc and sale the same to MKs for agri-nutri-garden (ANG). She can set up a NPM shop and sale the concoctions to other villagers. Many such opportunities can be explored where the KS can become an agri-entrepreneur.
- (b) *Service charge:* Krishi Sakhi may be trained to run the Custom Hiring Centres and a part of - hiring charges collected from CHC machineries may be used to pay for the KS. If any other community assets are being managed by KS, part of the generated revenue may be used to pay KS.
- (c) *Convergence:* Once the MKs are trained by the KS, majority of them have adopted improved practices, the KS may be linked with ATMA as Farmers Friend / Agriculture department / horticulture department if opportunities come as village level extension worker.
- (d) *Graduation:* Some of the KS and Krishi Jaivik Sakhi may be graduated to become Krishi Udyog Sakhi.

The well performing CRPs who have successfully completed the module based training program may also graduate as master CRP with higher responsibilities.

Master CRPs (m-CRPs) are the experienced Krishi Sakhis selected from among the pool of CRPs based on certain criteria and selection process. Master CRPs are those who have excelled in their role as CRP and have demonstrated ability in quick scaling up. They are among the best practitioners, skillful, undergone training and applied improved practices in their own farm, thus are confident on the impacts of the improved practices in agro ecology to help others to adopt similar practices. Master CRPs are exclusive pool, trained and groomed by the State Resource Persons (SRPs) and National Resource Persons (NRPs). They are the trainers' pool and are deployed for capacity building /skill trainings and continuous on-field handholding supports to the CRPs of her state. They may also be deployed to other states, on demand from that state for the same purpose. Several states have already

developed cadre of mCRP on AEP who are supporting other states in scaling up AEP interventions in other states. Considering the success of mCRP strategy the National Unit is in the process of issuing a separate guideline on selection criteria, process of selection, grooming, deployment etc. on master-CRPs.

Pashu Sakhi (PS):

For Pashu Sakhi, the following options can be explored for their sustainability beyond the project period.

- (a) *Service charge:* From the very beginning, the livestock rearers (MKs) may be encouraged to pay for their services – vaccination, de-worming, first aid type of treatments, supply of feed and mineral bolus, arranging for vet-doctors in case of emergency etc. A PS may charge a lump sum amount for a particular service that includes the cost of medicine as well as their own service.
- (b) *AI technician:* Some of the Pashu sakhis in convergence with Department of Animal Husbandry may be trained in artificial insemination (AI) technique thus becoming the torch bearer for breed improvement in her operational area.
- (c) *Vet-entrepreneur:* The PS may also be encouraged to set up small livestock enterprises like hatchery or day-old-chick (DoC) rearer (mother unit), kid nursery, small scale broiler farming etc. to generate her income.
- (d) *Supplier of fodder seed:* PS services may be utilized for promoting production of fodder crop among the farmers. The seed for the same can be obtained in convergence with Department of Animal husbandry.
- (e) *Service charge:* PS may also get a part of her honorarium out of managing a livestock unit owned by her VO. For example a pig breeding unit.
- (f) *Convergence:* The PS may be linked with livestock department (efforts towards this has been initiated) as village level extension worker to join in the campaign of 'FMD and Brucellosis free India' and other similar government programmes. The Animal Husbandry department may utilize the services of Pashu Sakhi against a pre-determined service fee.

Van Sakhi:

Van Sakhi acts as Manager of the NTFP PG. For *tasar* it is Tasar Vikas Samity (TVS), similar is the case for other NTFPs. Initially the honorarium may be paid from the project fund, once the PG starts its full operation, the honorarium of Van Sakhi should come out of surplus generated from the business of PG.

Krishi Udyog Sakhi:

They are the Managers of the PG. After initial support from SRLM, as soon as the business of PG starts functioning in scale, the honorarium of Krishi Udyog Sakhi should come out of the profit generated from the business of the PG.

It is extremely important to mention here that in a VO, the number of CRPs will be nested from all verticals (IB&CB, FI etc.), the SRLM need to rationalize the honorarium / earning of CRPs across all verticals.

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Government of India
Ministry of Rural Development
Department of Rural Development
(DAY-NRLM)

7th Floor, NDCC-II Building
Jai Singh Marg, New Delhi-1.
Dated 1st Feb.,2021

To,
The SMD/CEO,
All States / UTs

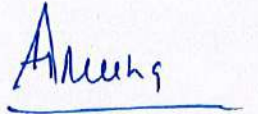
Subject: Advisory on promotion and functioning on State Resource Persons (SRPs) under DAY-NRLM for promoting farm livelihoods.

Sir / Madam,

I am directed to share the advisory on promotion and functioning of State Resource Persons (SRPs) under DAY-NRLM for promotion of farm livelihoods for your information and necessary action. These Guidelines are for facilitating the implementation of the DAY-NRLM in the State/UT. Further, State/UT may adopt or modify these Guidelines for selection/empanelment and utilization of SRPs as per their specific requirements.

Yours sincerely

Enclose:-As above



(H.R. Meena)
Deputy Secretary to the Govt. of India

Draft guideline for promotion and functioning of pool of State Resource Person (SRP) under DAY-NRLM for promotion of Farm Livelihoods

1. Introduction:

The Ministry of Rural Development (MoRD), Government of India, has been implementing Deendayal Antodaya Yojana, National Rural Livelihoods Mission (DAY-NRLM) in all the States and UTs of the country. To support the Ministry in rolling out various mission interventions, DAY-NRLM has set up a dedicated National Mission Management Unit (NMMU). DAY-NRLM supports the implementation strategy of poverty alleviation woven around community-based institutions. The Mission's primary objective is to reduce poverty by promoting diversified and gainful livelihood opportunities through a sustainable increase in incomes.

Since interventions are made through different community institutions like SHGs, Village Organizations (VO Livelihoods sub-committee) as well as by various community level cadres such as *Krishi Sakhi*, *Pashu Sakhi*, *Van Sakhi*, *Udyog Sakhi*, *Krishi Jaivik Sakhi*, *Matsya Sakhi* etc., it needs to take up various capacity building measures through training, demonstration, exposures, handholding etc. of these staff and cadres. Identification, training and deployment of these Community Resource Persons (CRPs) under farm livelihoods is one of the key strategies responsible for delivering different livelihood services to the community at their doorstep. The success of the programmes depends heavily on the quality of the community institutions and their cadres. Hence, it was evident that strengthening such institutions requires lots of capacity building inputs from the DAY-NRLM. It is equally important to enhance the knowledge and skill base of the human resources, i.e. both staff and the livelihood cadres. Thus, a robust training and capacity-building delivery architecture need to be in place. At the national level, there is a NIRD-empaneled pool of National Resource Persons (NRPs), who are domain experts drawn through the well-defined process, having a long association with this sector, including implementation experiences. They support SRLMs and NMMU on various aspects as and when required.

