

Annual Report of KVK, Nagapattinam on SCSP activities for the year 2023-24

Name of the KVK implementing SCSP : KVK, Nagapattinam

State : Tamil Nadu

1. Summary table of all activities under SCSP

S.No	Name of the Activity	Achievement during 2023-24	
I	On- farm trials		
	Title of the trial	No. of trials	Number of beneficiaries
1	Assessment of high yielding fine grain Rice variety for Nagapattinam District.	1	1
2	Assessment of Zinc Solubilizing bacteria for Zn nutrition in Paddy	1	1
3	Assessment of Foliar nutrition for the improvement of grain filling in Rice	1	1
4	Assessment of Marigold hybrids for yield and income potential	1	1
5	Assessment of bio repellants against wild boar in Rice	1	1
6	Assessment of Technologies for management of Cotton sucking pests	1	1
7	Assessment of Technologies for management of Root Rot Disease in Groundnut	1	1
8	Assessment Of Periphyton Based Grow-Out Culture For Enhancing Production of Carps	1	1
9	Assessment of Zeolite and Biochar To Improve Fish Production.	1	1
10	Assessment of Amur Carp under Polyculture with Indian Major Carps	1	1
11	Assessment of different methods of Fish Cutlets preparation and Quality Evaluation	2	2
12	Assessment of different methods of Fish Acid/Amino Acid preparation and Quality Evaluation	1	1
II	Frontline demonstrations		
	Title of the demonstration	No. of Demonstration	Number of beneficiaries
1	Demonstration of Suitable Newly Released Rice Variety ADT 58 for Thaladi	2	2
2	Demonstration of Newly Released Short duration Rice Variety ADT 56	3	3
3	Demonstration of Suitable Rice fallow Blackgram ADT 7	3	3
4	Demonstration on Yield augmentation techniques	3	3

	in Mango		
5	Demonstration on Cocoponics in terrace gardening	3	3
6	Demonstration on management module against sucking pests in Chilli	3	3
7	Demonstration of IDM for false smut in paddy	3	3
8	Demonstration of IPDM in Snake gourd	3	3
9	Demonstration on biological control of aquatic weeds in ponds	1	1
10	Popularisation of formulated floating pellet feeds for freshwater fish culture	1	1
11	Demonstration of Value Added Products from Millets – Multi Millets Bread	2	2
12	Demonstration of Vacuum Packaging Technology for Dry fishes	2	2
III	Training to Practicing Farmers		
	Name of the training	Duration	No of participants
1	Natural farming practices	1 day	30
2	Millets cultivation technologies	1 day	30
3	ICM in Vegetables	1 day	30
4	Nursery and seedling production in Vegetables	1 day	25
5	IPDM in Rice	1 day	25
6	Silkworm production	1 day	25
7	Integrated farming	1 day	25
8	Fish culture technology	1 day	25
9	Value added Products in Fishes	1 day	25
10	Scientific goat farming	1 day	25
IV	Training to Rural Youth		
	Name of the training	Duration	No of participants
1	Grafting technology in Fruits and Vegetables	1 day	25
2	Beekeeping	1 day	25
3	Carp Culture	1 day	25
4	Poultry rearing	1 day	25
5	Dairy farming and Milk Value Addition	1 day	25
V	Training to Extension Personnel		
	Name of the training	Duration	No. of participants
1	Productivity enhancement in field crops	1 day	25
2	INM in Horticulture crops	1 day	25
VI	Skill Training programs		
	Name of the training	Duration	No. of participants
1	Scientific Coconut Cultivation	3	40
2	Value addition in Fish – Masmin Production Technology	5	40
VII	Extension activities		
	Name of the extension activity	Duration	No. of participants
1	Scientist Visit to Farmers Field	52	157
2	Advisory Service	26	353

