Guidelines on implementation of livestock Clusters

DAY-NRLM

TABLE OF CONTENTS

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 Bookmark not defined.	under backyard poultry system)Error!
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 le	evelError! 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 Runne	er)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 Sate 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 memberss, 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, mudra 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

REFERENCE

- 1. https://newsonair.com/2022/11/28/focus-on-animal-husbandry-for-enhanced-farmers-income/
- 2. <u>https://www.hilarispublisher.com/open-access/duck-farming-fascinating-option-in-india-2157-7579.1000181.pdf</u>
- 3. http://dadf.gov.in/sites/default/filess/20th%20Livestock%20census-2019%20All%20India%20Report.pdf
- 4. https://www.krishisewa.com/articles/livestock/414-duck-farming.html
- 5. https://www.pashudhanpraharee.com/modern-duck-farming-practices-in-india/#:~:text=Duck%20farming%20occupy%20an%20important,by%20about%2018%2D20%20g.
- 6. https://www.indiaagronet.com/indiaagronet/poultry_management/CONTENTS/duck.html
- 7. http://cpdosrbng.kar.nic.in/DUCK%20FARMING%20GUIDE.pdf
- 8. https://www.ijcmas.com/6-12-2017/A.%20Roy,%20et%20al.pdf
- 9. http://nexusacademicpublishers.com/uploads/files/JAHP_5_2_39-43.pdf
- 10. <u>https://pdfs.semanticscholar.org/d6a6/ab3924f5f94cc0a0ce4e88d69c7eb28</u> 1ccc2.pdf
- 11. http://www.researchjournal.co.in/online/RKE/RK%20Eng%20%20%209%2 http://www.researchjournal.co.in/online/RKE/RK%20Eng%20%20%209%2

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		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	-
Mother unit		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	Pashu Sakhi

- a. **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.
- b. **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.
- c. 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, vitamines 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	Particulars	Ownership
	area		
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	1
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	Pashu Sakhi

Duck raising is a lucrative livestock industry in the globe and at the same time is an incomegenerating 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)

- a. **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
- b. **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.
- c. 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
В3.	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		Year 1		
	Unit No. of		Unit Cost	Value
		Units	(INR)	(INR)
Capital Expenditure				
Hatchery unit with other machinery & accessories	Number	1	200,000	200,000
(2080 eggs)				
2 KVA inverter with solar support	Number	1	150,000	150,000

Platform & Platform & an	nother establishment	Number	1	50,000	50,000
Construction of Building	for Hatchery (20X10 Sc	1. Number	200	1,000	200,000
ft)					
	Total capita expenditure	al			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 packagin	g Number	466	20.0	9,318
Total Expenditure Costs		•			5,61,702
Gross Profit					1,37,178
Depreciation (machinery/e	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
В.	Recurring cost				
B1.	Cost of day-old chicks	No.	30	2,000	60,000
B2.	Feed Cost	Kg	32	500	16,000
В3.	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 / 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.	2,000	1,250
	25/- for local chicken		
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	
В	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
С	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 mandays x Rs. 150/- per Man-day = Rs. 6750.00		3,375
	Total variable cost	8042.5	5,950
III	Fixed cost		
A	Land	with farmer	with farmer
В	Low-cost poultry shed made with locally available material		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
В	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

NORSERI				
A. Fixed cost	Kids - L	Kids - Less than 14-15 kg kids		
	weight	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	360	8640
concentrate for 120 days in a year			
B4. Health care cost	100	10	1000
B5. Grazing charges@Rs 100 per month per kids or fodder	100	10	1000
cost			
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

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		Cost
				units	
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		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		Nine goats will provide 14 kids in each parturition in 2 years, a total of 40 kids, 75 gm concentrate feed per kid		540	16,200
8	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		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
В	Other costs				
1	Interest on capital	12% per year for two years			48,721
	Total B				48,721
	Total (A+B)				2,51,725

\mathbf{C}	Receipts				
1	Sale of 13-Month-old	The average weight of 16 Kg	10,000	27	2,70,000
	27 goats				
2	Sale of 6-month-old	The average weight of 9 Kg	8,000	13	1,04,000
	kids				
3	Rate of adult goat &	Goats & buck purchase initial can be	12,000	10	1,20,000
	buck	used for one more year			
4	Sale of manure	Approx. 2 tons	5,000	2	10,000
	Gross Receipts				5,04,000
	Net profit in 24				2,52,275
	Months				
	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% agribyproducts)		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)		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 2 nd 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 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	(NS)		
Δ1 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)		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	No of	Cost (Rs)
	(Rs)	units	
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 -	5	3750	18750
concentrate (50% concentrate + 50% agri-byproducts)			
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	300	120	36,000
mating per boar per week ie. 120 mating @ Rs. 300 per mating	5		
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	5	11406	57,030
Rs/Kg - concentrate (50% concentrate + 50% agri- by	-		
products)			
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	300	500	150,000
ie. 100 mating per boar per year @ Rs. 300 per mating			
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 2 nd year onward			7998
Value of parent stock (available with farmer as insurance	05	15000	75,000
against natural disasters and hard times).			

