Annual Progress Report 2023 (January – December)

KRISHI VIGYAN KENDRA, IMPHAL EAST (ANDRO)
ESTD.: 2005

Krishi Vigyan Kendra, Imphal East
Directorate of Extension Education
Central Agricultural University, Imphal, Manipur

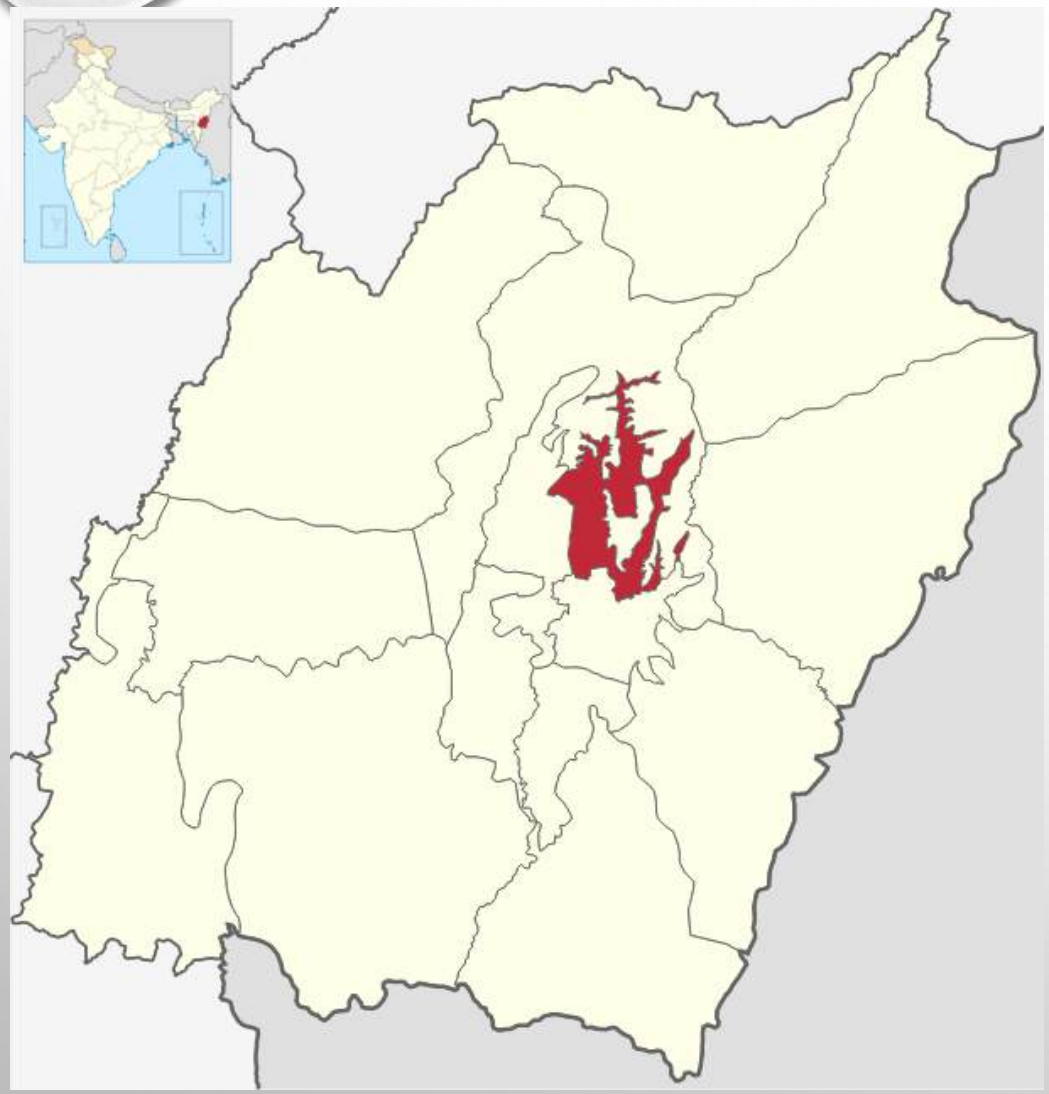
STAFF POSITION as on December, 2023 (Filled post = 13 & Vacant Post = 3)

Sl. No.	Name	Designation	Date of Joining	Discipline
1.	**Vacant**	**Sr. Scientist and Head**		
2.	Smt. S. Molibala Devi	Subject Matter Specialist	20.06.2007	Home Science
3.	Mr. M. A. Salam	Subject Matter Specialist	11.06.2008	Fisheries
4.	Smt. Nandini Chongtham	Subject Matter Specialist	25.08.2008	Agronomy
5.	Er. Gunajit Oinam	Subject Matter Specialist	24.05.2012	Agril. Enggineering
6.	Dr. H. Ramananda Singh	Subject Matter Specialist	09.07.2018	Plant Protection
7.	Dr. Priyadarshini Salam	Subject Matter Specialist	09.07.2018	Horticulture
8.	Dr. Th. Sushilkumar Singh	Programme Assistant	04.10.2007	Animal Science
9.	Smt. M. Bharati Devi	Programme Assistant	03.10.2007	Computer Science
10.	**Vacant**	**Farm Manager**		
11.	**Vacant**	**Office Superintendent cum Accountant**		
12.	Mr. O. Singhajit Singh	Jr. Stenographer cum Computer Operator	22.07.2012	Education
13.	Mr. H. Budhi Singh	Driver cum Mechanic	09.10.2007	NA
14.	Mr. Sh. Jiten Singh	Driver cum Mechanic	10.10.2007	NA
15.	Mr. Ch. Bijen Singh	Multi Tasking Staff	10.10.2007	NA
16.	Smt. Ch. Tilotama Chanu	Multi Tasking Staff	03.10.2007	NA