3	Field Day	1	5
4	Guest Lecture	28	409
5	Kisan Mela	1	17
6	Exhibition	6	20136
7	Film Show	1	38
8	Farmers Visit To KVK	27	208
9	Exposure Visit	5	116
10	Demonstrations	7	76
11	Farmers' seminar/workshop	1	32
12	Soil health Camps	1	7
13	Group Discussion	7	108
14	Celebration of important days/Special Day	6	105
15	Publications	38	10668
16	Awareness programme	54	9547
17	News Paper Coverage	68 nos.	-
18	Radio Talk	17 nos.	-
19	TV talk	1 no.	-
VIII	Seed supplied (Q)		
	Name of the crop / variety	Quantity (Q)	No. of beneficiaries
1	Rice -ADT 51	10	25
2	Blackgram	1.5	15
IX	Planting material supplied		
	Name of the crop	Number	No. of beneficiaries
1	Coconut seedlings	1000	200
2	Teak seedlings	250	25
3	Vegetable seedling – Hybrid Brinjal	5000	100
4	Vegetable seedling – Hybrid Chilli	5000	100
X	Live-stock strains supplied		
	Name	Number	No of beneficiaries
1	Poultry –Aseel Chicks	925	85
XI	Fish fingerlings supplied	Number	No. of beneficiaries
	Carp Fish Fingerlings	20000	20
XII	Bio products supplied	Quantity (Q)	No. of beneficiaries
	<i>Bacillus subtilis</i>	1	100
XI	Soil, water, plant, manures samples analyzed		
	Nature of the sample	Number	No of beneficiaries
1	Soil Sample	100	100
XIII	Soil Health Cards issued	Number	No. of beneficiaries
	Soil Health Cards	100	100
XIV	Mobile agro- advisory provided to farmers		
	Nature of the advisory	No of messages	No. of beneficiaries
1	Advisory service on Agronomical practices,	26	353

	Horticulture technologies, IPDM technologies, Animal Husbandry, Fisheries and value addition technologies provided through phone call		
2	Mobile advisory through whatsapp	1	51
XV	Physical Assets / micro-enterprises established		
	Nature of asset	Number of units supplied / established	Number of beneficiaries
1	Apiary	10	10
2	Poultry Cage	5	5
3	Vermi composting Silpaulin Bag	25	25
4	Value addition unit	2	20
5	Small farm implements - Sprayer	20	20

2. Results of OFTs conducted under SCSP:

OFT 1: Assessment of high yielding fine grain Rice variety for Nagapattinam.

1	Thematic area	:	Varietal Assessment
2	Title	:	Assessment of high yielding fine grain Rice variety for Nagapattinam.
3	Details of farming situation	:	Irrigated, Kharif 2023, Clay loam,
4	Problem definition / description	:	Introducing fine grain rice varieties in Nagapattinam is important to address the changing preferences of consumers towards fine grain rice. Furthermore, these varieties have the potential to command higher prices in the market, thereby increasing farmers' income. Currently, during the kuruvai season, only a few fine grain varieties like ADT 43, ADT 45, ADT 47, and CO 51 are available. However, there is still a need for high yielding varieties and high-quality rice. To tackle this issue, OFT is being formulated to evaluate high yielding fine grain varieties in Nagapattinam district.
5	Technology Assessed	:	<p>TO 1: CO 55 It is a derivative of ADT 43 x GEB 24 and short duration superfine variety with 115 days. The average yield of the culture is 6050 kg/ha. It has milling of 66% and head rice recovery of 62%. It is medium slender fine rice with cooking quality.</p> <p>TO 2: RNR 15048 Telangana Sona (RNR 15048) is a short duration, blast resistant rice variety suitable for both kharif and rabi seasons. It is a derivative of ADT 45 x ACK 03002, It is a medium slender rice with 115 days</p> <p>Farmers Practice: CO 51</p>
6	Critical inputs given:	:	CO 55 and RNR 15048 seeds -12 kg each
7	Results:		
Performance of the technology			
	Technology Option	No. of trials	Yield (q/ha)
	FP : CO 51		Net Returns (Rs./ha)
	TO 1 :CO 55	5 (SC 1)	B:C ratio
	TO 2 :RNR 15048		No. of tillers/plant
			49.5
			45,300
			1.89
			14
			52.7
			52,125
			1.70
			16
			48.5
			42,080
			1.77
			14

8	Constraints	:	Nil
9	Feedback of the farmers involved	:	Mr. Sambandham, a progressive farmer, observed that the CO 55 variety fetched superior cooking quality and is particularly well-suited for preparing biryani dishes.
10	Feed back to the scientist who developed the technology	:	Rice CO 55 converted as FLD to popularize among the farmers of the Nagapattinam district for its high yielding nature and superior grain quality.

