ANNUAL ACTION PLAN

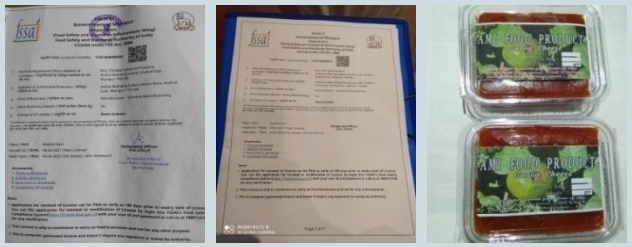
(January to December, 2021)

KRISHI VIGYAN KENDRA, IMPHAL EAST

Staff Position

Sl No.	Name of the incumbent	Designation	Discipline
1		Sr. Scientist & Head	-
2	S. Molibala Devi	Subject Matter Specialist	Home Science
3	Md. Abdul Salam	Subject Matter Specialist	Fishery
4	Nandini Chongtham	Subject Matter Specialist	Agronomy
5	Gunajit Oinam	Subject Matter Specialist	Agri. Engg
6	Dr. H. Ramananda Singh	Subject Matter Specialist	Entomology
7	Dr. Priyadarshini Salam	Subject Matter Specialist	Horticulture
8	Dr. Th. Sushilkumar Singh	Programme Assistant	Veterinary
9	Smt. M. Bharti Devi	Programme Assistant	Computer Sc.
10	O. Singhat Singh	Jr. Steno cum Comp. Operator	
11	Shri. H. Budhi Singh	Driver	NA
12	Shri. Sh. Jiten Singh	Driver	NA
13	Smt. Ch. Tilotama Devi	Supporting staff	NA
14	Shri. Ch. Bijen Singh	Supporting staff	NA
15		Farm Manager	-
16		Office Assistant	-

Recommendation of SAC and Action Taken Report

Recommendations	Action Taken
Agril. Engg. Suggested for popularization of 8 row drum seeder among the farmers by procuring more numbers of drum seeders from the previous manufactures for wider spread of technology.	Procured 6 nos. of Drum seeder and distributed to farmers for wider dissemination of the technology.
Agronomy Suggested for using maize HQPM-5 instead of HQPM-1	Initiated and distributed 100 kgs of HQPM-5 maize seeds
Home Science Status of marketing and licensing of Jackfruit chips and Guava Cheese 	i) Marketing and branding linkage with M/S Ami Foods FSSAI license no. 11621008000019. Products received consolation prize in the CAU RAF, 2021 held during 8th to 10th March, 2021 in the category of processed food, Product fetched good response during MAI OWN exhibition by GOM and has demand the product for diwali gifts. ii) Brand creation of M/S Chakpa Langmei Products with the FSSAI license of 11621008000022 has started producing jackfruit chips
Fisheries To refine the problem identified on OFT of Silver Barb	Redefined as suggested and incorporated in the action plan
All training programme should give more emphasis on Skill development training programme and vocational training programme for income generation.	Most of the training programmes have been targetted to cover 3/4 days for skill development, however due to the Covid-19 situation only one day programme could be covered
Suggested to go for a training need analysis by discussing with farmers before conducting any training programmes.	Initiated and on request training programmes are given more emphasis

Sl. No.	Title of the OFT (15 nos.)
1	Bio floc fish culture (Anabas testudineus & Tilapia)
2	Performance Evaluation of *Anabas testudineus* (Ukabi)
3	Performance Evaluation of Silver Barb in monoculture system
4	Performance Evaluation of Gravity Fed Inline Drip Irrigation system in increasing Tomato Yield
5	Performance Evaluation of Eight Row Self Propelled Rice Transplanter
6	Performance Evaluation of Green Gram Variety Tripura Moong - 1
7	Performance Evaluation of Short Duration, High Yielding Field Pea Variety TRCP-9
8	Performance Evaluation of Toria var. TRC T-1-1-5-1 (Tripura toria) under zero tillage cultivation
9	Evaluation of Leftover Watermelon Rind Candy Preparation
10	Production of Osmodity Dehydrated Pineapple Slices
11	Management of Early Blight and Late Blight of Potato
12	Management of Diamond Back Moth and Cabbage Butterfly in Cabbage for Higher Productivity
13	Management of Fall Armyworm
14	Performance Evaluation of Tripura papita var. RCTP1
15	Performance Evaluation of Onion variety- Bhima Red and Bhima Shakti

OFT-01

Performance evaluation of Anabas & Tilapia in Bio floc culture system

1st year

Enterprise	Prioritized Problem	Details of technology	Source	Observations
Fisheries	Huge gap in demand and supply of fish in the state.	Stocking density – 1000 fingerling per tank Feeding rate – 3-5 % body weight Culture period: 120 days Tank size – 10000 lit **T1**= 1000 fingerling/tank; **T2**= 1500 fingerling/tank; **T3**= 2000 fingerling/tank	NFDB, 2018	➢ Survival rate after 120 days ➢ Growth after 120 days ➢ Production ➢ BCR

