

Annual Progress Report (2020-21)



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



STAFF POSITION as on March, 2021 (Filled post = 13 & Vacant Post = 2)

| Sl. No. | Name | Designation | Date of Joining | Discipline |
|---------|---------------------------|--|-----------------|---------------------|
| 1. | NIL | 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. | NIL | Farm Manager | | |
| 11. | Mr. O. Singhajit Singh | Jr. Stenographer cum Computer Operator | 22.07.2012 | Education |
| 12. | Mr. H. Budhi Singh | Driver cum Mechanic | 09.10.2007 | NA |
| 13. | Mr. Sh. Jiten Singh | Driver cum Mechanic | 10.10.2007 | NA |
| 14. | Mr. Ch. Bijen Singh | Multi Tasking Staff | 10.10.2007 | NA |
| 15. | Smt. Ch. Tilotama Chanu | Multi Tasking Staff | 03.10.2007 | NA |



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INFRA STRUCTURE FACILITIES/VEHICLES as on March, 2021

| 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 | | | Covered 1.35,123 km till date Requires frequent servicing and repairing, needs replacement |
| | 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) |



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Rainfall Data 2020-2021

| Month | Rainfall Received (mm) |
|-----------------|------------------------|
| January, 2020 | 65.8 |
| February, 2020 | 13.3 |
| March, 2020 | 12.1 |
| April, 2020 | 102.8 |
| May, 2020 | 148.6 |
| June, 2020 | 307.4 |
| July, 2020 | 270.8 |
| August, 2020 | 205.7 |
| September, 2020 | 229.9 |
| October, 2020 | 165.8 |
| November, 2020 | 104.9 |
| December, 2020 | Nil |
| Total : | 1627.1 |



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SIGNIFICANT ACHIEVEMENTS (2020)

| Sl No | Award | Awarded to | Awarded by |
|-------|--|--------------------------------|--|
| 01 | Pandit Deen Dayal Upadhyay Rashtriya Krishi Vigyan Protshahan Puraskar 2019 | KVK, Imphal East | ICAR, New Delhi |
| 02 | Best Poster Presentation Award of the International Web Conference | SMS, Agril. Engg | ANRCM, Lucknow |
| 03 | Scientist of the Year Award 2019-20 | SMS, Agril. Engg | Society of Krishi Vigyan |
| 04 | Best KVK Scientist Award 2020 | SMS, Fisheries | Society of Krishi Vigyan |
| 05 | 1st Prize in Poster presentation | SMS, Fisheries | Soil Conservation of Society of India, New Delhi |
| 06 | 1st Prize in poster presentation | SMS, Plant Protection | ICAR (NBAIR) Bengaluru |
| 07 | Best Fish Farmers Award during 20th National Fish Farmers Day | Progressive Farmer Imphal East | CAU, Imphal |



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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 |



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ON FARM TRIAL (OFTs)

Target : 18 numbers**SUMMARY OF OFTs****Achievement : 15 numbers**

| Sl. No. | Title of OFTs |
|---------|---|
| 1 | Utilisation of Squash for preparation of Wadi |
| 2 | Performance Evaluation of Low Cost Pusa Concentric Onion Storage Structure |
| 3 | Performance of hand crank rice transplanter for hilly area and small plot area |
| 4 | Performance of short duration, high yielding field pea variety TRCP- 9 |
| 5 | Performance Evaluation of Toria var. TRC T-1-1-5-1 (Tripura Toria) under zero tillage cultivation |
| 6 | Management of Early blight and late blight of potato |
| 7 | Management of Diamond Back Moth and Cabbage Butterfly in Cabbage for Higher Productivity |
| 8 | Performance evaluation of Papaya Var. RCTP1 (Tripura papita) |
| 9 | Performance evaluation of new variety of French Bean Var. MZFB 48 |
| 10 | Performance evaluation of Onion variety Bhima Shakti |
| 11 | Fish fingerling production through cage system |
| 12 | Periphyton based fish farming |
| 13 | Monoculture of air breathing fish (Anabas) |
| 14 | Paddy cum fish culture using silver barb |
| 15 | Water reed cum fish culture using silver barb |



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Title of OFT : Utilisation of Squash for preparation of Wadi

Prioritised Problem: Under utilisation and non usage of squash as novel or value addition purpose

Technology details:

- Treated squash (40 %) mixed with KMS @ 1.5g/kg
- Whisking of blackgram paste @ 60 %
- Addition of spice mixture
- Mixing of squash, blackgram paste and spices
- Division into small ball spread over oil smeared tray
- Dry in hot air oven or sun drying for 14-16 hrs

No.
of
trials
= 05



Source: College of Community Science, CAU, Tura. 2017

| Parameters on Assessment | Results on selected Parameters | |
|----------------------------------|--------------------------------------|--------------------------------------|
| Technology / methodology | Technology : Blackgram-Squash-Bori | Farmer Practice : Blackgram Bori |
| 1. Recovering % | 98% | 88% |
| 2. Acceptability (Hedonic scale) | Like a lot with a hedonic scale of 5 | Like a lot with a hedonic scale of 5 |
| 3. B.C Ratio | 2.85 | 2.65 |

Remark

The 10% increase in the recovery percentage of the product over the check is observed. The added nutritional value of the squash is an additional property in the characteristic of the value added product. There is a need for popularization through commercialization of the product.

Title of OFT : Performance Evaluation of Low Cost Pusa Concentric Onion Storage Structure

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.

| Performance parameters/ indicators | Data on parameters in relation to technology demonstrated | | % Change |
|------------------------------------|---|----------------------|---------------------------|
| | Demo | Local (Open Storage) | |
| Rotting percentage | 9% | 20% | 122% (Rotting percentage) |
| No.of infested (fungal) onion | 112 | 250 | |
| PLW (Physiological loss in Weight) | 6% | 15% | |

Team members

SMS –
Agricultural
Engineering
/Horticulture

Source: IARI,
2012

Details of Demonstration

| No. of Demonstration | Area (ha)/unit | No. of farmers |
|----------------------|----------------|----------------|
| 03 | 03 | 6 |



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Title of OFT : Performance Evaluation of Hand Crank Rice Transplanter for hilly area and small plot area

Prioritised Problem-High cost of manual transplanting and non maintenance of spacing

Crop: Paddy
Var. CAU-R3
No. of Row: 2
Spacing: R-R 20 cm
Hill to Hill Distance: 10 cm

Farmer's practice-Surface irrigation

Source: BSKKV, Dapoli 2012

Team members

SMS – Agri Engg
SMS-Agronomy

Parameters on Assessment

1. Field capacity
2. Days to crop establishment
3. Cost of operation
4. Labour requirement
5. Field efficiency
6. Yield
7. BCR

Results/ observation

1. Need for refinement as the plural pickup forks doesn't pick up the seedling from the seedling tray while operating.
2. Discussed with College of Agri. Engg, COA, CAU, Imphal for further refinement.



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

Prioritised Problem- Low yield of long duration field pea varieties due to moisture stress under rainfed condition of the region

Details of technology:

Seed rate : 80 kg / ha

Fertilizer : 20:40:30 kg NPK/ha

Spacing : 30 cm x 10 cm

Seed treatment : Rhizobium 10ml/kg seed

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

Team members

SMS – Agronomy, SMS-Plant Protection

Parameters on Assessment

Results/ observation on selected parameters

| Technology | Technology | Farmers practice (var. Prakash) |
|-----------------------|------------|----------------------------------|
| Plant height | 53.28 cm | 59.85 |
| No. of pods per plant | 8.57 | 8.85 |
| No. of seeds per pod | 7.37 | 6.91 |
| Duration in days | 113 days | 103 days |
| Yield/ ha | 6.25 q/ha | 6.17 q/ha |
| BCR | 1.56 | 1.54 |



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

Prioritised Problem- Lack of high yielding short duration Toria varieties suitable under rainfed condition

Details of technology:

Seed rate : 14 kg/ha (Mixed with sand 1:1 and broadcast)

Fertilizer rate : 40:20:20 kg NPK/ha

Sailent features of TRC T-1-1-5-1 (Tripura Toria)

Short Duration: 86 days

Resistant to lodging, perform well under residual moisture after kharif rice, also as *utera crop*.