OFT 2: Assessment of Zinc Solubilizing Bacteria for yield enhancement in Rice

1	Thematic area	:	Crop Production and Management			
2	Title	:	Assessment of Zinc Solubilizing Bacteria for yield enhancement in Rice			
3	Details of farming situation	:	Irrigated, Rabi 2023, Clay loam			
4	Problem definition / description	:	Zinc Solubilizing Bacteria, a biofertilizer, enhances the bioavailability of zinc, which is beneficial for the growth and development of rice plants. The effectiveness of Zinc Solubilizing Bacteria sourced from both TNAU and IIHR was evaluated through this OFT.			
5	Technology Assessed	:	<p>TO 1: Zinc solublising bacteria TNAU- Zinc solublising bacteria (<i>Pseudomonaschloropisis</i>) Soil Application of 2 lit per ha + Zinc Sulphate @ 25 kg /ha</p> <p>TO 2: IIHR- Microbial Consortium Arka Microbial Consortium Is A Carrier Based Product Which Contains N Fixing, P & Zn Solubilizing And Plant Growth Promoting Microbes As A Single Formulation.</p> <p>Farmers Practice: Application of Zinc sulphate 25 kg/ha alone</p>			
6	Critical inputs given	:	Zinc solubilizing bacteria 2 kg + IIHR Microbial Consortia 2 kg			
7	Results					
Performance of the technology						
	Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio	No. of tillers/plant
	FP : Application of ZnSo₄-25 kg/ha alone	5 (SC 1)	50.5	48,100	1.83	14
	TO 1 : Zinc solubilizing bacteria		52.5	52,480	1.90	15
	TO2 : IIHR- Microbial Consortium		54.0	55,255	1.95	16
8	Constraints	:	Nil			
9	Feedback of the	:	Farmer Mr. Ravichandran noticed that the IIHR Microbial Consortium			

	farmers involved	:	maintained the greenness of the plants and increased the number of tillers per plant.
10	Feed back to the scientist who developed the technology	:	It was observed that, the ADT 58 variety exhibited the longest root length of 33.7 cm when treated with the IHR Microbial consortium, compared to 29.5 cm with TNAU Zinc solubilizing bacteria and 28 cm with ZnSO ₄ alone.

OFT 3: Assessment of foliar nutrition for yield improvement in Rice

1	Thematic area	:	Crop Production and Management			
2	Title	:	Assessment of foliar nutrition for yield improvement in Rice			
3	Scientists involved	:	Dr.V. Kannan SMS (Agronomy)			
4	Details of farming situation	:	Irrigated- Clay loam, Rabi 2023			
5	Problem definition / description	:	Foliar nutrition enables to supply the complete range of nutrients in readily available form to the plants. The crop booster like TNAU Rice reap which improves uniform flowering, improved grain filling and grain weight. Also, 3 percent application of KNO ₃ has been recommended for achieving similar objectives. The effectiveness of both TNAU Rice Reap and KNO ₃ was assessed in this OFT.			
6	Technology Assessed	:	<p>TO 1: TNAU Rice Reap Dose: 6 kg/acre</p> <ul style="list-style-type: none"> Spray volume : 200 lit Stages of spray : Booting stage (3 kg) and 10 days after first spray (3 kg) <p>TO 2: Foliar application of 1.5% Potassium nitrate Foliar application of 1.5% Potassium nitrate (3 kg Potassium nitrate in 200 litres of water per acre) during boot leaf stage</p> <p>Farmers Practice: Application of DAP 2 %</p>			
7	Critical inputs given:	:	Zinc solubilizing bacteria 2 kg + IHR Microbial Consortia 2 kg			
8	Results					
Performance of the technology						
	Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio	1000 Grain weight (g)
	FP : Application of DAP 2 %	5 (SC 1)	49.1	47,110	1.72	16.34
	TO 1 : TNAU Rice Reap		52.5	51,650	1.95	16.56
	TO2 :Foliar application of 1.5% Potassium nitrate		50.2	49,425	1.81	16.45
9	Constraints	:	Nil			
10	Feedback of the farmers involved	:	Farmer Mr. Anthonisamy, Sikkal noticed that the improved grain filling was observed with TNAU rice reap and overall yield.			
11	Feed back to the scientist who developed the technology	:	It was observed that, the ADT 58 variety with foliar application of TNAU Rice reap recorded higher 1000 grain weight.			