Tank size	**10000 lit**
Replications	**6**
Cost per Trial	**Rs.20000 /-**
Total Cost	**Rs. 120000 /-**

OFT-02

Performance evaluation of *Anabas testudineus* (Ukabi) in farm pond

1st year

Enterprise	Prioritized Problem	Details of technology	Source	Observations
Fisheries	**Poor growth, low productivity of local Anabas leading to low net return**	Stocking density – 80000/ha Feeding rate – 3-5 % body weight Feeding interval – twice a day Feed : Pellet & Sinking (1:2) feed (30-32 % Protein) Culture period: 120 days **T1**= 80000 fingerling/ha; **T2**= 100000 fingerling/ha; **T3**= 120000 fingerling/tank	CIFA, 2016	➢ Survival rate after 120 days ➢ Growth after 120 days ➢ Net return ➢ BCR

Area	**0.25**
Replications	**3**
Cost per Trial	**Rs. 20000**
Total Cost	**Rs. 60000/-**

Scientists
SMS- Fisheries

OFT-03

Performance evaluation of Silver Barb in monoculture system

1st year

Enterprise	Prioritized Problem	Details of technology	Source	Observations
Fisheries	Non practices of minor carp farming by the farmers. Huge gap in demand and supply of fish in the state.	Stocking density – 120000/ha Feeding rate – 3 % body weight Feeding interval – twice a day Feed : RB+ Floating (2:1) feed (30-32 % Protein) Culture period: 120 days **T1**= 80000 fingerling/ha; **T2**= 100000 fingerling/ha; **T3**= 120000 fingerling/tank	CIFA, 2018	➢ Survival rate after 120 days ➢ Growth after 120 days ➢ Net return ➢ BCR

Area	**0.75**
Replications	**3**
Cost per Trial	**Rs. 40000**
Total Cost	**Rs. 120000/-**

Scientists
SMS- Fisheries

OFT-04

Performance evaluation on Gravity Fed Drip Irrigation system in increasing Tomato Yield

1st year

Crop	Prioritized Problem	Details of technology	Source	Observations
Tomato	High volume requirement of water with flooding system of irrigation on Tomato, low water use efficiency, High weeding intensity.	Crop: Tomato var. Arka Rakshak Spacing: 45cm x 45 cm Area: 0.75 ha Irrigation Scheduling: Every three days	College of Agri. Engg. & PHT, CAU (I), Ranipool, 2012	Water use efficiency (WUE = Crop yield kg/water consumption m3), Weed intensity index, Labour requirement, Yield, BCR

Area	**0.75**
Replications	**3**
Cost per Trial	**Rs. 20000/-**
Total Cost	**Rs. 60000/-**

OFT-05

Performance Evaluation of Eight row self propelled Rice Transplanter

1st year

Crop	Prioritized Problem	Details of technology	Source	Observations
Rice	High cost of manual transplanting and non maintenance of spacing	Crop: Paddy Var. CAU-R1 No. of Row: 8 Spacing: R-R 20 cm Hill to Hill Distance: 10 cm	CIAE, 2012	1. Field capacity 2. Days to crop establishment 3. Cost of operation 4. Labour requirement 5. Field efficiency 6.Yield 7.BCR

Units	**03**
Replications	**3**
Cost per Trial	**Rs. 10000/-**
Total Cost	**Rs. 30000/-**

Scientists
SMS- Ag. Engg. Hort, PP

OFT-06

Performance Evaluation of Green gram variety Tripura Moong – 1

1st year

Crop	Prioritized Problem	Details of technology	Source	Observation
Green gram	Unavailability of high yielding uniform maturity green gram varieties in the region 	**Seed rate:** 20-25 kg / ha; **Spacing:** 30 cm x 10 cm **Seed treatment:** Thiram 2 g + carbendazim 1gm / kg seed **Rhizobium and PSB Culture:** 7-10 g / kg seed ***Trichoderma veridae*:** 5-7 g / kg seed **Fertilizers** :- 20 kg : 50 kg: 30 kg NPK / ha as basal **Weed management**: Pre emergence application of Pendimethalin @ 1 kg / ha in 400-600 l of water **Check variety: IPM 2-3** Tripura Moong – 1 is suitable for Kharif season, early maturing, medium bold seed, moderately resistant to MYMC, CLS, Anthracnose and resistant to powdery mildew, maturity 70 days.	ICAR Research Complex for NEH Region, Tripura Centre, 2018	Plant height, No. of branches per plant, No, of pod per plant, No. of seed per pod , Duration in days ,Yield/ ha, BCR

Area	**0.5ha**
Replications	**5**
Cost per Trial	**Rs. 3000/-**
Total Cost	**Rs. 15,000/-**

