

# TECHNICAL REPORT ON NEH ACTIVITIES

उत्तरपूर्वी पहाड़ी कार्यकलाप  
का तकनीकी प्रतिवेदन



2022-23



ICAR-NATIONAL INSTITUTE ON FOOT AND MOUTH DISEASE  
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# Technical Report on NEH Activities

## 2022-2023



**ICAR-National Institute on Foot and Mouth Disease**

**Arugul, Jatni, Bhubaneswar**

**Odisha-752050**

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## Technical Report on NEH Activities 2022-2023



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## FOREWORD

ICAR-NIFMD, being a leading institute of animal science in eastern India works on holistic approaches for control of FMD and development of the technologies for FMD control. Our institute works in the North Eastern region for livelihood support through animal husbandry practices as an initiative to enhance farmers' income through a network of FMD regional centre and collaborating centres. In the current year, under NEH activities, a total of 86 programmes were conducted which includes FMD awareness camps, animal health camps & FMD vaccination programme, Input distribution, training on sample collection, diagnosis, capacity building of NEH women farmers, training of rural youth for intensive animal husbandry involving a total of 2690 beneficiaries including input distribution. Furthermore, a focused approach involving targeted aspirational district, block and villages was made for improvement of livelihood support of farmers with intervention on pig production to increase their income.



This report is a useful compilation of all such activities conducted in NEH region during the year 2022-23. I hope this will be of interest to the farmers, students, academicians and planners and other stakeholders in the NEH region in particular and country in general.

A handwritten signature in blue ink, appearing to read 'R.P. Singh'.

**(R.P. Singh)**  
Director, ICAR-NIFMD





## Technical Report on NEH Activities 2022-2023



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## Technical Report on NEH Activities 2022-2023







## 1. Executive Summary

NEH programme of ICAR-National Institute on Foot and Mouth Disease was implemented with the aim to support surveillance & epidemiology of FMD as per the institute mandate as well as to support the livelihood of the stakeholders in terms of rejuvenating the loss due to pandemic of African swine fever reported since 2020, where a huge number of pigs died due to the disease affecting the livelihood. For the year 2022-23, initially the participating Centres have conducted several activities across the respective states. However, afterwards the revised guidelines have suggested focusing the aspirational districts as well as focusing the activities to a single theme attached with the Key Performance Indicators associated with. Therefore, to strengthen the pig production on the north-eastern states, this scheme operated in the different villages of the Aspirational districts communicated from the council.

The FMD research Centre Guwahati, Assam being a regional Centre selected district West Karbi Anglong and the village Sumer Pathar. The Base line survey was conducted and many livestock based agriculture centric extension activities were carried out in the selected village Sumer Pathar for promoting livelihood amongst farming community. Initially, Participatory Rural Appraisal (PRA) and baseline survey identified livestock based agriculture centric activities for intervention in the village. Further, during the period of 2022-23, 3 capacity building training programmes, 3 awareness programmes, 1 animal health camp and 3 on farm testing / demonstration programmes were conducted. Also, under poultry and piggery sector development programme in the village, 700 Kamrupa chicks and 42 HDK75 piglets along with feed ingredients and mineral mixture were distributed amongst selected farmers in the

village. In the state of Manipur, the base line survey of the village Chakpikarong was conducted by FMD collaborating Centre Imphal which revealed various livestock based agriculture centric extension activities in the selected village contributing for promoting nutrition and livelihood amongst farming community. A Participatory Rural Appraisal (PRA) and baseline survey identified livestock based agriculture centric activities for intervention in the village. Further, during the period of 2022-23, FMD collaborating Centre Imphal, Manipur conducted 20 programme supporting 758 beneficiaries. In Mizoram State, Thingkah is a Village in Lawngtlai Block in Lawngtlai District selected for intervention. The Aizawal Collaborating Centre, Mizoram conducted several Animal health camps and Awareness programme activities in the selected village, for promoting nutrition and livelihood amongst farming community. Initially, Participatory Rural Appraisal (PRA) and baseline survey identified livestock based agriculture centric activities for intervention in the village. During the period, Aizawal Centre conducted 07 programme benefiting 198 Beneficiaries. In Nagaland, the village Beisumpuikam was selected and base line survey of the village was conducted as per KPI. During the period of 2022-23, FMD collaborating Centre Kohima, Nagaland conducted 07 programme supporting 57 Beneficiaries. In Tripura State, Dhalai district is selected as Aspirational district and Ganganagar Aspirational village. During the period of 2022-23, FMD collaborating Centre Agartala, Tripura conducted 26 programme benefiting 540 Beneficiaries. A total of 86 programmes were organized by the 6 NEH Centres during the year 2022-23 in terms FMD awareness activity at north-eastern hill region to spread awareness about the disease among the people of that region.





## 2. Introduction

The North-Eastern (NE) states of India are unexplored paradise and familiar for its natural diversity, ecology, culture and unique wildlife. These states are surrounded by Bhutan, China and Myanmar and almost cut off from the rest of India by Bangladesh excluding a narrow chicken neck shaped landmass. North Eastern Region (NER) comprises of states such as Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura which constitutes 8% of the country's geographical area. Flanked by hills and with the mighty river Brahmaputra slashing a central path between its north and south, the North East is bounded by the States of Manipur, Meghalaya, Mizoram, Nagaland, and Tripura with Assam comprising the heart with

Arunachal Pradesh lies to its north. Bangladesh and Myanmar lie to its southwest and east. The torrential Brahmaputra deposits its rich alluvial silt along the banks of the plains of Assam. Tropical rain forest, rich in flora and fauna, spread their arms across Arunachal Pradesh into Assam. North-East India has a population of over 45 million, which is 3.76% of whole India's population. The overall density of population is 159 persons/ km<sup>2</sup>. The most densely populated parts of this region are the plains of Brahmaputra and Barak in Assam, the Imphal plain of Manipur and the western part of Tripura. Total livestock population in eight states is 243 Lakhs (20<sup>th</sup> Livestock census) which is 4.54%, share of Indian livestock population.



Fig. 1: Map of North East India

During the year 2022-23, NEH component was implemented with the aim to support surveillance, epidemiology and control of FMD - as per the institute mandate as well as to support LHDCP on FMD activities to bridge the gap from the other part of the country. The goal was to accelerate the pace of FMD control activities of

the Region so that it may enjoy growth parity with the rest of the country. The institute created liaison with the Centres already working on FMD like, SAU (Regional research Centre at C.V.Sc., A.A.U., Khanapara) as well as State FMD collaborative Centres at Imphal, Aizwal, Kohima, and Agartala under Animal Husbandry



Departments of respective Governments. The institute has delineated the following technical programme after critical review of issues, prospects and challenges in animal husbandry for better outreach of the programme in NEH regions. Furthermore, a focused approach

involving targeted aspirational district, block and villages was made for improvement of livelihood support of farmers with intervention on pig production to increase their income looking to the devastation caused to piggery sector due to ASF.



**Fig. 2:** One Day Training Programme and Vaccination Camp organized by ICAR-DFMD NEH, Dirang center



### 3. Detail work plan

#### A. Activities identified for support LHDCP for control of FMD

NEH programme of ICAR-NIFMD was initiated with the aim to support surveillance activities & epidemiology of FMD in terms of FMD awareness as per the institute mandate as well as to support NADCP on FMD activities. Under this activity, during the year 2022, there were 7 participating Centres such as NRC on Yak (ICAR institute), Regional Research Centre at C.V.Sc., A.A.U., Khanapara, Guwahati (SAU) as

well as State FMD collaborating Centres at Imphal, Aizawl, Kohima, Itanagar, and Agartala under Animal Husbandry Departments of respective Governments. The collaborating Centres conducted various activities such as FMD awareness camps, training & workshops, capacity building, animal health camps & FMD vaccination in collaboration with ICAR-NIFMD as a part of the programme. The list of activities conducted during 2022-23 is listed in the following table 01.