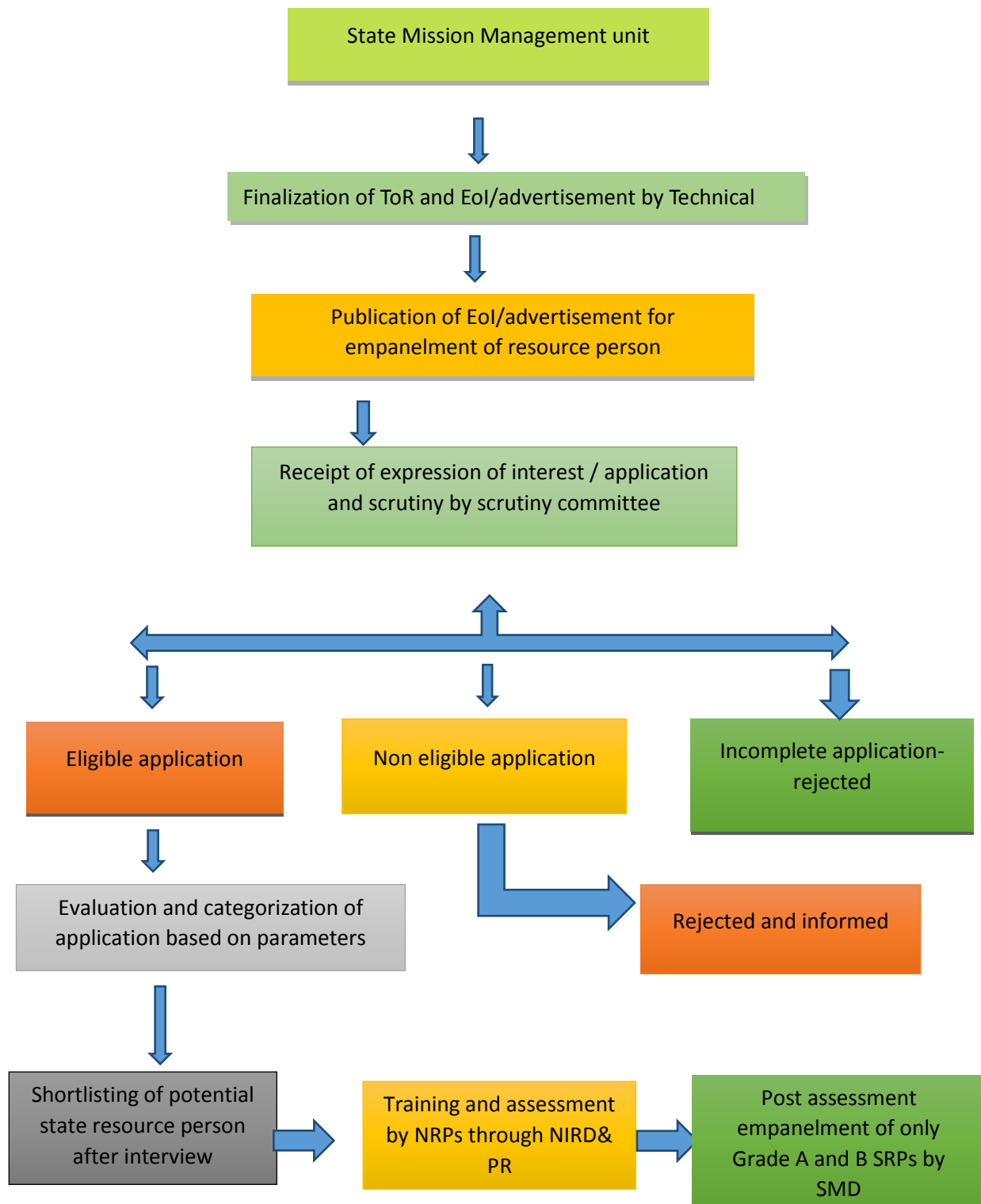
Similarly, a pool of quality expert human resources is required at each State, termed as State Resource Person (SRP), to support the SRLM on various aspects of programme implementation as and when needed. Since the SRPs are drawn internally (SRLM staff) as well as externally (NGOs, line departments, research institutes etc.) **subject to the concurrence of individuals** from a variety of diverse sources, a broad outline document on their identification, selection, training, deployment, remuneration etc. is the need of the hour which will act as guiding document to the SRLMs **for selection/empanelment and utilization of the SRPs**. This document has been prepared in consultation with the SRLMs and their prevailing practices.

2. Roles and responsibilities of SRPs:

One of the main objectives of this guiding document for SRP is to delineate the roles and responsibilities of the SRPs in providing continuous, proficient and knowledgeable mentoring supports to SRLMs. Therefore, those who can guide and support the assigned SRLM through their understanding and experience and offer technical assistance and capacity building to help plan, execute, monitor, and document farm livelihood activities. The specific roles of SRPs as envisaged are:

- a. *Planning*: Support the SRLM in developing an implementation plan for farm livelihoods intervention specifically on agro-ecological practices, NTFP, livestock, organic farming, Integrated Farming Cluster (IFC) promotion and value chain interventions.
- b. *Execution*: Support SRLM in execution of farm livelihoods intervention plan, especially agro-ecological practices, NTFP, livestock, organic cluster, IFC and value chain interventions.
- c. *Monitoring, evaluation and documentation*: Support SRLM to develop robust field monitoring system at all levels (State, district, block and village), capturing and validation of MIS, maintenance of updated MIS continuously, in house evaluation or through third party evaluation agencies by drafting TOR, evaluation of bids and negotiation of contracts and monitoring of evaluations and similar activities for ongoing and post project documentation.
- d. *Immersion site development*: Support SRLM in creating immersion sites for farm livelihood interventions in a cluster of adjoining 2-3 villages.
- e. *Training and capacity building*: Support SRLM in developing training materials, preparation of training modules, execution of training and capacity building events, field demonstration etc.

3. The procedure of selection/empanelment of State resource person



4. Profile / application Evaluation Parameters :

1. Experience (in years)	Weightage	Remark
3.1 to 5.0	1	
5.1 to 7.0	2	
7.1 to 10.0	3	
More than 10.0	5	
2. Work Experience in applied Thematic (in years) out of Total Work Experience (Sl.No.1)		Thematic Modules
2.0 to 3.0	1	1. Agro-ecological practices 2. Organic farming 3. Livestock practices 4. Value chain 5. NTFP
3.1 to 5.0	2	
5.1 to 10.0	3	
More than 10.0	5	
Work Experience as Trainer (in years) out of Total Work Experience (Sl.No.1)		
2.0 to 3.0	1	
3.1 to 5.0	2	
5.1 to 10.0	3	
More than 10.0	5	

5. Committees:

1. State technical Committee

State Technical Committee would perform the functions of selection of Resource Pool at State level.

Level of Committee	Expected members of the committee	Role
State Technical Committee	1) Chief Operating Officer /SMD/ PD 3) SPM Livelihoods/MKSP/Farm/Livestock 4) SPM HR/ SPM Procurement	Review the Resource Person Requirement Plan of State and submit to the Technical Committee by concerned Thematic as per the current Financial Year's Annual Action Plan before sending for approval to SMD, SRLM. Review and finalize Terms of Reference received from concerned Thematic before sending to SMD, SRLM for approval Expression of Interest (EoI) / advertisement to be prepared by SPM Procurement before sending for approval of SMD, SRLM. Advertisement to be released as per the approved resource requirement.

2. *Scrutiny Committee*

Members – SMMU

- 1) COO/SMD/PD or representative of SMD
- 2) NMMU Representative/NRP
- 3) Concerned SPM /thematic expert from SMMU.

a. **Role of Scrutiny Committee**

- a) Screening candidates based on the Eligibility Criteria as per advertisement/ TOR from CEO/SMD, SRLM.
- b) Preparing the final list of Eligible candidates thematic wise, based on Resource Person requirement plan as per ToR/EoI/application received, for Written test/GD/Interview and seek approval of CEO/SMD, SRLM and handover the same to the HR department/Training and capacity building team (SMMU) to take the process forward.

6. **Essential Qualifications**

State Resource Persons are the pool of trainers identified from among the staff, outsourced from relevant departments or from market (individual or institution, trainers from NGO, research institution, professor from colleges, SIRD resource person, RSETI trainers, retired department staff etc.) or maybe shortlisted from the community. The specific qualification for the resource person under farm livelihoods for SRP for staff and outsourced is as follows;

Minimum eligible criteria/qualification for SRPs

Experience Qualification	Category
Experience	At least 08 years of relevant experience
Educational Qualification	Master or PG diploma in Agriculture, Animal husbandry, rural development or science preferable biological sciences/ bachelor in agriculture or allied or zoology or botany
Language	Proficiency in English, Hindi and State-specific language/s

The SMD / CEO of the SRLM may have the authority to relax some criterion in cases of exceptional merit

7. **Screening and Empanelment Process**

Primary shortlisting of applicants may be based on the eligible criteria, qualification and experience. This may be followed by a written examination and GD/interview, after which the applicants may be shortlisted. Post shortlisting, these applicants may undertake orientation cum induction course of 5 days and State Resource Person training for Agro-ecological practices and livestock practices of 8 days each through NIRD & PR by the NRPs as per the structured module designed by NMMU. Post these training the participants may be assessed through NIRD&PR, and those who pass through grade A and B (Grade A = Greater than 90% and Grade B = Greater than 75 %) may be recommended for and empaneled as State Resource Person.