OFT-07

Performance of short duration, high yielding field pea variety TRCP- 9

2nd year

Crop	Prioritized Problem	Details of technology	Source	Observation
Field Pea	Non availability of short duration high yielding suitable field pea varieties for the region.	Seed rate: 80 kg / ha; Fertilizer : 20:50:30 kg NPK/ha Spacing : 30 cm x 10 cm Seed treatment : Rhizobium 10ml/kg seed **Check variety : IPFD 1-10** TRCP-9 is suitable for both rainfed and irrigated situation of rabi season, Resistant to powdery mildew and rust, good tolerance to pod borer and stem fly, Short duration 93-95 days and yield potential is 17-18 qt/ha	ICAR Research Complex for NEH Region, Tripura Centre, 2018	Plant height, No. of branches per plant, No, of pod per plant, No. of seed per pod , Duration in days ,Yield/ ha, BCR

Area	**0.5 ha**
Replications	**5**
Cost per Trial	**Rs. 5000/-**
Total Cost	**Rs. 25,000/-**

Scientists
SMS- Agronomy, PP

OFT-o8

Performance Evaluation of Toria var. TRC T-1-1-5-1(Tripura toria) under zero tillage cultivation

2nd year

Crop	Prioritized Problem	Details of technology	Source	Observation
Toria	Lack of high yielding short duration Toria varieties suitable under rainfed condition 	Seed rate : 14 kg/ha (Mixed with sand 1:1 and broadcast); Fertilizer rate : 40:20:20 kg NPK/ha **Salient feature of TRC T-1-1-5-1 (Tripura toria)** Short Duration: 86 days Resistant to lodging, perform well under residual moisture after kharif rice, alsoi as *utera _crop.* Oil content 42.6% under rainfed condition. Potential yield : 9qt/ha	ICAR Research Complex for NEH Region, Tripura Centre, 2018	Plant height, No. of branches per plant, No, of siliqua per plant, No. of seed per siliqua, Duration in days ,Yield/ ha, BCR

Area	**1 ha**
No. of trials	**5**
Cost per Trial	**Rs. 3000/-**
Total Cost	**Rs. 15,000/-**

Scientists

SMS- Agronomy, PP

OFT-o9

Evaluation of leftover watermelon rind candy preparation

1st year

Crop	Prioritized Problem	Details of technology	Source	Observation
Water melon	Disposal menace of watermelon rind after use Un-utilization of white edible rind for usage as value added product to enhance income. 	- Cut rind of watermelon, green portion of rind & peeled with stainless steel knife - Cut into cuboids of (1.5 cm x 1.5cm) with thickness of (1.0 – 1.5 cm) - Blanched cuboids of white rind in boiling water for 5 min - Addition of 100 g sugar directly with 100 g blanched. - Raised the sugar syrup to 10°brix and keep over night - Repeat process till 70°brix - Rinse with boiling water for 5 to 10 seconds - Dry/dehydrate candy	Navsari Agricultural University, Navsari, Gujarat, 2017	Acceptability by hedonic scale BC Ratio

Units	**5**
Replications	**5**
Cost per Trial	**Rs. 1000/-**
Total Cost	**Rs. 5000/-**

Scientists

SMS- Home Science, Horticulture

OFT-10

Performance of Osmo dehydrated Pineapple Slices

1st year

Crop	Prioritized Problem	Details of technology	Source	Observation
Pineapple	Limited value added pineapple products available in the district. Need for more novel pineapple products as pineapple has been identified as priotized crop of the district.	T_1: Soaking pineapple in normal sugar syrup for overnight T_2: Soaking pineapple slices in sugar syrup (60 degrees brix for 20 hours) T_3: Soaking pineapple slices in sugar syrup (65 degree brix for 20 hours)	IIHR, Bangalore, 2015	1. Shelf life 2. Drying time 3. Acceptability (by Hedonic scale) 4. B:C ratio

Scientists
SMS- Home Science, Horticulture

Units	5
Replications	5
Cost per Trial	Rs. 3000/-
Total Cost	Rs. 15000/-

OFT-11

Management of Early blight and late blight of potato

2nd year

Crop	Prioritized Problem	Details of technology	Source	Observation
Potato	High incidence of Early Blight and Late Blight affecting Growth and Yield of Potato	1. Protective spraying of Mencozeb 75% & Zineb 75% WP @ 2gm/litre alternatively 4 times at 20 days interval from 20 DAT. 2. Trichoderma Harzianum @ 2.5kg + 100kg of FYM at 10-15 days before sowing + Foliar application of Trichoderma Harzianum and Pseudomonas Florescens @ 5ml each at 10 days interval 3 times from 20 DAT 3. Farmer Practice	TNAU, August 2015 & State Biological Control Laboratory, Shillong 2008	1. % damage 2. Yield of the crop 3. B:C ratio

Scientists
SMS- PP, Horticulture

Area	0.3 ha
Replications	3
Cost per Trial	Rs.15,000 /-
Total Cost	Rs.45,000/-

OFT-12

Management of Diamond Back Moth and Cabbage Butterfly in Cabbage for Higher Productivity