**Table 01:** List of activities performed by the NEH FMD Regional & Collaborating Centres

Sl. No.	State	Date	Name of Programme	No. of farmers/stakeholders participated		
				Total	Male	Female
1.	Arunachal Pradesh	09-04-2022	Animal Health Camp	70	49	21
2.	Manipur	23-04-2022	Animal Health Camp and vaccination programme	239	126	113
3.	Mizoram	29-04-2022	Organization of State Level workshops on FMD	70	32	38
4.	Tripura	29-04-2022	Training of rural youth for intensive animal husbandry	25	9	16
5.	Assam	29-04-2022	Awareness cum training programme on FMD CP with special reference to disease prevention & disease control	30	0	30
6.	Tripura	30-04-2022	Animal health camp	30	18	12
7.	Manipur	08-05-2022	State level workshop on FMD organized by ICAR-NIFMD& AICRP-FMD-Manipur Centre	70	40	30
8.	Assam	10-05-2022	Awareness cum training programme on FMD CP with special reference to disease prevention & disease control	32	17	15
9.	Tripura	16-05-2022	Training on FMD Awareness	35	0	35
10.	Mizoram	23-05-2022	Animal health camp	30	19	11
11.	Mizoram	27-05-2022	Animal health camp	56	23	33
12.	Arunachal Pradesh	28 & 29-05-2022	FMD awareness cum vaccination programme for high altitude animals	26	15	11
13.	Mizoram	02, 23 & 24-06-2022	Awareness Campaign cum Distribution of Technical Literatures and Mineral Mixture	41	20	21
14.	Manipur	20-06-2022	State level workshop on FMD organized by ICAR-NIFMD& AICRP-FMD-Manipur Centre	121	30	91
15.	Tripura	20-06-2022	Training on FMD Awareness	20	15	5
16.	Manipur	04-07-2022	The second round of FMD vaccination organized by Directorate of Veterinary	262	87	175
17.	Manipur	21-08-2022	Animal Health Camp and vaccination programme	276	191	85
			<b>TOTAL</b>	<b>1433</b>	<b>691</b>	<b>742</b>





**Fig. 3:** Animal Health Camp at Kangkarnalla, Naharlagun organized by FMD Collaborating Centre, Itanagar



**Fig. 4:** Awareness Campaign cum Distribution of technical literatures and Mineral Mixtures at Zokhawthar Villages, Mizoram

#### **B. Activities identified for livelihood support through animal husbandry practices**

The North-Eastern region of India comprises of a high proportion of tribal people and pig rearing is an integral part of their way of life since time immemorial. Although they are the largest pig producers across the country, only 60% consumption can be fulfilled by the domestic production due to the high demand and consumption rate. North-east India are presently consumers about 70% of the country's total domestic pork production, so to fulfil the demand pigs are imported from the states of Punjab and Uttar Pradesh. Northeast India house

the state with the country's biggest pig population: Assam, which rears 2.1 million pigs out of India's 9.06 million, according to 2019 livestock census. Moreover due to the recent pandemic of African swine fever reported since 2020, a huge number of pigs died due to the disease. More than 40 thousand pigs died only in Assam since the disease reported. The disease is also deadly affected the farmers of Tripura, Manipur and Nagaland too. Most of the farmers are marginal and reared pigs in their backyards had lost their whole stock due to the disease. In order to strengthen the pig production on the north-eastern states, this NEH programme





operated in the selected villages of the Aspirational districts. As per the revised guidelines communicated to identify least performing KPIs of the aspirational districts, a new work plan was prepared in consultation with the Centres to conduct outreach activities at NEH region. The Centres have identified KPIs and designed work plan in consultation with ICAR-NIFMD in order to generate few success stories from the interventions taken and presented their proposals for funding support. On the basis of the work plans and realistic budgets submitted by the centers and availability of funds, 4 Centres

viz. RRC Guwahati & collaborating Centres of Imphal, Agartala & Kohima were selected for livelihood support in area of advanced pig farming at 1st phase and supported accordingly. They have conducted initial baseline survey and started interventions like Awareness camp, distribution of piglets/ other critical inputs (medicines, vitamins & feed supplements), capacity building programmes, periodic screening of important diseases and constant monitoring & supervision to generate success stories.

**Table 02:** The selected villages from the Aspirational districts for the 1<sup>st</sup> phase

Sl No	State	District	Block	Village
1.	Assam	West KarbiAnglong	Chinthong	Sumer Pathar
2.	Manipur	Chandel	Chakpikarong	Chakpikarong
3.	Nagaland	Peren	Jalukie	Beisumpuikam
4.	Tripura	Dhalai	Dumburnagar	Gandachara

All the villages under this scheme are situated in remote areas with minimal available of inputs and veterinary aids, surveillance & monitoring of diseases. So the idea is to deliver

the minimal necessary inputs in terms of piglets, feeds and supplements, health and awareness camps with trainings in scientific pig farming and pig health management.

**Table 03:** Activities identified for intervention with the KPIs

Activities identified for intervention	KPIs reflecting progress towards target outcome
1. Awareness on FMD & other diseases	1. No. of awareness camps organized
2. Distribution of piglets to interested farmers	2. No. of piglets distributed (No. of beneficiaries)
3. Training / Capacity building programme on scientific rearing of piglets to the farmers	3. No. of trainings conducted (No. of beneficiaries)
4. Distribution of critical inputs (medicines, vitamin and feed supplements)	4. No. of input distributed (No. of beneficiaries)
5. Periodic screening of FMD/ vaccination for other important diseases	5. No. of disease outbreaks/ health screening/ health camps conducted
6. Supervision and conducting periodic health camps & vaccination programmes	6. No. of animal vaccinated per year
	7. Meat productivity of livestock (kg/kg feed) at farmer end
	8. Socioeconomic improvement of farmers



## 4. Detail Achievements under NEH Scheme

### 4.1 Regional Research Centre, Khanapara, Guwahati

<b>Name of the Centre</b>	<b>: Regional Research Centre, Guwahati</b>
<b>Name of the State</b>	<b>: Assam</b>
<b>Name of the selected aspirational district</b>	<b>: West Karbi Anglong</b>
<b>Village in which interventions made</b>	<b>: Sumer Pathar</b>
<b>Contributors</b>	<b>: Dr R Sharma and Dr P Deka</b>

#### Selected district West Karbi Anglong:

The West Karbi Anglong district is a district formed out of the existing Donka circle of Karbi Anglong district of Assam. The name “Karbi Anglong” is derived from Karbi language. The word *Karbi* is the name of indigenous tribe living in and around the region.

stands at 80.57% while female literacy rate was 54.30%. Though as per 2011 census, there were 108 households, at present there are 125 families in the village. The total geographical area of village is 549 hectares. In Sumer Pathar village, Schedule Tribe (ST) constitutes almost 100% of total population.

#### Base line survey of the village Sumer Pathar:

The village Sumer Pathar is located 12 Km away from Hamren in Donka Circle of West Karbi Anglong district. As per population census 2011, it has population of 558 of which 258 are males while 273 are females. Sumer Pathar village has lower literacy rate compared to other villages of Assam. In 2011, literacy rate of Sumer Pathar village was 68.16% compared to 72.19% of Assam's average. In Sumer Pathar male literacy

**Main cropping system:** Besides rice, the main cropping systems in the village are Broom Grass > Ginger (Organic) > Turmeric (Organic) > Pineapple etc.

**Major Livestock farming component:** The majority of the households possess Poultry, Pig and Goat. The farming system practiced by the farming community is backyard farming system.



**Fig. 5:** Farming system in Sumer Pathar, West Karbi Anglong (A) Backyard system of poultry rearing, (B) Water harvesting system, developed under Swanirbhar Nari Atmanirbhar Assam scheme for livestock farming and other household activities, (C) Goat and poultry housing and (D) Pigsty



### Constraints faced by the farming community:

A study was conducted in the aspirational selected tribal village of Karbi Anglong district in Assam, the Sumer Pathar, to identify the various constraints faced by the livestock and poultry farming community. The analyses of data revealed that majority of respondents had middle or primary level of education. Agriculture was the major occupation and had medium livestock holding with more than 6 years of farming experience.

**Poultry sector:** The poultry rearing was mainly tended by women folks with a flock size of 5-15 birds, reared in semi-intensive system with little supplementary feeding in terms of broken rice, kitchen waste etc. The production level observed was very low. Natural hatching was the main source of chicks with high early chick mortality. No systematic care was taken with regard to the disease management and vaccination of the birds was also not carried out. The study revealed that high incidence of poultry diseases, lack of suitable germplasm, non-availability of day old chicks round the year, lack of feed supply and lack of technical know-how, attack by predators, poor economic condition of the farmers and weak market linkage were the most serious constraints faced by the farmers. Introduction of hybrid variety suitable for backyard farming, skill up gradation on feeding, housing and disease prevention management can bring about a significant improvement in sustainable poultry production in the selected village.