8. Training process:

The resource persons need to have a thorough understanding of DAY-NRLM concepts & thematic areas in the DAY-NRLM context in which SRLM is dealing. Therefore, the SRPs may undergo at least two training doses; the first dose may be an Orientation program for five days on DAY-NRLM farm livelihoods Vision, Mission and its components. In addition to orientation, thematic training of eight days each may be conducted on agro-ecological practices and livestock separately. **In addition to this, structured training on other activities like Organic Farming, Fisheries, and value chain will be imparted.** An assessment may take place at the end of the training. After assessment results, only A and B grade candidates may be designated as SRP. Subsequently, refresher training may be conducted based on need.

9. Payment of resource fees:

Though SRLM may revise TA / DA time to time remuneration for SRPs. **Till the State/UT develop and approve its own guideline on TA/DA the following rate will be applicable:**

Particulars	Grade	State level
Remuneration Per day in Rs	A	5000
	B	4000
	C	3000
Remuneration Per Session in Rs,	A	1500
	B	1000
	C	750
Travel		Rail – AC –II class
		Bus- Volvo /AC
		Local Transport- Taxi provided by Mission or Rs. 15 per KM
Boarding and lodging arrangement		Boarding and Lodging may be provided by SMMU/DMMU/ Regional Training Centre

The payment of resource persons may be booked under IB&CB.

10. Scope of work for the SRP deployment:

After empanelment, the engagement of SRPs depends on the need of the SRLM. It may be assignment based. The empanelment does not bind an SRLM to engage any SRPs, or empanelment does not mean any assurance of employment in the SRLM. The SRLM may seek supports of finalized and empanelled SRPs in AAP, MKSP-AAP, NRETP or any such project/programme the SRLM is implementing on the following aspects through ToR based assignment:

1. Planning:

- a. Help SRLM in preparation of State annual action plan. Once the State level planned annual physical targets against key deliverables are approved, help the SRLM to break the targets into quarterly and monthly targets at district, block and up to village level.
- b. Help SRLM in planning for resources - CRPs, m-CRPs, convergence with line departments, training material development, the printing of training materials and documentation of best practices
- c. Help SRLM in training calendar preparation for m-CRPs, CRPs and Mahila Kisan (through FFS).
- d. Help SRLM in planning for identification and documentation of best practices.
- e. Help SRLM in the development of continuous Monitoring & evaluation framework.

2. Execution of the plan:

- i. Help SRLM in the execution of village action plan including village entry, planning, collection and analysis of progress data for livelihood activities.
- ii. Help SRLM in formation, orientation, and functioning of VO Livelihoods sub-committee in execution and Monitoring of the village's livelihood interventions.
- iii. Help SRLM in organizing all training & capacity building events as per the training calendar for staff, m-CRPs and CRPs.
- iv. Help SRLM in holding farmer field school / Pashu Pathshala regularly involving MKs
- v. Help SRLM in the implementation of various advisories and guidelines issued by the Ministry.
- vi. Help SRLM in formation & smooth functioning of PGs and LGs

3. Achieving targets, Monitoring and documentation:

- i. Participate in monthly state level progress review meeting (Physical & Financial), taking inputs from field visits and MIS data. Preparation of action plan for the next month to achieve the planned physical target
- ii. Help SRLM to ensure periodic field visits of state and district level SRLM staff for on-field review.
- iii. Help SRLM identify best practice sites during field visits and document them (write up, short video clips), interact with the MKs etc.

4. Immersion site development:

Through the supports of SRPs all the relevant farm livelihood interventions – agro ecology, organic farming, value chain, convergence, need-based partnership may be showcased in a cluster of 2-3 villages. This should include starting from village entry exercise to develop village plan and individual household level plan on asset, access and skill development/improvement, and its implementation and impact assessment based on primary data analysis.

11. Deployment protocol for State Resource Pool:

- i. Though the State Resource Persons may be empaneled by SMD / CEO of the respective SRLM for a period of 3 years but there may be yearly review of performance of each SRP. The continuation of a SRP depends on the outcome of the review every year. Besides, after expiry of the life of the empaneled list, i.e., 3 years; a fresh empanelment may be done following the same guideline by the SRLM.
- ii. Services of the Resource Person may be hired as per the requirement of the SRLM. At the beginning of every month, the concerned SPMs may prepare a training plan/TOR based plan and intimate the Resource Person at least 15 days before the programme, after the competent Authority's approval. Only in exceptional cases or in case of urgency, the Resource Person may be informed by the project at least 7 days before the training program commencement.
- iii. Performance of the State Resource Person may be reviewed per assignment by the competent Authority at respective level (State and District) based on the report submitted by DMMU, concerned SRP and feedback collected from the participants and concerned staff during the training program/task/Assignment.
- iv. The Resource Person needs to follow the training schedule and ensure quality standards. If there is any deviation prior approval to be taken from respective offices of SRLM.
- v. SRLM reserves the right to cancel the assignment during the process for any reason like if the Resource Person does not deliver as per the ToR or if found indulged in any unfair practices that bring bad name for the SRLM, its staff or Clients.
- vi. In case of any discrepancies, SMD, SRLM, maybe the appellate Authority and his/her decision may be considered final.
- vii. This is not permanent employment, and SRLM is under no obligation, post empanelment to avail the services of the resource person. It may be the sole discretion of SRLM as per the requirement to invite /not invite an empaneled resource person.
- viii. The parties submit all their disputes arising out of or in connection with this Agreement to the exclusive jurisdiction of the Courts of respective State.

12. Submission of reports and bills by the SRP:

- a. Based on the need of the farm livelihood team of the State / UT, the SRP may prepare and submit a detailed work plan for the work allocated to that particular SRP. The SRP may submit the work plan with travel details to SMMU for approval.
- b. Based on the advice of SPM-Farm Livelihoods post-approval from competent authorities, respective district team may make travel and stay arrangements for the SRP as per the approved plan.
- c. At the end of every assignment, the SRP may submit a detailed report and relevant bills / invoice of the current month to the respective DMMU/SRLM on or before the 5th of the next month.
- d. Based on the advice of SPM- Farm Livelihoods, post-approval from competent authority of all bills / invoices submitted by the SRP, the Accounts Division / HR Division of the SRLM may make payment of resource fee and reimbursement of TA&DA as per norm / rule of the SRLM to the SRP. SRLM team may ensure that the payment all bills / invoice to the SRP are made within one month of submission of the claim / payment documents.

File No. J.11060/60/2015-RL (345564)
Government of India
Ministry of Rural Development
Department of Rural Development
(National Rural Livelihoods Promotion Society)

6th Floor, Hotel Samrat,
Kautilya Marg, Chankyapuri,
New Delhi-110 021

Dated: 10th July, 2017

To,

CEOs/SMDs State Government of Odisha,
Bihar, Chhattisgarh, Madhya Pradesh,
Jharkhand and West Bengal

Sir/Madam,

A workshop for planning for documentation of best practices under Mahila Kisan Sashaktikaran Pariyojana (MKSP) was held on 22nd June, 2017 at India International Centre, New Delhi attended by the representatives from the State Governments of Odisha, Jharkhand, West Bengal, Bihar, Chhattisgarh and Madhya Pradesh and NSOs of NRLM. The main objective was to discuss and finalize a framework for documentation of best practices in the States which could be further dissemination to the other States/Areas.

The minutes of the meeting are attached for kind information and further necessary action towards documentation and dissemination of best practices identified in MKSP areas.

Yours faithfully,



(Nita Kejrewal)
Director (Admn. & Finace),
NRLPS

Minutes of the best practices documentation workshop held on 22nd June 2017 at IIC, New Delhi

A workshop for planning for documentation of best practices under *Mahila Kisan Sasaktikaran Pariyojana (MKSP)* for further dissemination of these practices was held on 22nd June 2017 at Conference Hall No.1, India International Centre, New Delhi under the Chairmanship of Shri Tapish Chandra Nautiyal, Deputy Secretary (RL), MoRD.

2. Objective of the workshop: MKSP is being implemented since 2011 under DAY-NRLM. After several years of implementation, there are many best practices on farm livelihoods interventions under MKSP are coming to the fore. In order to document such best practices, so that they may be shared with all states for replication, wherever feasible, the workshop was organised.