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 (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- by-products) for 2 days		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		150	30,00,000
Gross Receipts			30,00,000

Net	receipt(C-B)	excluding	establishment	and		7,38,000
hous	ing cost					7,30,000
Mon	thly income		_	•		61,500

ANNEXURE XI: BUSINESS PLAN FOR HOUSEHOLD POST MOTHER UNIT AT HOUSEHOLD LEVEL

Econo	omics 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
В3.	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 o depreciation	f			40,900

Initial investment required p	per unit Per Unit	3,13,900

Particulars	Year 1			
	Unit		of Unit Cost	Volue
	Omt	Units	(INR)	(INR)
Conital Ermanditure	1	Omts	(IINK)	(IINK)
Capital Expenditure	NT la a			
Hatchery unit with other machinery & accessories (2080 eggs)	sinumber	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		200	1,000	2,00,000
	number	200	1,000	
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	12	7,000	84,000
	months			
Hatchery assistant	Person	12	4,000	48,000
	months			
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	Ī		Ì	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.

	Scheme Component	Activities Supported	How to apply	Eligible entities	Assistance
1	Establishment of	For establishment of		Individuals / Self	
		Parent Farm, Rural		1 1	subsidy up to
		Hatchery, brooder			the subsidy
		cum mother unit for			limit directly
	Rural Poultry	Production of			to the
		Hatching Eggs, and			beneficiary
		Chicks and rearing of		1	account
		the said chick up to			through SIDBI
		four week in the			
		mother unit (with		` /	installments.
		minimum 1000 parent	Eligible Entities	Section 8	
		<i>y</i>			Subsidy Limit
2	Establishment of	For establishment of	application through		for each unit:
	Entrepreneur for	sheep and goat	the NLM Portal in	Eligibility	Poultry
	breed	breeding unit with	1		Project: Rs. 25
	development in	minimum 500 females	Expression of	Entrepreneurs/	lakh,
	small ruminant				Sheep & Goat
	sector (sheep and				Project: Rs- 50
	goat farming)		The subsidy amount		
3	Promotion of	For establishment of a	will be channelised	obtained training	Pig project:
	Piggery	breeder farm with	through the Small	or have trained	Rs. 30 lakh
	Entrepreneur	minimum 100 sow and	Industries	experts or have	
	1	25 boars breeding	Development Bank	sufficient	Feed and
		animals from the	of India (SIDBI).	experience in the	fodder – Rs 50
		Central or State	The subsidy will be	relevant field in	Lakh
			provided by SIDBI		
		university farms or	through the lending	running the	
		local farmers with	scheduled bank or	project or have	
		high genetic merit.	Financial	technical experts	
4	Entrepreneurship	For establishment of	Institutions to the	with sufficient	
	activities in feed	fodder value addition	subsidy account of	experience in the	
	and fodder	such as	beneficiaries.	relevant field of	
		Hay/Silage/Total		managing and	
		Mixed Ration(TMR)/	The beneficiaries	running the	
		Fodder Block and	interested in taking	project.	
		storage of fodder,	benefit under the	- -	
		infrastructure	entrepreneurship	II. Have got the	
		development related to	project in self-	loan sanctioned	
		hay/silage at village	financing mode need	for project by the	
		level/ Fodder blocks	to provide Bank	bank/financial	
	<u> </u>	10.01/ 1 dadel blocks			

5	model for establishment of	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 For construction of cattle sheds, equipment, procurement of elite bull mothers etc. the entrepreneur will establish breed multiplication farm	Entrepreneur will formulate bankable proposal as per guidelines and submit directly to NDDB in response to Expression of Interest issued by the NDDB. Project will	furnished bank guarantee from scheduled bank along with appraisal of project for its validity by bank where it is holding the account. III. Should have Maximum own land or lease land where the project will be 2.00 crores. established. IV. Have all the relevant documents for
	Multiplication	bull mothers etc. the entrepreneur will establish breed multiplication farm (BMF) and produce elite heifers using sex sorted semen or IVF technology.	NDDB in response to Expression of Interest issued by the NDDB. Project will be implemented	established. IV. Have all the relevant documents for KYC

For detail guidelines visit Department's website www.dahd.nic.in.