**Piggery sector:** This sector is characterized by Low productive non-descript germ plasm. Iron deficiency in piglet leading to piglet anemia. No vaccination programme against CSF. No scientific knowledge. Imbalanced feeding Poor market linkage Introduction of improved variety germplasm, skill up gradation on feeding, housing and disease prevention management can bring about a significant improvement in sustainable pig farming in the selected village.

**Agriculture sector:** Regular produce organic turmeric and ginger, poor market linkage is the major constraint. Broom grass is one of the major component, but for product development, they have to wait for Meghalaya Govt.

### Activities identified for intervention in the village and achievement:

Regional Research Centre, Guwahati performed many livestock based agriculture centric extension activities in the selected village, the Sumer Pathar for promoting nutrition and livelihood amongst farming community. Initially, Participatory Rural Appraisal (PRA) and baseline survey was conducted in the village and identified livestock based agriculture centric activities for intervention in the village (Table 04, Fig 05).

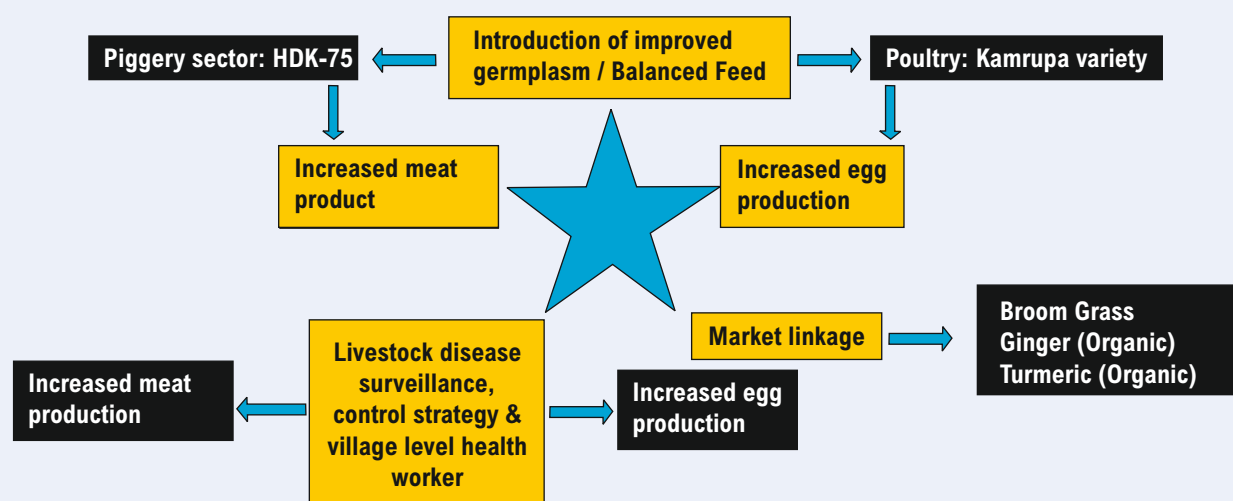


Fig. 6: Flow chart showing different identified activities performed during the year 2022-23


**Table 04:** List of intervention and achievements during 2022-23

Sl. No.	Key performance indicator	Key points	Activities identified for intervention	Achievements till date
1.	Meat productivity of livestock	<ul style="list-style-type: none"> <li>✓ Rearing low productive pig variety like doom variety.</li> <li>✓ Non availability of quality germ plasm.</li> <li>✓ Housing system of goat and pig is poor.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Introduction of HDK-75 pig germ plasm (Cross of Hampshire and Doshi-75:25)</li> <li>✓ Vaccination against Classical swine fever</li> <li>✓ Adoption of biosecurity measures for prevention of diseases like African swine fever in the area</li> <li>✓ Seroprevalence study of major pig diseases.</li> <li>✓ Adoption of scientific housing system for goat and pigs with locally available materials.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Training on biosecurity measures conducted</li> <li>✓ Scientific housing system adopted with locally available materials.</li> <li>✓ Distributed mineral mixture amongst the farming community</li> <li>✓ 44 numbers of piglets of HDK-75 variety will be distributed very soon to develop breeding unit for quality piglet production.</li> </ul>
2.	Proportion of improved livestock breed	<ul style="list-style-type: none"> <li>✓ Rearing indigenous variety only</li> </ul>	<ul style="list-style-type: none"> <li>✓ Introduction of Kamrupa variety of poultry and HDK-75 piglets</li> </ul>	<ul style="list-style-type: none"> <li>✓ 10 numbers of breeding unit will be developed in the month of April, 2023.</li> </ul>
3.	Incidence of livestock diseases	<ul style="list-style-type: none"> <li>✓ Disease incidence is comparatively less.</li> <li>✓ Major problems for mortality of livestock and poultry are poor housing, deficiency in care and management of day old chicks, piglets etc., poor feeding, no biosecurity measures adopted</li> <li>✓ Iron deficiency in piglets</li> </ul>	<ul style="list-style-type: none"> <li>✓ Adoption of scientific housing system for goat and pigs with locally available materials.</li> <li>✓ Awareness on scientific brooding of day old chicks</li> <li>✓ Routine vaccination against economically important diseases of livestock and poultry (CSF, PPR and ND)</li> <li>✓ Adoption of biosecurity measures for prevention of diseases like African swine fever, PPR etc. in the area</li> <li>✓ Supplementation of iron for piglets</li> </ul>	<ul style="list-style-type: none"> <li>✓ Awareness on scientific brooding of day old chicks</li> <li>✓ Animal Health Camp organized</li> <li>✓ Provided iron tablets for piglets to reduce iron deficiency</li> </ul>
4.	Number of animals health worker	<ul style="list-style-type: none"> <li>✓ Besides state veterinary officer, there is one Pashu Pakhi in the area. She has to cover a long distance to improve livestock and poultry health in the area.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Training on different methods of vaccination to poultry, pigs and goats</li> </ul>	<ul style="list-style-type: none"> <li>✓ 10 rural women were trained for poultry vaccination</li> </ul>
5.	Number of FPO per 10000 households	<ul style="list-style-type: none"> <li>✓ There is one producer group named Klar Chingrum targeting Ginger and Hill Broom Grass</li> </ul>	<ul style="list-style-type: none"> <li>✓ Development of marketing linkage with major urban cities.</li> <li>✓ Development of SHGs</li> </ul>	<ul style="list-style-type: none"> <li>✓ At present there are 10 SHGs with 100 farm women</li> </ul>





During the period of 2022-23, RRC, Guwahati performed 3 capacity building training programme, 3 awareness programme, 1 animal health camp and 3 on farm testing/demonstration programme. Also, under poultry and piggery

sector development programme in the village, 700 Kamrupa chicks, 22 Quintal Poultry Feed, 42 Piglets, 26 Quintal feed ingredients, 40 Kg mineral mixture were distributed amongst selected farmers in the village.

**Table 05:** Activities and achievement details under NEH subcomponent during 2022-23

Sl. No.	Activity	Achievement (Units)	Achievement details	Number of Beneficiaries	KPIs associated to activity
1.	Training/ Capacity building programme	3	Three numbers of training programme were conducted on following topics: 1. Scientific management of Pigs 2. Scientific management of poultry 3. Scientific management of Goat	10 SHGs consisting 100 farm women	✓ Productivity of poultry (eggs/year) ✓ Meat productivity of livestock ✓ Incidence of livestock diseases
2.	Awareness programme	3	Three numbers of awareness programme were conducted on following topics:	86 (Male 27, Female 59)	✓ Incidence of livestock diseases
3.	Animal Health camp	1 (Vaccination against CSF, PPR and ND)	An animal health camp cum vaccination programme was organized in the village in which 40 Pigs, 32 Goat and 824 Poultry were vaccinated against CSF, PPR and ND respectively.	58 Families	✓ Incidence of livestock diseases
4.	OFT/ Demonstration	2	Two on farm testing/ demonstration programme were organized in the village highlighting the following topics- 1. Brooding of day old chicks 2. Supplementation feed additives and de-worming 3. Different routes of poultry vaccination	23 (Male 7, Female 16)	✓ Productivity of poultry (eggs/year) ✓ Incidence of livestock / poultry diseases
5.	Inputs distribution programme	Poultry sector development programme	700 Kamrupa Chicks, 22 Quintal poultry feed	5 SHGs consisting 50 farm women	✓ Productivity of poultry (eggs/year)
		Piggery sector development programme	42 Piglets, 20 Quintal Maize, 6 Quintal Wheat bran, 40 Kg Mineral Mixture	5 SHGs consisting 50 farm women	✓ Meat productivity of livestock ✓ Proportion of improved livestock breed

#### Disease surveillance

Disease surveillance is crucial in implementing better prevention and management strategies for controlling infectious diseases. A total of 122

sera samples (Pig: 46, Poultry: 28, Goat: 16 and cattle: 32) and 27 faecal samples collected randomly were screened for prevalence of economically important diseases (Table 06).