3. Participants: The workshop was participated by SRLM teams comprise of SPM, Livelihoods / KMC / M&E from six states namely Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha and West Bengal and NRLM Farm Livelihoods team. As External Expert Ms Sejal Dand, independent consultant and Ms Sabita Parida from UN WOMEN also participated. A two members team from Digital Green has also participated to understand the purpose, content, scope for video documentation of best practices. List of participants is attached at Annexure – 1.

4. Minutes of the workshop:

- a) Workshop started with a welcome address by the Deputy Secretary (RL), MoRD where he stated about the importance of capturing best practices in MKSP areas for future references and replications in other areas. A presentation on the perspective was made by the farm livelihoods team. The external expert Ms Sejal Anand shared her experiences on women empowerment through MKSP and suggested some key areas to be looked into while documenting the best practices.
- b) The best practices document will cover the best practices around the interventions such as Agro-Ecological Practices, *Pasu Sakhi* extension model & Custom Hiring Centre/Tool bank. In addition, the best practices document will capture the outcomes like women empowerment; food, nutrition & health security; drudgery reduction & economic benefits to *mahila kisan* achieved in the best practices sites. Role of the promoting/ implementing organisation is also to be covered in the best practices.
- c) Looking at the geographical area compatibility between PRADAN-NSO and NRLM the documentation will be made for the best practices evolved in MKSP areas of six states namely Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha and West Bengal.
- d) It was discussed and finalised to list out the cluster/area for best practice with following basic conditions;

1. A cluster for best practice with coverage of 3-4 villages in contiguous patch with a size of minimum 100 household (in case of Tasar and Lac the household size is 150).
 2. The best practices shall have evolved in a period of 3-4 years.
 3. The best practice has covered at least 1/3rd of the targeted households.
 4. Cost effective for easy replication.
 5. Prototype shall have been easily adopted with less criticalities.
 6. Same Household accepting the practices for a period of 3-4 years and building trust on that practice and vis-à-vis it enhances the productivity and scope.
 7. Resources mobilised through convergence.
 8. Robust institutional architecture established.
 9. Clearly defined technical protocols and relevant use of these protocols.
- e) PRADAN-NSO has to develop the framework and methodologies for selection & documentation of the best practices. The final framework document is to be shared with the states by the second week of July 2017. Methodologies for the study is to be finalised by end of July 2017.
- f) States in consultation with PIAs have to create an exhaustive list of best practices sites around the selected areas. PRANDA-NSO team in consultation with the SRLM/PIA& NMMU team will make a probable list of the best practices sites for documentation. Final list is to be prepared by PRADAN-NSO in consultation with NMMU/SRLM from the probable list of best practices sites by 4th week of July 2017 for document.
- g) Joint field visit by PRADAN-NSO team and SRLM official/ PIA representative to be started in 2nd week of August '17. State has to provide logistic support for the field visits of the joint team. It is planned to come up with the draft document in October '17 and hold the sharing workshop in December 2017.
- h) State has to nominate one senior SRLM official as the nodal person for coordination in best practices documentation. However, the name suggested by the state teams are 1) Bihar - Manoj Kumar 2) Chhattisgarh – Divya Gupta, 3) Jharkhand – Kamal Jaiswal, 4) Madhya Pradesh – Manish Pawar, 5) Odisha – P K Dash, 6) West Bengal – N C Manna.

Workshop ended with vote of thanks.

Framework and methodology for best practices documentation under MKSP (Mahila Kisan Sashaktikarana Pariyojana)

A) Background

The Mahila Kisan Sashaktikaran Pariyojana (MKSP) was launched in 2011 as a sub component of the National Rural Livelihood Mission (NRLM) with the primary objective of empowering women in agriculture by making systematic investments to enhance their participation and productivity, as also to create and sustain agriculture based livelihoods of rural women. MKSP is one of the first programmes of the government that recognizes the increasing feminization of agriculture and the role of women in farming. Women friendly interventions and revival of Sustainable agro-ecological practices has been the major focus of MKSP.

MKSP is being implemented by Project Implementing Agencies (PIA) i.e. by SRLMs themselves or partner organizations who have expertise in working with communities at scale in agriculture and allied sectors. With six years of its launch, it is now the time to look into the best practices that have emerged through the implementation of MKSP across states. The best practices thus evolved would be the knowledge resource to be emulated in scale by different State Rural Livelihood Missions (SRLM) and other partner agencies.

B) Purpose and objective

The aim of this exercise is to identify, assess, compile and disseminate a selection of evidence based best practices in livelihoods that have emerged in the MKSP, providing pro poor sustainable livelihood solutions which could be widely replicated and scaled up. The best practice documentation will be carried out in six States (Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha and West Bengal). PRADAN as National Support Organization for DAY- NRLM would document the Best Practices that have emerged in the MKSP.

The main objectives of this exercise therefore are to profile and describe current best practices/approaches in three broad intervention areas of MKSP i.e.

1. Agro-ecological practices
2. Livestock- Last mile extension service
3. Farm Mechanization- Custom Hiring Centre/Tool Bank

The documentation study would assess the effect of these three interventions at households as well as community level based on the desired outcomes of MKSP i.e.

- a) **Women Empowerment** – Need to explore the dimensions such as shifts happened in the intra household level decision making, division of labour, increased control over their income realized and their ownership on the assets such as Increased access of women in agriculture to productive land, inputs, credit, technology and information.
- b) Enhanced skills and knowledge in sustainable agriculture (Agro Ecological Practices).
- c) **Food and Nutrition Security** – Dimensions such as enhanced productivity in cereal crop including millets so as to have round the year food sufficiency, interventions in vegetables, pulses and livestock for family consumption for better nutrition through food diversity.
- d) **Economic Impact** – Economic impact could be both from enhanced income because of higher productivity and more area coverage, and also due to the decrease in production cost due to use of low cost non-chemical agri inputs and improved practices. The net additional income should have increased by 25% for the family from the basket of activities taken up by the families.
- e) **Drudgery reduction** – Drudgery reduction for women in agriculture through use of gender friendly tools / technologies. Women have access to user-friendly farm implements, designed to reduce

their drudgery and physical stress; and have enhanced skills to use them; increased participation of men in the activities generally taken by women.

The process of documentation would cover success stories in three different interventions and map out the desired outcomes as what worked well, what did not work, challenges, lessons learnt, the gaps, the scope of improvement and the way ahead. The best practice documentation would also look into the factors like pro-poor friendly interventions, Ease of Replicability and/or up-scaling and Sustainability of the intervention. Study will also capture the convergence happen in the location and impact of it.

C) Criteria for Selection of Best Practice

The following criteria would be required to shortlist the SRLM/PIA at the initial level.

Sr.	Filters for Identification	Description
1	Poor friendly interventions	Easy adoption by poorer families (women, marginalized sections like tribals, dalits, landless, small and marginal farmers, women headed households)
		Intervention adopted by substantial number of poor families in a contiguous project area. (A cluster for best practice with coverage of 3-4 villages in contiguous patch with a size of minimum 100 household (in case of NTFP/Tasar/ Lac the household size is 150 per GP), at least 1/3rd of the target households, the more the better.)
2	Number of years activity is grounded	The intervention should have evolved for at least three years from the date of grounding.
		Successfully adopted by the same set of farmers for at least three years.
3	Investment per member household	Should not be a high cost model.
4	Technology/Activities	Simple to adopt and less technology dependent - Use of locally adopted, resource conserving, farmer-led and environment-friendly technologies
5	Minimum level of handholding	Minimum external handholding required.
6	Ease of Replicability and Up-scaling	Have the potential for replication and should therefore be adaptable to similar conditions in varying situations (clearly spelt out protocols developed and adhered for implementation)
		Cadre of Community Resource persons developed with well laid out training architecture.
7	Sustainability	Strong Community based Institutional Mechanism developed (SHG, PG, SHG federation, inter & intra community institution interaction)
		Existence of capable local resource persons and local entrepreneurs (being acceptable to the community and have mutual trust)
		Significant and regular flow of income
		Ecologically sustainable with climate resilient interventions
		Robust institutional linkages with market/line department
	Lower follow up cost.	