INFRA STRUCTURE FACILITIES/VEHICLES as on December, 2023

Sl. No.	Infra-structure facility	Present Status			Remarks (including quantity and quality at present)
		Existing/ Completed	On-going	New proposal	
1.	Administrative building	Completed	-	-	-
2.	Staff Quarters	-	-	-	-
3.	Farmers' hostel	-	-	-	-
4.	Demonstration Units	Completed			Piggery unit(1), Goatery Unit(1),Poultry Unit(2), Duckery (1), Low Cost Mushroom (1), Low Cost Vermicompost (4), Water reed cum fishery (1) Cattle unit (1)
5.	Fencing/boundary wall	Completed	-	-	-
6.	Vehicle-	Pl. tick (√) on appropriate status			
	a. Four Wheeler	Running /√Condemned / Not available			
	a. Tractor	√ Running /Condemned/ Not available			
	a. Power Tiller	√ Running/ Condemned/ Not available			
i.	Any other (Pl. specify)				Poly house (2), Shade net (1), Automatic Weather Station (1)

DETAILS OF VILLAGES IN THE IMPHAL EAST DISTRICT



Total No of Villages in the District	191
Total no of Villages adopted by KVK till date	09
Total No of Villages covered by KVKs interventions/ activities	187
% of Villages Covered based on Col. ii & iv	97.9

List of technologies identified/recommended for large scale adoption during last 2 years

Sl. No.	Details of technologies	Source and year of release	Area coverage (ha)/ extent of adoption (%) in the district
1	Eight Row Paddy Drum Seeder	TNAU, 2010	24 ha
2.	Cultivation of Field Pea var. Aman	IIPR, Kanpur, 2012	90 ha
3.	Cultivation of Blackgram var. PU-31	Recommended by AICRP, CAU, Imphal ,2015	35 ha
4.	Cultivation of maize var. HQPM-1	Anand Agricultural University, Gujarat, 2011	22 ha
5.	Popularization of Guava Cheese	Horticulture Division ICAR Research Complex for NEH Region Umiam, 2014	3 units for commercialization
6.	Value Added products of Mushroom	Directorate of Mushroom Research Solan, HP 2016	Commercialization and expansion upto 5 units

General Recommendations & Action Taken Report

Discipline	Suggestion	Action taken
1. OFT :		
Horticulture	The term pit should be change with proper words on OFT of Organic cultivation of King Chilli	Changed as instructed
Fisheries	In parameter analysis, the growth parameters to be remove on OFT on Performance evaluation of growth and survival in *Wallago attu* (Sareng)	OFT not conducted
Plant Protection	Source of technology should be change and the trials should be properly planned to avoid contamination on OFT on On farm production technology for mass production of *Trichoderma spp.*	OFT not conducted
Ag. Engg.	The trial should be done with drip irrigation. on OFT of Performance evaluation of half-moon terrace in papaya in slope hilly area	Done as instructed
	Title should be change with a suitable one on OFT on Assessment of plastic mulching in king chilli to conserve soil moisture and weed control	Done as instructed
2. FLDs:		
Animal Science	Problem identified and title of the demonstration should be change on FLD of Popularization of improved crossbreed pig/improved breed	Done as instructed
	Title should be change with a suitable one on FLD of Popularization of dual purpose poultry breed-Giriraja	Done as instructed
Home Science	Specific millet crop should be mentioned for FLD on Popularization of nutri rich millet products	Ragi, bajra, sorghum
Plant Protection	Title should be change on FLD of Demonstration on the management of BPH & WBPH in rice	Changed as per instruction

Status and Strategy for utilization of fund by on or before 25.03.2024

Sr. No.	Grant provided under	Major sub-head	Fund received up up to 1st March, 2024	Fund utilized by 8.03.2024	% of utilization	Strategy for ultilization of items by 25.03.2024		
						Instrument	Status of your strategy	Timeline of status
A	DARE GRANT	General						
		Capital						
B	ICAR NEH Component	General						
		Capital						
C	AICRP	Recurring						
		Non-recurring						
		TSP						
		SC-SP						
		NEH						
D	Externally funded Project	Recurring						
		Non-recurring						
		TSP						
		SC-SP						
		NEH						
E	KVK	Recurring	22247201.00	22122177.00	99.43		**500000.00**	31-03-2024
		Non-recurring	0.00	0.00	0.00	0.00	0.00	0.00
		TSP	0.00	0.00	0.00	0.00	0.00	0.00
		SC-SP	0.00	0.00	0.00	0.00	0.00	0.00
		NEH	0.00	0.00	0.00	0.00	0.00	0.00
F	IRP (University funded)	General						
		0.00	**22247201.00**	**22122177.00**	**99.43**	**0.00**	**500000.00**	

Detail Fund Utilization under various head

Heads	Received	Status	Balance	Percent Utilized
Salary	20067201	20067201	Nil	100
Contingency	1730000	1656816	73184	95.77
HRD	50000	50000	Nil	100
TA	300000	248160	51840	82.72
NARI	50000	50000	Nil	100
KSHAMTA	50000	50000	Nil	100
IIOR	275000	275000	Nil	100
DST, Manipur (PP)	90000	90000	Nil	100
DST, Manipur (Fishery)	90000	68000	22000	75.56
SAP	55270	55270	Nil	100
Total	22702201	22555177	147024	99.35

ON FARM TRIAL (OFTs)

Target : 12 numbers

SUMMARY OF OFTs

Achievement : 06 numbers

Sl. No.	Title of OFTs
1	Organic Cultivation of King Chilli
2	Performance evaluation of Growth and Survival in *Wallago attu (Sareng)*
3	Breeding and seed production of freshwater Eel (Ngaprum)
4	Performance evaluation of Pabda (*Ompok bimaculatus*) in composite culture
5	Management of Fall Armyworm
6	Performance evaluation of Half moon terrace with drip irrigation in Papaya in slope hilly area
7	Assessment of Plastic mulching with drip irrigation in king Chilli to conserve soil moisture and weed control
8	Preparation of Pomelo Jam
9	Assessment of Multi Grain Millet Cookies
10	COMMON OFT ASSIGNED FOR ALL KVKs FROM VALLEY DISTRICT OF MANIPUR

OFT – 1

Discipline: Horticulture

(2nd Year)

Title of OFT-Organic Cultivation of King Chilli

Prioritised Problem- Low yield under farmers practice (Reliance on ITKs and not adopting scientific method of cultivation) and increased resistance of insect pest towards chemical measure

Details of technology:

Crop : King chilli

T1: FYM @ 10 t per ha to be applied at final land preparation

T2: Application of enriched compost @ 10 t/ha or 5 t/ha + biofertilizer. Apply *Azotobacter* @ 5 gm, PSB @ 5 gm and Biofor Pf @ 100 gm/pit within 7 days of transplanting.

