



Government of Meghalaya

PIGGERY MISSION

**Meghalaya Livestock Enterprises
Advancement Society (MLEADS)**

FOREWORD



Shri. Conrad K. Sangma
Hon'ble Chief Minister of Meghalaya

In order to improve the economic and nutritional status of the Meghalaya's population, our government has decided to launch a Rs. 209 Crore Piggery Mission implemented by the newly formed Meghalaya Livestock Enterprises Advancement Society (MLEADS).

Over the next 3 years this Mission will enable Meghalaya to achieve self-sufficiency in pork production, reduce our out-of-state import burden by nearly Rs. 150 Crores annually and improve the incomes of over 25,000 households, totalling to an annual increment of Rs. 70 Crores across the state.

Moreover, with this Mission mode transformation of piggery sector we will reap many long term benefits with respect to quality enhancement, skill development, value addition. and input cost optimisation. Hand in hand with the people and government of Meghalaya, MLEADS will spearhead this transformative intervention in Piggery sector.

A handwritten signature in black ink, appearing to be 'Conrad K. Sangma'.

Conrad K. Sangma
Chief Minister of Meghalaya

FOREWORD



Shri. Prestone Tynsong

Hon'ble Deputy Chief Minister of Meghalaya
i/c Animal Husbandry and Veterinary Department

Meghalaya's gastronomical heritage has always given a position of prime importance to pork. Pig rearing has been an important source of livelihood for generations. The Piggery Mission, designed to bring about a step change in domestic pork production, promises to further our achievements in the sector.

By extending Rs. 200 crores as zero interest loans, the Mission will create and augment over 20,000 enterprises in the piggery sector. With interventions across the value chain, the Mission will provide a holistic overhaul of the sector. It will also open up more opportunities for export and food processing in the state.

Over the next Decade, this Mission promises to augment the value of piggery sector in the state by Rs. 700 Crores. With a robust, yet flexible, programme design and an agile and responsive implementing agency (MLEADS), the Piggery Mission holds the promise for a brighter tomorrow to the people of Meghalaya.

A handwritten signature in blue ink, appearing to read 'Prestone Tynsong', written over a blue ink scribble that resembles a stylized signature or a large 'X'.

Prestone Tynsong
Deputy Chief Minister of Meghalaya

Table of Contents

<u>INTRODUCTION</u>	5
<u>MISSION OVERVIEW</u>	8
OBJECTIVES	8
MISSION COMPONENTS	8
FUND DISTRIBUTION	9
FUND DISBURSEMENT MECHANISM	10
SOURCE OF FUNDING	10
FUND FLOW	10
FUND DISTRIBUTION WITHIN COOPERATIVES	10
DECADAL VALUE GENERATION	11
<u>BREEDING CUM FATTENING UNITS</u>	12
TECHNICAL ASSUMPTIONS	12
COST ESTIMATION	14
LOAN REPAYMENT	18
COMPONENT SUMMARY	19
<u>FATTENING UNITS</u>	21
<u>AUXILIARY SERVICES</u>	22
SLAUGHTERHOUSES	22
VENDING KIOSKS	22
FEED SUPPORT UNIT	22
CERTIFYING AGENCY	23
<u>PROGRAMME IMPLEMENTATION</u>	24
BENEFICIARY SELECTION	24
CONVERGENCE	25

Table 1: Demand Forecast	6
Table 2: Fund Distribution across components	9
Table 3: Annual Fund Disbursement	9
Table 4: Value Generated	11
Table 5: Value saved from imports.....	11
Table 6: Breeding cum Fattening Units	12
Table 7: Technical Assumptions.....	13
Table 8: Cost Assumptions	16
Table 9: Cost for Breeders	16
Table 10: Cost for Fatteners.....	17
Table 11: Loan Repayment.....	18
Table 12: Alternate Loan Patterns	19
Table 13: Breeding/Fattening Summary	19
Table 14: Breeding/Fattening Fund Distribution.....	20
Table 15: Fattening Component Summary	21
Table 16: Existing Cooperatives	24
Table 17: Target Beneficiary Distribution	25

Introduction

Pork is a major source of animal protein in nearly 90% of the North Eastern households. As per the Meghalaya State Development Report, pork constitutes 11.25% of the meat consumed in the State. However, domestic pork production is inadequate to meet the State’s requirements. Latest estimate show that while the annual consumption hovers over 15,000 Tons of pork, only 13,500 Tons are produced from live animals slaughtered within the state. There is reason to believe that 50% of the animals slaughtered within the state are procured as live animals at various of stages of growth from outside the state. This translates to a 8,250 Ton shortfall in pork production in the state. Furthermore, studies that show that there is significant unmet demand that could further increase the share of pork vis-à-vis other sources of animal protein. Therefore, the demand side factors to boost domestic pork production are considerable.