Oil content 42.6% under rainfed condition.

Potential yield : 9qt/ha



| Parameters on Assessment | Results/ observation on selected parameters | |
|--------------------------|---|-------------------------------|
| Technology | Technology | Farmers practice (var. M-27) |
| Plant height | 52.8 cm | 60.58 |
| No. of siliqua per plant | 239 | 245 |
| No. of seed per siliqua | 22.4 | 21.8 |
| Duration | 105 days | 98 |
| Yield/ ha | 5.60 q/ha | 5.89 |
| BCR | 1.45 | 1.52 |

ICAR Research Complex for NEH Region, Tripura Centre, 2018

Team members

SMS – Agronomy, SMS-Plant Protection

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Title of OFT : Management of Early blight and late blight of potato

Prioritised Problem- High incidence of Early Blight and Late Blight affecting growth and yield of Potato

Technology details:

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

Source: TNAU, August 2015 & State Biological Control Laboratory, Shillong 2008



| 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 | 5-6 | 10-15 | - | 1,54,000 | 11,000kg x Rs.30 =3,30,000 | 1,76,000 | 2.14 |
| 2 | Yield of the crop | 11 tons | 8.5 tons | 22.23 | | | | |

| Details of Demonstration | | |
|--------------------------|-----------|----------------|
| No. of Demonstration | Area (ha) | No. of farmers |
| 03 | 0.125 | 03 |



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Title of OFT : Management of Diamond Back Moth and Cabbage Butterfly in Cabbage for Higher

Prioritised Problem- Severe Infestation with Diamomd Back Moth and Cabbage Butterfl affecting Cabbage Yield

Technology details:

Crop : Cabbage

Variety: Rareball

Treatment 1: Spray of Neem Seed Kernal Extract 0.03% @ 5ml/ha at 10 days interval starting from 20 DAT for 4 times

Farmer Practice

Source: University of Horticulture and Forestry, Solan 2015



Details of Demonstration

| No. of Demonstration | Area (ha) | No. of farmers |
|----------------------|-----------|----------------|
| 03 | 0.125 | 03 |

Results/Observations of parameters

| Sl. No | Parameters | Treated | FP | % increased in yield over FP per ha | Cost of cultivation per ha | Gross income per ha | Net income per ha | B:C ratio |
|--------|-------------------|---------|--------|-------------------------------------|----------------------------|----------------------------|-------------------|-----------|
| 1 | % Damage | ≥ 2% | 8-12% | 17.86 | 80000 | 27000 x Rs.10 =2,70,000 | 190000 | 3.38 |
| 2 | Yield of the crop | 27tons | 23tons | | | | | |



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Title of OFT- Performance evaluation of Papaya Var. RCTP1 (TripuraPapita)

Prioritised Problem- Low yield, Susceptible to PRSV (Papaya Ring Spot Virus), Small size fruit of local cultivars

Details of technology:

Tripura Papita

var. RCTP1

Spacing: 1.8 × 1.8 m

Planting: May-June

Seed rate: 500 g/ha

Farmers practice

Papaya (local):

Days to maturity = 152.65 days

No. of fruits/plant = 16.56

Avg wt (g) = 0.78

ICAR Research Complex for NEH Region,
Lembucherra, Tripura Centre, 2014

Team members

SMS – Agronomy, SMS-Plant Protection,
SMS-Horticulture

| Parameters on Assessment | Results/ observation on selected parameters |
|-----------------------------------|--|
| Days to Maturity | 141.4 |
| No. of fruits /plant | 25.6 |
| Av. Wt. of fruit (kg) | 1.87 |
| Days to Maturity | 141.4 |
| No. of fruits /plant | 25.6 |
| Farmers and consumers preference. | Farmers preferred variety RCTP1 over local variety owing to high yield and more no. of fruits of RCTP1 |



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Title of OFT- Performance evaluation of new variety of French Bean Var. MZFB 48

Prioritised Problem- Lack of awareness of availability of high yielding pigmented French bean varieties (specially released by known and reputed institution)

Details of technology:

Seed rate: 25-30 kg/ha

Spacing: 60-65 cm x 10-12 cm

Period: Sep- Feb

| Parameters on Assessment | Results/ observation on selected parameters |
|--------------------------|---|
| No. of pods/plant | 75.6 |
| Length of pods | 23.4 |
| Yield/ ha | 4.16 |
| BCR | 2.54 |



ICAR Research Complex for NEH Region, Mizoram Centre, 2013

Team members

SMS – Agronomy, SMS-Plant Protection,
SMS-Horticulture

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Title of OFT- Performance evaluation of Onion variety Bhima Shakti

Prioritised Problem- Non availability of high yielding variety

Details of technology:

Seed rate: 3 kg/ha

Spacing: 15x10 cm

Period: Late Kharif

Directorate of Onion and Garlic Research, Pune
2011

Team members

SMS-Plant Protection & SMS-Horticulture

Parameters on Assessment

Technology

Bulb weight (g) = 78.35

Bulb Yield (t/ha) = 23.78

Days to maturity = 127.29 (after
transplanting)

B:C ratio : 2.42

Results/ observation on selected parameters

Farmers practice (prema)

Bulb weight = 73.45 g

Bulb yield = 22.65 t/ha

Days to maturity = 122.3 days

B: C ratio = 2.38



Title of OFT- Fish fingerling production through cage system

Prioritised Problem- Low survivability of fish seed in open pond

Details of technology

Cage size – 12x6x5 ft

Fish seed – Tilapia

Stocking density – 2000 fry/cage

Feeding – Pallet (3% BW)

Rearing period – 35 days

| Parameters on Assessment | Fammer practice | Results/ observation |
|--------------------------|------------------|----------------------|
| Survival (%) | 47 % | 72 % |
| Average growth (gm) | 13.35 – 15.62 gm | 18.18 - 22.50 gm |



Source: CIFA, 2016

No. of Trials - 03

Team members

SMS, Fisheries

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Title of OFT- Periphyton based fish farming

Prioritised Problem- Low fish growth in extensive culture system

Details of technology

Stocking density – 8000fingerling/ha

Fish Species - IMC

Feeding – MOC & RB + pallet (2:1)

Culture period– 6 months

Source: CIFA, 2016

| Parameters on Assessment | Results/ observation | |
|--------------------------|----------------------|----------------|
| | Without Substrate | With Substrate |
| Survival (%) | 64 | 82 |
| Absolute growth (g) | 496.10 | 620.32 |
| Total yield (Kg/ha) | 1714.44 | 2189.71 |
| Net return (Rs./ha) | 2.52 lakhs | 3.2 lakhs |



No. of Trials - 03

Team members

SMS, Fisheries

Title of OFT- Monoculture of air breathing fish (Anabas)

Prioritised Problem- Low fish growth in extensive culture system

Details of technology :

Stocking density – 1000 fry/ha

Fish Species – Anabas

Feeding –Pallet feed (3% BW)

Culture period– 4 months

| Parameters on Assessment | Results/ observation |
|--------------------------|----------------------|
| Survival (%) | 62 |
| Absolute growth (g) | 89.4 |
| Total yield (Kg/ha) | 55.4 kg |
| Net return (Rs./ha) | 22171 |
| BC | 2.1 |

Source: CIFA, 2016

No. of Trials - 03

Team members

SMS, Fisheries



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Title of OFT- Paddy cum fish culture using silver barb

Prioritised Problem- Unaware of the importance of minor carps

Details of technology :

Stocking density – 10000 fry/ 0.25ha
 Fish Species – Silver barb
 Feeding –Pallet feed (3% BW)
 Culture period– 5 months
 Paddy var.-Local var. Drum

| Parameters on Assessment | Results/ observation | |
|-------------------------------|----------------------|------------|
| | Paddy monocrop | Paddy-fish |
| Survival (%) | - | 65 |
| Total yield of fish (kg/0.25) | - | 108.30 |
| Yield of paddy (kg/0.25) | 1860 | 1710 |
| Net return (Rs./0.25) | 21200 | 39020 |



Source: CIFA, 2018

No. of Trials - 02

Team members

SMS, Fisheries & SMS Agronomy



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Title of OFT- Water reed cum fish culture using silver barb