2nd year

Crop	Prioritized Problem	Details of technology	Source	Observation
Cabbage	Severe infestation with Diamond Back Moth and Cabbage butterfly affecting yield of Cabbage	**Crop : Cabbage; Variety: Rareball** ➢ Spray of Neem Seed Kernal Extract 0.03% @ 5ml/ha at 10 days interval starting from 20 DAT for 4 times ➢ Farmer Practice	University of Horticulture and Forestry, Solan 2015	1. % damage 2. Yield of the crop 3. B:C ratio

Area	**0.6 ha**
Replications	**3**
Cost per Trial	**Rs.3500/-**
Total Cost	**Rs.10,500/-**

OFT-13

Management of Fall Armyworm

1st year

Crop	Prioritized Problem	Details of technology	Source	Observation
Maize	Severe infestation of fall army worm affecting growth and yield of maize	**Crop : Maize** **Treatment 1** Deep ploughing Application of sand or ash into plants whorl of affected plants Application of Bacillus thuringiensis @ 2g/lit **Treatment 2** Farmer Practice	CAU (I)/DEE – Advisory, 2020	1. % damage 2. Yield of the crop 3. B:C ratio

Area	**0.75 ha**
Replications	**3**
Cost per Trial	**Rs. 4000/-**
Total Cost	**Rs.12,000/-**

Scientists
SMS- PP, Horticulture, Agronomy

OFT-14

Performance of Tripura papita var. RCTP1

2nd year

Crop	Prioritized Problem	Details of technology	Source	Observation
Papaya	Low yield, susceptible to PRSV (Papaya Ring Spot Virus) Small size fruit of local cultivars	Tripura Papita var. RCTP1 Spacing: 1.8 × 1.8 m Planting: May-July Seed rate: 500 g/ha Manure : 10 kg FYM + 1 kg Neem cake + 200 g each of NPK/plant	ICAR, Tripura Centre Lembucherra (2014)	1.Days to Maturity 2. No. of fruits /plant 3. Av. Wt. of fruit (kg) 4. Yield (t/ha) 5. BC ratio 6. Farmers and consumers preference

Area	**1 ha**
Replications	**3**
Cost per Trial	**Rs. 6000/-**
Total Cost	**Rs. 18,000/-**

OFT-15

Performance of Onion variety- Bhima Red and Bhima Shakti

2nd year

Crop	Prioritized Problem	Details of technology	Source	Observation
Onion	Non-availability of high yielding variety	T1 : Bhima red T2 : Bhima Shakti T3 : Nasik red Seed Rate : 3 kg/ha Spacing: 15x10 cm NPK : 75:40:40 kg/ha Period: Late Kharif/Rabi	Directorate of Onion and Garlic Research, Pune 2011	1. Yield 2. B:C ratio 3. Crop Duration

Area	**0.5 ha**
Replications	**3**
Cost per Trial	**Rs. 3000/-**
Total Cost	**Rs. 9000/-**

Scientists
SMS- Horticulture, PP

Sl. No.	Title of the FLD (21 nos.)
1	Culture of improved variety carp (Variety - Amur Carp & Jayanti Rohu)
2	Monoculture of Monosex tilapia
3	Low Cost Pusa Concentric Onion Storage Structure
4	Popularization of Manually operated Treadle pump: A low cost irrigation option for marginal Farmers
5	Popularization of Wheat Cultivation var DBW-107
6	Popularisation of maize intercropping with pulses
7	Popularization of Rice-toria-greengram cropping system
8	Popularisation of Vermiculture and Vermicomposting for sustainable income generation
9	Popularization of Jackfruit chips for Sustained Income
10	Popularization of Gauva Cheese as a value added product
11	Popularization of Solar Cabinet Dryer
12	Popularization of hermetic storage system (grain pro's super bags) for increasing quality of grains/seeds
13	Popularization of Integrated Pest Management in rice
14	Popularizing Year round Oyster Mushroom production

Sl. No.	Title of the FLD
15	Popularization on the use of pheromone trap for management of fruit fly in cucurbits
16	Popularization of Improved breed Black Bengal Goat
17	Popularization of improved breed Rani pig
18	Popularization of improved breed rainbow rooster
19	Popularization of Native Poultry - Kadaknath
20	Popularization of Tomato variety Arka Rakshak and Arka Samrat
21	Popularisation of Turmeric variety Megha Turmeric-1

FLD-01

Culture of Improved Common Carp (Variety -Amur Carp & Jayanti Rohu)

2nd year

Problem: Poor growth and low productivity of common carps

Technology details:
Stocking density-8000/ha
Stocking time- April-May.
Feeding method – Broadcasting
Feed – Pellet feed
Feeding rate : 3-5 % BW