There is a strong preference to indigenous and crossbred breeds of pigs for consumption, as compared to exotic breeds. The average weight of the adult animal significantly varies in these three categories. Given the low weight of indigenous varieties (averaging 40 Kgs before slaughter), it is uneconomical to rear them at a large scale. However, the advantages higher weights of exotic breeds (averaging 120 Kgs before slaughter) suitable for Meghalaya are offset by the higher mortality rates, increased cost of medical care and vaccinations, and the strong culinary preference to local breeds. This positions crossbreeds at an advantageous position in terms of mortality, weight, and other rearing costs. The average crossbreed weight is 60 kgs of meat per animal. This is a conservative estimate and accounts for the fact that the share of concentrated feed in backyard pig rearing is minimal. The mortality rate of these crossbreeds during the weaning period is 10% and 5% during the fattening period. Given these estimates, the average shortfall of crossbred piglets for domestic consumption within the State totals to 1,60,819 animals.

S.No	Description	Quantity	Units
1	Consumption	15,000	Tons
2	Population	35,00,000	Pax
3	Pork Per Capita	4.3	Kg
4	Production	6,750	Tons
5	Shortfall	8,250	Tons
6	Yield per pig	60	Kg
7	Pigs Consumed	2,50,000	Pigs
8	Market Price	300	Rs
9	Shortfall Value	2,47,50,00,000.00	Rs.
10	Shortfall Pigs	1,37,500	Pigs

11	Mortality Rate - Breeders	10%	
12	Mortality Rate - Fatteners	5%	
13	Reqd. Piglets	1,60,819	Piglets

Table 1: Demand Forecast

Pig rearing has historically been an integral source of livelihood for rural households. It is practiced mainly by small and marginal farmers and landless labourers to generate additional income. Pig rearing requires minimal initial investment; they are prolific breeders and efficient feed to meat converters compared to other livestock. Moreover, livestock rearing provides economic resilience to farming households as the animal can be readily sold at any stage of its lifecycle. Given these positive factors, pig rearing is a viable source of additional income to the 5 lakh rural households of the State. However, given the low mortality rate and skill requirement, fattening is the preferred activity for most households practicing piggery. This has resulted in a dearth of pig breeders within the state, causing excessive reliance on bordering states for piglet procurement. This input constraint significantly stunts the growth of piggery sector in Meghalaya.

In light of these factors, the State of Government of Meghalaya has decided to undertake a 3 yearlong Piggery Mission from FY 2021 to FY 2024 that will make the state self-sufficient in pork production, improve incomes of over 25,000 households, strengthen cooperative culture and credit extensions, and improve the nutritional status of the State’s population. The Mission will be funded by National Cooperative Development Corporation (NCDC), with the Meghalaya Livestock Enterprises Advancement Society (MLEADS) as the implementing agency. The Mission relies on creating self-sustaining economically viable breeding and fattening units across the State. The Mission aims to address input constraints by encouraging domestic feed production, creating village level veterinary service providers and providing large scale extension services. Creating hygienic slaughterhouses, vending kiosks and better transport infrastructure, are also focus areas of the Mission.

In order to improve economies of scale, encourage peer learning and develop a robust credit culture, the Mission will target cooperatives as units of operation. Loans, with 0% effective interest rate and term length of up to 8 years, will be extended to interested cooperatives that will in turn extend the amounts to individual entrepreneurs. A minimum of one veterinary service provider per cooperative will be trained under the Mission. Currently there are 100 cooperatives in the state that practice piggery, with 45 of them being exclusively involved in piggery. Additionally, there are 108 IVCs (Integrated Village Cooperatives) that rely on pig rearing as a source of income. The average membership strength of these cooperatives is 46. Through this Mission, MLEADS aims to increase the number of cooperatives in the sector to 1,000, including auxiliary activities such as feed manufacturing, slaughtering and operating vending kiosks.

This document will serve as the primary reference for Meghalaya’s Piggery Mission between 2020 – 2026. Every year an annual review of the progress of the Mission are to be included as addendums along with any necessary amendments in the execution process. This document is to be supplemented by a detailed process map that will include the Mission KPIs and the yearly targets for each block, and a package of practices to be used in trainings. The next section of this document provides an overview of the Mission and its various subcomponents, each of which are detailed further in the subsequent sections. The last section of the document discusses the administrative requirements for executing this Mission and provides estimates on beneficiary selection across the State.