Prioritised Problem- Unaware the importance of minor carps

Details of technology :

Stocking density – 20000 fry/0.25ha
 Fish Species – Silver barb
 Feeding –MOC + RB (3% BW)
 Culture period– 6 months
 Water reed – 4200 plants

| Parameters on Assessment | Results/ observation |
|-------------------------------|----------------------|
| Survival (%) | 76 |
| Total yield of fish (kg/0.25) | 216.20 |
| Yield of water reed (kg/0.25) | 2865 |
| Net return (Rs./0.25) | 87523 |
| BC | 3.7 |



Source: Innovation

No. of Trials - 01

Team members

SMS, Fisheries



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FRONT LINE DEMONSTRATION (FLDs)

Target : 17 numbers

SUMMARY OF FLD

Achievement : 17 numbers

| Sl. No. | Title of FLDs |
|---------|--|
| 1 | Popularization of Jackfruit chips as value added product |
| 2 | Popularization of portable vegetable preservator for increasing shelf life of vegetables |
| 3 | Popularization of hermetic storage system (grain pro's super bags) for maintaining quality of grains/seeds |
| 4 | Popularization of cabinet solar dryer for drying of perishable, semi perishable and wet food materials |
| 5 | Popularization of Guava Cheese as value added products and income generation |
| 6 | Popularization of Manually operated vegetable transplanter |
| 7 | Popularization of all the year round Production of Mushroom Cultivation |
| 8 | Popularization of Integrated Pest Management in Rice |
| 9 | Popularization on Use of Pheromone trap for the management of fruit fly in cucurbits |
| 10 | Popularisation of Tomato variety Arka Rakshak and Arka Samrat for higher production and productivity |
| 11 | Popularization of Broccoli Var. Green Magic |
| 12 | Popularization of Culture of improved common carp (var. Amur carp) |
| 13 | Popularization of Monoculture of Monosex Tilapia |
| 14 | Popularization of Wheat Cultivation for increasing cropping intensity |
| 15 | Popularization of Quality protein maize cultivation for higher yield |
| 16 | Popularization of Scientific Rearing of Cross Breed Pig for higher production |
| 17 | Popularization of Scientific Rearing of Backyard Goatary |



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Popularization of Jackfruit chips as Value added product

Source : ICAR, Barapani, 2012 (Process protocol for preparation of jackfruit chips.)

Technology details:

Cutting of fully matured, unripe jackfruit deseeded bulbs into longitudinal finger like pieces

- Blanched in hot water with 1% KMS for 5 minutes
- Dried in dryer @ 40-50° 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

| Performance parameters/ indicators | Data on parameters in relation to technology demonstrated | | Remarks |
|------------------------------------|---|------------------|---|
| | Demo | Local | |
| Acceptability by Hedonic scale | Like a lot with a hedonic scale of 5 | New Introduction | Product well accepted, needs to popularize through commercialization of the product |
| BC ratio | 2.37 | | |

Details of Demonstration

| No. of Demonstration | Units | No. of farmers |
|----------------------|-------|----------------|
| 10 | 10 | 10 |



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Popularisation of Portable Vegetable Preservator for increasing shelf life of vegetables

Source: CRIDA, Hyderabad, 2013

Technology details:

1. Fibre reinforce plastic comprising of two compartment with circular holes in the periphery
2. Kept offset by inch to accommodate pine grass mat dripped with water
3. The circular tank thus kept the basket temperature 8-10 °C less then the room temperature with 80-85% humidity

Details of Demonstration

| No. of Demonstration | Units | No. of farmers |
|----------------------|-------|----------------|
| 02 | 02 | 10 |

| Performance parameters/ indicators | Data on parameters in relation to technology demonstrated | | Remarks |
|---|---|--|---|
| | Demo | Local (Normal without any preservator) | |
| Inside outside temperature | Inside temperatue : 10° C winter | 6°C winter | The equipment has to be made available for more popularization. |
| | Outside temperature : 16°C | 16°C | |
| Extend of RH maitenance | RH : 81% | 72% | |
| Shelf life of vegetable in number of days | Shelf life of brinjal : 8 days | 4 days | |
| | Cabbage : 6 days | 3 days | |
| | Cauliflower : 6 days | 3 days | |
| | Carrot : 8 days | 5 days | |



Popularization of Hermetic Storage System (grain pro's super bags) for maintaining 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

Details of Demonstration

| No. of Demonstration | Units | No. of farmers |
|----------------------|-------|----------------|
| 10 | 10 | 10 |

Data on parameters in relation to technology demonstrated

| Demo (Hermatic Storage) | Local (Gunny Bag) | Remarks |
|---|--|---------|
| <ul style="list-style-type: none"> ➤ 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 <i>kharif</i> season. | 70-72% 72-74% No incidence and still ongoing | |

Details of Demonstration

| No. of Demonstration | Units | No. of farmers |
|----------------------|-------|----------------|
| 10 | 10 | 10 |



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Popularization of Cabinet Solar Dryer for drying of perishable, semi perishable and wet food materials

Source : College of Agriculture, CAU, 2014

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

| Data on parameters in relation to technology demonstrated | | % Change | Remarks | | | | | | | | |
|---|-----------------------------------|----------------|--|--|--|----------------------|-------|----------------|----|----|----------------|
| Demo | Local | | | | | | | | | | |
| Chilli (2 days) | 4 days in open condition | 200 | The technology is being well accepted because of the reduce drying time with safe and hygienic characteristic properties | | | | | | | | |
| Amla, wood apple (2 days) | 4 days | 200 | | | | | | | | | |
| Mushroom (1 day) | 3 days | 300 | | | | | | | | | |
| Fermented soybean (2 days) | 3 days | 150 | | | | | | | | | |
| Processed fruits – uniform and well dehydrated and refined product obtained | Non uniform products | - | <div>Details of Demonstration</div> <table><tr><th>No. of Demonstration</th><th>Units</th><th>No. of farmers</th></tr><tr><td>03</td><td>03</td><td>45 from 3 SHGs</td></tr></table> | | | No. of Demonstration | Units | No. of farmers | 03 | 03 | 45 from 3 SHGs |
| No. of Demonstration | Units | No. of farmers | | | | | | | | | |
| 03 | 03 | 45 from 3 SHGs | | | | | | | | | |
| Fermented soybean – good and well dehydrated and hygienic product free from flies, infestation and contamination obtained | Unhygienic and uncertain products | - | | | | | | | | | |



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Popularization of Guava Cheese as value added product and income generation

Source : Horticulture Division, ICAR, Umiam, 2014

Technology details:

1. 1 kg firm, ripe guava pulp cooked to a thick paste.
2. Addition of 1.25 to 1.5 kg sugar
3. Addition of citric acid @ 1.5gm and butter @ 56 gm
4. Hot cheese spread on tray and set to cool down and cut into desire shape

Details of Demonstration

No. of Demonstration

Units

No. of farmers

05

05

05

| Parameters on Assessment/Refined (Pl. mention) | Results on selected Parameters | % increase/ Change in parameters (Remark) |
|---|--|--|
| Technology methodology | Technology / methodology | Product has been accepted well and liked because of the novelty . Farmers and SHGs are giving the need for more trials and training on the preparation process. The product is being popularised through process of branding and commercialization |
| 1. Recovering % | 125 recovered | |
| 2. Acceptability (Hedonic scale of 5) | Scale of 6 on the hedonic scale giving a well accepted product | |
| 3. B.C Ratio | 1.84 | New Introduction and hence no such practice |
| Farmer Practice | | |



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Popularization of Manually operated Vegetable Transplanter

Source: CIAE, Bhopal, 2017

Technology details:

- ✓ Crop- Tomato Var. Arka Rakshak
- ✓ Spacing: 60cm x 45 cm
- ✓ Depth: 3cm
- ✓ Working style- Upright position reducing drudgery
- ✓ Field capacity- 6000 seedlings/day (1500 plants/hr)
- ✓ Weight-2 kg, 1 mt long, 2" diameter

| Performance parameters/ indicators | Data on parameters in relation to technology demonstrated | | % Change | Remark |
|---------------------------------------|--|---------------|-------------|---|
| | Demo | Local | | |
| 1. Labour requirement | 3 mandays/ha | 12 mandays/ha | 300% | Felt calf, thigh, back pain greatly reduced due to non squaring position during transplanting. Veg. transplanter : Avg. heart rate during operation 76 BPM (Beat per min) Manual transplanter : Avg. hear rate during operation 87 BPM (Beat per min) |
| 2. Labour cost (transplanting) | Rs.900/ha | Rs.3600/ha | 300% | |
| 3. Field Capacity | 1500 plants/ha | 480 plants/hr | 462% | |



Details of Demonstration

| No. of Demonstration | Area (ha) | No. of farmers |
|----------------------|-----------|----------------|
| 03 | 0.75 | 03 |



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Popularization of all the year round Production of Oyester Mushroom

Source : CAU, Pasighat, Arunachal Pradesh, 2010-11

Technology details:

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

Summer Variety : *Pleurotus flabellatus*, *P. eous*, *P. Sajor Caju*, *P. Sapidus*

Winter variety : *Pleurotus ostreatus/elm*



Details of Demonstration

| No. of Demonstration | Units | No. of farmers |
|----------------------|-------|----------------|
| 10 | 10 | 10 |

| Seasons | Parameters | Results/Observations of parameters | | | Cost of cultivation for 100 bags (Rs.) | Gross income (Rs.) | Net Income (Rs.) | B:C ratio |
|---------|------------|------------------------------------|----------------------|-------------------------------------|--|--------------------|------------------|-----------|
| | | Treated Per 100 bags (Kg) | FP Per 100 bags (Kg) | % increased in yield over FP per ha | | | | |
| Summer | Yield | 185 | 150 | 18.92 | 6000 | 25900 | 19900 | 3.32 |
| Winter | Yield | 225 | 195 | 13.33 | 6000 | 31500 | 25500 | 4.25 |



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Popularization of Integrated Pest Management in Rice

Source : IARI, 2013

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 of pheromone trap (Scripo Lure @ 10/ha) for monitoring yellow stem borer
4. Need based spray of imodacloprid @ 1ml/3lit of water against plant hoppers

Details of Demonstration

| No. of Demonstration | Area (ha) | No. of farmers |
|----------------------|-----------|----------------|
| 6 | 1.5 | 6 |



| Sl. No | Parameters | Results/Observations of parameters | | | Net Return of treatment over FP in hectare | Net Return of treatment over FP in hectare – Treatment cost | Treatment cost/ha (Traps + labour charges) | B:C ratio In relation to treatment cost |
|--------|------------|------------------------------------|---------|-------------------------------------|--|---|--|---|
| | | Treated | FP | % increased in yield over FP per ha | | | | |
| 1 | % DH | 3-5% | 15-20% | - | 34,000 | 28,000 | 7132 | 3.93 |
| 1 | % WEH | 2-3% | 10-15% | - | | | | |
| 2 | Yield | 6.0 ton | 4.3 ton | 28.33% | | | | |

Popularization of Use of Pheromone trap for Management of Fruit fly in Cucurbits

Source: IARI, 2013

Technology details:

Installation of Cue lure for monitoring and mass trapping of fruit fly to reduce male population

Details of Demonstration

| No. of Demonstration | Area (ha) | No. of farmers |
|----------------------|-----------|----------------|
| 03 | 0.125 | 03 |



| Sl. No | Parameters | Results/Observations of parameters | | | Net Return of treatment over FP in hectare | Net Return of treatment over FP in hectare – Treatment cost | Treatment cost/ha (Traps + labour charge) | B:C ratio In relation to treatment cost |
|--------|------------------------------------|------------------------------------|----------|-------------------------------------|--|---|---|---|
| | | Treated | FP | % increased in yield over FP per ha | | | | |
| 1 | No. of flies per trap | 25-45 | - | - | 36,000 | 26,000 | 7,260 | 3.58 |
| 2 | % Infested fruits | < 2% | > 20 % | - | | | | |
| 3 | Unaffected fruit Yield per hectare | 9.00 ton | 7.80 ton | 13.33% | | | | |

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Popularisation of Tomato variety Arka Rakshak and Arka Samrat for higher production and productivity

Source: IIHR, Bengaluru, 2010

Technology details:

Seed rate: 300-400g/ha

Spacing: 60 x 45 cm

FYM: 500 kg/ha

NPK: 120:60:60 kg/ha

Period: Aug- Dec

| Performance parameters/ indicators | Data on parameters in relation to technology demonstrated | | | Remark |
|------------------------------------|---|-------------|-------|---|
| | Arka Rakshak | Arka Samrat | Local | |
| 1. Days to germination | 5.8 | 5.62 | 5.2 | Arka Rakshak had firm fruits with thicker skin which prolongs the shelf life easing transportation and marketing of farmers/sellers |
| 2. Days to maturity | 142 | 138.75 | 147 | |
| 3. Fruits no/plant | 98.5 | 121.36 | 64.62 | |
| 4. Avg yield in Kg/plant | 6.73 | 8.54 | 4.55 | |
| 5. B:C ratio | 2.72 | 2.86 | 2.57 | |



Details of Demonstration

| No. of Demonstration | Area (ha) | No. of farmers |
|----------------------|-----------|----------------|
| 03 | 0.75 | 03 |

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Popularization of Broccoli Var. Green Magic

Source: ICAR, Manipur centre, 2010

Technology details:

Seed rate: 300-400 g/ha

Spacing: 45 x 45 cm

FYM: 500 kg/ha

NPK: 50:25:25 kg/ha

Period: Oct- Jan

| Performance parameters/ indicators | Data on parameters in relation to technology demonstrated | | % Change | Remark |
|---------------------------------------|--|-------|-------------|--------|
| | Demo | Local | | |
| 1. Days to maturity | 69.56 | - | | |
| 2. Weight of Crown (g) | 404.02 | - | | |
| 3. Yield (q/ha) | 273.46 | - | | |
| 4. B.C ratio | 3.12 | - | | |



Details of Demonstration

| No. of Demonstration | Area (ha) | No. of farmers |
|----------------------|-----------|----------------|
| 03 | 0.75 | 03 |

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Popularization of Culture of improved common carp (var. Amur carp)

Source – FRC, Bangalore, 2015

Technology details:

Fish species – Amur carp

Stocking density: 4000
fingerling/ha

Feeding – Pallet (3% BW)

Culture duration – 6 months

Details of Demonstration

| No. of Demonstration | Area (ha) | No. of farmers |
|----------------------|-----------|----------------|
| 03 | 0.75 | 3 |



| Survival % | Average growth (gm) |
|------------|---------------------|
| 76 | 720 |

| Gross Cost (Rs/0.25)/ | Net Return (Rs/0.25) | B:C Ratio (GR/GC) |
|-----------------------|----------------------|-------------------|
| 150000 | 125000 | 1.8 |



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Popularization of Monoculture of Monosex Tilapia

Source – CIFA, 2010

Technology details:

Fish species – Monosex Tilapia
 Stocking density: 30000 fry/0.25ha
 Feeding – Pallet (3% BW)
 Culture duration – 4 months

Details of Demonstration

| No. of Demonstration | Area (ha) | No. of farmers |
|----------------------|-----------|----------------|
| 03 | 0.30 | 3 |



Survival %

Average growth (gm)

82

166.4

Gross Cost (Rs/ha)/

Net Return (Rs/ha)

B:C Ratio

950000

985000

2.48



Popularization of Wheat Cultivation for increasing cropping intensity

Source – IARI, 2011

Technology details:

Variety: HD-2967

Salient Features

Double dwarf variety with an avg. plant height of 101cm, profuse tillering, grains are amber, medium bold, hard and lustrous. Moderately resistant to yellow rust, less susceptible to Karnal bunt and loose smut diseases.