**Table 06:** Economically important disease surveillance in the Sumer Pathar village

Activities	Target disease	Sample collected and tested	Results
Disease Surveillance	CSF	46 Sera	11 (23.91%)
	ND	28 Sera	9 (32.14%)
	PPR	16 Sera	2 (12.5%)
	FMD (NSP Ab)	32 Sera	Nil
	Parasitic disease	27 Faecal sample	17 (62.96%) (Fasciola, Paramphistomum, Haemonchus)

**Impact of activities:**

1. Reduced early chick mortality by adopting scientific brooding of day old poultry chicks.
2. Reduced incidences of economically important diseases of poultry like Ranikhet disease due to routine vaccination programme.
3. There is significant improvement in the level of knowledge (pro-test responses Vs pre-test **responses**) **about the scientific management** livestock and poultry.
4. Pig farmers are interested to adopt scientific management of Pigs.


**Fig. 7:** Training / Awareness Programme organized in Sumer Pathar, West Karbi Anglong by Regional Research Centre, ICAR-AICRP on FMD, AAU, Khanapara under ICAR-NIFMD Activity.

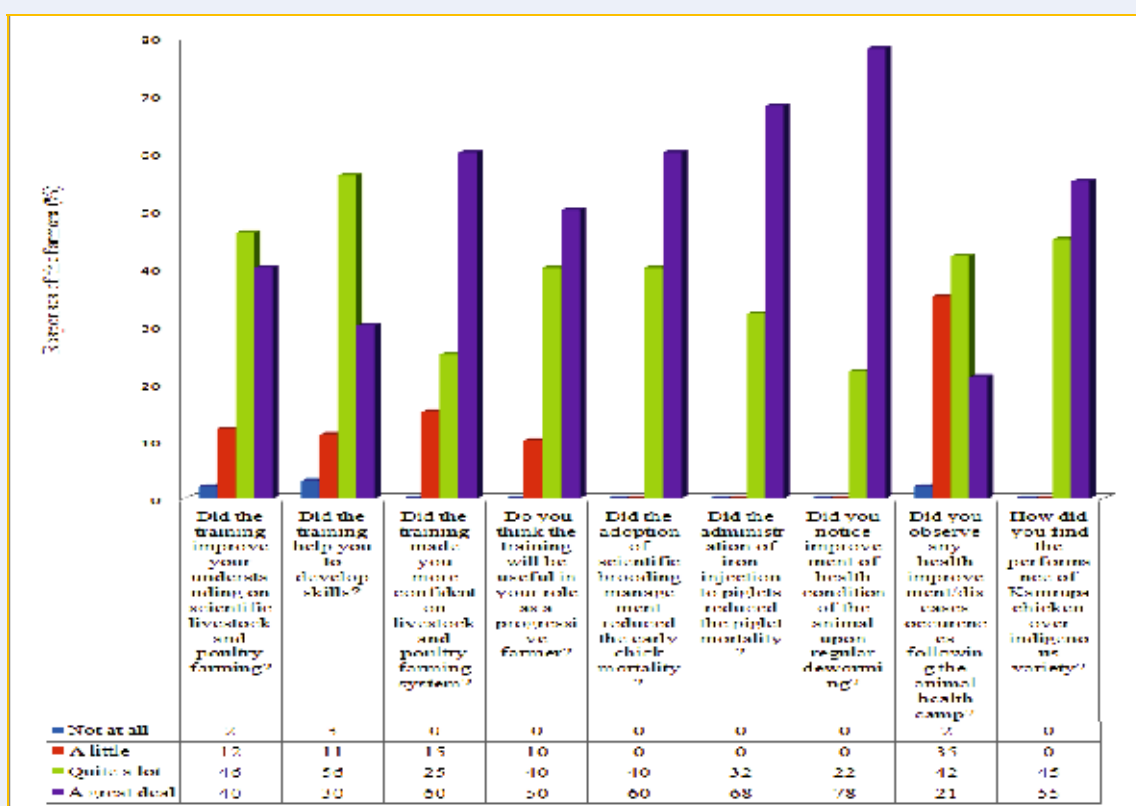


Fig. 08: Scientific management livestock and poultry responses of the farmer

#### 4.2. Imphal Collaborating Centre, Manipur

Name of the Centre	: Imphal FMD collaborating Centre
Name of the State	: Manipur
Name of the selected aspirational district	: Chandel
Village in which interventions made	: Chakpikarong

**Contributors:** Dr S Maibam and Dr Chirom Amita Devi

**Base line survey:** Chandel district is one of the 16 districts of Manipur state. This is the second least populous district in the state with a population density of 40 per square kilometre. Chakpikarong village is located in Chakpikarong sub-division of Chandel district in Manipur. It is situated at 25km away from district headquarter Chandel. Chakpikarong has a total population of 1,569 peoples, out of which male population is 737 while female population is 832. Literacy rate of chakpikarong village is 84.45% with 85.62% male and 83.41% female literacy. There are 292 house hold families in chakpikarong village.

**Livestock:** Most of rural households in Chandel district keep poultry (82.3% households) and have piggery (53.7%). Keeping of milch animal is

not a common practice in the hill areas of north eastern states. About 15 percent households in the sample are with possession of draught animal. This low proportion is explained by the fact that a limited proportion of households in this hill district have settled for permanent cultivation.

#### NEH Activities carried out in aspirational blocks:

The activities have been focused in 5 nos. of aspirational targeted blocks in the state of Manipur (Henglap, Sangaikot, Singngat, and Chapikarong & Vangai Range Block). FMD awareness programmes were conducted in different villages under these blocks. Further, the leaflets & pamphlets on FMD awareness & control were distributed among the farmers during those programmes.



**Table 07:** Month wise work done for the year 2022-23

Sl. No.	Month	KPIs Targeted	No. of Beneficiaries		Outcome
			Female	Male	
1.	April	Distribution of technical leaflets in local language, Training on intensive Animal Husbandry practices, Training to rural Youth.	52	41	Developed skill on intensive practices among Rural Youth.
2.	May	Incidence of FMD outbreaks. Training on FMD Awareness.	35	30	Developed disease outbreak reporting and awareness about FMD.
3.	June	Training on FMD Awareness.	51	44	Developed awareness about FMD.
4.	July	Training to Farm women. Training to rural Youth.	75	70	Developed skill among women & rural youth.
5.	August	Training on FMD Awareness. Incidence of livestock disease outbreaks.	63	52	Developed disease outbreak reporting. Developed awareness about FMD.
6.	September	Training on FMD Awareness.	37	32	Developed awareness about FMD. Publicity about FMD.
7.	October	Training on FMD Awareness.	25	20	Developed awareness about FMD.
8.	December	Training on FMD Awareness.	42	35	Developed awareness about FMD.
9.	March	Training on management of pigs. Feeding & Disease prevention, Piglet distribution.	32	22	Developed skill on scientific rearing of pig, Disease prevention, intervention to develop economic status.
<b>Total</b>			<b>412</b>	<b>346</b>	

### Piglets Distribution Programme Chakpikarong village

Pigs have been an integral component of farming system and most preferred pro-poor live-stock species since long due to low initial investment, less risk, early return, and high prolificacy, wide adaptability to climate and feed, round the year demand in market. Pig also has great potential to generate much needed employment opportunities. This may help in doubling farmer's income in a short period of time. On 30/03/2023, Piglets distribution was done from ICAR-NIFMD-NEH fund by Imphal Centre for Foot and Mouth Disease at Chakpikarong village, Chandel District. The programme was conducted with a long term vision for upliftment of scheduled tribe community.