Mission Overview

Objectives

- To set up 2,513 nuclear breeding units with 4 sows and 1 boar each spread across 503 cooperatives
- To set up 21,359 fattening units with over 4 pigs each spread over 921 cooperatives
- To set up 23 state of the art slaughterhouses – One per 2 blocks in the state
- To fund the upgradation of 6 pork vending kiosks in each block
- To create one feed manufacturing unit per district
- To induct 101 vehicles for transport of live animals and 3 refrigerated vehicles for movement of pork in the State
- To set up a state level certifying agency

Mission Components

The Mission has 6 subcomponents as described below:

1. **Breeding Cum Fattening Units**

503 Cooperatives will be selected with 5 Breeders and 30 Fatteners each. Each Breeder will be provided financial and technical assistance to set up units with 4 Sows and 1 Boar. Each fattener will be assisted to set up an operating unit with 4 animals every year. One veterinary service provider will be trained in each of the cooperative so as to provide continuous extension services. After 2 years of operation, 101 of these cooperatives will be chosen based on their performance, to avail loans for procuring vehicles for transporting animals, feed and other materials. Given the risk associated with breeding activity, the Mission will also develop a unique insurance mechanism that will allow procurement of replacement animals (piglets) in case of untimely death. An annual premium of 5% of the animal cost at purchase will be collected annually from every breeder.

2. **Fattening Units**

419 additional Cooperatives will be inducted/set up with 15 fatteners each. Every fattener will be provided financial and technical assistance to rear 4 animals annually.

3. **Slaughterhouses**

23 cooperatives located in urban and peri-urban blocks will be funded to set up state of the art slaughterhouse facilities. After 2 years of performance, 3 of these cooperatives based on their performance will be provided financial assistance to procure refrigerated transportation trucks.

4. Vending Kiosks

276 established small-scale pork vendors across the state will be provided low-cost loans to upgrade their vending kiosks. These vendors will be accessed through credit cooperatives in each district.

5. Feed Manufacturing

One cooperative per district will be selected to undertake feed manufacturing activities. MLEADS will assist them in established input procurement networks as well as encourage special, but not exclusive, relationships with the cooperatives set up under the first 2 subcomponents.

6. Certifying Agency

A state level certifying agency, under Bio-Resources Development Centre (BRDC) will be set up to verify the quality of animals before slaughtering as well as certify pork products produced within the state.

Fund Distribution

Component	Unit Cost	Units	Beneficiaries	Total
Breeding/Fattening	₹29,21,019.00	503	18,092	₹1,46,79,82,867.32
Slaughterhouses	₹10,00,000.00	23	115	₹2,30,00,000.00
Transport Vehicle	₹8,00,000.00	101	201	₹8,04,09,356.73
Pork Vending Kiosks	₹1,00,000.00	276	828	₹2,76,00,000.00
District Level Feed Support	₹30,00,000.00	11	110	₹3,30,00,000.00
Fattening	₹7,93,646.40	419	6,282	₹33,23,78,106.73
Certifying Agency	₹60,00,000.00	1	10	₹60,00,000.00
Cold Chain Transport	₹30,00,000.00	3	12	₹90,00,000.00
Training Cost				₹5,50,23,959.65
Insurance				₹1,53,06,674.89
Staffing			61	₹2,33,85,600.00
Administrative Cost	₹2,09,47,50,000.00	1.0%		₹2,16,63,434.69
			25,711	₹2,09,47,50,000.00

Table 2: Fund Distribution across components

Year	Project Cost
Y1	₹52,94,93,776.62
Y2	₹70,23,79,233.60
Y3	₹84,80,82,589.88
Y4	₹73,97,199.95
Y5	₹73,97,199.95
Total	₹2,09,47,50,000.00

Table 3: Annual Fund Disbursement

Fund Disbursement Mechanism

Source of Funding

The primary source of funding for the Piggery Mission is from NCDC. As per the State Government's agreement with NCDC, a total of Rs. 209.48 Crores will be provided by NCDC for the execution of the Mission. Rs. 55,12,50,000 of this is provided as subsidy with the rest of the amount as loan. The interest rate offered by NCDC is 10.25% with a one year moratorium on repayment. Under the Mission, nearly Rs. 192 Crores of this amount will be extended to various cooperatives, including the Rs. 75 Crores that is provided as grant.

Fund Flow

The following graphic explains the mechanism of fund flow in the Mission.