Source: CIFA, Bhubaneswar, 2015

Details of demonstration	
No. of demonstration	Area (ha)
03	0.75
Cost of the demo= Rs. 30,000/-	

FLD-02

Monoculture of Monosex tilapia

2nd year

Problem: Poor growth low productivity of mixed tilapia and carp culture leading to low net return

Technology details:
Stocking density – 100000/ha
Stocking time- May-June
Feeding method - Broadcasting
Feeding rate – 3-5% BW
Feed- Pellet feed

Source: CIFA, Bhubaneswar, 2013

Details of demonstration	
No. of demonstration	Units
5	5
Cost of the demo= Rs. 50,000/-	

FLD-03

Popularization of Manually operated Treadle pump: A low cost irrigation option for marginal Farmers

1st year

Prioritised Problem: High cost of irrigation

Technology Details

- ✓Crop- Tomato
- ✓Var. Arka Rakshak
- ✓Spacing: 60cm x 45 cm
- ✓Depth: 3cm
- ✓Working style- Paddle operated
- ✓Weight-15 kg

Parameters of demonstration

- ➢ Field Capacity (Volume of water pumped/hour)
- ➢ Labour and time requirement
- ➢ Cost of operation

Source- ICAR Research complex for Eastern Region, Patna, 2018

Details of Demonstration		
No. of Demonstration	Area (ha)/Units	No. of farmers
03	0.75	03

Cost of the demonstration = Rs. 10500/-

FLD-04

Demonstration on Low Cost Pusa Concentric Onion Storage Structure

1st year

Prioritised Problem: High rotting percentage and fungal infestation of onion under normal storage condition

Technology details

- ✓A concentric cylinder structure: 5 tier
- ✓Capacity: 250 Kg (5 tier)
- ✓Material: Bamboo and Wooden Planks.
- ✓Inner and outer walls : 25mm dia bamboo
- ✓Base of tier: 740 mm x 740 mm perforated wooden planks.

Parameters of Demonstration

- ➢Rotting percentage
- ➢No.of infested (fungal) onion per 250kg
- ➢ PWL

Pusa Concentric Onion Storage Structure

Source- IARI, 2012

Details of Demonstration		
No. of Demonstration	Area (ha)/Units	No. of farmers
03	03	03

Cost of the demo-25000

Team members

SMS – Agril. Engg, Plant protection, Horticulture

FLD-05

Popularization of Wheat Cultivation

1st year

Prioritised Problem: Low income of farmers due to monocropping practices

Wheat Variety: DBW – 107

Salient Features : Suitable for irrigated late sown condition, recommended for NEPZ, tolerant to heat stress and higher disease resistance

Duration-110 days; Potential yield- 30 qt/ha

Seed rate:80kg/ha; Fertilizer: 80:40:25 kg NPK/ha

Parameters of demonstration

- Plant height
- No of tillers/plant
- No of panicles/plant
- Yield /ha

Source – DWR, Karnal, 2014

Details of Demonstration		
No. of Demonstration	Area (ha)	No. of farmers
05	10	20

Cost of the demo-80,000

FLD-06

Popularization of maize cultivation and intercropping with pulses

1st year

Prioritised Problem: Unutilisation of available space between plant rows in wide space crops thereby no additional income

Technology details

Maize var. HQPM-5

Seed rate : 20kg/ha

Spacing : 60cm x 20 cm

Intercrop : 2 rows of blackgram (30 cm apart) in between 2 rows of maize

Seed rate of blackgram- 15 kg/ha

Planting Geometry: 2:2

Parameters of demonstration

- Plant height
- No of branches/plant
- No of cobs/plant
- Yield of maize
- Yield of Blackgram
- Maize equivalent yield

Source-Indian institute of Pulse Research

Details of Demonstration		
No. of Demonstration	Area (ha)	No. of farmers
05	05	25

Cost of the demo-30,000

Team members

SMS – Agronomy, Plan Protection, Home Sc

FLD-07

Demonstration on Rice – Toria – Greengram cropping system

2nd year

Prioritised Problem: Low cropping intensity due to monocropping practice keeping the land fallow after rice harvest

Technology details

✓Cultivation of rice var CAU-R1/CAU-R3 during June/July

✓Sowing of Toria var. TS-38 just after harvest of rice during October/early November under zero tillage method

✓Sowing of Greengram during Feb/early march

Parameters of demonstration

- Yield of paddy
- Yield of toria
- Yield of Greengram
- Economic analysis of the cropping system

Source-Indian institute of Pulse Research

Details of Demonstration		
No. of Demonstration	Area (ha)	No. of farmers
04	02	08

Cost of the demo-40,000

FLD-08

Popularization of Vermiculture and Vermicomposting for sustainable income generation

2nd year

Prioritised Problem: Nonutilization of farm waste, kitchen waste and mushroom substrate waste for production of usefull compost

Technology details

Earthworm variety; Red worm (Eisenia foetida)