Potential yield- 52 qt/ha

Seed rate: 80kg/ha

Fertilizer: 80:40:25 kg NPK/ha

| Demonstration Yield(Qt/Ha) | | | Yield of local Check | % increase/ change in avg. yield over local |
|----------------------------|----|------|----------------------|---|
| H | L | A | (Qt/ha) | % |
| 32 | 13 | 21.5 | Not grown | - |

| Gross Cost (Rs/ha)/ | Gross Return (Rs/ha) | Net Return (Rs/ha) | B:C Ratio (GR/GC) |
|---------------------|----------------------|--------------------|-------------------|
| 30500 | 52875 | 22375 | 1.73 |

Details of Demonstration

| No. of Demonstration | Area (ha) | No. of farmers |
|----------------------|-----------|----------------|
| 03 | 3.5 | 10 |



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Popularization of Quality protein maize cultivation for higher yield

Source – Anand Agricultural University, Gujarat, 2011

Technology details:

Variety: HQPM-1

Salient Features: Yellow flint grain single cross hybrid with high lysine and tryptophan than normal maize

Resistant to Maydis Leaf Blight and Common Rust, tolerance to Frost/cold, borer and responsive to high fertility

Potential yield- 60-65 qt / ha/ha

Seed rate:20 kg/ha;Duration:88-90 days (medium maturing)

Spacing: 60cm x 20 cm (70,000-80,000 plants/ha)

Fertilizer:120: 80:60 kg NPK/ha

Details of Demonstration

| No. of Demonstration | Area (ha) | No. of farmers |
|----------------------|-----------|----------------|
| 03 | 4 | 12 |



| Demonstration Yield(Qt/Ha) | | | Yield of Local check(qt/ha) | % increase/ change in avg. yield over local |
|----------------------------|------|------|-----------------------------|---|
| H | L | A | (Qt/ha) | % |
| 67 | 42.5 | 52.4 | 38.5 | 36.1 |

| Gross Cost (Rs/ha)/ | Gross Return (Rs/ha) | Net Return (Rs/ha) | B:C Ratio (GR/GC) |
|---------------------|----------------------|--------------------|-------------------|
| 83,000 | 3,24,000 | 2,41,000 | 3.90 |

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Popularization of Scientific Rearing of Cross Breed Pig for higher production

Source : NRC Pig, Guwahati, 2016

Technology details:

Backyard Piggery

Rani crossbreed

Details of Demonstration

No. of
Demonstration

No. of animals/
poultry birds

No. of farmers

10

20 piglets
2 piglets/farmer
(1M & 1F)

10



Data on parameters in relation to technology demonstrated

% Change

Demo

Local

1. Litter size: 10-12 piglets/ farrowing
2. Body weight : 80-100kg/pig

1. 6-7 piglets/farrowing
2. 56-70 kg/pig

1. 71%
2. 42.5%



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Popularization of Scientific Rearing of Backyard Goatary

Source : NRC Goat, Guwahati, 2015

Technology details:

Backyard Goatary

Black bengal

Details of Demonstration

No. of
Demonstration

72020

No. of animals/
poultry birds

12 weaner goats
2 weaner
goat/farmer (1M &
1F)

No. of
farmers

7



Data on parameters in relation to technology demonstrated

Demo

Local

% Change

1. Kidding potency: 2-3 kids/kidding
2. Worm infestation: Low

1. 1 kid/kidding
2. High

1. 200%
2. -



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Achievements for CFLD PULSES (Area-11 ha ; No. of Demo-22)

| Crop Enterprise | Variety | Demonstration Yield (Qt/Ha) | | | Yield of local Check Qt/ha) | % increase/ change in avg. yield over local | Gross Cost (Rs/ha) / (Rs./ unit) | Gross Return (Rs/ha) / (Rs./ unit) | Net Return (Rs/ha) / (Rs./ Unit) | B:C Ratio (GR/G C) |
|-----------------|-------------------|-----------------------------|------|------|--------------------------------|--|--|--|--|-----------------------|
| | | H | L | A | | | | | | |
| Blackgram | PU-31 (6 ha) | 8.95 | 4.2 | 7.87 | 5.86 | 34.3 | 22200 | 39350 | 17150 | 1.75 |
| Greengram | IPM 2-3 (5 ha) | 7.85 | 3.64 | 6.35 | Not grown | - | 24500 | 55650 | 31150 | 2.27 |



Performance of Blackgram Var. PU-31



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Achievements for CFLD (PULSES)



Performance of Greengram Var. IPM 2-3



Achievements for CFLD OILSEEDS (Area-30 ha ; No. of Demo-44)

| Crop Enterprise | Variety | Demonstration Yield (Qt/Ha) | | | Yield of local Check Qt/ha) | % increase/ in avg. yield over local % | Gross Cost (Rs/ha) | Gross Return (Rs/ha) | Net Return (Rs/ha) / (Rs./ Unit) | B:C Ratio (GR/G C) |
|-----------------|-------------------|-----------------------------|------|------|--------------------------------|---|--------------------|----------------------|----------------------------------|--------------------|
| | | H | L | A | | | | | | |
| Rapeseed | TS-38 (15 ha) | 9.2 | 5.1 | 7.8 | 6.5 | 20 | 21230 | 35100 | 13870 | 1.65 |
| Mustard | NRCHB-101 (15 ha) | 7.85 | 3.64 | 6.35 | Not grown | - | 24500 | 55650 | 31150 | 2.27 |



Performance of TS-38 and NRCHB-101



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Achievements for CFLD OILSEEDS



Performance of TS-38 and NRCHB-101



The background of the slide is a light gray gradient. In the top-left and bottom-right corners, there are several realistic water droplets of various sizes, rendered with soft shadows and highlights to give them a three-dimensional appearance. A solid yellow rectangular box is positioned in the center of the slide, containing the text "Training Programme".

Training Programme

Training Programmes

Total no of Training programme – 49 nos

Total Beneficiary– 1100 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 | 28 | 44 | 115 | 236 | 199 | 280 | 314 | 594 |
| 3 days Farmers and Farm Women | 8 | 13 | 74 | 23 | 66 | 36 | 140 | 176 |
| 4 days Farmers and Farm Women | 6 | 33 | 47 | 22 | 64 | 55 | 111 | 166 |
| 1/2 days Rural youth | 4 | 5 | 17 | 48 | 14 | 53 | 31 | 84 |
| 3 days Rural youth | 2 | - | 20 | 30 | - | 30 | 20 | 50 |
| Extension Personnel | 1 | - | - | - | 30 | - | 30 | 30 |
| Total | 49 | 95 | 273 | 359 | 373 | 454 | 646 | 1100 |



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The background of the slide is a light gray gradient. In the top-left and bottom-right corners, there are several realistic water droplets of various sizes, rendered with highlights and shadows to give them a three-dimensional appearance. A solid yellow rectangular box is centered horizontally on the slide.

Extension Activities

Extension Activities (KVK)

| Extension Activity | Activity | | | Beneficiaries | | |
|-----------------------------------|--------------|--------------------|---------------|---------------|--------------------|---------------|
| | Target (No.) | Achievement (Nos.) | % achievement | Target (Nos.) | Achievement (Nos.) | % achievement |
| Field day | 10 | 5 | 50.00 | 200 | 80 | 40.00 |
| Diagnostic visit | 300 | 275 | 91.67 | 350 | 557 | 159.14 |
| Scientist visit to farmer's field | 500 | 285 | 57.00 | 600 | 714 | 119.00 |
| Farmer visit to KVK farm | 200 | 142 | 71.00 | 300 | 568 | 189.33 |
| Method demonstration | 30 | 68 | 226.67 | 600 | 527 | 87.83 |
| Exhibition | 5 | 3 | 60.00 | 250 | 122 | 48.80 |
| Group Discussion | 20 | 16 | 80.00 | 400 | 322 | 80.50 |
| Exposure visit | 6 | 02 | 33.33 | 120 | 40 | 33.33 |
| Advisory/helpline | 1800 | 1427 | 79.28 | 1800 | 1775 | 98.61 |
| Lecture delivered | 25 | 16 | 64.00 | 500 | 862 | 172.40 |
| Mass awareness | 10 | 2 | 20.00 | 1000 | 221 | 22.10 |
| Farmer Scientist Interaction | 20 | 11 | 55.00 | 600 | 220 | 36.67 |
| Agri Mobile Clinic | 10 | 4 | 40.00 | 500 | 173 | 34.60 |