D) Steps in the Best Practice Documentation with timeline

Timeline for Best Practices Documentation				
	Task	Timeline	Responsibility	
			Lead	Support
1	PRADAN-NSO to develop the final framework and methodologies in consultation with NMMU for selection & documentation of the best practices.	24th July, 2017	PRADAN - NSO	NMMU
2	NMMU will circulate the final framework across six selected MKSP states for generating list of Best Practices	3 rd August, 2017	NMMU	PRADAN – NSO
3	Respective SRLMs in coordination with MKSP-PIAs and state point persons from PRADAN will generate a detailed list of best practices on the selection criteria.	By 10 th August 2017	SMMUs	PRADAN – NSO
4	Further screening & short-listing of best practices along with locations/study areas by SRLM state anchor, PRADAN- NSO representative and shortlisted PIA representatives. Use of framework and template.	20 th Aug, 2017	PRADAN – NSO	SMMUs
5	Joint team field visit (PRADAN-NSO, SRLM, PIA) for detailed exploration of BP, SRLM to depute relevant persons for joint field visit	3rd week of Aug to Sep end, 2017	PRADAN – NSO	SMMUs
6	First draft of BP documentation shared by NSO	4th week of Oct, 2017	PRADAN – NSO	NMMU
7	Final draft of comprehensive document by NSO in consultation with NMMU	4th week of November, 2017	PRADAN – NSO	NMMU
8	Dissemination of MKSP best practices through a National Level workshop	First week of Dec, 2017	NMMU	PRADAN – NSO



ग्रामीण विकास मंत्रालय
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ATAL DULLOO

Joint Secretary

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January 22, 2018

DO No. K-11067/16/2017/NRLM(Livelihoods)/PartFile

Dear Madam / Sir,

I would like to share herewith the key output indicators on farm livelihoods interventions finalized during the thematic discussion in the writeshop - 2018 held at NIRD & PR, Hyderabad. These key output indicators are to be included in the SRLM – Annual action plan 2018-19 as part of farm livelihoods interventions.

Yours Sincerely,

Encl: Key output indicators on farm livelihoods interventions.

(Atal Dulloo)

To,
The All States/UTs CEOs/SMDs of SRLMs

Annexure - 1

Farm Livelihoods Key Output Indicators

Name of SRLM:

Sr.	Indicators	Achievement till March 2018	Plan for 2018-19 (Additional count)	Cumulative [3 + 4]
1	2	3	4	5
A	SRLM AAP - Farm Livelihoods Key Output Indicators			
1	No of MahilaKisan covered			
2	No. of districts			
3	No. of intensive blocks entered under farm livelihoods interventions			
4	No. of Villages covered under farm livelihoods interventions			
5	No. of block LH staff engaged (@3 per block as per advisory)			
6	No. of SRP (SRLM Staff)			
7	No. of SRP (Non SRLM Personal)			
8	No. of LH CRPs engaged by VO after training			
i	Krishi Sakhi			
ii	PasuSakhi			
iii	Van Sakhi			
iv	Any other type (pls. mention)			
9	No. of Custom Hiring Centres established			
10	No. of Organic clusters developed			
i	No of blocks to be covered under organic			
ii	No of villages under organic farming			
iii	Areas to be covered under organic farming (Ha)			
iv	No. of Producer groups promoted			
11	Total budget proposed for Farm Livelihoods			
i	IB-CB			
ii	CIF			
B	MKSP (existing projects implemented by SRLM)			
1	No of MahilaKisan covered			
2	No. of districts			
3	No. of blocks covered under MKSP			
4	No. of Villages covered under MKSP			
5	No. of block LH staff engaged (@3 per block as per advisory) under MKSP			
6	No. of LH CRPs engaged			
i	Krishi Sakhi			
ii	PasuSakhi			
iii	Van Sakhi			
7	No. of Custom Hiring Centres established			
8	Areas to be covered under MKSP (Ha)			
9	No. of Producer groups promoted			
C	MGNREGA			

1	Farm Pond			
2	Dug Well			
3	Compost Pit			
4	cattle Shed			
5	Goat shed			
6	Rural Haat			
7	CHC with Dept of Agri			
	MoA or any other Department, please mention clearly			
8				



एक कदम स्वच्छता की ओर

ATAL DULLOO

Joint Secretary

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सत्यमेव जयते

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भारत सरकार
कृषि भवन, नई दिल्ली-110114
Ministry of Rural Development
Deptt. of Rural Development
Government of India
Krishi Bhavan, New Delhi-110114

D.O. No. K-11062/08/2016/NRLM (Livelihoods)-Part-1

August 04, 2016

Dear Sir/Madam,

NRLM has a clear mandate to train and capacitate the poor and vulnerable women for enhancing their livelihoods skills. The primary focus of DAY-NRLM farm livelihoods is scaling up core livelihoods promotion models in all intensive blocks on sustainable agriculture, livestock and non-timber forest produce. In this context, a training and capacity building architecture has been developed (advisory is attached). This advisory is developed through a consultative process with SRLMs, MKSP partners and other stakeholders, for rolling out the training and capacity building of the community cadres, leaders, members and institutions. The schematic diagram is given below:

Schematic diagram	
Body	State Resource Persons (SRP)
No of members in each state to be identified by SRLM	30/40 members nominated/selected from SRLM/DMMU/MKSP partners/ reputed NGOs/ consultants
Composition	(a)sustainable agriculture (15/20), (b) livestock/ animal husbandry (5/10) and (c) Non Timber Forest Produce (3/5)
Role	(a) Train Community resource persons, 1 CRPs for 50 Mahila farmers (b) 3/5 days training module, done twice a year

Keeping the need of the SRLMs to have a strong capacity building system, NMMU has worked out a structured and systematic approach in building the skills and capacity of community. The training architecture will be a three level structure to reduce the knowledge transmission loss. At the national level there will be a pool of National Resource Persons (NRP). The National Resource Persons would be identified by NIRD and NMMU jointly. NRPs would train the State level pool of State resource Persons (SRP) and the SRPs would in turn train the Community Resource Persons (CRP) and block staff and CBO leaders. CRPs would be responsible for directly training the community.

NIRD will be providing key and critical support to the SRLMs in ensuring the delivery of the training plan- training the state level resources persons and staff; and sending the anchor NRPs to support the SRPs in training the BMMU and CRPs.

Since this is an important and time-bound task and big effort, SRLMs need to have clear plans, schedules, anchoring hands and resource persons. Staffs needs to be taken on Board and oriented fully. The state trainers need to be identified with care and at the earliest.

SRLMs need to identify experienced state level trainers/resources persons by August, 2016. The SRP team would consist of 30-40 members, [Sustainable Agriculture-20 members, and livestock/animal husbandry 5-10 members, and NTFP (if required) 3-5 members]. The potential SRPs could be SMMU and DMMU personnel; Livelihoods Anchor from DMMU, Agriculture expert from MKSP partners/other reputed NGOs and Agriculture/livelihoods experts (Individual consultants). State trainers/ resource persons will conduct the training to train CRPs, block staff and CBO leaders as planned at the state level. SPMs will anchor these trainings at various levels and prepare a training calendar for CRP trainings. If required, National Resource Persons from NIRD will be available to support/anchor the overall training plan in the state.

SRLM has to adhere to the timeline indicated strictly. Therefore, you are requested to take charge of this effort immediately, lead and extend priority support, designate anchors to take the agenda forward and review/ monitor its progress on a weekly basis. NMMU team /NIRD-NRLM Cells /NRPs will participate in planning and monitoring the progress on the plans.

With regards,

Yours Sincerely



(Atal Dulloo)

To: All CEOs and SMDs of SRLMs

Copy to: DG, NIRD

Advisory on the training and Capacity Building architecture

Mahila Kisan Shaskatikaran Pariyojana (MKSP) has been integrated with the broader DAY-NRLM roll out Action Plans and is gradually converging with State's Livelihoods Plan. The implementation architecture as emerged in the financial year FY 2015-16, the MKSP NGO partners/PIAs would provide training and capacity building support to the community based organizations and implementation would be done exclusively by the concerned Block units and the Cluster Federations/ Village Organizations of the women SHGs as implementing partners of SRLMs.