Rate of application: 1 kg earthworm in 100 kg organic matter(1000 worm/sq m area)

Method: Bed method and use of Vermibed of GSM 350

Parameters of demonstration

- Production of Vermiworm
- Production of Vermicompost
- BCR

Team members

SMS – Agronomy, Plant Protection

Source-Technology Inventory for NE India,ICAR-ATARI,2017

Details of Demonstration		
No. of Demonstration	Area (ha)	No. of farmers
10	-	10

Cost of the demo-50,000

FLD-09

Popularization of Jackfruit chips for Sustained Income

2nd year

Prioritised Problem: Non utilization of Jackfruit into value added production

Technology details

- Cutting of fully matured, unriped jackfruit descedded bulbs into longitudinal finger like pieces
- Blanched in hot water with 1% KMS for 5 minutes
- Dried in dryer @ 40-50º for 10-15 minutes
- Deep fry into oil till golden brown colour
- Cool and sprinkled with required salt and chilli powder
- Packing in a tight material

Parameters of demonstration

- Acceptability by hedonic scale
- B.C. Ratio

Source- ICAR Barapani (Process Protocol for Preparation of Jackfruit Chips), 2012

Details of Demonstration		
No. of Demonstration	Area (ha)/Units	No. of farmers
10	10	10
Cost of the demo-30,000		

FLD-10

Popularization of Gauva Cheese as a value added product

3rd year

Prioritised Problem:Underutilization of Guava into value added product

Technology details

- ✓1 kg firm, ripe gauva pulp cook to a thick paste
- ✓Addition of 1.25 – 1.5 kg sugar
- ✓Addition of citric acid and butter@ 56gm
- ✓Hot cheese spread on tray to set over night and cut into desired size.

Parameters of demonstration

- Recovery percentage of finish products
- Acceptability test by hedonic scale
- B:C ratio

Horticulture Division ICAR Research Complex for NEH

Details of Demonstration		
No. of Demonstration	Area (ha)/Units	No. of farmers
05	05	05
Cost of the demo-6000		

Team members
SMS – Home Science, Horticulture

FLD-11

Popularization of Solar Cabinet Dryer

3rd year

Prioritised Problem: Unhygienic and open state of long hours of sun drying of agricultural produce hindering income generation

Technology details

The dryer with four main component that is flat plate collector, drying trays, exhaust fan and solar PV module

Specification: Dimension: 1500mm x 1000mm x 800 mm, 2 trays of 1400mm x 900mm at bottom and 900mm x 400mm at the centre, double wall black painted GI sheet filled with thermocol in between the wall attached with force convection with a capacity of 10-15 kg/batch with a drying time of 1-2 days

Parameters of demonstration
- Drying time (in days)
- Quality of Products

Source- COA,,CAU,Imphal 2014

Details of Demonstration

No. of Demonstration	Area (ha)/Units	No. of farmers
05	05	05

Cost of the demo-135,000

FLD-12

Popularization of hermetic storage system (grain pro's super bags) for increasing quality of grains/seeds

3rd year

Prioritised Problem: High infestation rate of storage grain/seeds pest under uncontrolled storage condition

Technology details

✓EVOH (ethylene-venyl alcohol) incorporated as a barrier structure with a 7 to 9 layers structures packing and storing material

✓Reusable plastic sealing tapes at 2 (two) levels for each bag making it airtight

Parameters of demonstration
- Relative humidity (before andafter storage)
- Pest infestation (before and after storage)incidence
- Germination percentage

Team members

SMS – Home Science, Horticulture, Plant protection, Agronomy

Source-Pest Control of India 2015

Details of Demonstration

No. of Demonstration	Area (ha)/Units	No. of farmers
10	10	10

Cost of the demo-7000

FLD-13

Popularization of Integrated Pest Management Practice in rice

3rd year

Problem: Injudicious use of chemicals and inorganic sources for pest management in rice

Technology details:

1. Remove seedling tips before transplanting to destroy the egg masses of yellow stem borer
2. Avoid excessive use of nitrogenous fertilizers
3. Use pheromone trap (Scripo Lure @ 4acre) for monitoring yellow stem borer
4. Need based spray of imidacloprid @ 1ml/3 litres of water against plant hoppers

Parameters

- Time of incidence of major insect pest
- Yield
- B:C ratio

Source: IARI 2013

Details of demonstration	
No. of demonstration	Area (ha)
06	2.5
Cost of the demo = Rs. 10,000/-	

FLD-14

Popularizing year round Oyster Mushroom production

3rd year

Problem: Wastage of paddy straws by burning causing environmental hazards

Technology details:

1. Chopped the paddy straw (2-3 inch length)
2. Soak the chopped straw for 4-5 hrs
3. Allow it to drain excess water till it reach 60% moisture level.
4. Spawning with layer method (3-4 layers each 10-15cm straw) in polybags with 1cm diameter hole with10cm apart between each holes.
5. Allow the spawn to run in dark for 7-10 days.
6. After mycelium have fully impregnated, spray water 2-3 times during day time.
7. Pin head developed will fully matured in 2-3 days.