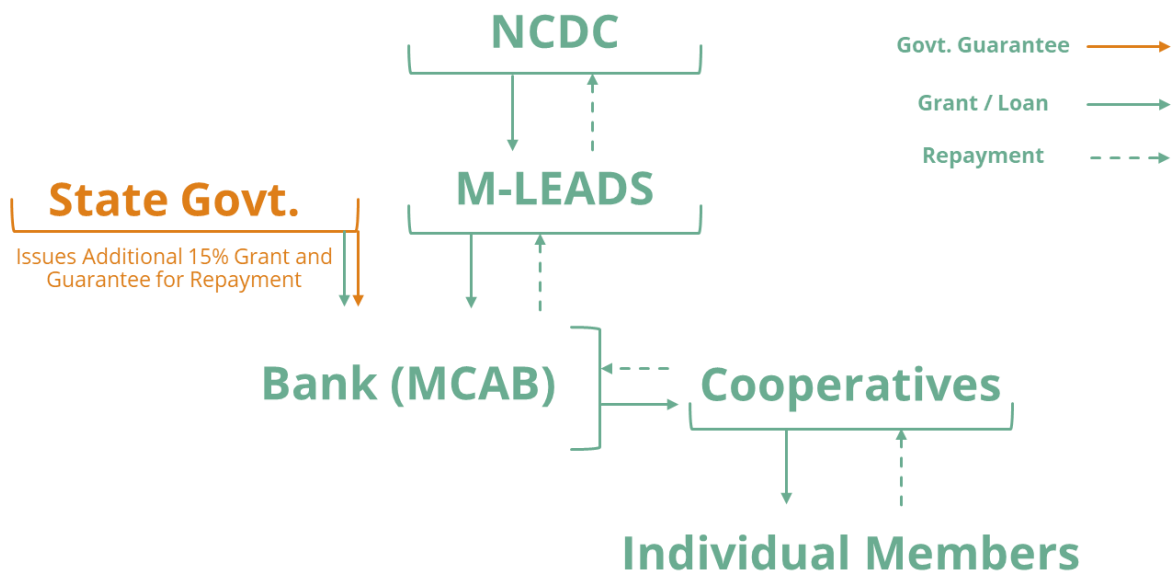


Figure 1: Fund Flow Mechanism

The State Government will provide an additional Rs. 20 Crores as grant under the Mission. The funds will be disbursed through a nodal bank. Meghalaya Cooperatives Apex Bank will be the nodal bank for extending these loans. In addition, for the loans extended in the first year of execution the State Government will also guarantee the loan repayments. Both the nodal bank and the State Government's role as a guarantor will be reviewed on a quarterly basis from FY 2022.

Fund Distribution within Cooperatives

Since the Mission is entirely executed with cooperatives as the primary beneficiary, the loans will be directly extended to the cooperative. However, to preserve individual initiative in the enterprises, the cooperatives are required to pass on a large share of the loan to individual members that will own and operate the breeding or fattening units. In case of vending kiosks and slaughterhouses, the individual entrepreneurs can access the loans through credit

cooperatives. At the cooperative level, activities such as procurement, marketing, insurance and training, etc. can be undertaken to better unlock synergies. There is enough room in the Mission’s design for developing customised relationships between members and the cooperative to ensure timely repayment and long term financial viability. Personnel from the Registrar of Cooperative Societies office will oversee this crucial aspect of developing robust agreements between members and cooperatives to ensure credit discipline.

Decadal Value Generation

Through this Mission, over 25,000 households involved in piggery will see an increased annual income. The following table summarises the expected decadal value of this Mission.

	Beneficiaries	Additional Annual Income	Repayment per person	Decadal Value
Breeders	2513	₹87,134.65	₹2,50,639	₹1,55,97,10,003.92
Fatteners	21359	₹18,391.68	₹50,859	₹2,84,19,47,189.42
Butchers	115	₹2,73,750.00	₹1,92,248	₹29,27,03,987.59
Kiosks	828	₹2,19,000.00	₹32,041	₹1,78,67,89,785.10
Service Providers	716	₹60,000.00	₹0	₹42,93,49,122.81
				₹6,91,05,00,088.84

Table 4: Value Generated

	Import Value - Pork	Import Value - Pigs	Annual Import Value
Value Saved from imports	₹45,00,00,000.00	₹1,01,25,00,000.00	₹1,46,25,00,000.00

Table 5: Value saved from imports

Through the Piggery Mission, we will provide an average annual income increase of Rs. 69 Crores in the sector as well as produce Rs 147 crores worth of pork annually within the state.

Breeding Cum Fattening Units

Over 500 Cooperatives are to be chosen as breeding cum fattening units under this Mission. Each cooperative will have 5 breeders and 30 fatteners. The following table shows the number of fatteners and breeders required under this subcomponent.

S.No	Description	Quantity	Units
1	Shortfall Piglets	1,37,500	Piglets
2	Mortality Rate - Breeders	10%	
3	Mortality Rate - Fatteners	5%	
4	Reqd. Piglets	1,60,819	Piglets
5	Piglets Per Farrow	8	Piglets
6	Farrow Per Year	2	Farrow
7	Reqd. Breeding Sows	10,051	Sows
8	Sows per Boar	4	Sows
9	Reqd. Breeding Boars	2,513	Boar
10	Sows per Breeder	4	Sows
11	Reqd. Breeders	2,513	Breeders
12	Breeders Per IVCS/Coop	5	Breeders
13	Number of IVCS/Coop	503	IVCS/Coop
14	Piglets per fattener	4	Pigs
15	Fatteners per Breeder	6	Fatteners
16	Coops Targeted	503	
	Y1	168	33%
	Y2	168	33%
	Y3	168	33%
17	People Impacted	17,590	

Table 6: Breeding cum Fattening Units

Technical Assumptions

While the Mission allows for flexibility in terms of breed selected by different cooperatives. There are some common technical assumptions across the breeds that are crucial to estimate the cost and income potential of breeding and fattening units. The following table summarises the key technical assumptions considered in the design of this Mission.