The primary focus of DAY-NRLM through annual action plan farm livelihoods is "Scaling up core livelihoods promotion model in all intensive blocks from 2016-17 on sustainable agriculture, livestock and non-timber forest produce". The focus is also towards value chain development interventions for establishing market linkage initiatives, as a step forward for the ongoing MKSP projects. Convergence with Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), value chain development and creating market linkages is an integral part of the intervention strategy.

An advisory by Joint Secretary-Rural Livelihoods was issued to State Missions on 29th December 2015, which drew attention to scaling up of livelihoods program and the need of capacity building architecture, including modules, tools and methods across staff, cadre and community. The advisory very clearly states the need to scale up livelihood interventions in all intensive blocks in a programmatic manner. The scaling up strategy will primarily be based on developing a large cadre of Community Resource Persons (CRP) chosen from the best practitioners of sustainable agriculture, livestock rearing and NTFP collection.

This would require a very strong capacity building architecture so that the CRPs are well trained in the concepts and practices so as to enable them spreading the best practices without any transmission loss.

With reference to the above, NMMU had recently conducted series of review and workshops with State Mission teams on scaling up of livelihoods interventions and its' been felt both by the State Missions and NMMU that there is a need for a strong trainers team at national, State and block levels. The SRLMs have incorporated the livelihood scaling up strategy in their respective AAPs for 2016-17 and they need to build an integrated training and capacity building process so that adequate care is taken to continuously upgrade the skills of Mission staff and Community Resource Persons (CRPs) and community. A strong focus will also be give on refresher training. Further to achieve the agenda of Prime Minsters Office, DAY-NRLM is committed to build 10-20 block trainers across the States.

Keeping the need of the SRLMs to have a strong capacity building system NMMU has worked out a structured and systematic approach in building the skill and capacity of community. The training architecture will be a three level structure. At the national level there will be a pool of National Resource Persons (NPR) who would train the State level pool of State resource Persons (SRP) and the SRPs would in turn train the Community Resource Persons (CRP) and block staff and CBO leaders. CRPs would be responsible for directly training the community.

The NRPs would play an important role in the entire delivery of training and capacity building. They would not only be responsible for training the SRPs, they would also be responsible for supporting, handholding and mentoring the SRPs in conducting training in their respective states.

The Activities proposed by the team (2016-17)

1. To identify 60-80 National Resource Persons (NRPs) pool,
 - (i) Farm livelihoods (a) sustainable agriculture (40-50 NRPs), (b) livestock/ animal husbandry (10-15 NRPs) and (c) Non Timber Forest Produce (10-15 NRPs),
 - (ii) Selected representatives from State Missions and MKSP partners would be given priority to be considered as National Resource Persons. There will also be a few eminent development professionals as NRP.

2. Resource Cell at National Institute of Rural Development and Panchayati Raj (NIRDPR), Hyderabad have supported DAY-NRLM to generate list of about 300+ national resource persons pool for various themes like institution building, capacity building, social inclusion, social development, health, nutrition, sanitation and WASH. These pool of resource persons are supporting training for NRLM and various SRLMs on the above mentioned themes. The pool/list of resource persons are uploaded at Resource Cell NIRDPR (RC-NIRDPR) website for use. The categories of resource persons are A+, A, B, C and D.

3. Similarly, the list of Livelihoods National Resource Persons (LNRPs) pool will be generated.
 - (i) A pool of 60-80 National Resource Persons would be generated jointly by NMMU and the Resource Cell at NIRDPR.
 - (ii) Categories of livelihoods NRPs required for the livelihoods is 5-10 A+, 50-60 A and B category.
 - (iii) Sector wise break up are 40-50 NRPs on Sustainable Agriculture, 10 NRPs each on livestock and NTFP.
 - (iv) The details are in the table below:

Sector wise thematic break up of Resource Persons:
Sustainable Agriculture: (40-50)

SN	Broad themes	Sub themes	No of NRPs
1	Livelihoods	Overall livelihood context in rural India, specific to rainfed region, different theme	3
		Livelihood framework	
2	Facilitation	Adult learning	2
		Group facilitation skills/Team Building	
3	Seed	Seed replacement	5
		Seed selection, germination, priming and seed treatment using Beejamruth	
		Seed storage in raised platforms	
4	Soil and plant nutrient management	Composting – heap composting/NADEP, vermi-composting	9
		Dung-based inoculants like Jeebamruth Ghanjeevamruth etc.	
		Cropping system and cropping pattern	
		Promotion of monocot/dicot crop combinations	
		Green manure crops (insitu and ex situ)	
		Tank silt application	
Azola in paddy field			

SN	Broad themes	Sub themes	No of NRPs
5	Water management	Land and water development: land levelling, rain water harvesting (farm ponds)	6
		In situ moisture conservation like mulching	
		Method and schedule of irrigation	
		Zero tillage	
6	Pest management	Preventive	9
		Curative	
		Physical, biological, mechanical, cultural, etc.	
		Preparation of organic, herbal, plant extract solutions	
		Crop rotation	
7	Harvesting, post-harvest, storage and marketing	Scientific harvest, Storage practice,	4
		Sorting, grading	
		Drying floor optimum moisture,	
		Minimize post-harvest losses	
8	Other SA practices	SRI, SWI and SCI	7
		Inter-culture operations	
		36 X 36 model for round the year household nutritional security and regular income as well	
		5% models	
		Agroforestry /WADI	

NTFP: (10)

SN.	Theme	Sub theme	No of NRPs
1	Lac	Host plant management, Brood management, scientific inoculation, pest management, harvesting, grading, sorting, primary processing, storage and marketing	2
2	Tasar	Host plant management, DFL, basics of grainage, rearing practices, sustainable cocoon harvesting techniques, storage of seed cocoon/cocoon, cocoon marketing, yarn production and marketing	2
3	Gums	Sustainable harvesting, storage	1
4	Medicinal plants and other	Identification, collection, cultivation, sustainable harvesting, primary processing, cleaning, drying, grading, sorting, storage and marketing	5

Livestock: (10)

SN.	Theme	No. of NRPs
1	Vaccination	10
2	Neonatal care of small/ruminants	
3	Primary healthcare	
4	Fodder management	
5	Home- made feed/fodder fortification methods	
6	Shed management	
7	Ethno-vetenary	
8	Development of pasusakhi	

4. The desired eligibility criteria, developed for empaneling National Resource Pool is placed in the table below, which would be referred during selection.

Eligibility Criteria for NRPs

SN	Category	Experience/eligibility	No of NRPs	Remuneration in Rs.
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1	NRP Category A+	15+ years of experience in thematic livelihoods promotion, production, aggregation, marketing etc. Experience in large scale programmes and schemes of Government or Corporate. PG in Ag Science, Animal Husbandry, Forestry, Rural Development/ Rural Management would be preferred.	5-10	10,000/day
2	NRP Category A	10+ years of experience in thematic livelihoods promotion, production, aggregation, marketing etc. Experience in large scale programmes and schemes of Government or Corporate. PG in Ag Science, Animal Husbandry, Forestry, Rural Development/ Rural Management would be preferred.	20	7,500/day
3	NRP Category B	6+ years of experience in thematic livelihoods promotion, production, aggregation, marketing etc. Experience in large scale programmes and schemes of Government or Corporate. UG in Ag Science, Animal Husbandry, Forestry, Rural Development/ Rural Management would be preferred.	40	5,000/day

5. State Mission will be requested to recommend and share their list/ pool of (i) State Resource Persons to be empaneled.

Potential members of SRP: SPM-Livelihoods as Anchor, SRP would consist of 30-40 members, (Sustainable Agriculture-20 members, livestock/animal husbandry 10-15 members, and NTFP 10 members).

- Select SMMU and DMMU personnel
- Agriculture university/agriculture department/forest department - scientist/faculty/staff
- Livelihoods Anchor from select DMMU
- Agriculture expert from MKSP partners/other reputed NGOs
- Agriculture/livelihoods experts (Individual consultants)

6. RC-NIRDPR and livelihoods team, would undertake the screening and selection of the National Resource Persons from a pool of 100-120 resource persons.

7. 60-80 NRPs would be shortlisted from the above pool (as per eligibility criteria)

8. Two day orientation of the shortlisted NRPs (in 2 batches of 50-60 each) will be conducted jointly by livelihoods team and RC-NIRDPR. Based on the performance of the NRPs during the orientation program, final list of NRPs will be generated. The final listed NRPs will be given offer letter from RC-NIRDPR for their engagement.