Parameters

- Yield
- B:C ratio

Source: CHF, CAU, Pasighat, A. P., 2010-11

Details of demonstration	
No. of demonstration	Units
10	10
Cost of the demo= Rs. 30,000/-	

Team members

SMS-Plant Protection, Agronomy

FLD-15

Popularization on use of pheromone trap for management of fruit fly in cucurbits

3rd year

Problem: Reduction in the quantity and quality of the produce due to fruit fly infestations

Source: IARI, 2013

Technology details:

Installation of cue lure for monitoring and mass trapping to reduce the male population

Parameters

- No. of insects per trap
- Percent infestation of cucumber by fruit borer
- Yield
- B:C ratio

Details of demonstration	
No. of demonstration	Area (ha)
10	1
Cost of the demo = 10,000/-	

Team members

SMS-Plant protection, SMS-Horticulture

FLD-16

Popularization of Improved breed Black Bengal Goat

4th year

Prioritised Problem: Unavailability of economically viable suitable breed

Demonstration parameters

- Adaptability
- Kidding potency
- Disease resistance
- BCR

Source-NRC GoatGuwahati 2015

Details of Demonstration		
No. of Demonstration	Area (ha)/Units	No. of farmers
05	2 weaning goats/farmer	05
Cost of the demo- 40000		

Team members

Prog. Asstt. (Animal Science)

FLD-17

Popularization of improved breed Rani pig

4th year

Prioritised Problem: unproductivity of local breed and unacceptable size of Hampshire pig

Demonstration parameters

- Age of 1st farrowing
- Litter size
- Milk production
- BCR

Source-NRC Pig,Guwahati2016

Details of Demonstration		
No. of Demonstration	Area (ha)/Units	No. of farmers
05	2 Piglets /farmer	05
Cost of the demo- 40000		

FLD-18

Popularization of improved breed rainbow rooster

1st year

Prioritised Problem: Lack of productive chicken meat

Technology details

- ✓ Feeding: Starter: 0-56 days ; Grower: **57-150 days** layer mesh 151 onwards
- ✓ Feed supplement: Probiotics, Calcium, Vitamins and Mineral mixture,
- ✓ Body wt: 3 – 3.5 kg (M), 2.5 - 3 kg (F) at maturity
- ✓ Egg laying capacity: 150 /year

Parameters of demonstration

- Weight of day old chick
- Growth
- Weight at maturity
- Egg production

Team members
Programme Asst-Animal Science

Source-CPDO, Banglore, 2016

Details of Demonstration		
No. of Demonstration	Area (ha)/Units	No. of farmers
20	20 chicks/ farmer	20
Cost of the demo-25000		

FLD-19

Popularization of Native Poultry - Kadaknath)

2nd year

Prioritised Problem: Lack of low cholestrol chicken meat and egg production

Technology details

- ✓ Feeding:
  - Starter: 0-56 days
  - Grower: **57-150 days**
  - layer mesh 151 onwards
- ✓ Feed supplement: Probiotics, Calcium, Vitamins and Mineral mixture
- ✓ Body wt: 2 kg (M), 1.8 kg (F) at maturity
- ✓ Egg laying capacity: 200 /year

Source-CPDO, Bangalore, 2016

Details of Demonstration		
No. of Demonstration	Area (ha)/Units	No. of farmers
20	20 chicks/ farmer	20
Cost of the demo-30000		

Parameters of demonstration

- Weight of day old chick
- Growth
- Weight at maturity
- Egg production
- Organo leptic acceptability test

Team members

Programme Asst-Animal Science

FLD-20

Popularization of Tomato variety Arka Rakshak and Arka Samrat

2nd year

Prioritised Problem: Unavailability of disease resistant and high yielding tomato cultivars

Technology details

T1: Arka Rakshak (triple disease resistance to ToLCV, BW and early blight)
T2: Arka Samrat
Seed rate: 300-400g/ha
Spacing: 60 x 45 cm
FYM: 500 kg/ha
NPK:120:60:60 kg/ha
Period: Aug- Dec

Parameters of demonstration

1. Days to germination
2. Days to maturity
3. Fruits no/plant
4. Avg Yield/plant
5. B:C ratio

Team members

SMS – Horticulture
SMS-Plant Protection

Source-IIHR, Bengaluru, 2010

Details of Demonstration

No. of Demonstration	Area (ha)	No. of farmers
03	01	04

Cost of the demo-30,000

FLD-21

Popularization of Turmeric variety Megha Turmeric-1

1st year

Prioritised Problem: Unavailability of high yielding, high tolerance to disease (leaf spot and blotch), wider adaptability and processing variety of turmeric