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Extension Activities (KVK)

| Extension Activity | Activity | | | Beneficiaries | | |
|-----------------------|--------------|--------------------|---------------|---------------|--------------------|---------------|
| | Target (No.) | Achievement (Nos.) | % achievement | Target (Nos.) | Achievement (Nos.) | % achievement |
| Technology showcasing | 6 | 9 | 150.00 | 300 | 391 | 130.33 |
| TV Talk | 5 | 6 | 120.00 | - | - | |
| Popular article | 10 | 5 | 50.00 | - | - | |
| Newspaper coverage | 10 | 16 | 160.00 | - | - | |
| Soil Health Camp | 15 | 5 | 33.33 | 100 | 125 | 125.00 |
| Vaccination Camp | 10 | 1 | 10.00 | | 280 | |
| Film Show | 5 | 1 | 20.00 | 25 | 30 | 120.00 |
| Rabi Campaign | 5 | 2 | 40.00 | | 221 | |



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Extension Activities (KVK)

| Extension Activity | No of Activity | No of Beneficiaries |
|---------------------------|----------------|---------------------|
| World Soil Day | 1 | 25 |
| Swachhta Pakwada | On going | |
| Awareness Programme | 18 | 395 |
| National Fish Farmer Day | 1 | 20 |
| Kisan Mahila Diwas | 3 | 140 |
| Pooshan Maah | 1 | 60 |
| World Food Day | 1 | 30 |
| World Environment Day | 1 | 30 |
| Parthenium awareness Week | 10 | 150 |



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World Soil Day

Poshan Maah

National Fish Farmer Day

Celebration of
Important
Days

World Environmental Day

World Food Day

National Unity Day



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DIAGNOSTIC/FIELD VISITS



SIGNIFICANT ACTIVITIES DURING PANDEMIC COVID 19

| Sl.No. | Disciplines | No. of Advisories |
|--|---|-------------------------|
| A. Advisories | | |
| 1 | Advisories on Crop | 82 nos |
| 2 | Advisories on Mushroom crop | 15 nos |
| 3 | Advisory on Fishery | 61 nos |
| 4 | Advisories on Plant Protection | 57 nos including 8 ITKs |
| 5 | Advisories on Horticulture Crops (6 nos) | 76 nos |
| 6 | Advisories for Farm Women (13 nos) | 43 nos |
| 7 | Advisories for Agricultural Engg. (10 nos) | 17 nos |
| B. Development of Best Farm Practice for combating COVID 19 | | |
| 1. | Safe Seed Storage through Hermetic Bag | |
| 2. | Processing of Mushroom produced by Mushroom Growers | |
| 3. | Post Harvest Management of Chives | |



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SIGNIFICANT ACTIVITIES DURING COVID 19 PANDEMIC

C. For Farmers and Stakeholders

| | | |
|----|--|---|
| 1. | Dissemination of ICAR approved State Agricultural Advisory including awareness of COVID 19 | 545 |
| 2. | Information circulation related to COVID 19 hygienic practices. | 545 |
| 3. | Awareness and installation of Aarogya Setu App | 294 |
| 4. | Awareness programme on safety and precautionary measures to be taken up during lockdown | 24 location |
| 5. | Door to door delivery of inputs | 36 houses |
| 6. | Nutritional garden to be strengthened and developed for ensuring adequate vegetable supplies during lock down | 42 |
| 7. | Sanitisation of public places, common centres etc. | Huikap, Andro Bazar Andro Club, KVK office |
| 8. | Coordination with district administration for marketing of farm produce and linkage created with NERAMAC and RED Shopper | 07 no. |



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SIGNIFICANT ACTIVITIES DURING COVID 19 PANDEMIC

D. Seeds and Inputs distributed

| | | |
|-----|----------------------|-----------------------------------|
| 1. | Paddy | CAU-R1: 1080 kg; CAU-R3: 80 kg |
| 2. | Tomato | 200 gm |
| 3. | Papaya | 100 gm |
| 4. | Mushroom spawn | 48 kg |
| 5. | Neem Cake | 60 kg |
| 6. | Hermetic storage bag | 60 nos |
| 7. | Mustard Oil Cake | 400 kg |
| 8. | Maize HQPM-1 | 160 kg |
| 9. | Fish fingerling | 1500 nos |
| 10. | Water reed plant | 6000 nos |
| 11. | Cucumber | 500 gm |
| 12. | Cabbage | 50 gm |
| 13. | Paddy | 140 kg |
| 14. | Ladies finger | 100 gm |
| 15. | King Chilli | 500 nos |



| | | |
|-----|--------------------------|---------|
| 16. | French Bean | 5000 gm |
| 17. | Long Bean | 1000 gm |
| 18. | Ridge gourd | 500 gm |
| 19. | Sponge gourd | 250 gm |
| 20. | Coriander | 2000 gm |
| 21. | Fish Medicine | 2000 ml |
| 22. | Urea | 150 kg |
| 23. | SSP | 150 kg |
| 24. | MOP | 150 kg |
| 25. | Spinetoram | 440 ml |
| 26. | Emamactin Benzoate | 440 gm |
| 27. | Mushroom Machine bagging | 02 nos |
| 28. | Mikmor | 120 kg |
| 29. | Marinol | 4 Litre |



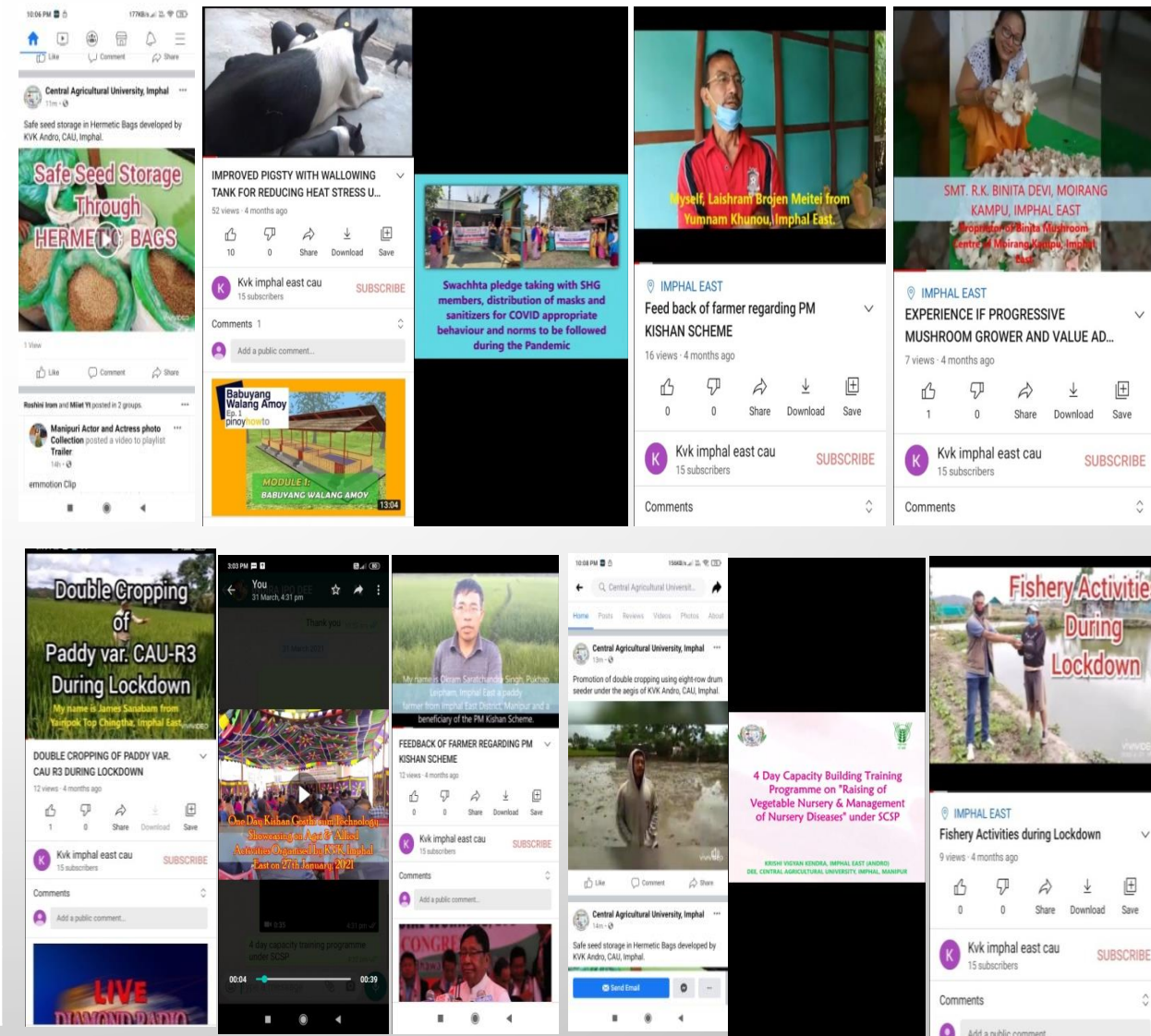
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SIGNIFICANT ACTIVITIES DURING PANDEMIC COVID 19