In this programme, Dr. Sabitri Maibam, P.I. FMD Imphal Centre, Chief of Chakpikarong Ts. Berek, Block Veterinary Officer Dr. Sumita, Dr. R.D Samery, Dr. Wangam and other staff were

present. During the first phase of this programme a total of 5 beneficiaries from ST community interested in animal husbandry practices participated and they were distributed with piglets and other related necessary materials e.g., animal feed, mineral mixture, antihelmethic, CSF Vaccine, Antibiotics, that can be used in their day to day life. Some ST beneficiaries having cattle were distributed with cattle feed and those rearing goats were given mineral mixture. During the Awareness programme, highlighting facts on pig husbandry was brief to all the participants. Before conducting the programme, a survey was done and appropriate beneficiaries from ST community were selected discussing with the Village Chief and ward member and also with the people attending the meeting. Then they were sensitized with a capacity buildup programme where they came to know about the aim and objective of the entire programme, what is their role, why govt is trying to make a difference in





their life, pig husbandry practices etc. Three piglets (i.e. 1 male & 2 females) were distributed to 5 beneficiaries each. After the distribution of

critical inputs, periodic health management and improved husbandry practices were supported with output.



**Fig. 09:** Piglet distribution under ICAR-DFMD-NEH Programme, Imphal Centre

### 4.3 Aizawal Collaborating Centre, Mizoram

<b>Name of the Centre</b>	<b>: Collaborating Centre, Aizawal</b>
<b>Name of the State</b>	<b>: Mizoram</b>
<b>Name of the selected aspirational district</b>	<b>: Lawngtlai</b>
<b>Village in which interventions made</b>	<b>: Thingkah</b>

**Contributors:** Dr M Zohmingthangi and Dr E Hmingthanzuava

The Collaborating Centre, Aizawal has conducted several programmes supporting LHDPC activities for FMD control. The list is as follows.

**Table 08:** Several programmes supporting LHDPC activities for FMD control

Sl. no	Activities	No of stakeholders (M+F)	Venue
01	FMD awareness camps and development and distribution of technical literatures	23(M) + 19 (F)=42	Hmunhmeltha, Ruantlang, Tlangsam and Zokhawthar villages, Champhai District (Myanmar Border)
02	Organization of animal health camps and FMD vaccination programme	74(M) + 82(F) =156	29 <sup>th</sup> April 2022-Thingkah 23 <sup>rd</sup> may 2022-Tipperaghat 27 <sup>th</sup> may 2022-Tablabagh
03	Organization of State Level workshops on FMD	32(M) + 38(F) =70	Selesih, Aizawl District



The centre has also conducted activities focused in of aspirational district as follows.

**About the selected district:** Lawngtlai District is situated in the southernmost part of the state of Mizoram. This district is one of the most backward districts of the state. About 60% of the total population depends on agriculture and allied sector, 37.90% on service sector and 2.4% on secondary sector. About 37.54% of the total

households are BPL. Literacy rate of the District (66.41%) is the lowest in the state.

**Base line survey:** Thingkah is a Village in Lawngtlai Block in Lawngtlai District of Mizoram State, India. It is located 4 Km towards west from District headquarters Lawngtlai and 153 Km from State capital Aizawl. This Place is in the border of the Lawngtlai District and Saiha District.



Fig. 10: Organization of State Level workshops on FMD Selesih village Aizawl district



Fig. 11: Animal Health Camp was conducted at Thingkah Village



Fig. 12: Animal Health Camp was conducted at Tipperaghat Village





**Table 09:** Periodic monitoring and output

Farmer	Particulars	Before intervention	Type of intervention (with photographs)	After interventions												Remarks
				1 <sup>st</sup> month	2 <sup>nd</sup> month	3 <sup>rd</sup> month	4 <sup>th</sup> month	5 <sup>th</sup> month	6 <sup>th</sup> month	7 <sup>th</sup> month	8 <sup>th</sup> month	9 <sup>th</sup> month	10 <sup>th</sup> month	11 <sup>th</sup> month	12 <sup>th</sup> month	
Sr. Warthung	No of animals	3	Nil	3	-	3	-	-	-	-	-	-	-	-	-	-
Sng. Solomi		3	Nil	3	-	3	-	-	-	-	-	-	-	-	-	-
Hb. Behring		3	Nil	3	-	3	-	-	-	-	-	-	-	-	-	-
Sp. Jolthu		3	Nil	3	-	3	-	-	-	-	-	-	-	-	-	-
Ws. Ruda		3	Nil	3	-	3	-	-	-	-	-	-	-	-	-	-
Sr. Warthung	New birth (M+F)	0	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Sng. Solomi		0	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Hb. Behring		0	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Sp. Jolthu		0	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Ws. Ruda		0	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Sr. Warthung	Any Sale of animals (no)	0	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Sng. Solomi		0	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Hb. Behring		0	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Sp. Jolthu		0	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Ws. Ruda		0	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Sr. Warthung	Any disease occurrence (mention the disease & no of animals affected)	No	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Sng. Solomi		No	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Hb. Behring		No	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Sp. Jolthu		No	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Ws. Ruda		No	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Sr. Warthung	Any death (cause & no of death)	No	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Sng. Solomi		No	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Hb. Behring		No	Nil	0	-	0	-	-	-	-	-	-	-	-	-	-
Sp. Jolthu		No	Nil	-	-	0	-	-	-	-	-	-	-	-	-	-
Ws. Ruda		No	Nil	-	-	0	-	-	-	-	-	-	-	-	-	-
Sr. Warthung	Live weight of the individual animal (kg)	4kg	Nil	+2	-	6	-	-	-	-	-	-	-	-	-	-
Sng. Solomi		4kg	Nil	+2	-	6	-	-	-	-	-	-	-	-	-	-
Hb. Behring		4kg	Nil	+2	-	6	-	-	-	-	-	-	-	-	-	-
Sp. Jolthu		4kg	Nil	+2	-	6	-	-	-	-	-	-	-	-	-	-
Ws. Ruda		4kg	Nil	+2	-	6	-	-	-	-	-	-	-	-	-	-



**Livestock:** Pig is the most commonly reared livestock by the Mizo community. The total population of pigs in Mizoram is 0.29 million (20th livestock census) with an increase of 19.26% from previous census (19th livestock census). Zovawk is a national registered pig breed found in Mizoram.

**Piggery Farming:** Piggery has a number of biological advantages over other meat producing animals owing to high prolificacy, efficient mothering ability, faster growth rate, higher feed conversion efficiency, shorter generation interval and higher dressing percentage.



**Fig. 13:** Animal Health camp was conducted at Tablabagh Village

#### 4.4 Kohima FMD Collaborating Centre, Nagaland

<b>Name of the Centre</b>	<b>: Kohima Centre</b>
<b>Name of the State</b>	<b>: Nagaland</b>
<b>Name of the selected aspirational district</b>	<b>: Peren district</b>
<b>Village in which interventions made</b>	<b>: Beisumpuikam</b>

**Contributors:** Dr S. Amenla Walling and Dr Khrisamhazo Rhetso

**About the selected district:** Peren District is a district of Nagaland. With headquarters the town of Peren, the district was formed by the partition of Kohima District in 2003. The baseline survey was conducted and Beisumpuikam village was selected as per KPI and survey was conducted in the village to determine the feasibilities for farming. The prominent challenges / problems were found to be poor road connectivity, Poor telecom connectivity for communication, Rough terrain, difficult accessibility for treatment and purchase of medicines hampering animal husbandry.

#### **Action plan formulated and activities undertaken:**

1. Conducting training/ awareness camp on piggery farming.
2. Selection of beneficiaries for piglet distribution.
3. To provide four piglets (1 male and 3 female) to each beneficiary in the initial phase of the programme.
4. Regular monitoring on the beneficiaries.
5. Conducting vaccination camps and distribution of medicines.