OFT 4: Assessment of Marigold hybrids for yield and market preference

1	Thematic area	:	Varietal evaluation				
2	Title	:	Assessment of Marigold hybrids for yield and market preference				
3	Details of farming situation	:	Irrigated Dry, Sandy loam soil, The On Farm Testing was conducted in 5 locations during Rabi 2023 under irrigated condition. The average rainfall received during the cropping period was 254.3mm.				
4	Season	:	Rabi 2023				
5	Problem definition	:	In Nagapattinam district the existing marigold varieties being cultivated by farmers are low yielder due to less number of flowers and lesser size. More over these varieties are susceptible flowers susceptible to diseases which led to low marketable flower yield. Shelf life of the flowers is only 3-4 days. High yielding hybrids with good shelf life and larger in size will give better yield and income to the farmers.				
6	Technology Assessed	:	T.O.1- Cultivation of Marigold hybrid ArkaAbhi (IIHR 2020) T.O.2- Cultivation of Marigold hybrid ArkaVibha (IIHR 2020) Farmers practice – Cultivation of private hybrids				
7	Critical inputs given:	:	Input	Quantity	Value (Rs)		
			Marigold seed (ArkaAbhi)	50g	7500		
			Marigold seed (ArkaVibha)	50g	7500		
8	Results						
	Technology Option		No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	BCR	Flower diameter (cm)
	Farmers Practice – Private hybrids		5 (SC 1)	134.2	306270	3.29	5.8
	Technology 1-ArkaAbhi			154.4	421507	3.90	6.2
	Technology 2- ArkaVibha			146.5	383120	3.77	7.4
9	Feedback of the farmers involved		<ul style="list-style-type: none"> Marigold hybrid ArkaAbhi has given higher yield and fetched higher price in the market due to its bigger size of flowers. Flowers of ArkaVibha were very compact and had longer shelf life. Pinching facilitated more number of branches which in turn resulted in more number of flowers per plant. 				
10	Feed back to the scientist who developed the technology		<ul style="list-style-type: none"> Marigold hybrid ArkaAbhi performed well and has good market preference in Nagapattinam. Technology may be developed to induce earliness in flower bud initiation in case of Marigold hybrid ArkaVibha. 				

OFT 5: Assessment of Bio-repellents against wild boar in Rice:

1	Thematic area	IPM
2	Title	Assessment of bio repellants against wild boar in Rice
3	Details of farming situation:	Clay loam soil, Irrigated
4	Problem definition	Yield loss >30% due to intrusion of wild boar
5	Technology Assessed	T1: Spraying of Innovative Herboliv ⁺ (10% dilution) with 10 days interval – 5 Application

		T2: Tying of Neelbo treated ropes around the field. 20-30 days once replacement required. Farmer practice: Manual monitoring				
6	Critical inputs given	Innovative Herboliv - 25 lit Neelbo - 1 lit				
7	Results:	Technology Option	Yield (q/ha)	Net Returns (Rs./ha)	BCR	Data on Other performance indicators
		Farmers Practice	39.74	31,799	1.53	24.8
		Technology 1	45.74	45,659	1.76	9.5
		Technology 2	43.55	40,601	1.68	12.2
8	Feedback of the farmers involved	The paddy field was frequently being damaged by boar which reduced the crop yield. Hence, farmers started staying in the field during night to prevent the entry of boar. However, Herboliv ⁺ and Neelbo were very effective.				
9	Feed back to the scientist who developed the technology	The Herboliv ⁺ is very effective and easy to handle				

OFT 6: Assessment of Technologies for management of Cotton sucking pests

1	Thematic area:	IPM
2	Title:	Assessment of Technologies for management of Cotton sucking pests
3	Details of farming situation:	Clay loam soil, Irrigated
4	Problem definition	<ul style="list-style-type: none"> • Incidence of Mealy • • bug infestation resulted yield loss of up to 35% • Indiscriminate use of combination of pesticides • Lack of awareness about IPM
5	Technology Assessed	<p>T1: Seed treatment with Imidacloprid 70WS at 7g / kg of seed</p> <ul style="list-style-type: none"> • Installation of Yellow sticky trap 5 per acre • Azadirachtin 300ppm @5ml/l • Fish oil rosin soap 25g/litre of water • Spray Verticillium lecanii 5gm/l • Need based spraying of Clothianidin 50%WDG 1g/10litre of water @ 35 DAS, Fipronil 5%SC 4ml/10litre of water @ 120 DAS <p>T2: Seed treatment with Thiamethoxam 30FS 10ml/kg of seed Grow pigeonpea, bajra or maize as border crop wherever possible.</p> <ul style="list-style-type: none"> • Installation of Yellow sticky trap 8 per acre