T3: Control

Sowing: Last week of Feb - 1st week March

Parameters of Assessment	Results/ observation on selected parameters		
	T1	T2	T3
1. Plant height (cm)	89.21	95.36	85.38
2. No. of branches	7.3	8.5	6.4
3. No. of fruits/plant	165.91	194.15	132.40
4. Yield /plant (kg)	1.98	2.14	1.25
5. BCR	2.38	2.80	1.98

Technologies for Organic management of crops in NE India 2019
ICAR- ATARI Umiam

Team members
SMS-Horticulture
SMS-Plant Potection





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OFT – 2 | **Discipline: Fisheries** | **(1st Year)**

Title of OFT : Performance evaluation of Growth and Survival in *Wallago attu (Sareng)*

Prioritised Problem : Huge gap in demand and supply of fish in the state

Details of technology :

Stocking density – 2000-3000 fingerling/ha
Feeding rate – 5-6 % body weight
Culture period: 3 months
T1= 2000 fingerling; **T2**= 2500 fingerling; **T3**= 3000 fingerling

Parameters on Assessment	Results/ observation
Survival rate after 90 days	
Growth rate after 90 days	
BCR	

Source: Central Institute of Freshwater Aquaculture, Kausalyaganga, Bhubaneswar (2012)

No. of Trials – 03 each

Team members
SMS, Fisheries

OFT – 3 | **Discipline: Fisheries** | **(1st Year)**

Title of OFT : Breeding and seed production of freshwater Eel (Ngaprum)

Prioritised Problem : Dependence of eel catch from wild

Details of technology :

Hormone dose: 3-4ml/kg wt.
Stocking density – 1000-3000 nos/tank
Feeding rate – 3-5 % body weight
Feeding interval – twice a day
Feed :Pellet feed (30-32% Protein)
Culture period: 120 days
T1= 1000 seed/tank; **T2**= 2000 seed/tank; **T3**= 3000 seed/tank

Parameters on Assessment	Results/ observation
Hormone dose	
Fertilization rate	
Survival rate	

Source: CMFRI, 2013

No. of Trials – 06

Team members
SMS, Fisheries

OFT – 4

Discipline: Fisheries

(2nd Year)

Title of OFT : Performance evaluation of Pabda (*Ompok bimaculatus*) in composite culture

Prioritised Problem : Non culture of Pabda in the district and huge gap in the production and fish diversity

Details of technology :

Stocking density – 10000/ha
Feeding rate – 3 % body weight
Feeding interval – twice a day
Feed : Floating feed (30-32 % Protein)
Culture period: 6 months
T1= 8000 fingerling/ha; **T2**= 10000 fingerling/ha; **T3**= 12000 fingerling/tank

Parameters on Assessment	Results/ observation
Survival rate after 120 days	
Growth rate after 120 days	
Net return	
BC ratio	

Source: COF, 2018

No. of Trials – 03

Team members
SMS, Fisheries

OFT – 5

Discipline: Plant Protection

(3rd Year)

Title of OFT : Management of Fall Armyworm

Prioritised Problem- Severe infestation of fall armyworm affecting growth and yield of maize

Technology details:

Crop : Maize (var. HQPM - 5)

Treatment 1:

i) Deep ploughing

ii) Application of sand or ash into plants whorl of affected plants

iii) Application of BT @ 2gm/litre









Sl. No	Parameters	Results/Observations of parameters			Cost of cultivation per ha	Gross income per ha	Net income per ha	B:C ratio
		Treated	FP	% increased in yield over FP per ha				
1	% Damage	5-7%	30-35%	23.68%	60000	141000	81000	2.35
2	Yield of the crop	47 q/ha	38 q/ha					

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

Source : CAU(I)/DEE-Advisory, 2020

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OFT – 6

Discipline: Agri. Engg.

(1st Year)

Performance evaluation of Half moon terrace with drip irrigation in Papaya in slope hilly area

Prioritised problem- High Soil erosion, Soil moisture losses and low yield

Details of technology

- Crop: Papaya
- Cutting half moon shape to create circular level bed having 1-1.5m diameter with cut and fill method.

T1: 1m dia
T2: 1.5m dia
T3: Farmer's practice (traditional)

Farmer's Practice

- No Mulching/Traditional

Parameters of Assessment	Results / observation	
	Demo	Farmer Practice (No mulching)
1. Water use Efficiency	Ongoing	
2. Soil loss		
3. Soil Moisture Content		
4. Yield		
5. BCR		

ICAR,Umiam 2006

Team members

SMS – Agri Engg
SMS-Horticulture

OFT – 7

Discipline: Agri. Engg.

(1st Year)

Assessment of Plastic mulching with drip irrigation in King Chilli to conserve soil moisture and weed control

Prioritised problem- Soil Moisture loss, low yield and high weed infestation.