S.No.	Description	Units	
1	Weaning period	2	Months
2	Lactating Period	2	Months
3	Pregnancy Period	4	Months
4	Age of Piglets on Sale	2-3	Months

5	Number of Farrows Per Sow	<i>10</i>	Self-Replace
6	Age of Pigs on Sale	<i>12</i>	Months
7	Concentrate Feed Req'd. for Breeders:		
	Adults	30%	
	Growers	10%	
8	Concentrate Feed Req'd. for Fatteners	10%	
9	Sows Bought in First Batch	2	3 months old
10	Sows Bought in Second Batch	2	
11	Time Between Two Batches	3	Months
12	Age at First Servicing	9	Months

Table 7: Technical Assumptions

Each breeder will procure animals in 2 batches, the first batch with 2 sows and 1 boar (3 months old) and the second batch with 2 sows. This is done so as to stagger the weaning periods of the animals and reduce the infrastructure requirements. Since the initial animals are procured at their infancy, the breeders are expected to have the first batch of piglets for sale only at the end of the first year. The piglets will be sold after 2 months of weaning period. Given the reproductive cycle and mortality rates of crossbreed pigs, a breeder is expected to produce 57-58 piglets per year for sale. In order to reduce mortality related to inbreeding, the cooperatives will be encouraged to develop a boar exchange arrangement between the 5 breeders.

Given the current paucity of quality piglets, each cooperative will provide initial animals to its fatteners from its own breeding units. So, the fatteners of every cooperative will be onboarded only in the year 2 of their operation. Each of them will be provided 4 piglets from the breeding units.

Cost Estimation

S.No	Description	Units		Cost		Total	Remarks
1	Cost of Breeding Sow	4		3,000		₹12,000.00	3 Months Old
2	Cost of Breeding Boar	1		3,500		₹3,500.00	
3	Cost of Insurance Premium	1		5%	Annual	₹775.00	Only for adults
4	Cost of Transport - Pigs	5		100		₹500.00	
5	Cost of Vaccination						
	<i>Adults</i>	5		10	Per Month	₹10.00	
	<i>Weaners</i>	16		5	Per Month	₹5.00	Half of Sows Lactating at Any Point
	<i>Growers</i>	8		5	Per Month	₹5.00	One Farrow Left unsold between 2 - 3 months
6	Cost of Feed						
6a	Sow	3.5	Kg/day			₹883.12	Monthly
	Concentrate Feed	1.05		23	Rs/Kg	₹734.16	Monthly. Including IVCS Margin
	Kitchen Waste	2.45		2	Rs/Kg	₹148.96	Monthly
6b	Boar	3	Kg/day			₹756.96	Monthly
	Concentrate Feed	0.9		23	Rs/Kg	₹629.28	Monthly
	Kitchen Waste	2.1		2	Rs/Kg	₹127.68	Monthly
6c	Growers (2-3 Months)	1	Kg/day			₹124.64	Monthly
	Concentrate Feed	0.1		23	Rs/Kg	₹69.92	Monthly

PIGGERY MISSION

	Kitchen Waste	0.9		2	Rs/Kg	₹54.72	Monthly
6d	Growing Boars & Sows	2	Kg/day			₹249.28	Monthly
	Concentrate Feed	0.2		23	Rs/Kg	₹139.84	Monthly
	Kitchen Waste	1.8		2	Rs/Kg	₹109.44	Monthly
6e	Growers 3-6 Months	1.5	Kg/day			₹186.96	Monthly
	Concentrate Feed	0.15		23	Rs/Kg	₹104.88	Monthly
	Kitchen Waste	1.35		2	Rs/Kg	₹82.08	Monthly
6f	Growers 6-12 Months	2	Kg/day			₹249.28	Monthly
	Concentrate Feed	0.2		23	Rs/Kg	₹139.84	Monthly
	Kitchen Waste	1.8		2	Rs/Kg	₹109.44	Monthly
7	Cost of Equipment - Breeders	500		1		₹500.00	
8	Cost of Equipment - Fatteners	200		1		₹200.00	
9	Cost of Equipment - IVCS/Coop	30000		1		₹30,000.00	
10	Transport Vehicle IVCS/Coop	0		1		₹0.00	
11	Fuel Charges	0		30.4		₹0.00	
12	Labour Charges - IVCS/Coop	0	Monthly	1		₹0.00	
13	Infra Requirements	500	Rs/Sq. Ft.				
13a	Breeders					₹1,82,000.00	
	Boar	50	sq. Ft/animal	1		₹25,000.00	
	Lactating Sow + Piglets	70	sq. Ft/animal	2		₹70,000.00	
	Growers (2-3 Months)	8	sqft/animal	8		₹32,000.00	
	Dry Sow	30	sqft/animal	2		₹30,000.00	
	Feed Storage	50	sqft	1		₹25,000.00	
13b	Fatteners					₹30,000.00	

PIGGERY MISSION

	Growers	30	sqft/animal	4		₹60,000.00	
	NREGA Convergence	50%				₹30,000.00	

Table 8: Cost Assumptions

In addition to the above assumptions, the market price of each piglet is assumed to be Rs. 3,000, while the price of a live adult animal with 60 Kgs of meat is assumed to be Rs. 9,000.