		<ul style="list-style-type: none"> • Azadirachtin spray @ 1% suppresses jassid population during pre squaring crop stage. • Fish oil rosin liquid 10ml mixed with Azadirachtin 300ppm 10ml/l • Spray <i>Verticillium lecanii</i> 10gm/l • Need based spraying of Flonicamid 50 WG 4g/10litre of water @ 35 DAS, Thiodicarb 75WP 20g/10litre of water @ 120 DAS. <p>Farmer practice: Spraying of Profenofos 50.00% EC, Dimethoate 30 EC/ Imidacloprid 17.8 SL/Acephate 75.00% SP</p>																				
6	Critical inputs given	Yellow sticky, Azadirachtin, <i>Verticillium lecanii</i>																				
7	Results	<table border="1"> <thead> <tr> <th>Technology Option</th> <th>Yield (q/ha)</th> <th>Net Returns (Rs./ha)</th> <th>BCR</th> <th>Data on Other performance</th> </tr> </thead> <tbody> <tr> <td>Farmers Practice</td> <td>29.33</td> <td>1,39,810</td> <td>3.13</td> <td>-</td> </tr> <tr> <td>Technology 1</td> <td>37.04</td> <td>2,21,320</td> <td>3.95</td> <td>-</td> </tr> <tr> <td>Technology 2</td> <td>33.60</td> <td>1,90,800</td> <td>3.56</td> <td>-</td> </tr> </tbody> </table>	Technology Option	Yield (q/ha)	Net Returns (Rs./ha)	BCR	Data on Other performance	Farmers Practice	29.33	1,39,810	3.13	-	Technology 1	37.04	2,21,320	3.95	-	Technology 2	33.60	1,90,800	3.56	-
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Technology 1	37.04	2,21,320	3.95	-																		
Technology 2	33.60	1,90,800	3.56	-																		
8	Feedback of the farmers involved	The integrated pest management is very effective and the occurrence of various sucking pest was significantly controlled																				
9	Feed back to the scientist who developed the technology	<i>Verticillium lecanii</i> is highly effective in controlling the sucking pest population																				

OFT 7: Assessment of Technologies for management of Root Rot Disease in Groundnut

1	Thematic area:	IPM
2	Title:	Assessment of Technologies for management of Root Rot Disease in Groundnut
3	Details of farming situation:	Sandy loam soil, Irrigated
4	Problem definition / description:	<ul style="list-style-type: none"> • Incidence of Stem rot infestation resulted yield loss of up to 32% • Indiscriminate use of combination of fungicides • Lack of awareness about IDM
5	Technology Assessed	<p>T1: Summer ploughing.</p> <ul style="list-style-type: none"> • Seed treatment with Carbendazim @2 g/kg of seed • Soil application of <i>Bacillus subtilis</i> and <i>Trichoderma asperellum</i> @ 2.5 kg/ha mixed with 50 kg FYM on 30 DAS. • Spot drench with carbendazim @ 1 g / l <p>T2: Summer ploughing.</p> <ul style="list-style-type: none"> • Seed Treatment with Tebuconazole 2DS @ 1.5 g/kg of seed. • Soil application of <i>Trichoderma asperellum</i> @ 4 kg/ha with enriched 250 Kg FYM first at the time of sowing, 35 and 70 DAS. • Farmer practice: Spraying of Carbendazim 50% WP
6	Critical inputs given	<i>Trichoderma asperellum</i> , <i>Bacillus subtilis</i>

7	Results:	Technology Option	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio
		Farmers Practice	27.18	65,220	2.50
		Technology 1	36.90	1,02,600	3.28
		Technology 2	31.80	82,200	2.83
8	Feedback of the farmers involved:	Over the past years, various fungicides were mainly used. This year, application of biocontrol agents increased and it was observed to be efficient and cost effective. Accordingly, it is planned to purchase biocontrol agents in the upcoming years from KVK.			
9	Feed back to the scientist who developed the technology:	<i>Trichoderma asperellum</i> and <i>Bacillus subtilis</i> application of the field reduced the root rot disease compared to the fungicides.			