9. Select NRPs chosen from the selected NRPs, livelihoods team and RC-NIRDPR would spend about a weeks' time to develop the training tools and session plans, training calendar, handbook for trainers and reading materials for trainees. Select NRP to orient the NRP for a week.

10. The selected NRPs will conduct ToT for SRPs in batches. And SRPs train the CRPs.

11. A table below shows summarized trainees and trainers.

Proposed Schematic diagram	
Body	National Resource Persons (NRP)

	No of members	60/80 members nominated/selected from SRLM/ MKSP partners/ reputed NGOs/ consultant
	Composition	(a) sustainable agriculture (40-50), (b) livestock/ animal husbandry (10-15) and (c) Non Timber Forest Produce (10-15)
	Role	(a) Developing training modules and materials for SRLM/CRPs/Farmers (b) Train State resource persons
	Total resource persons trained	1200
State	Body	State Resource Persons (SRP)
	No of members	30/40 members nominated/selected from SRLM/ DMMU/MKSP partners /reputed NGOs/consultants
	Composition	(a)sustainable agriculture (15/20), (b) livestock/ animal husbandry (5/10) and (c) Non Timber Forest Produce (3/5)
	Role	(a) Train Community resource persons, 1 CRPs for 50 Mahila farmers (b) 3/5 days training module, done twice a year
	Total CRPs trained	3.10 lakh CRPs trained (Tentative Yr-1/20,000, Yr-2/30,000, Yr-3/50,000, Yr-4/80000 and Yr-5/1,30,000)
	No of farmers trained	1.55 crore farmers trained (Tentative Yr-1/10 lakh, Yr-2/15 lakh, Yr-3/25 lakh, Yr-4/40 lakh, and Yr-5/65 lakh)

12. The SRPs then in turn will be rolling out training programs on themes (i) sustainable agriculture (ii) livestock/animal husbandry (iii) NTFP specifically for CRPs.

13. State Mission has an important role which are as follows:

- a. House the SRPs
- b. Arrange the training venue, logistics etc.
- c. Translate the training materials and tools etc. in local language
- d. Arrange training programs as per the calendar
- e. Prepare training reports

14. The respective CRPs would be training the community on the thematic issues like sustainable agriculture, livestock and NTFP.

15. State Missions would request NMMU for NRPs to roll out livelihoods capacity building calendar. NMMU approves the names from the list of NRPs and RC-NIRDPR would pay their fees as per the approved norms by NMMU as stated in the website

16. The NRPs will be anchored by the livelihoods team and RC-NIRDPR will coordinate. RC-NIRDPR would bear all cost of NRPs – resource fees, travel etc.

17. The proposed livelihoods resource persons under A+, A and B category, will be paid similar resource fees and would be entitled to travel, as currently been paid by RC-NIRDPR following the office order DO. No. NIRDPR/NRLMRC/NRPs/2015-16 Dt: 17.04.2015. The details are summarized in the table below:

SN	Category	Experience in Yrs.	Remuneration in Rs.	Travel
1	NRP Category A+	15+	10,000/day	Air-fare -Economy Class / 2 nd AC train
2	NRP Category A	10+	7,500/day	Air-fare -Economy Class / 2 nd AC train
3	NRP Category B	6+	5,000/day	Air-fare -Economy Class / 2 nd AC train

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DO # K-1111062/01/2015/NRLm(Livelihoods)
December 29, 2015

Dear Madam/Sir,


Since its launch NRLM has made significant progress in mobilizing the poor and vulnerable women into their institutions. NRLM has also supported these women SHGs through provisioning of revolving fund and Community Investment Fund (CIF) to take up livelihoods activities. Besides, NRLM has linked these SHGs to banks as well through its SHG Bank linkage program for enabling them to access easy credit.

As you are aware, *Mahila Kisan Sashaktikaran Pariyojna* was launched in 2010-2011 as a subcomponent of National Rural Livelihood Mission (NRLM) to promote farm based livelihoods. With the launch of NRLM and gradual establishment of State Rural Livelihood Missions, it was envisaged that Ministry of Rural Development would integrate MKSP with the broader NRLM roll out plan in the states and MKSP will gradually converge with State's Livelihoods Plan. SRLMs would eventually integrate farm livelihoods in their Livelihoods Promotion Strategy as a part of their Annual Action Plan (AAP).

Though in the initial years the requirement of the programme was to focus on activities related to institution building and capacity building, it is now very important that livelihoods interventions are scaled up in all intensive blocks immediately. The strategic direction of NRLM, now onwards, should be focused on the promotion of livelihoods interventions in all intensive blocks. In this context this Ministry is also focusing on developing a clearly articulated strategy for scaling up livelihoods interventions, both farm and non-farm, in every intensive block in the Annual Action Plans of the SRLMs

In this context this Ministry has developed an advisory (copy attached) in order to guide all SRLMs in developing their livelihoods strategy and implementation plan. We will also be holding a detailed dissemination workshop in early January to de-mystify the advisory and help states in thinking through the livelihoods strategies to be adopted.

With regards

Yours Sincerely,

(Atal Dulloo)

Encl.: livelihoods implementation advisory

To all Principal Secretary, State Rural Development & PR

CC to All the state Mission Director/ CEOs

Since its launch NRLM has made significant progress in mobilizing the poor and vulnerable women into their institutions. NRLM has also supported these women SHGs through provisioning of revolving fund and Community Investment Fund (CIF) to take up livelihoods activities. Besides, NRLM has linked these SHGs to banks as well through its, SHG Bank linkage program for enabling them to access easy credit.

NRLM recognizes that the poor have multiple livelihoods and one of the key components of NRLM as envisaged in the NRLM Framework is enhancing and expanding the existing livelihoods of the poor. More than 70% of the rural poor are dependent on agriculture either as cultivators or as agriculture labour. Besides, livestock rearing is again a key livelihood of the poor. And in forest fringe areas NTFP is a major livelihood of with the poor, who mostly belong to tribal communities. The intervention strategy of NRLM for Farm based Livelihoods promotion is focused on strengthening these key farm livelihoods of the poor with the following objectives:

- Every poor household is supported on at least 2 farm sector livelihoods (agriculture, NTFP and livestock)
- Assured annual incremental income of more than Rs 50,000 per family per year after 2 years of intervention
- Year long food & nutritional security for the household created by themselves.
- Income streams throughout the year
- Creation of Social capital for agriculture, NTFP and livestock, from the best practitioners as extension workers

NRLM has been working strongly towards achieving these objectives and had launched Mahila Kisan Sashaktikaran Pariyojana (MKSP) and Ultra Poor Strategy for livelihoods promotion.

There is now a strong need to intensify the livelihood intervention under NRLM and all the states are expected to seriously drive this agenda.

Strategy and Implementation Plan

Under Farm Livelihoods interventions the core focus would be to promote sustainable agriculture, where the inputs are localized, risks are mitigated, productivity is enhanced, and food-nutritional security is ensured, hence net income of family is increased. In sustainable agriculture NRLM is focusing on agro ecology by promoting low cost sustainable practices such as Non-chemical Pest Management (NPM), Integrated Nutrient Management, inclusion of cultural practices, climate resilient practices, soil health improvement/ management, in situ water conservation, diversified poly crop model and promoting indigenous variety of seeds.

The interventions around NTFP are focused on building the capacity of the community in modern harvesting and post harvesting techniques to increase their income, promoting value addition of NTFP to ensure higher returns, developing value chain, promoting regeneration of NTFP species to improve the bio diversity and enhanced productivity, introducing better cultivation practices etc.

NRLM recognizes the importance of livestock especially the small ruminant and poultry in the livelihoods of the poorest and started developing strategy to integrate livestock in the primary sector livelihood strategy of NRLM. Livestock not only contributes to the income stream of the households and enhances the nutritional status of the rural poor household but also plays a vital role in conserving the bio-diversity. Besides, promotion of livestock helps in meeting the need of draught power, farmyard manure, and organic inputs requiring cow dung and urine etc. Major intervention outcomes envisaged are reduction of morbidity and mortality of livestock and thereby improving the body weight gain and productivity. NRLM would be engaged in aligning livestock activity as an integral part of farm sector livelihoods through community based institutions and creating a cadre of community service providers for delivering livestock and animal husbandry related services at the door step of the SHG members.