#### **Organization of events and details of participants:**

On the first day, forty (40) beneficiaries (31 Male and 9 Female) attended the awareness/ training camp during which piglets were distributed to three selected beneficiaries. One male and three female piglets were distributed to each selected beneficiary.





**Fig. 14:** Vaccination camp and training was conducted along with piglet distibution

The type of programmes included 1 input (piglets) distribution, 2 capacity building programmes on scientific pig rearing, 2 programmes on critical input (Medicines, vitamins and feed suppliments) distribution and 2 vaccination and health camps for periodic monitoring of their health and management.

**Impact of the intervention / Success story:**

Beisumpukam is an economically poor and far outreached village in Peren district. Developmental activities are few and the villagers depend on agriculture for livelihood. Piggery, goatery and dairy are some of the few animal husbandry

practices in the village. Pigs are reared in the open backyard tethered to a rope with no pig sty and kitchen leftovers are mostly fed. Conducting awareness camp on piggery and other farming sectors under NEH activity has generated a lot of interest to the farmers. Selected beneficiaries were trained in rearing techniques i.e. feeding and housing, and with regular de-worming and mineral supplements being provided, they observed a rapid gain in weight on the piglets and with availability of feed in the surrounding forest, the cost of feed is reduced. Witnessing the progress, many of the beneficiaries are interested to invest in piggery farming.



**Fig. 15:** Photographs of beneficiaries with piglets


**Table 10:** Periodic monitoring and output

Farmer	Particulars	Before intervention	Type of intervention (with photographs)	After interventions												Remarks
				1 <sup>st</sup> month	2 <sup>nd</sup> month	3 <sup>rd</sup> month	4 <sup>th</sup> month	5 <sup>th</sup> month	6 <sup>th</sup> month	7 <sup>th</sup> month	8 <sup>th</sup> month	9 <sup>th</sup> month	10 <sup>th</sup> month	11 <sup>th</sup> month	12 <sup>th</sup> month	
Hangmangbe	No of animals	4	Nil	4	-	-	4	-	4	-	-	-	-	-	-	-
Ramsobe		4	Nil	4	-	-	4	-	4	-	-	-	-	-	-	-
Azangbo		4	Nil	4	-	-	4	-	4	-	-	-	-	-	-	-
Hangmangbe	New birth (M+F)	0	Nil	0	-	-	0	-	0	-	-	-	-	-	-	-
Ramsobe		0	Nil	0	-	-	0	-	0	-	-	-	-	-	-	-
Azangbo		0	Nil	0	-	-	0	-	0	-	-	-	-	-	-	-
Hangmangbe	Any Sale of animals	0	Nil	0	-	-	0	-	0	-	-	-	-	-	-	-
Ramsobe		0	Nil	0	-	-	0	-	0	-	-	-	-	-	-	-
Azangbo		0	Nil	0	-	-	0	-	0	-	-	-	-	-	-	-
Hangmangbe	Any disease occurrence (mention the disease & no of animals affected)	No	Nil	0	-	-	0	-	0	-	-	-	-	-	-	-
Ramsobe		No	Nil	0	-	-	0	-	0	-	-	-	-	-	-	-
Azangbo		No	Nil	0	-	-	0	-	0	-	-	-	-	-	-	-
Hangmangbe	Any death (cause & no of death)	No	Nil	0	-	-	0	-	0	-	-	-	-	-	-	-
Ramsobe		No	Nil	0	-	-	0	-	0	-	-	-	-	-	-	-
Azangbo		No	Nil	0	-	-	0	-	0	-	-	-	-	-	-	-
Hangmangbe	Live weight of the individual animal (kg)	4kg	Nil	+2	-	-	+8	-	+3 0	-	-	-	-	-	-	-
Ramsobe		4kg	Nil	+2	-	-	+8	-	+3 0	-	-	-	-	-	-	-
Azangbo		4kg	Nil	+2	-	-	+8	-	+3 0	-	-	-	-	-	-	-


**Fig. 16:** Photographs of beneficiaries with growers

### Learning experiences from interventions:

It has been learnt that Beisumpuikam, an economically poor and far outreached village, where the villagers developed interest in animal

husbandry especially piggery while supported with the interventions observed rapid growth in piglets, backyard farming and modern farming.



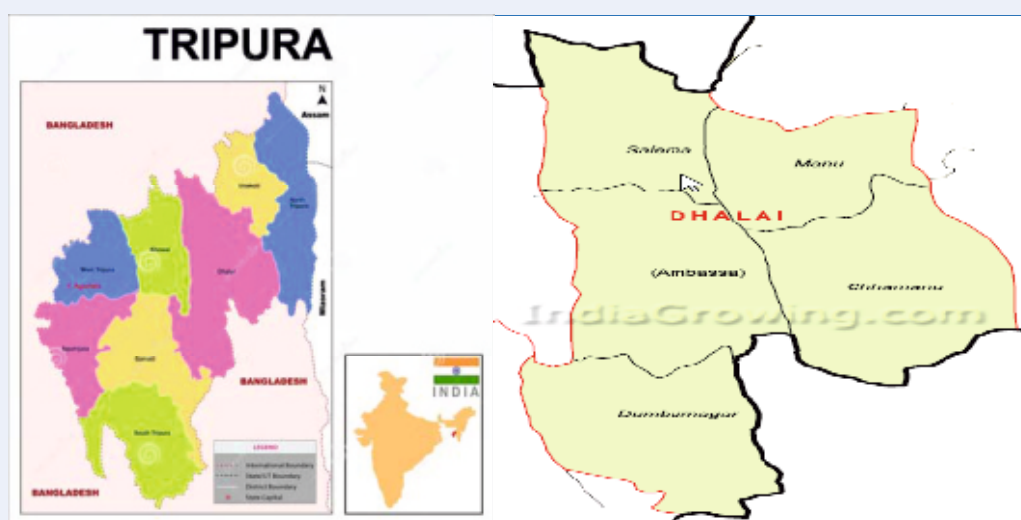
#### 4.5 Kohima FMD Collaborating Centre, Tripura

Name of the Centre	: Agartala Centre
Name of the State	: Tripura
Name of the selected aspirational district	: Dhalai district
Village in which interventions made	: Ganganagar

**Contributors: Dr M K Dutta and Dr B Saikia**

Under NIFMD- NEH programme, as per guidelines the centre focus for development is targeted for Aspirational district. For Tripura State, under

NIFMD project- NEH component, Dhalai district is selected as Aspirational district.



**Fig. 17:** Aspirational district of Tripura under NEH Activity: Dhalai district

The activities were focused in the specified aspirational district, blocks and villages as follows.

**Table 11:** Details of Aspiration district, Blocks & Villages taken up for NEH activity

Aspirational District Covered	Aspirational Block	Village name	KPIs targeted	Challenge/ problem/ issue addressed
Dhalai	Dumburnagar	Laxmipur	÷ Training on FMD Awareness	Disease incidence
		Gandacharra	÷ Incidence of livestock disease outbreaks	Introduction of Improved variety
		Jagabandhupara	÷ Training on FMD Awareness	Management of animals
	Ganaganagar	Ganganagar	÷ Training on intensive Animal Husbandry practices	Awareness programme
		Karnamanipara	÷ Training to rural Youth	
		Radharambari	÷ Training to Farm women	
	Raishyabari	Boalkhali	÷ Distribution of technical Leaflets in local language	
		Raishyabari		
		Tuichakma		

Several programmes have been conducted throughout the year the details of which are as follows.