E. One Minute Videos developed

1. Safe Seed Storage through Hermetic Bags
2. Double Cropping of Paddy var.CAU R3 during Lockdown
3. Fishery Activities during Lockdown
4. Experience of Progressive Mushroom Grower
5. Feedback of Farmer regarding PM Kishan Scheme – Shri Th. Shyam Singh, Yumnam Khunou Makha Leikai, Imphal East
6. Feedback of Farmer regarding PM Kishan Scheme – Shri O. Saratchandra Singh, Pukhao Makha Leikai, Imphal East
7. Observation of Swachhta Pakwada during 16th to 31st Dec, 2020
8. Kishan Gosthi cum Technology Showcasing in Agri & Allied Activities
9. 4 day Capacity Training Programme under SCSP
10. 13th SAC Meeting of KVK, Imphal East



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SIGNIFICANT ACTIVITIES DURING COVID 19 PANDEMIC

Establishment of Model Fruit Village Village Name- Nungkot, Imphal East

| SI No | Items distributed | Quantity |
|-------|----------------------|----------|
| 1 | Kachai Lemon Sapling | 400 nos |
| 2 | Fertilizers | 5 bags |



Publications of KVK (2020)

| Items | Title | Journal Name |
|---------------------|--|--|
| Short Communication | Critical Limit of Zinc in relation to the growth of pea (<i>Pisum sativum</i> L.) in acid soil of Imphal West District, Manipur (India). <i>H. S. Athokpam, L. Ralte, Nandini Chongtham & N. B. Singh</i> | Indian Journal of Agricultural Research |
| Abstract | Diversification of low productive paddy areas through Water Reed cum Fish Integrated Farming -Manipur, India <i>M. A. Salam, Gunajit Oinam, H. Ramananda Singh</i> | Soil Conservation National e-Poster Olympiad on Soil, Biomes and Resilience to climate change. |
| | Low cost perennial water harvesting structure Jalkund for sustainable livelihood of the Nungbrang Village of Imphal East District, Manipur India <i>Gunajit Oinam, M. A. Salam & Nongthambam Jotish</i> | Souvenir cum Abstract E Book on International Web Conference on Resource Management and Biodiversity conservation to achieve sustainable development goals |
| Research Paper | Effect of planting dates and newer insecticides on the incidence of major lepidopterous pests under <i>Kharif</i> rice ecosystem <i>K.I. Singh, Naveen Kumar, N. Sunita Devi, H. R. Singh, T. R. Singh and M.P. Singh</i> | J. Appl. Zool. Res |
| | Effectiveness of Botanicals against <i>Lipaphis erysimi</i> (Kaltenbach) and their effect on <i>Apis Cerana</i> Himalaya & <i>Coccinella septumpunctata</i> population <i>K.I. Singh, N. Sunita Devi, H. R. Singh, T.R. Singh and M.P.Singh</i> | J. Appl. Zool. Res |
| | Microbial control of <i>Spilarctia oblique</i> Walker under sunflower-crop-ecosystem of Manipur <i>K.I.Singh, H.R. Singh, T.R.Singh and M.P.Singh</i> | J. Appl. Zool. Res |



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



Publications of KVK (2020)

| Items | Title | Journal Name |
|----------------|---|---|
| Research Paper | Study on growth performance, production and return of Vietnamese koi (<i>Anabas testudineus</i>) for socio economic upliftment of rural youth in Manipur, India. M. A. Salam, Y. Bedajit, Surajkumar Irungbam, H. Ramananda & Gunajit Oinam | Journal of Experimental Biology and Agricultural Sciences (Accepted) |
| | Potentiality of Periphyton based Aquaculture Technology in Water reed (<i>Schoenoplectus lactustris</i> Linn) - fish Environment in Manipur, India M. A. Salam, Gunajit Oinam, H. Ramananda Singh, Y. Bedajit Singh Surajkumar Irungbam | International Journal of Current Microbiology and Applied Sciences (Accepted) |
| | Perceived Constraints of Fish Farmers in Adoption of Scientific Fish Farming in Manipur M A Salam, Shah M Hussain, Gunajit Oinam and Biswajit Debnath | Journal of Krishi Vigyan |
| | Problems Faced by Fish Farmers in Imphal East District of Manipur M A Salam, Shah M Hussain, Gunajit Oinam and Biswajit Debnath | Journal of Krishi Vigyan |



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



Production of Seed Materials

| Item | Crop | Variety | Quantity produced (Qt) |
|---------|------------|------------------------|------------------------|
| Cereals | Rice | CAU-R3 | 14 |
| | | CAU-R1 (farmers field) | 140 |
| Pulses | Black gram | PU-31 | 10 |
| | Garden Pea | Makhiyat Mubi | 3.5 |
| | Green gram | IPM 2-3 | 6 |

Production of Planting Materials

| Item | Crop | Variety | Quantity produced (No) |
|------------|-------------|--------------|------------------------|
| Spices | Onion | Bhima Shakti | 20000 |
| Vegetables | Cabbage | Rare Ball | 1 lakh |
| | Tomato | Arka Rakshak | 20000 |
| | | Arka Samrat | 20000 |
| | | Sultan | 5000 |
| | Broccoli | Green Magic | 30000 |
| | Cauliflower | White Excel | 15000 |
| | Bokchoy | - | 1000 |

Bio Products Produced

| Item | Product Name | Species | Target (kg) | Quantity produced (kg) | Value (Rs.) | Qty supplied and No. of farmers |
|------------|--------------|-----------------|-------------|------------------------|-------------|---------------------------------------|
| Vermi worm | Vermi worm | Eisenia foetida | - | 5.5 | 6450 | 5.5 kg supplied to 13 nos. of farmers |
| Total | | | | 5.5 | 6450 | |

Soil & Water Testing/SHCs during 2020-21

| Sl. No. | Samples tested/Analysed | Sample (No.) | Farmer beneficiaries | Village covered | Amount realised (Rs.) | SHCs issued to farmers (Nos.) |
|---------|-------------------------|--------------|----------------------|-----------------|-----------------------|-------------------------------|
| 1. | Soil Sample | | 35 | | | |
| 2. | Water Sample | | 50 | | | |



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Directorate of Extension Education
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Status of Mobile Advisory Upto March, 2021

| 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 | - | 874 | - | 351 | - | 217 | - | 166 | - | 164 | - | 713 | - | 2485 |
| Total | - | 874 | - | 351 | - | 217 | - | 166 | - | 164 | - | 713 | - | 2485 |

Revenue(R) generation by KVK from different sources upto March, 2021

Opening balance – Rs. 244049/-

| Sl. No. | Activity/ Enterprise | Revenue (Rs.) |
|----------------|-------------------------------|-----------------|
| 1 | Integrated Farming Components | 42000.00 |
| 2 | Crop Components | 8500.00 |
| 3 | Vermiworm | 6450.00 |
| 4 | Custom Hiring | 17574.00 |
| 5 | Interest | 4547.00 |
| TOTAL : | | 79071.00 |



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



On-going projects & achievements

ACTIVITIES UNDER NBAIR

TRAININGS AND DEMONSTRATIONS OF INSECT PESTS AND DISEASE MANAGEMENT USING BIO-CONTROL AGENTS IN RICE UNDER NBAIR, BENGALURU

| Sl no | Activities | No of Programme (nos) | No of Participants (nos) |
|-------|--|-----------------------|--------------------------|
| 1 | 3 days Training Programme | 2 | 50 |
| 2 | Field Day | 1 | 10 |
| 3 | Demonstration (at Yumnam Khunou and Nungbrang) | 1 | 20 |