Breeders					
S.No	Item	Share	Total	Loan	Grant
1	Infra	70%	₹1,82,000.00	60%	40%
2	Equipment	0%	₹500.00	60%	40%
3	Insurance	0%	₹775.00	60%	40%
4	Feed	23%	₹59,450.24	60%	40%
5	Medicines/Vaccination	1%	₹2,520.00	60%	40%
6	Initial Animals	6%	₹15,500.00	60%	40%
	Fixed Cost	76%	₹1,98,000.00	₹1,18,800.00	₹79,200.00
	Recurring Cost	24%	₹62,745.24	₹37,647.14	₹25,098.10
	Total		₹2,60,745.24	₹1,56,447.14	₹1,04,298.10

Table 9: Cost for Breeders

Fatteners					
S.No	Item	Share	Total	Loan	Grant
1	Infra	57%	₹30,000.00	60%	40%
2	Equipment	0%	₹200.00	60%	40%
3	Insurance	0%	₹0.00	60%	40%
4	Feed	20%	₹10,469.76	60%	40%
5	Medicines/Vaccination	0%	₹240.00	60%	40%
6	Initial Animals	23%	₹12,000.00	60%	40%

PIGGERY MISSION

Fixed Cost	80%	₹42,200.00	₹25,320.00	₹16,880.00
Recurring Cost	20%	₹10,709.76	₹6,425.86	₹4,283.90
Total		₹52,909.76	₹31,745.86	₹21,163.90

Table 10: Cost for Fatteners

Loan Repayment

Each breeder will be extended an amount of Rs. 2.6 Lakhs, while each fattener will be given Rs. 53,000. 60% of this amount will be a loan to be repaid over 8 years. Additionally, each Cooperative will be extended an amount of Rs. 30,000 (40% as grant and 60% as loan) to procure common equipment such as veterinary injections, weighing scales, basic training equipment etc. So, for a cooperative with 5 breeders and 30 fatteners, the total loan amount comes to Rs. 29.2 Lakhs. The interest rate offered for the loan component will be the same as that offered by NCDC, 10.25%. With a 8 year repayment period, including a one and a half year moratorium, these terms translate to an effective interest less than 0%, with 14 instalments of Rs. 1.95 Lakhs paid by a cooperative. The following table summarises the repayment details. For calculation of the Internal Rate of return, the monthly income of the breeders, fatteners and Cooperative have been estimated based on existing market prices.

1	Fatteners Per IVCS/Coop	30
	Coop - Fattener Loan	₹9,52,375.68
	Coop - Fattener Grant	₹6,34,917.12
	Each Instalment - Fatteners	₹3,912.23
	Coop - Repayment Fatteners	₹15,25,768.81
2	Breeders Per IVCS/Coop	5
	Coop - Breeder Loan	₹7,82,235.72
	Coop - Breeder Grant	₹5,21,490.48
	Each Instalment - Per Breeder	₹19,279.90
	Coop - Repayment Breeders	₹12,53,193.34
3	IVCS/Coop Loan	₹18,000.00
	IVCS/Coop Grant	₹12,000.00
	Each Instalment - Coop	₹2,218.25
	Total Repayment - Coop	₹28,837.19
4	Total Loan	₹17,52,611.40
	Total Grant	₹11,68,407.60
	TOTAL	₹29,21,019.00
	Each Instalment - Total	₹2,15,984.56
	Total Repayment	₹28,07,799.34
5	Interest Rate - Annual	10.25%
6	Repayment Period	8 years
7	Moratorium	1.5 year
8	Repayment Frequency	Twice a Year
10	Effective Interest for Coop	-0.49%

Table 11: Loan Repayment

To ensure that cooperatives with less than 35 members are also able to participate, the mission allows for 3 additional patterns of engagement as shown in the table below.

	Loan Amount	Grant Amount	Repayment Amount
2 Breeders x 10 Fatteners	₹6,48,352.85	₹4,32,235.23	₹10,38,704.13
3 Breeders x 15 Fatteners	₹9,63,529.27	₹6,42,352.85	₹15,43,637.60
4 Breeders 20 Fatteners	₹12,78,705.70	₹8,52,470.46	₹20,48,571.07

Table 12: Alternate Loan Patterns

The number of cooperatives targeted will have to be amended according to the uptake of smaller loans so as to achieve the pork production targets.