Details of technology

- Crop: King Chilli
- Spacing:75cm x 75 cm
- Area: 0.75ha
- Polythylene mulch 30micron thickness with silver and black coating
- Irrigation Scheduling : Soil Moisture Indicator

Farmer's Practice

- No Mulching/Traditional

Parameters of Assessmenthn	Results / observation	
	Demo	Farmer Practice (No mulching)
1. Soil Moisture Content	(ONGOING) Transplanted on Feb.2024	
2. Weeding Efficiency%		
3. Plant height (cm)		
4. No. of fruits/ plant		
5. Yield / plant (Kg)		
6. BCR		

AAU, 2015

Team members

SMS – Agri Engg
SMS-Horticulture

OFT – 8

Discipline: Home Science

(1st Year)

Title of OFT : Preparation of Pomelo Jam

Prioritised Problem- Thrown as wastage

Technology details:

T_1: 100 % of pomelo pulp

T_2: 50% pomelo pulp
50 % papaya pulp

T_3: 50% pomelo pulp
50 % orange pulp

- Peel & remove white residue
- Chop into small pieces & put in a saucepan with sugar (500g/kg) mash & let the liquid steep for 30 mins
- Chop up nicely with hand blender & bring to boil
- As soon as it starts boiling add 2 g citric acid
- After 10 minutes make gelling test & pour into sterilized glass jar

No. of trials = 05

Parameters on Assessment	Results on selected Parameters	
Technology / methodology	**Technology :**	**Farmer Practice :**
1. Shelf life	6 months	New introduction
2. Acceptability (Hedonic scale)	Liked moderately with a score of 6 in hedonic scale	
3. Nutritional Content	Results (On the Test Report)	
4. B.C Ratio	2.27	

Sl No	Parameters	Result	Test Method
1	Moisture % (g/100g)	33.65 ±0.23	AOAC 934.01, 21st Ed. 2019
2	Protein (NX 6.25) % (g/100g)	0.22 ±0.06	AOAC 2001.11, 21st Ed. 2019
3	Fat % (g/100g)	0.09±0.07	AOAC 2003.05, 21st Ed. 2019
4	Crude fibre % (g/100g)	0.27±0.00	AOAC 978.10, 21st Ed. 2019
5	Total Ash % (g/100g)	0.15±0.01	AOAC 942.05, 21st Ed. 2019
6	Carbohydrates (by difference) % (g/100g)	65.63	Nutritive value of Indian Foods. Gopalal C, et al, NIN, ICMR, 1996
7	Energy value (kcals/100g)	264.15	Food energy – methods of analysis and conversion factors (p 57-60)

Please note: *The results contained in this Test Report relate only to the sample tested.*

Source: University of Agricultural Science, Bangalore 2015




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OFT – 9

Discipline: Home Science

(1st Year)

Title of OFT : Assessment of Multi Grain Millet Cookies

Prioritised Problem- Non availability of diversified value added products

Technology details:

1. Beat 50 gm butter and 30 gm sugar powder till fluffy
2. Add 100 gm of millet flour (ragi, sorghum, bajra) till soft dough and add 5 ml vanila essence
3. Spread out dough on butter paper and roll out
4. Cut into shapes and perforate it
5. Bake for 15 minutes at 180°C in pre heated oven

Farmers practice: New Introduction

No. of trials = 05

Parameters on Assessment	Results on selected Parameters	
Technology / methodology	**Technology :**	**Farmer Practice**
1. Acceptability (Hedonic Scale)	Well accepted with a scale 7 in the hedonic scale	New Introduction
2. Nutritional value	Result awaited from the test lab of COFT, CAU	
3.Shelf life	1 ½ months and still in good condition. Complete result – ongoing process	
4. BC ratio	1.5	

Source: ICAR-IIMR, Hyderabad, 2018

Sl No	Parameters	Result	Test Method
1	Moisture % (g/100g)	2.35±0.27	AOAC 934.01, 21st Ed. 2019
2	Protein (NX 6.25) % (g/100g)	3.16±0.06	AOAC 2001.11, 21st Ed. 2019
3	Fat % (g/100g)	16.74±0.23	AOAC 2003.05, 21st Ed. 2019
4	Crude fibre % (g/100g)	1.07±0.06	AOAC 978.10, 21st Ed. 2019
5	Total Ash % (g/100g)	1.54±0.01	AOAC 942.05, 21st Ed. 2019
6	Carbohydrates (by difference) % (g/100g)	75.14	Nutritive value of Indian Foods. Gopalal C, et al, NIN, ICMR, 1996
7	Energy value (kcals/100g)	463.86	Food energy – methods of analysis and conversion factors (p 57-60)

Please note: *The results contained in this Test Report relate only to the sample tested.*

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COMMON OFT ASSIGNED FOR ALL KVKs FROM VALLEY DISTRICT OF MANIPUR

Title of OFT :Management of purple blotch disease in onion

Source of Technology: DOGR & Janagadh Agricultural University, 2018

Technology Details:

T1= Spraying Mancozeb @ 0.25% + Propiconazole @ 0.1% thrice at 10 Days Interval from 30 Days after Transplanting

T2= Spraying Tebuconazole 29.5 EC @ 0.1% thrice after appearance of the disease at weekly interval

T3= Farmers practice









FRONT LINE DEMONSTRATION (FLDs)

Target : 18 numbers

SUMMARY OF FLD

Achievement : 15 numbers

Sl. No.	Title of FLDs
1	Popularisation of Turmeric variety Megha Turmeric-1
2	Promotion of improved crossbreed pig (Hamsphire)
3	Promotion of backyard poultry (dual purpose breed) – Giriraja
4	Popularization of Backyard Layer Poultry Breed (ACARI)
5	Promotion of Backyard Goatary Breed – Beetal
6	Culture of Improved Common Carp (Variety -Amur Carp & Jayanti Rohu)
7	Monoculture of *Anabas testudineus* (Ukabi) in farm pond
8	Popularization of Tractor drawn potato Digger
9	Popularization of mini sprinkler in onion through treadle pump: A low cost irrigation option for marginal Farmers
10	Popularization of Pedal operated paddy thresher
11	Popularization on the use of pheromone trap for management of fruit and shoot borer in brinjal
12	Demonstration on the management of BPH&WBPH in rice
13	Popularization on management of late blight of potato
14	Popularization of mushroom cultivation and recycling of waste for additional income generation
15	Popularization of nutri rich millet products (Ragi, Pearl Millet & Little Millet)
16	Popularisation of Osmotic dehydration of Pineapple
17	Popularization of hermetic storage system (grain pro's super bags) for increasing quality of grains/seeds

FLD – 01

Discipline: Horticulture

(3rd Year)

Popularization of Turmeric var. Megha Turmeric 1

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

Technology details:

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

Performance parameters/ indicators	Data on parameters in relation to technology demonstrated		% increased in yield over local	Remarks
	Demo	Local		
Days to maturity	Not yet harvested			-
Yield/clump (g)				
Yield (q/ha)				
B.C ratio				

Details of Demonstration		
No. of Demonstration	Area (ha)	No. of farmers
03	1.25	04





FLD –02

Discipline: Animal Husbandry

(1st Year)

Promotion of improved crossbreed pig (Hamsphire)

Source: Deptt. of Animal Science, COA, 2018

Technology details:

Farrowing capacity (8-12 piglets)
Body weight at maturity (150-180 kg)

Details of Demonstration		
No. of Demonstration	**No. of animal**	**No. of farmers**
05	**<u>10 piglets</u>** 2 piglets/farmer (1M & 1 F)	05

Data on parameters in relation to technology demonstrated			
Demo	**Local**	**Improved**	**% Change**
1. Age of 1st farrowing 2. Litter size: 10-12 piglets/ farrowing 3. Meat production 4. BCR	**ONGOING**		

FLD – 03

Discipline: Animal Husbandry

(2nd Year)

Promotion of Backyard Poultry (Dual Purpose) Breed – Giriraja

Source: CPDO, Bangalore, 2016

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: 150 /year

Details of Demonstration

No. of Demonstration	Area (ha)/Units	No. of farmers
20	20 chicks/ farmer	20

Data on parameters in relation to technology demonstrated

Demo	Local	Improved	% Change
1. Live body weight : 5 kg (M) & 3 kg (F) 2. Egg capacity : 150/year 3. Egg size : 65 gm 4. BCR : 1:1.8	1. 2.5 kg (M) & 1.3 kg (F) 2. 70 eggs/year 3. 40 gm 4. 1:1.4	1. Double increase 2. Double increase 3. 10-15 gm increase	40%

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FLD –04

Discipline: Animal Husbandry

(1st Year)

Popularization of Backyard Layer Poultry Breed (ACARI)

Source: CDPO, Bangalore

Technology Details

- Feeding Pattern:
  Prostarter : 0-7 days; Starter: 8-56 days ; Grower: **57-152 days** layer mesh 153 onwards upto egg laying
- Feed supplement: Probiotics, Vitamins and Mineral mixture
- Max. body wt:1.5 – 1.8 kg (M), 1.3 kg (F)

Details of Demonstration		
No. of Demonstration	**Area (ha)/Units**	**No. of farmers**
20	20 poultry birds /farmer	20

Data on parameters in relation to technology demonstrated

Demo	Local	Improved	% Change
1. Live body weight : 3kg (M) & 1.5 (F) 2. Egg capacity : 250/year 3. Egg size : 55-60 gm 4. Egg color : Brown 5. BCR	1. 2.5 kg(M) & 1.3 kg (F) 2. 70-80/year 3. 40-45 gm 4. Brown 5. 1:1.5	1. Body is almost same 2. Double times increase 3. 10-15 gm 4. - 5. 1:1.3	33.3%

FLD –05

Discipline: Animal Husbandry

(5th Year)

Promotion of Backyard Goatary – Beetal

Source: **Goat Research Centre, AAU**

Technology Details

- Live body wt. : 17-20 kg (M) 13-15 kg(F)
- Kidding performance : Duplicate/triplicate (2-3 kids per kidding)
- Kidding/year : 4-6 nos. annually
- Highly acclimatized in Manipur
- Highly disease resistant

Data on parameters in relation to technology demonstrated			
Demo	**Local**	**Beetal**	**% Change**
1. Body weight at maturity 2. Kidding/year 3. Meat production 4. BCR	ONGOING		

Details of Demonstration		
No. of Demonstration	**Area (ha)/Units**	**No. of farmers**
10	2 goats/ farmer	10

FLD – 06

Discipline: Fisheries

(2nd Year)

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

Source – CIFA, Bhubaneswar, 2015

Technology details:

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

Survival %	Average growth (gm)	Gross Cost (Rs/ha)/	Net Return (Rs/ha)	B:C Ratio

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

FLD – 07

Discipline: Fisheries

(2nd Year)

Monoculture of *Anabas testudineus* (Ukabi) in farm pond

Source – CIFA, Bhubaneswar, 2018

Technology details:

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

Details of Demonstration		
No. of Demonstration	Units	No. of farmers
03	03	03

Survival %	Average growth (gm)	Gross Cost (Rs/ha)/	Net Return (Rs/ha)	B:C Ratio

FLD – 08

Discipline: Agri. Engg.

(2nd Year)

Popularization of Tractor drawn potato Digger

Source: CIAE 2013

Technology details:

- Crop: Potato
- Tractor Power:35HP
- Number of row : 2,
- Row spacing 24-26 inch,
- Weight : 550Kg,
- Separation of potato: vibrating rod chain (Conveyor)

Performance parameters/ indicators	Data on parameters in relation to technology demonstrated		% Change
	Demo	Local	
1.Field Capacity 2.Cost of Harvesting 3.Labour Requirement **Farmers' Practice** (Manual)	1. 0.38ha/hr 2. 2170/ha 3. 5 mandays / ha	1. 0.02ha/hr 2. 17808/ha 3. 42 mandays / ha	1. 1800% 2. 720% 3. 740%

Details of Demonstration		
No. of Demonstration	**Area (ha)**	**No. of farmers**
03	**1.5**	**03**

FLD – 09

Discipline: Agri. Engg.

(1st Year)

Popularization of mini sprinkler in onion through treadle pump: A low cost irrigation option for marginal Farmers

Source: Kerala Agricultural University, 2015

Technology details:

Crop: Onion
Var.Bhima Super
Spacing:15cm x 10 cm
Area: 0.25 ha
Mini-sprinkler: 110 lts /hr
Pump: Treadle
Recommended overlaping:30%
Irrigation Scheduling: Alternate day

Performance parameters / indicators	Data on parameters in relation to technology demonstrated
1.Water use efficiency (WUE = Crop yield kg/water consumption m3), 2.Field Capacity, 3. Labour requirement, 4.Yield 5.BCR	ONGOING

Details of Demonstration		
No. of Demo.	**Area (ha)**	**No. of farmers**
03	0.75	03





Krishi Vigyan Kendra, Imphal East
Directorate of Extension Education
Central Agricultural University, Imphal, Manipur

FLD – 10

Discipline: Agri. Engg.