**Table 12:** Details of events and participants

Month	KPIs Targeted	No. of Beneficiaries	
		Female	Male
<b>APRIL</b>	Training on intensive Animal Husbandry practices Training to rural Youth	33	25
<b>MAY</b>	Distribution of technical Leaflets in local language Training on FMD Awareness	29	16
<b>JUNE</b>	Training on FMD Awareness	26	17
<b>JULY</b>	Training to Farm women, Training on intensive Animal Husbandry practices, Training to rural Youth, Training on FMD Awareness	42	31
<b>AUGUST</b>	Training on FMD Awareness	35	22
<b>SEPTEMBER</b>	Training on intensive Animal Husbandry practices Training to rural Youth	32	18
<b>NOVEMBER</b>	Training on FMD Awareness	18	20
<b>DECEMBER</b>	Training on FMD Awareness	30	18
<b>JANUARY</b>	Training on FMD Awareness	29	16
<b>FEBRUARY</b>	Training on FMD Awareness	14	18
<b>MARCH</b>	Exposure Visit, Training on management of pigs, feeding & disease prevention, Improved variety of Piglet distribution	28	23
	<b>26</b>	<b>316</b>	<b>224</b>


**Fig. 18:** Glimpse of awareness programme



Fig. 19: Exposure Visit and Piglet distribution

#### 4.6 ICAR-NIFMD NEH Activities of ICAR-NRC on Yak, Dirang Centre

**Contributor: Dr Joken Bam**

Arunachal Pradesh is a tribal people state basically agrarian by occupation with more than 66% population engaged in agricultural, horticultural, livestock rearing and other related Activities. The farmers of Arunachal practice mixed farming wherein they rear livestock along with agricultural/ horticultural crops or sometimes fish farming along with livestock. Livestock rearing has been an integral livelihood enhancement opportunity and nutritional security since time immemorial. This occupation is intrinsically linked with the socio-economic fabrics of the tribal people in the state. The traditional system of livestock rearing are still prevailing where they rear without applying scientifically improved management practices may be due to lack of awareness. The survey of livestock has revealed the following.

1. **Poultry sector:** Poultry rearing was mainly tended by the tribal population, specially the

tribal women. A flock size of 5-25 birds per household are being reared in semi-intensive system with little supplementary feeding in terms of broken rice, kitchen waste etc. Because of non-scientific indigenous rearing system, a very low production level is being observed in those villages. Due to lack of knowledge, no systematic care is being taken by the farmers with regard to the diseases management and vaccination of the birds against different prevalent bacterial and viral diseases. The survey also revealed high incidence of poultry disease, lack of suitable germplasm, non-availability of day old chicks round the year, lack of feed supply and lack of technical knowledge.

2. **Piggery sector:** Pig farming is also having a huge scope in this area, as almost 95% of the tribal populations living in this area are non-





vegetarian. Traditionally majority of the house hold is rearing pigs under backyard system. Despite of having huge marketing scope, the income level of the pig farmers is found to be very low. The survey revealed that, besides early piglet mortality due to unscientific management practices, improper feeding and pig diseases like classical swine fever and African swine fever are the major constraints. The tribal farmers of those identified villages, a significant improvement in sustainable need based livestock production of the tribal

communities in the villages can be achieved with the following interventions:

- ✓ Awareness programme in respect to the importance, management and prevailing disease conditions among the livestock.
- ✓ Scientific training and skill up-gradation about livestock and poultry farming
- ✓ Introduction of hybrid poultry variety suitable for backyard farming.
- ✓ Disease prevention and proper management.
- ✓ Credit linkage and establishment of market linkages.



**Fig. 20:** Training and vaccination programme organized by ICAR-DFMD NEH, Dirang center





## 5. Summary of funds and activities

### 5.1 Funds provided by ICAR-NIFMD for carrying out NEH activities:

To perform the activities by the NEH centres they were provided with funds to the tune of 5.50 lakh as first instalment and 3.25 lakh as second instalment, as a whole 8.75 lakhs for the whole

year. The funds allotted to the institutions/ centres according to their requirement stated by respective centres in an initial review meeting. The requisite grant under carrying out of NEH activities in the year 2022-23 was drawn as follows:

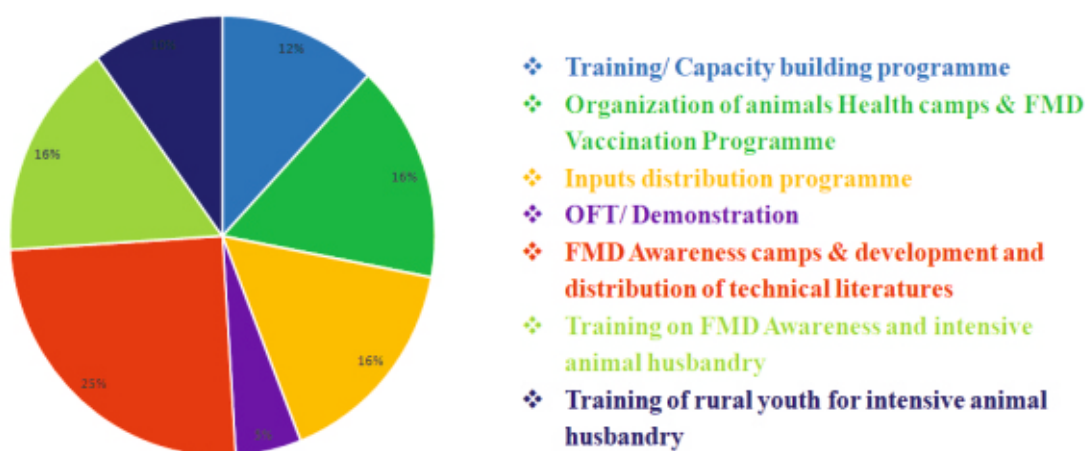
**Table 13:** Details of funds released by ICAR-NIFMD for the centres during 2022-23

Sl. No.	Name of the centre	Grant released in favour of	Allocation (in lakhs)		
			1 <sup>st</sup> Instalment	2 <sup>nd</sup> Instalment	Total
1.	Regional FMD Research Centre, Guwahati, Assam.	Comptroller, Assam Agricultural University, Jorhat, (Assam)	2.00	1.00	3.00
2.	Imphal FMD collaborating centre, Manipur	Director, Veterinary A.H. services, Manipur	1.25	0.75	2.00
3.	Kohima FMD collaborating centre, Nagaland	Director of Animal Husbandry & Veterinary, Govt. of Nagaland, Kohima	1.00	0.75	1.75
4.	Agartala FMD collaborating centre, Tripura	Director of Animal Resources Development Department, Govt. of Tripura, Agartala	1.25	0.75	2.00
<b>Total Amount</b>			<b>05.50</b>	<b>03.25</b>	<b>08.75</b>

### 5.2 Types of activities performed by the NEH Collaborating Centres:

The following types of activities have been conducted during the period of report.

**Type of activities performed by different collaborating Centres in year 2022-23:**



**Fig. 21:** Types of activities performed by different collaborating centres

**Table 14:** Types of activities performed by individual collaborating centres

Type of Activity	RRC, Guwahati	Imphal CC	Kohima CC	Agartala CC	Aizawl CC	ICAR-NRC on Yak
Training/ Capacity building programme	√		√	√		√
Organization of animals Health/ FMD Vaccination camps	√	√	√	√	√	
Inputs distribution programme	√	√	√	√		
OFT/ Demonstration	√					√
FMD Awareness camps and distribution of technical literatures	√	√	√	√	√	√
Training on FMD Awareness	√	√	√	√	√	
Training of rural youth for intensive animal husbandry	√	√	√	√	√	

### 5.3 Number of Activities done by the NEH Collaborating Centres

The following table contains the number of

activities conducted during the year 2022-23 under the ICAR-NIFMD NEH scheme involving a total of 2690 beneficiaries.

**Table 15:** Number of activities done by individual centres

Sl. No.	Name of the Collaborating Centre	State	No of events	Number of beneficiaries		
				Male	Female	Total
1.	RRC, Guwahati	Assam	19	333	708	1041
2.	Imphal FMD CC	Manipur	20	346	412	758
3.	Aizawl FMD CC	Mizoram	7	97	101	198
4.	Kohima FMD CC	Nagaland	7	46	11	57
5.	Agartala FMD CC	Tripura	26	224	316	540
6.	ICAR-NRC on Yak	Arunachal Pradesh	7	64	32	96
<b>TOTAL</b>			<b>86</b>	<b>1110</b>	<b>1580</b>	<b>2690</b>

### 5.4 Feedback and Socio-economic impact

NEH programme of ICAR-Directorate of Foot and Mouth Disease was implemented with the aim to support surveillance activities & epidemiology of FMD in terms of FMD awareness as per the institute mandate as well as to support NADCP on FMD activities. For the year 2021-22, the participating centres were NRC on Mithun, NRC on Yak (ICAR institutes), Regional research Centre at C.V.Sc., A.A.U., Khanapara (SAU) as well as State FMD collaborative centres at Imphal, Aizawl, Kohima, Itanagar, Agartala under Animal Husbandry Departments of respective Governments. The collaborating centres conducted various activities such as FMD awareness camp, animal health camps, vaccination and training programmes for farmers as well as for the

professionals, FMD surveillance at international border areas etc. with the support of ICAR-DFMD as a part of it.