Component Summary

Under this Mission component Rs. 146 Crores will be extended to over 500 cooperatives. 60% of the amount will be extended as loans with the rest being provided as grants. The loans will be routed through the cooperatives which will impose a surcharge of 2% on the individual beneficiaries on their repayment amount. This will boost the average annual income of the cooperative by Rs. 10 lakhs in the long term.

	Breeders	Fatteners	Common	Cooperative Total
Fixed Cost	₹1,98,000.00	₹42,200.00	₹30,000.00	₹22,86,000.00
Recurring Cost	₹62,745.24	₹10,709.76	₹0.00	₹6,35,019.00
Loan	₹1,56,447.14	₹31,745.86	₹18,000.00	₹17,52,611.40
Grant	₹1,04,298.10	₹21,163.90	₹12,000.00	₹11,68,407.60
Total Repayment	₹2,50,638.67	₹50,858.96	₹28,837.19	₹28,07,799.34
Average Annual Income During Loan Period	₹59,712.03	₹10,211.39	₹3,342.76	₹6,08,244.59
Average Annual Income After Loan Period	₹87,134.65	₹18,391.68	₹0.00	₹9,87,423.67

Table 13: Breeding/Fattening Summary

This component of the Mission will be completely implemented in 3 years. The fund distribution pattern is as shown below.

Category	Cost	Share
Total	₹1,46,79,82,867.32	
Breeders	₹65,51,98,656.80	45%
IVC/Coop	₹1,50,76,754.39	1%

Fatteners	₹79,77,07,456.14	54%
Y1	₹29,35,96,573.46	
Y2	₹58,71,93,146.93	
Y3	₹58,71,93,146.93	

Table 14: Breeding/Fattening Fund Distribution

In addition to direct financial support for setting up these breeding cum fattening units, over Rs.5 crores will be spent on training the breeders of these cooperatives. Each breeder will receive a one week long training for the first 3 years of operation. Moreover, one veterinary service provider per cooperative will be identified and trained. The selected service provider will receive 2 week long training at the district Animal Husbandry training institute for the first 3 years.

The adult pigs of each breeder will also be insured under this Mission for a premium of 5% of the animal cost at procurement. This amount will be supplemented with a Mission allocation of Rs 2 Crores.

Based on rigorous performance monitoring during the first 2 years of the Mission, 101 of these 503 cooperatives will be eligible for availing the transportation loan of Rs. 8,00,000 to procure a truck. This will also be extended with 40% of the amount as subsidy and 60% as loan. The terms of loan repayment will be the same as those detailed in table 11.

Fattening Units

The second major component of the Piggery Mission is to establish 6282 Fattening Units across 419 Cooperatives. Under this component, each newly formed piggery cooperative will be provided financial assistance to develop 15 nuclear fattening units capable of handling 4 animals at a time. Since fattening is a less risky, less resource intensive activity compared to breeding, this component will target interested households that aren't currently undertaking any pig rearing activities. It has the potential to bridge any exclusion errors in the first component, which only targets households currently involved in piggery. To address the pressure on piglets procurement, this subcomponent will be executed in Year 2 and 3 of the Mission period after establishing enough breeding units to secure the supply of piglets.

The economics of these fattening units is nearly identical to those in the first component. Table 11 provides the cost estimation for the individual fatteners while Table 13 details their repayment burden. However, given that these are predominantly newly formed cooperatives, there is no provision for a 2% surcharge imposed at the cooperative level.

The following table summarises the key design elements of this component.

S.No	Description	Units	Total
1	Piglets Produced in Component 1	Piglets	1,60,819
2	Piglets Consumed in Component 1	Piglets	60,307
3	Piglets remaining	Piglets	1,00,512
4	Target for Component 2		25%
5	Required Fatteners in Component 2	Pax	6,282
6	Fatteners Per Cooperative	Pax	15
7	Required Cooperatives	Coops	419
8	Cost of each Fattener		
	Fixed	Rs.	₹42,200.00
	Recurring	Rs.	₹10,709.76
9	Loan component	60%	₹31,745.86
10	Grant component	40%	₹21,163.90
11	Total Loan per coop	Rs.	₹7,93,646.40
12	Total Component Cost	Rs.	₹33,23,78,106.73
13	Total Beneficiaries	Pax	6,282

Table 15: Fattening Component Summary

Auxiliary Services

This section will summarise the activities to be undertaken in the last 4 components of the Mission.

Slaughterhouses

23 state of the art slaughterhouses will be set up across the state. There will be one slaughterhouse assigned to every 2 geographically contiguous blocks to ensure equitable distribution of resources. The financial support will once again be extended to willing cooperatives in the selected blocks. The beneficiary cooperatives will be selected mostly from the 503 cooperatives undertaking breeding cum fattening services under component 1. In addition to performance statistics, the geographical location of these cooperatives which determine their access to markets will be taken into account during beneficiary selection. An amount of Rs. 10,00,000 will be extended to each of the selected cooperative with 40% of the amount given as subsidy. The terms of loan repayment will be similar to those mentioned in Table 11. Since each of these units will employ a minimum of 5 people, over 100 unemployed youth will be provided livelihood opportunities through this component.