3 days Training Programme at Nungbrang



Distribution of inputs at Nungbrang



Method Demonstration at Nungbrang



Demonstration at Nungbrang



3 days Training Programme at Yumnam Khunou



Demonstration at Yumnam Khunou



Method Demonstration at Yumnam Khunou



Field day at Yumnam Khunou



Demonstration at Yumnam Khunou



Inputs distribution for On-farm production of Trichoderma sp

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 establishment of nutritional garden for national security | 4 | 90 (72 FW & 18 Extension Functionaries) |
| 2 | Exhibition on Nutri Thali | 1 | 35 |
| 3 | Recipe Competition | 1 | 35 |
| 4 | Demonstration on Nutritional Garden (200 sq. m) | 42 | 42 households |
| 5. | Production of mushroom for enhanced nutrients intake | 2 units | 160 kg |



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ACTIVITIES UNDER PKVY

PARAMPARAGAT KRISHI VIKAS YOJANA (PKVY)

| Sl no | Activities | No of Programme (nos) | No of Participants (nos) |
|-------|--|-----------------------|--------------------------|
| 1 | Meetings conducted for formation of clusters at Imphal East district | 4 | 45 |
| 2 | Selected cluster for the programme at Yumnam Khunou and Nungbrang | 2 nos. of clusters | 20 |
| 3 | Training Programmes | 3 | 60 |
| 4 | Field Day | 1 | 15 |
| 5. | Organic certification process approved | | 20 |

First year demonstration on cropping sequence of Garden Pea (Makhyat mubi)- Paddy (CAU R1) completed



PGS - India
A Participatory Organic Guarantee Programme
Department of Agriculture and Cooperation
Govt of India

Certificate No. - 202001835432
Date of Issue (DD/MM/YYYY) - 10/12/2020

Scope Certificate

This is to certify that the product(s) and service(s) of the mentioned farmer, **Shri LAKSHMAN BISHOI**, belonging to PGS-India Group **APINDIA LOCAL LLP**, Registered with Regional Council No. **PGS/NE/NE/1109**, Green Foundation are in accordance with requirements of **PGS-India National Standards For Organic Production** For the process of **"Crop Production"**.

This Scope Certificate valid from (DD/MM/YYYY) 10/12/2020 until (DD/MM/YYYY) 09/12/2021 for those product(s) and service(s) specified in the annex.

The validity of this certificate solely depends on the continued compliance with the required standards and PGS-India guidelines.

Signature of PGS India Group Leader
Local Group No. L.G.20080943

Authorized by Signatures of Head of the BC With Seal:
Green Foundation
Regional Council for PGS in MANIPUR
Authorization No. - PGS/NE/NE/1109
Date - 10/12/2020

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Directorate of Extension Education
Central Agricultural University, Imphal, Manipur



ACTIVITIES UNDER KSHAMTA

Implementing Village: Nungkot Village

| Sl No. | Activities | Beneficiaries (No.) |
|--------|--|---------------------|
| 1 | Creation of fruit village: 400 nos. of Kachai Lemon saplings are distributed and planted. | |
| 2 | Training Programmes: | |
| | 4 days training programme on “ Integrated Farming System and its value chain management for upliftment of rural economy” during 21 st – 23 rd January 2021 | 25 |
| | 3 days training programme on “Introduction of Rainbow Rooster for sustain farm income” during 23 rd -25 th January 2021. | 25 |
| 3 | Demonstrations | |
| | Demonstration on cultivation of HQPM maize at 3.25 ha. | 13 |
| | Demonstration on Backyard poultry of Rainbow Rooster. 600 birds were distributed | 40 |
| | Demonstration on low cost Vermicomposting techniques. 3 nos. of vermicomposting beds distributed. | 3 |
| | Demonstration of manually operated vegetable transplanter for reducing | 40 |



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Directorate of Extension Education
Central Agricultural University, Imphal, Manipur



ACTIVITIES UNDER SCSP

| Sl No. | Activities | Beneficiaries (No.) |
|--------|---|---------------------|
| 1. | 4 days capacity building training programme on “Raising of Vegetable nursery and management of Nursery diseases” (23-26 th Mar 2021) | 40 21 M; 19 F |
| 2. | Exposure visit at Kwasiphai, Bishnupur District, the vegetable hub in Manipur on 25 th March, 2021 | 40 |
| 3. | Exposure visit of farm women and Self Help Group at State Level Exhibition Mai Own at Hapta Kangjeibung, Imphal on 19 th March, 2021 | 24 |
| 4. | Scientific cultivation of ginger variety Nadia and Turmeric variety Megha 1 (1 ha) | 10 |
| 5. | Cultivation of Maize variety HQPM 5 in an area of 10 ha at Andro | 30 |
| 6. | Inputs distributed: King Chilli seedlings – 400 nos. Brinjal seedlings – 400 nos. Cucumber- 200 g Tomato (Arka Rakshak/Samrat)- 300 g Coriander- 20 kg Ginger (Nadia) – 1 tonnes Turmeric (Megha 1) – 1 tonnes Maize – 200 kg | 50 |



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Name of the DFI village: Nungbrung; No. of Households: 356; Block : Keirao Bitra
Location: Latitude: 94.10443°E, Longitude: 24.70040°N, Altitude: 790 MSL; No. of Population: 420

| | Area (ha) | | Average Income /ha/yr (Rs) | |
|--|---------------------|--------------------|----------------------------|--------------------|
| A. Land Pattern: | Before intervention | After intervention | Before intervention | After intervention |
| 1. Geographical Area | 203 | 203 | | |
| 2. Total Cultivable Area | 150 | 150 | | |
| 3. Cultivated Area | 84 | 136 | | |
| B . Cropping Pattern: | | | | |
| Paddy Monocrop | 84 | 48 | 36,000.00 | 44,000.00 |
| Monocrops paddy (seed production) | - | - | | 90,000.00 |
| Paddy- Mustard | 4 | 52 | 57,000.00 | 1,50,000.00 |
| Paddy-Pea | 5 | 15 | | |
| Paddy-Potato | 2 | 7 | | |
| Paddy- Cole crops | 1 | 6 | | |
| Fishery | 0.25 | 4.5 | 75,000.00 | 2,80,000.00 |
| Integrated farming/Jalhund (Fish + Piggery + duckery) | - | 6 | 36000.00 | 102000.00 |
| C. Livestock: | | | | |
| 1. Pig | 17 | 39 | 39000.00 | 45000.00 |
| 2. Cattle | 23 | 41 | 30000.00 | 35000.00 |
| 3. Poultry | 02 | 23 | 47000.00 | 72000.00 |
| 4. Duckery | 04 | 19 | 35000.00 | 42000.00 |
| D. Non Farm activities | | | 100000.00 | 100000.00 |



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FEEDBACK OF FARMERS

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

- i. Farmers have shown satisfaction with the interventions taken up by the KVKs in respect of trainings, demonstrations and overall extension activities, which are being rendered to them as and when required
- ii. However, in some of the demonstrations provision of only critical inputs by the KVK is perceived as “incomplete”
- iii. Support of whole package in any demonstration is being demanded

IMPORTANT PROBLEMS AND RESEARCHABLE ISSUES (POINT-WISE)

- i. Unavailability of quality seeds on time
- ii. Inaccessibility of internet facility
- iii. Inability to conduct demonstration under Agricultural Engineering due to high cost of machineries
- iv. Lack of laboratory facility for Home Science hindering taking up vocational training programmes
- v. Lack of proper storage/godwon facility
- vi. Lack of Threshing ground
- vii. Lack of well develop garage for farm machineries
- viii. Lack of well equipped Conference/Training /Exhibition hall
- ix. Needs research and development of Short duration high yielding varieties specially for *rabi* Oilseeds and Pulses as agriculture in the region is totally *rainfed*
- x. Moisture Stress tolerant Crops/varieties should be developed/identified





Pumnamakpu Khurumjari



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