(1st Year)

Popularization of Pedal operated paddy thresher

VPKAS, Almora, 2008

Technology details:

Technology details

- Crop: Paddy
- Number of manpower: One (Pedal operated)
- Weight : 35Kg,
- Length :1030mm, Wide: 630mm, Height:975mm

Parameters of Assessment	Results / observation		Capacity %
	Demo	Farmer Practice (No mulching)	
1. Threshing Capacity	62.6 kg/hr	28 kg/ha	123.5
2. Cost of threshing	Rs.850/t	Rs.2125/t	150
3. Labour requirement	2 mandays/ ton	5 mandays/ ton	-

Details of Demonstration		
No. of Demonstration	Area (ha)	No. of farmers
03	1.5	03

FLD – 11

Discipline: Plant Protection

(1st Year)

Popularization on the use of pheromone trap for management of fruit and shoot borer in brinjal

Source: Dept. of Agriculture & Cooperation, Ministry of Agriculture, Govt. of India (2014)

Technology details:

- For monitoring: Installation of pheromone traps @ 4-5 traps/acre and application of Emamactin benzoate 5% SC @ 80gm/200 litre per acre at the appearance of pest.
- For mass traping: 10 traps/acre at 10m distance from 20 days after sowing (DAS) slightly above the canopy for effective attraction

Details of Demonstration		
No. of Demonstration	**Area (ha)**	**No. of farmers**
5	0.1	05






Sl. No	Parameters	Results/Observations of parameters			Cost of cultivation per ha	Gross income per ha	Net income per ha	B:C ratio
		Treated	FP	% increased in yield over FP per ha				
1 2	**% Infestation**	**10%**	**20-25%**	**10.71%**	**85000**	**225000**	**140000**	**2.65**
3	**Unaffected fruit Yield per hectare**	**155q/ha**	**140q/ha**					

FLD – 12

Discipline: Plant Protection

(1st Year)

Demonstration on the Management of BPH&WBPH in Rice

Source : Dept. of Agriculture & Cooperation, Ministry of Agriculture, Govt. of India (2014)

Technology details:

Application of Buprofezin 25% SC @ 800ml/ha or Imidacloprid 30.5 SC @ 60-75ml/ha

Details of Demonstration		
No. of Demonstration	Area (ha)	No. of farmers
6	2.5	6

Sl. No.	Parameters	Results/Observations of parameters			Cost of cultivation per ha	Gross income per ha	Net income per ha	B:C ratio
		Treated	FP	% increased in yield over FP per ha				
1	% Infestation	<5%	20-30%	12.96	68000	122000	54000	1.79
2.	Yield	61q/ha	54q/ha					

FLD – 13

Discipline: Plant Protection

(1st Year)

Popularization on management of late blight of potato

Source: Assam Agriculture University (2015)

Technology details:

1. Spray Mancozeb 75% (Indofil M-45) @ 2.5gm/litre at canopy closure (35-45 Days after planting)
2. Spray Cymoxyl 8% + Mancozeb 64% @ 2.5gm/litre at first appearance of disease if the disease appears
3. Spray Mancozeb 75% (Indofil M-45) @ 2.5gm/litre at 10 Days after the second spray

Sl. No.	Parameters	Results/Observations of parameters			Cost of cultivation per ha	Gross income per ha	Net income per ha	B: C ratio
		Treated	FP	% increased in yield over FP per ha				
1	% Infestation	ONGOING						
2	Yield							

Details of Demonstration		
No. of Demonstration	Area (ha)	No. of farmers
05	0.5	5










FLD – 14

Discipline: Plant Protection

(1st Year)

Popularization of mushroom cultivation and recycling of waste for additional income generation

Source: CAU, 2022

Technology details:

1. Cultivation of oyster mushroom
2. Utilization of mushroom waste for production of vermicompost

Sl. No.	Parameters	Results/Observations of parameters
1	Yield of mushroom	ON GOING
2	Yield of vermicompost	
3.	BC ratio	

Details of Demonstration		
No. of Demonstration	Area (ha)	No. of farmers
05	0.5	5







Krishi Vigyan Kendra, Imphal East
Directorate of Extension Education
Central Agricultural University, Imphal, Manipur

FLD – 15

Discipline: Home Science

(2nd Year)

Popularization of nutri rich millet products

Source : Indian Institute of Millet Research, Hyderabad, 2020

Technology to be demonstrated :

- ✓ Millet based cake, cookies and bakery products
- ✓ Millet based namkeen snacks : spirals, bhujia, cullets

Data on parameters in relation to technology demonstrated			Remarks
	Demo	Local	
Acceptability test by hedonic scale	4.5	5	➢ Products needs to popularized for its nutritional value and also on the health index
Nutrient supplementation/ 100 g of the product : Millet Cookies : i) Carbohydrates ii) Energy iii) Protein iv) Fat	 i) 51.79 (g) ii) 535 (Kcal) iii) 8.99 (g) iv) 29.45 (g)	 i) 51.94 (g) ii) 561.42 (Kcal) iii) 10.86 (g) iv) 34.72 (g)	
B:C ratio	2.39	2.42	

Details of Demonstration		
No. of Demonstration	Units	No. of farmers
10	10	5 SHG groups

FLD – 16

Discipline: Home Science

(1st Year)

Performance of Osmo dehydrated Pineapple Slices

Source : Navsari Agriculture University, 2017

Technology details:

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: Pre treatment of KMS @ 1.5 g/kg of pineapple for 8 hrs before osmosis followed by Blanching for 5 minutes-drenching-drying