Out of these 23 cooperatives, 3 beneficiaries will be selected to avail a Rs. 30 lakh loan (including 40% grant) to purchase a refrigerated transportation truck. This will allow them to carry out basic value addition activities along with slaughtering.

Vending Kiosks

276 vending kiosks will be upgraded across the state in this component of the Mission. The beneficiaries will be existing pork vendors with established input and market linkages. A sum of Rs. 1,00,000 will be extended to each beneficiary to upgrade their kiosks to include refrigeration and weighing facilities. 40% of the assistance provided will be extended as grants. The loans will be routed through credit cooperatives operational in the state. The fiduciary relationship between the individual beneficiary and the lending cooperative will be determined on a case by case basis. Over 800 people will receive augmented incomes through this component.

Feed Support Unit

Concentrate feed forms a large share of the operating costs of both breeding and fattening units. Currently Meghalaya is almost completely dependent on feed from outside the state. This has resulted in a high unit cost of concentrated feed and reduced incentive to feed pigs quality concentrated feed. This is the primary reason for the low weights of the pigs produced in Meghalaya. To ease this input burden, the Mission has allocated Rs. 3.3 Crores to set up feed production units across the State. One cooperative per district will be selected to operate a feed

manufacturing plant. The beneficiaries can be Farmer Producer Organisations since most of the input materials for making concentrated feed is already grown in the State. Each unit will procure raw materials for feed mixing and undertake basic value addition and packaging activities before selling the feed. With MLEADS as the liaison organisation, they will be assisted in forming market linkages with the piggery cooperatives in the State.

Certifying Agency

Meghalaya's Bio-Resources Development Centre (BRDC) will be equipped as the certifying agency for pork products in the State. In addition to certifying live animals before slaughter, they will also certify processed pork products meant for local consumption and export to other states/countries. This will provide a stable environment for value addition activities and Food Processing Parks to take root in the State. Rs. 60 Lakhs is earmarked to procure the necessary lab equipment and provide certification training in BRDC.

Programme Implementation

MLEADS, a state owned society under the Animal Husbandry & Veterinary Department, will be the nodal organisation for the implementation of the Piggery Mission. A team of 61 people including 46 block level officials will be hired or deputized to carry out implementation of the Mission. The staffing cost will be shared equally between the Piggery and Milk Missions. Nearly Rs. 2.5 Crores is earmarked to cover the staffing requirements of MLEADS for the first 3 years of project implementation.

Additionally, Rs. 3 Crores has been set aside as administrative cost for MLEADS to carry out the recruitment, training, monitoring & evaluation, knowledge dissemination functions in the programme. This will cover incidentals and miscellaneous expenditures during the programme duration.

Beneficiary Selection

The current spread of Piggery Cooperatives is shown below.

Location*	Existing Coops	Membership Strength
Amlarem Sub Division	19	1,021
East Garo Hills District	4	357
East Khasi Hills District	31	1,421
Jaintia Hills District	38	2,494
North Garo Hills	11	269
Ri Bhoi District	26	760
Sohra Sub- Division	24	1,176
South Garo Hills District	19	919
South West Khasi Hills District	27	963
West Khasi Hills District	9	324
Grand Total	208	9,704

Table 16: Existing Cooperatives

** The locations are based on the administrative units of the Cooperation Department*

In order to ensure equitable development across the State, the new cooperatives that are to be created between FY 22 and FY 26 under the Mission are to be spread across the State. Given below is the tentative target beneficiary distribution across the three hill ranges in the State.

Location	Existing Coops	Y2	Y3	Y4	Y5	Breeders	Fatteners	Share
Garo Hills	34	50	73	70	70	785	6804	32%
Jaintia Hills	57	45	55	70	70	785	6804	32%
Khasi Hills	117	33	40	70	70	950	7794	37%
Grand Total	208	168	168	209	209	2520	21402	

Table 17: Target Beneficiary Distribution

Convergence

To achieve optimum results, the Piggery Mission has to utilise all available convergence opportunities. The implementation requires the efforts of multiple state and non-state actors such as Dept. of Planning, Dept. of Cooperation, Dept. of Animal Husbandry & Veterinary, Dept. of Community & Rural Development, State Rural Employment Society, Dept. of Agriculture, Meghalaya Basin Management Authority and various NGOs active across the State. Relevant personnel will be deputed to MLEADS to ensure appropriate policy and programme convergence.

Some of the primary avenues of convergence are:

- Infrastructure development under MGNREGS
- Beneficiary Selection through Bottom 20
- Income Augmentation through Organic Mission – Supply of Organic Manure
- Value Addition opportunities through PM – Formalisation of Micro Food Processing Enterprises Scheme