Technology details

Spacing: 30 x 30 cm
Planting time: April- May
FYM: 20 t/ha
NPK: 120:90:90 kg/ha

Parameters of demonstration

1. Days to maturity
2. Average yield of rhizome/clump (kg/plant)
3. Average yield/ha

Team members

SMS – Horticulture
SMS-Plant Protection

Source-ICAR (RC) for NEH Region, Umiam, Meghalaya,2013

Details of Demonstration

No. of Demonstration	Area (ha)	No. of farmers
03	0.5	04

Cost of the demo-40,000

No. of Prog : 60
No. of Farmer : 1614

Training Programmes

Discipline	No. of trainings to be proposed											
	Farmer/FW		Rural Youth		Ex. Personnel		Sponsored		Vocational		Total	
	C	P	C	P	C	P	C	P	C	P	C	P
Agronomy	06	225	03	130	-	-	-	-	-	-	09	355
Agril. Engg.	02	50	05	125	-	-	-	-	-	-	07	175
Fisheries	04	100	06	150	-	-	03	60	01	20	14	330
Home Science	02	50	04	100	-	-	-	-	-	-	06	150
Horticulture	04	109	02	45	-	-	-	-	-	-	06	154
Plant Protection	02	50	04	100	-	-	-	-	-	-	06	150
Animal Science	08	200	04	100	-	-					12	300
										Total	**60**	**1614**

Activities (Programmes : 1340 & Beneficiaries : 8840)

Activity/ programme	No. of activity/ prog	Beneficiary (No.)	Activity/ programme	No. of activity/ prog	Beneficiary (No.)
Field trips and Visits			**Publications**		
1. Exposure Visits	06	180	1 Popular Articles	10	
2. Diagnostic Visit	300	400	2. Extension Literature	12	
3. Scientist Visit to Farmer's Field	300	700	**Others**		
Group activities			1. Field Day	09	300
1. Group Meeting	20	400	2. Method demonstration	30	480
2. Ex-Trainee Meeting	10	200	3.Farmer's Seminar	01	50
Mass outreach program			4. Advisory Service	500	500
1. Technology Week	01	100	5. TV Talk	05	
2. Jai Kishan Jai Bharat	01	120	6. Radio Talk	07	
3. Mera Goan Mera Gaurav	06	440	7. Resource Person	15	2150
4. Kishan Gosthi	02	200	8. Proposed farmer's club to be form	10	150
5. Awareness Programme	06	600	9.Celebration of Important Days	08	250
6. Interaction Programme	20	800	10.Newspaper coverage	20	
Camps and Campaigns			11.Film show	10	
1.Swatchata Bharat Campaign	05	160	12.Technology showcasing	06	
2. Soil Health Camp	05	220	13.Mass awareness	04	400

Other Demonstrations

1. **PKVY : To be proposed depending upon the fund availability**
   - Pea- Rice cropping sequence in 2 clusters (10 ha each)

Activities for 2021:

- 04 nos. of Training cum method demonstration
- 02 nos. of Field Day
- Soil sample analysis
- Establishment of Processing units in the 2 clusters

2. **CFLD on Pulses:**
   - Blackgram Var PU 31 (10 ha) , Green gram var. IPM 2-3 (10 ha) and Field Pea var Aman (50 ha) to be proposed
   - 06 nos. of Trainings and 03 nos. of Field Day to be conducted

3. **CFLD on Oilseeds :**
   - ✓ Rapeseed-mustard : 30 ha
   - ✓ Training : 2 nos
   - ✓ Field Days : 2 nos

Materials	Crop	Variety	Quantity
A. Seed materials (q)			
Cereals	Paddy	CAU-R1	100 qt
Oilseeds	Rapeseed Mustard	TS-38; NRCH-101	10 qt; 10 qt
Pulses	Greengram	IPM 2-3	10 qt
	Blackgram	PU-31	20 qt
B. Planting materials (No.)			
Spice	Onion	Bhima Dark Red/ Bhima Shakti	10000
Vegetable	Cauliflower	White Treasure/white Excel	10000
	Cabbage	Rareball	15000
	Tomato	Arka Rakshak	12000
	Peas	Makhyat mubi	80 kg
	Strawberry	Winter dawn	1000
	Coriander		10 kg
Plantation crops/ forest	Tree beans	Local	500
Bio-agents (Kg)	Earthworm	*Eisenea foetida*	10 kg
Bio-fertilizers (kg)	Vermicompost		1000 kg
Livestock strains/ fingerlings (No.)			
1.	Fish Spawn	Indian Major carp	1 million
2.	Fish Fry	Indian Major carp	50000
3.	Fish Fingerling	Indian Major carp	10000
4.	Poultry chicks	Giriraja	600 chicks
5.	Piglets	Cross Bred	60 piglets

Soil testing and SHCs

Sample	No. of samples to be tested	No. of SHCs proposed to be supplied to farmers
Soil sample	200	200
Water sample	200	200
Plant sample	-	-
Total	**400**	**400**


Thank You