OFT 8: Assessment of Periphyton based Grow-Out Culture For Enhancing Production Of Carps

Thematic Area	Production and Management
Crop/Enterprises	Fisheries
Title of OFT	Assessment Of Periphyton Based Grow-Out Culture For Enhancing Production Of Carps
Farming situation	Canal Irrigation and Clay loam soil
Problem identified	Freshwater fishes are cultivated in about 388 ha in the district using farm ponds. Majority of freshwater fish farmers have meagre knowledge on feeding management and feed based fish culture. Usage of substratum ultimately increases the availability of periphyton for the growth of fishes.
Source and year	National Rice Research Institute, Cuttack and 2020
Description	T1 - Provision of bamboo mats (10 %) as substratum for periphyton growth. T2- Provision of bamboo mats (20 %) as substratum for periphyton growth
Number of Trials	3 (SC 1)
Area	0.2 ha
	Farmers usually culture Indian major carps without any substratum. They are less aware about the role of periphyton in carp culture.
Results	On going. Stocking of fishes completed. Awaiting for harvest

OFT 9: Assessment of Amur Carp under Polyculture with Indian Major Carps

Thematic Area	Production and Management
Crop/Enterprises	Fisheries
Title of OFT	Assessment of Amur Carp under Polyculture with Indian Major Carps
Farming situation	Canal Irrigation and Clay loam soil
Problem identified	Freshwater fishes are cultivated in about 388 ha in the district using farm ponds. Majority of freshwater fish farmers have meagre knowledge on feeding management and feed based fish culture. Polyculture of fishes in farm ponds results in low survival rate due to inclusion of predatory fishes

	in the system
Source and year	KVAFSU, Bidar (2019)
Description of technology Assed	T1 - Indian Major Carps (IMC) at stocking density ratio of Catla: Rohu: Amur carp – 35: 25: 40. T2 - Indian Major Carps at the stocking density ratio of Catla: Rohu: Mrigal: Amur carp - 30: 40: 15: 15
Number of Trials	3 (SC 1)
Area	0.2 ha
	Farmers usually culture Indian major carps with all other fish varieties like polyculture method.
Results	Ongoing. Stocking of fishes completed. Awaiting for harvest

OFT 10: Assessment of Zeolite and Biochar to Improve Fish Production

Thematic Area	Production and Management
Crop/Enterprises	Fisheries
Title of OFT	Assessment of Zeolite and Biochar to Improve Fish Production
Farming situation	Canal Irrigation and Clay loam soil
Problem identified	Zeolite is a crystalline, microporous, alumino silicate minerals with chemically neutral basic. Zeolite could be used to eliminate or reduce the content of ammonia, hydrogen sulphide, nitrite, heavy metals in fish pond. It can also increase the oxygen level and adjust pH levels. Farmers don't use any inputs for increasing the water quality parameters.
Source and year	CIFE, Mumbai (2019)
Description of technology Assed	T1 – Application of Biochar, T2 – Application of Zeolite
Number of Trials	3 (SC 1)
Area	0.2 ha
	Farmers culturing Indian major carps don't bother about maintaining the water quality parameters. Water quality parameters play a major role in increasing the productivity of the pond.
Results	Ongoing. Input distribution completed. Awaiting for harvest and observation

OFT 11: Assessment of different methods of Fish Cutlets preparation and their Quality Evaluation

1	Thematic area	:	Value Addition
2	Title	:	Assessment of different methods of Fish Cutlets preparation and their Quality Evaluation
3	Details of farming situation	:	Nil
4	Season		Throughout year

5	Problem definition	:	1. Lack of awareness of value added fishery products. 2. Lack of knowledge of different method of Fish Cutlets preparation. 3. Lack of /less popularization of Fish Cutlets although huge demand in market 4. Low income of women and rural youth entrepreneurs
6	Technology Assessed	:	TO-1: TNJFU(2020) - Steam boiling of fish (three different types of low value fishes)/30 min to get fish mince, blended with smashed potato, spices, round shaped to 35 g per pieces, battered with maida, salt & breaded, fried, stored at -20°C & Self-life 6 months.at -20°C. TO-2: CIFT(2019) - Direct boiling of fish in 3% brine & 0.1% citric acid/15 min to get fish mince, blended with smashed potato, spices, round shaped to 40 g per pieces, battered with maida, corn flour, Bengal gram flour, salt & breaded, fried, stored at -18°C & Self-life 6 months.at -18°C. FP: Conventional method - Direct boiling of fish in water to get fish mince, blended with smashed potato, spices, round shaped to differential weighed per pieces, battered with maida, salt & breaded, fried, stored at 4-7°C & Self-life 4-7 days.at 4-7°C.
7	No. of Trials		2 SC farmers
8	Critical inputs given:	:	--
9	Results: Storage studies is under progress		
10	Feedback of the farmers involved		nil
11	Feed back to the scientist who developed the technology		nil