Parameters on Assessment	Results on selected Parameters	
Technology / methodology	**Technology :**	**Farmer Practice :**
1. Shelf life	9 weeks	4 weeks
2. Acceptability (Hedonic scale)	5 (well accepted)	4 (moderately acceptable)
3. Drying time	Solar dry (1.5-2 days)	Sun dry (3-5 days)
3. B.C Ratio	2.37	

Remark

Product well accepted and attractive products were marketed

Details of Demonstration

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

Krishi Vigyan Kendra, Imphal East
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FLD – 17

Discipline: Home Science

(5th Year)

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

Source : Pest Control of India, 2015

Technology details:

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

Data on parameters in relation to technology demonstrated		Remarks
Demo (Hermatic Storage)	**Local (Gunny Bag)**	
➢ Relative humidity : Before : 70-72 %, After : 80-85% ➢ Pest infestation : Before : No incidence till now and still ongoing ➢ Germination percentage : Result will be validated before sowing during *kharif* season.	70-72% 72-74% No incidence and still ongoing	Well accepted and implemented through Village Seed Bank and Individual Farmer's too.

Details of Demonstration		
No. of Demonstration	**Units**	**No. of farmers**
10	10	10

Details of Demonstration		
No. of Demonstration	**Units**	**No. of farmers**
10	10	10

Krishi Vigyan Kendra, Imphal East
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Central Agricultural University, Imphal, Manipur

TRAINING PROGRAMME

Total no of Trg. Prog.– 30nos

Training Programmes - January to December, 2023

Total Beneficiary– 940 nos

Category	No. of Training	Farmers benefitted (Nos.)						Grand Total
		SC/ST		Others		Total		
		M	F	M	F	M	F	
1/2 days Farmers and Farm Women	21	0	7	99	571	99	578	677
3-4 days Farmers and Farm Women	3	0	0	32	79	32	79	111
1/2 days Rural Youths	2	6	0	39	8	45	8	53
Extension Personel	1	0	0	0	24	0	24	24
Skill Development Trg. Programme	1	0	0	7	18	7	18	25
Sponsored Trg. Programme	2	0	15	20	15	20	30	50
Total	**30**	**6**	**22**	**197**	**715**	**203**	**737**	**940**















EXTENSION ACTIVITIES

Extension Activities (KVK)

Extension Activity	Activity			Beneficiaries		
	Target (No.)	Achievement (Nos.)	% achievement	Target (Nos.)	Achievement (Nos.)	% achievement
Kishan Gosthi	02	1	50%	200	37	18.5
Exposure Visit	06			180		
Scientist visit to farmer's field	300	97	32.33	700	335	47.86
Farmer visit to KVK farm	200	55	27.5	500	285	57
Method demonstration	30	22	73.33	480	228	47.5
Exhibition	05	02	40	300	55	18.33
Group Discussion/Meeting	20	15	75	400	1137	284.25
Advisory/helpline	500	329	65.80	500	380	76
Awareness	06	07	116.66	600	218	36.33
Swachhta Campaign	05	04	80	160	135	84.37
Agri Mobile Clinic	05			500		
Newspaper coverage	20	03	15			
TV coverage	05	04	80			
Radio talk	07	04	57.14			
Resource person	15	04	35			

Extension Activities (KVK)

Extension Activity	No of Activity	No of Beneficiaries
World Soil Day	1	20
World Food Day	1	37
154th Gandhi Jayant	1	17
Constitution Day	1	37
15th SAC Meeting	1	29
23rd National Fish Farmer's Day	1	27
95th ICAR Foundation Day and Technology Day	3	65
Post Budget Webinar for implementation of "Sustainable Application in Mission Approach through Research and Technology based Holistic Intervention" (SAMARTH)	1	8
Awareness Campaign on PM Kisan Samman Nidhi (PM-Lisan Scheme)	1	62
Rabi Campaign cum Kisan Gosthi in connection with World Food Day under the theme "Water is Life and Food"	1	37
Swachhata Hi Sewa Campaign	1	28
Farmer Scientist Interaction programme on "Pest and Disease Infestation in Rice"	2	25
Input distribution in connection with FLD and OFT programme	9	70
Input distribution of seeds and planting materials	3	37
Swachhta Pakhwada	8	312
Kisan Diwas (Special Farmer's Day)	1	39
Viksit Bharat Sankalp Yatra	3	191




DIAGNOSTIC/FIELD VISITS



Publications of KVK (2023)

Items	Title	Name of Author
Extension Bulletin	*Gravity Based Drip Irrigation System : Its Components & Guide*	*-Er. Gunajit Oinam, SMS (Agril. Engg.)*
Short Video	*1) Observation of 95th ICAR Foundation Day and Technology Day during 16th to 18th July, 2023* *2) Observation of 23rd National Fish Farmer's Day on 16th July, 2023* *3) Three Dar Training Programme on "Mushroom Cultivation and Its Value Chain Management" during 17th to 19th August, 2023* *4) Method Demonstration on "Vermicomposting" under SAP 2023-24* *5) 3 Day on Request Training Programme on "Insect Pest and Disease Management of Paddy and Vegetable Crop" during 25th to 27th August, 2023* *6) Observation Swachhta Pakhwada during 16th to 31st December, 2023*	

Production of Seed Materials

Item	Crop	Variety	Quantity produced (Qt)
Cereals	Rice	CAU-R1	-
Pulse			

Bio Products Produced

Item	Product Name	Species	Target (kg)	Quantity produced (kg)	Value (Rs.)	Qty supplied and No. of farmers
Vermicompost	Vermicompost	*Eisenia foetida*	-	1 ton		Utilised at KVK Farm
Vermiworm	Vermiworm	*Eisenia foetida*		4650 nos		Distributed to farmers
Total				1 ton & 4650 nos.		