The FMD regional centre Guwahati, Assam being a major partner organized a total 21 activities including 7 awareness programmes/activities on FMD, 6 animal health camps, 2 FMD prevention and control programmes, 5 training on FMDCP to the youths and women of various region of the state. A regional level workshop on “Diagnosis, Prevention and Control of FMD” was organized at Guwahati for the veterinarians during the period. Imphal FMD collaborating centre of Manipur had organized 5 individual programmes throughout period which consisted of 3 numbers of awareness programme and an animal health camp. One day state level seminar on FMDCP was organised among the veterinary practitioners of the state. The Aizawl FMD collaborating centre of Mizoram



conducted 7 programmes on FMD at various parts of the state including 2 workshop/training programme, 2 animal health camps and 3 awareness programme against the disease. At Tripura, Agartala FMD collaborating centre organized 3 awareness camps, 2 training programme among the rural tribal women and one day sample collection and a FMD prevention & control programme against goat/pig, as a whole a total 6 activities were conducted during the period. For the state of Arunachal Pradesh, Itanagar FMD collaborating centre located at Nirjuli organized a one day training programme on sample collection of FMD among the state veterinary practitioners. Also ICAR-NRC on Yak located at western part of the state conducted 2 FMD awareness camps and a vaccination programme among the yak rearing farmers. On the other hand, ICAR-NRC on Mithun located at Jharnapani, Nagaland organised 4 awareness cum animal health & FMD vaccination camp on Mithun and spread awareness against the disease among the Mithun farmers of the state. A total 47 programmes were organised by the 7 NEH centres during the year 2021-22 in terms FMD awareness activity at north-eastern hill region to spread awareness about the disease among the people of the target region. In the year 2022, a revised guidelines has been communicated and the programme was implemented in Aspirational districts of NEH states in the thematic area based on the key performance indicators in a focused manner to support the livelihood of the farmers. The centres were asked to go for baseline survey for identification of intervention points and submitted proposal for interaction and accountably funded to generate the success story and replicate. It all has to start with year A total number of 86 programmes were organized by the 6 NEH Centres during the year 2022-23 in terms FMD awareness activity at north-eastern hill region to spread awareness about the disease among the people of that region.

### **Socioeconomic Impact**

Socioeconomical impact are improvement of income and new sources of revenue for local communities to bring about sustained improvement in the well-being of the individual,

groups, family, community and society at large. The NEH activity has generated a lot of interest to the Aspirational districts.

### **Experience of the Village Beisumpuikam, Nagaland**

Beisumpuikam is an economically poor and far outreached village in Peren district. Developmental activities are few and the villagers depend on agriculture for livelihood. Piggery, goater and cattle rearing are some of the few animal husbandry practices in the village. Pigs are reared in the open backyard tethered to a rope with no pigsty and kitchen leftovers are mostly fed. Conducting awareness camp on piggery and other farming sectors under NEH activity has generated a lot of interest to the farmers. Villagers shared their experience in existing animal rearing practices and discussions were held on how to improve the rearing practices and market feasibility. Selected beneficiaries expressed Full Corporation in rearing techniques i.e. feeding and housing, that was taught in the training and with regular deworming and mineral supplements being provided, they observed a rapid gain in weight on the piglets and with availability of forages in the surrounding forest for animal feed, the cost of feed is reduced. Witnessing the progress, many of the beneficiaries are interested to invest in piggery farming.

It has been learnt that Beisumpuikam, an economically poor and far outreached village, where the villagers developed interest in animal husbandry especially piggery while supported with the interventions observed rapid growth in piglets, backyard farming and modern farming.

### **Experience of the Village Sumer Pathar, Assam**

Regional Research Centre, Guwahati performed many livestock based agriculture centric extension activities in the selected village, the Sumer Pathar is the village of Hamren in Donka Circle of West Karbi Anglong district. As per population census 2011, it has population of 558 of which 258 are males while 273 are females. Sumer Pathar village has lower literacy rate compared to other villages of Assam. In 2011, literacy rate of Sumer Pathar





village was 68.16% compared to 72.19% of Assam's average. In Sumer Pathar male literacy stands at 80.57% while female literacy rate was 54.30%. Though as per 2011 census, there were 108 households, at present there are 125 families in the village. The total geographical area of village is 549 hectares. In Sumer Pathar village, Schedule Tribe (ST) constitutes almost 100% of total population. Developmental activities are few and the villagers depend on agriculture for livelihood. Piggery, goater and cattle rearing are some of the few animal husbandry practices in the village. Conducting awareness camp and other farming sectors under NEH activity has generated a lot of interest to the farmers. Villagers shared their experience in existing animal rearing practices and discussions were held on how to improve the rearing practices and market feasibility. Selected beneficiaries expressed Full Corporation in rearing

techniques for promoting nutrition and livelihood amongst farming community. Initially, Participatory Rural Appraisal (PRA) and baseline survey was conducted in the village and identified livestock based agriculture centric activities for intervention in the village.

Reduced early chick mortality by adopting scientific brooding of day old poultry chicks.

1. Reduced incidences of economically important diseases of poultry like Ranikhet disease due to routine vaccination programme.
2. There is significant improvement in the level of knowledge (post-test responses Vs pre-test responses) about the scientific management livestock and poultry.
3. Pig farmers are interested to adopt scientific management of Pigs.



Fig. 22: Input distribution program at sumer pathar village organized by ICAR- NIFMD NEH Assam center



## 6. Publication and Media Coverage

### Press Release, Guwahati, Assam on 30-10-2022:

#### Regional level Workshop cum training programme on FMD control organized

A three day workshop cum training programme on diagnosis, prevention and control of Foot and Mouth disease (FMD) of livestock was organized by Regional Research Centre, ICAR-AICRP on FMD, Guwahati in collaboration with ICAR-Directorate of FMD, Mukteswar from 27<sup>th</sup> to 29<sup>th</sup> October, 2022 at Department of Microbiology, College of Veterinary Science, AAU, Khanapara. A total of 25 veterinary officers from all the north eastern states participated in the training programme. In the inaugural programme, Dr Krishna Sharma, Officer in-Charge, Regional Research Centre, ICAR-AICRP on FMD, Guwahati cum chairman of the organizing committee welcomed the participants and apprised about the various activities of the centre regarding surveillance and control of FMD in north-eastern states of India. Dr B.N. Saikia, Dean, Faculty of Veterinary Science, AAU, Khanapara along with Dr. N. Kalita, Director of Research (Veterinary) was present in the occasion as chief guest and guest of honour respectively. Dr R.P. Singh, Director, ICAR-DFMD, Mukteswar delivered inaugural lecture on “FMD control programme in India: Pros and cons”.

In the programme, Dr D.K. Sarma, Former Director, ICAR-NRC on Pigs; Dr A.K. Chakraborty, Former Director of Research, AAU, Khanapara, AAU, Khanapara cum QRT member-ICAR-DFMD, Dr J.K. Mohapatra, Senior Scientist, ICAR-DFMD; Dr N.N. Barman, Professor and Head, Department of Microbiology, AAU, Khanapara; Dr K. Sharma, Officer In-charge, RRC, Guwahati; Dr Amitav Chakravarty, Nodal Officer, NADCP, Govt. of Assam, Dr N.I. Singh, Joint Director (Adm), Govt. of Manipur and Dr Pankaj Deka, Assistant Virologist, RRC, Guwahati delivered lecture on different aspects on diagnosis, prevention and control of FMD. In the valedictory session, all the retired professor & head of the Department of Microbiology, College of Veterinary Science, Khanapara namely Dr B.R. Boro, Dr A.K. Sharma, Dr S.K. Das, Dr D.K. Sharma was present. The programme was ended by both of thanks delivered by Dr N.N. Barman, Professor and Head, Department of Microbiology, College of Veterinary Science, Khanapara. Barman, Professor and Head, Department of Microbiology, College of Veterinary Science, Khanapara.



Fig. 23: 29th October, 2022 at 11:15 AM

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International Centre for Foot and Mouth Disease  
ICAR-NIFMD Bhubaneswar (Odisha)



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