The visions have been developed for a ultra-poor household who have been intervened with and also for a village where the intervention has been taken up

a. Household Level

- 36X36 model for round the year household nutritional security and regular income as well.
- Homestead kitchen garden should be there which would be a replica of 36X36 model on smaller plots (2 cents or decimal of land).
- Preparation and usage of Beejamruth etc. for seed treatment and Ghanjeevamruth for soil fertility management.
- Preparation and usage of bio-pesticides such as Agnayastram, Neemastram and Brahmastram. A minimum of 2 bio-pesticide usage will be taken for the adoption of the activity.
- NADEP/Vermi compost pits for improving the soil texture and bio-mass.
- SRI/SCI
- Azolla pits
- Sustainable agriculture/ Cultural Practice for pest management as trap cropping, bund cropping, bird perches, sticky traps etc.
- For in-situ moisture conservation practices like mulching and 5% model (i.e. corner pits).

b. Village Level

- NPM shop
- Custom Hiring center (CHC)
- Regular farmer field school (FFS)
- Compact, contiguous block/patch of land
- Pashu Sakhi
- Seed bank
- Wall writings and boards
- Maintenance of records
- VO sub-committee
- Producers Group
- At least one pico-projector for every group of 5 villages

It has been envisioned that there will be social capital in every village in agriculture, NTFP and livestock, who are Community Best Practitioners (CBP). It has also been envisioned that every household receives at least 2 supports in primary sector livelihoods (agriculture, NTFP and livestock).

SRLM ACTION PLAN

All the states would now start livelihoods interventions in all the intensive blocks immediately in a programmatic manner with clear strategy and implementation plan. A very specific strategy needs to be adopted for those Blocks where IPPE II exercise has been taken up. Based on the ground situation the SRLM can prepare a phasing plan of entering villages to saturate the Block.

The strategy is expected to be developed by SRLMs by adopting few guiding principles:

- Start with the vulnerable and deprived households (refer SECC data) –landless, small and marginal SHG members, Women headed household, widow, single women
- Mobilize them into their institutions-producers' groups
- Intensive engagement with them-promote Framers' Field School
- Focus on building the capacity of the poor to enable them becoming self-reliant
- Build Social Capital- create a cadre of Community Resource Persons (CRPs) out of the best practitioners who will be the vehicle for scaling up in new areas
- Address needs of entire livelihood basket and integrate Agriculture, livestock and Non Timber

- Focus on convergence and partnership for assetization, capacity building, knowledge management etc.
- Focus on sustainable climate change resilient practices which are local and scalable
- Scale up the successful models

Some of the important components of the roll out of farm livelihoods interventions by the SRLM would be:

- **Identification of Blocks and villages:** Each SRLM should plan the interventions in every Intensive Block. Within the Block state may work out a villages phasing plan and identify villages based on few objective criteria like extent of social mobilization, disbursement of RF and CIF, quantum of bank linkages, demand of assetization under IPPE II etc.
- **Putting a professional team in place at Block and State level:** Each state would position a professional team comprising professional from sustainable agriculture, Livestock and NTFP background.
- **Identification of Community Resource Persons:** The core strategy of intervention would be to deploy a team of Community Best Practitioners of agro ecology in every intervention village. This would require a large number of trained CRPs for reaching the scale that each state has to achieve. SRLMs may closely work with the MKSP partners from their state to identify and train a large pool of CRPs. A detailed list of each CRP and their deployment details may be maintained by the state.
- **Identification of resource persons for training of CRPs:** All the identified CRPs are to be trained intensively in various aspects of agro ecology. Besides, they are also to be trained in the use of audio visual aids like pico projectors while training. Therefore, each state would develop a pool of resource persons for training the CRPs who can be selected from MKSP partners, KVKs, NGOs and line departments. Community training is a very specialized area and necessary care must be taken while selecting the trainers. For training on audio visual aids, partnerships may be explored with NRLM Support Organizations.
- **Development of training modules:** To train the CRPs and also the community a large amount of training material would be required to be developed. Each SRLM has to prepare the training modules for which support may be taken from the MKSP partners, KVK, line departments and other resource organizations. NRLM has also developed a training handbook on Sustainable agriculture which is uploaded in our website. The same may also be used for the same.
- **Organizing training for TOT and CRPs:** The cutting edge for implementing the livelihoods strategy would be the deployment of highly experienced and properly trained CRPs chosen from among the community best practitioners. Therefore, the TOTs and the CRPs should be given repeated doses of training and every SRLM should prepare monthly and yearly training calendar for the same. These trainings should be organized preferably in the areas where field level demonstration can be arranged.
- **Preparation of annual action plan:** Each state has to prepare Annual Action Plan outlining the detailed action plans.

Implementation Outline

Geographic coverage

It is logical and expected that the livelihoods interventions are initiated in all the intensive blocks including resource and partnership blocks where IB and CB activities have been started.

A large number of poor SHG members are going to be benefitted through improved agriculture assets from MGNREGA in the Blocks where IPPE II exercise has been taken up and NRLM has to work on enhancing the skills and capacities of the beneficiaries to maximize the utilization of these

Therefore, every state would prepare a specific Annual action Plans for livelihoods for all Intensive Blocks, both IPPE II and non IPPE II. In each of these Blocks every village where the Village Organization (VO) has been formed to be identified for the intervention.

All future MKSP-AAP proposals and proposals under Livelihoods Special Fund should preferably be concentrated in these intensive Blocks. Exceptions may be made in case of distressed districts.

Human Resources

The human resources required driving interventions of such large magnitude and high intensity and which is to be accomplished in a time bound manner needs to be of very high quality and the importance of hiring or positioning the right kind of people cannot be overlooked. There has to be proper mix of academic excellence with right attitude and in depth experience of handling grass root implementation challenges.

Block Team:

In each Block three people should be positioned to drive the livelihoods interventions. One Livelihoods Anchor Person, who would be the Block anchor person, has to be from agriculture or animal husbandry background with 2-3 years of experience. S/he would be managing the field implementation of the program including technical assistance, training and capacity building, formation of producers' organization. One person who has knowledge of supply chain management i.e. S/he has to look after market linkages and also to follow up on IPPE II. Another person would be looking after MIS, and financial matters including CIF disbursement.

State Team

The state team would be led by a State Project Manager (SPM) - livelihoods. S/he has to be from Agriculture, Animal Husbandry or allied field with combined experience of 7-10 years including 2-3 years of field implementation experience at the grassroots. The responsibility of a SPM would include high quality technical assistance provisioning to the community members, developing training modules, developing partnerships, developing market linkages, maintenance of MIS and reporting etc. S/he would be supported by two to three Program Managers/Project executives, one of them being an agriculture/animal husbandry expert (should complement the qualification of SPM) and the other an expert in development of training modules for agriculture interventions. Based on the size of the state and number of intensive blocks the team may be supported by one or two young professionals.

Monitoring

Every state would give adequate emphasis on developing a strong web based MIS so that the progress of the interventions is tracked on a day to day basis. MIS may focus on capturing the following parameters:

- No of SHG members engaged in the interventions
- No of Women producer's groups formed
- No. of women CRPs identified
- No of SHG members trained in the practices in agriculture, livestock and NTFP
- No. of women external CRPs groomed
- No of farmers adopted the new practices and continued in subsequent years
- No of acres under the new practices
- No of HH with kitchen garden
- Extent of benefits accruing to SHG members

This is an indicative and not an exhaustive list.

Besides, the necessary steps should be taken to evaluate the following outcomes:

- Increase in production and productivity
- Reduction of the input cost
- Increase in market linkages

Again this is an indicative list and not an exhaustive one.

Funding:

- All the training and capacity building related expenditure may be budgeted under IBCB budget head of NRLM/NRLP.
- Priority should be given while preparing MCP to those HH who are planning for assetization to take up these farm Livelihoods interventions. Besides, VO can set up Common Facility centre, Tool Bank, seed Bank from the CIF.
- In addition SRLM can submit their farm intervention plan through MKSP-AAP route.