Production of Planting Materials

Item	Crop	Variety	Quantity produced (No)
Spices	Onion		2700
Vegetables	Cabbage	Rare Ball	500
	Tomato	Tomato	2350
	Broccoli	Green Magic	1000
	Cauliflower	White Excel	650
	Brinjal		1000

Soil & Water Testing/SHCs during 2022

Sl. No.	Samples tested/ Analysed	Sample (No.)	Farmer beneficiaries	Village covered	Amount realised (Rs.)	SHCs issued to farmers (Nos.)
1.	Soil Sample	15	20			100
2.	Water Sample					

Status of Mobile Advisory January to December, 2023

Message type sent	Crop		Livestock		Weather		Marketing		Awareness		Other Enterprise		Total	
	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary
Voice only	-	72	-	23	-	10	-	27	-	7	-	189	-	328
Total	-	**72**	-	**23**	-	**10**	-	**27**	-	**7**	-	**189**	-	**328**

Revenue(R) generation by KVK from different sources January to December, 2023

Sl. No.	Activity/ Enterprise	Revenue (Rs.)
1	Livestock (Poultry)	10,000.00
2	Custom Hiring (Irrigation Pipes)	8,140.00
3	Livestock (Piggery)	34,000.00
4		
5		
	TOTAL :	**52,140.00**

Functional Linkages 2023

Sl. No.	Name of the Organization	Nature of Linkages
1	Dept of Vety and Animal Husbandry, Govt. of Manipur	Awareness programme and vaccination programme
2	Dept of Fishery, Govt of Manipur	Training, fish seed production
3	Dept of Agriculture, Govt of Manipur	Distribution of seeds
4	Dept of Forestry, Govt of Manipur	Distribution of seedling and planting materials
5	ATMA, Imphal East	Training, demonstration, field visit, interaction
6.	NFDB, Hyderabad	Providing financial assistance for organizing fisheries training programme for the fish farmers
7.	NABARD, Manipur Centre	Sponsorship, credit linkage of farmer's club and subsidy schemes, training programmes, Cluster based programmes on low cost feed management of livestocks
8.	College of Agriculture, Iroisemba, Imphal	Technology support and other logistics
9.	National Rural Livelihood Mission	Collaborative training programme, fund, SHG linkage

Special Programmes 2023

Sl. No.	Name of the program	Duration and date	No. of Participants	Chief Guest/Special Dinitaries
1.	Rabi Campaign	16.10. 2023	37	
2.	Swachhta Abhiyan	19 & 24.08.2023	32	
3.	Celebration of Important Day			
	• World Soil Day	05.12.2023	20	
	• World Food Day	16.10.2023	37	Prof. M. Rohinikumar Singh, Retd. Director of Research, CAU, Imphal and Ex-Director, IBSD, Takyelpat, GOI graced the programme as Chief Guest
	* National Fish Farmers' Day	11.07. 2023	27	Shri Kh. Jibon Singh, National Secretary Kissan Morcha, Manipur as Chief Guest, Shri Y. Sanjoy Singh, Vice Chairperson as Guest of Honour, Dr. M.A. Salam, SMS (Fisheries), KVK, Imphal East President
	Any other (pl. specify) 154th Gandhi Jayanti	02.10.2023	17	
	94th ICAR Foundation Day	16.07.2023	53	
	Constitution Day	26.11. 2023	37	
	Swachhta Pakhwada	16-31.12.2023	312	
	Kisan Diwas (Special Farmer's Day)	23.12.2023	39	
	Viksit Bharat Sankalp Yatra	18 – 19.12.2023	191	
	Awareness Campaign on PM Kisan Samman Nidhi (PM-Kisan Scheme	27.02.2023	62	
	Special Campaign 3.0	02-31.10.2023	245	   
	Awareness Campaign on PM Kisan Samman Nidhi (PM-Kisan Scheme	27.02.2023	62	








ON-GOING PROJECTS & ACHIEVEMENTS 2023

ACTIVITIES UNDER NARI

NUTRI SENSITIVE AGRICULTURE RESOURCE AND INNOVATION (NARI)

Sl no	Activities	No of Programme (nos)	No of Participants (nos)
1.	Training Programme on community nutritional garden	2	90 (70 FW & 20 students)
2.	Establish of Community nutrition garden	2unit	55 (shelter home of displaced villagers)
3.	Demonstration on Nutritional Garden (200 sq. m)	13	13 households

•Short term Research Project on "Trial and Efficacy of low-cost on-farm production of Mushroom Spawn Production Technology" under R&D and Biotechnology Scheme of DST, Manipur

Sanction amount: Rs. 90,000/- Remark: Fully Utilized

Tissue Culture for sub culture multiplication completed

Commercial Spawn production completed (Results awaiting for documentation)

Work in progress: Project Ongoing

Project on "Implementation of NEH Component 2023-24" sponsored by IIOR, Rajendranagar, Hyderabad

Crop: Sesame
Area of demonstration: 1 ha

Fund Sanctioned	Fund utilized	Amount
2.75 lakh	Training, Demonstration & Workshop/field day	58,000/-
	Capital	2,00,000/-
	Total Utilized till date	2,58,000/-
	Balance amount	22,000/-

Remark
Balance Amount will be utilized for conducting workshop









FEEDBACK OF FARMERS

PL. PROVIDE FARMERS' PERCEPTION ON NEW VARIETIES AND TECHNOLOGIES (POINT-WISE).

I. **CHIA**: Nutri rich crop like chia gaining popularity amongst the farm women. more area and packets for cultivation are being shown interest

III. **MILLET**: farmers have shown interest in millets cultivation for participatory seed production programme may create more opportunities

IV. **ARKA RAKSHAK**: Advantages on its hardy skin, low disease incidence, good shelf life of produce and less damage % in transportation

V. **TURMERIC MEGA 1**: Easy availability of planting materials, less incidence for disease, intercropping can be done earning additional income

VI. **PADDLE OPERATED TREADLE PUMP**: Suitable for area without electricity, suitable way of irrigation, more farmers ready of adoption of the technology

IMPORTANT PROBLEMS

Sl. No.	Important Problems
1.	Late release of fund under CFLD programme
2.	Timely unavailability of fertilizer (especially urea during kharif season)
3.	Unassured irrigation facility
4.	Price fixation and marketing problem of the farmer's produce
5.	Limited facility (only paddy and cabbage covered under crop insurance) and lack of knowledge of crop insurance

Pumnamakpu Khurumjari