OFT 12: Assessment of different methods of Fish Acid/Amino Acid preparation and their Quality Evaluation

1	Thematic area	:	Value Addition
2	Title	:	Assessment of different methods of Fish Acid/Amino Acid preparation and their Quality Evaluation
3	Details of farming situation	:	Nil
4	Season		Throughout year
5	Problem definition	:	1. Lack of awareness of fishery by-products as bio-fertilizer. 2. Lack of knowledge of different method of Fish Acid/Amino Acid preparation. 3. Lack of /less popularization of Fish Acid/Amino Acid although huge demand in market 4. Low income of farmer, women and rural youth entrepreneurs.
6	Technology Assessed	:	TO-1: TNJFU (2020) - The fish waste collected from fish markets are cutted into small pieces & mixed with jaggery at 1:1 ratio. The product is

		<p>then kept under covered condition for a period of 45 days and the supernatant is collected and packed in bottles. It is a liquid fish manure (bio-fertilizer) and serve N, P & K to agri& allied crops.</p> <p>TO-2: CIFT (2019) - The fish waste collected from fish markets are homogenized then cooked for 1/2 hour with required quantity of jaggery, cooled & added with culture of lactic acid bacteria. The product is then kept under covered condition for a period of 20-30 days and the supernatant is collected and packed in bottles. It is supplemented with potassium and magnesium in the required level.</p> <p>FP: The fish waste mixed with jaggery& some fully ripened fruits at required level. The product is then kept under covered condition for a period of 30 days and the supernatant is collected and packed in bottles.</p>
	No. of Trials	1
7	Critical inputs given:	: --
8	Results: Storage studies is under progress	
9	Feedback of the farmers	nil
10	Feed back to the scientist	nil

3. Results of FLDs conducted under SCSP:

FLD 1: Demonstration of Newly Released Rice variety ADT 56 in Nagapattinam Dt.

Crop/Enterprise	:	Rice
Thematic area	:	Varietal Demonstration
Horizontal spread of the technology	:	25 ha.
Crop	:	Rice
Thematic area	:	Varietal Demonstration
Technology demonstrated	:	<p>Rice variety ADT 56</p> <ul style="list-style-type: none"> • Parentage: WGL 14377 / MDU 5 • Duration: 115 - 120 days. • Season: Kar / Kuruvai / Navarai / Summer. • Average grain yield : 6400 kg /ha. • High milling (69.4%) and Head rice yield (58.8%), intermediate amylose (23.8%), good cooking quality. • Moderately resistant to leaf blast, grain discolouration, RTD, stem borer and leaf folder.
Season and year	:	Kharif, 2023
Farming situation	:	Irrigated, Clay loam
No of locations (Villages)	:	6
No. of demonstrations	:	10 (SC 2)
Actual area (ha)	:	4 (SC 0.8)
Feedback from farmers	:	Farmers noted that ADT 56 exhibited a higher grain yield of 6750 kg/ha and a mean yield of 5350 kg/ha and shown resistance to rice

		stem borer.
Feedback of the Scientist	:	ADT 56 performed well in kuruvai season than all other varieties grown. ADT 56 recorded 16 tillers per plant. Net income of Rs. 53700/ha and BC ratio 1.92.

Photographs of Demonstration



FLD 2: Demonstration of Thaladi (Rabi) suitable Rice variety ADT 58 in Nagapattinam Dt.

Crop/Enterprise	:	Rice
Thematic area	:	Varietal Demonstration
Details on the performance of the technology sent to the Extension Department	:	Yes
Horizontal spread of the technology	:	100 ha.
Crop	:	Rice
Thematic area	:	Varietal Demonstration
Technology demonstrated	:	Rice variety ADT 58 <ul style="list-style-type: none"> • Duration : 125 days ; • Yield:6376 kg/ha • Medium slender grain, Milling- 72 %, Head Rice Recovery- 65 %. • Moderately tolerant to Leaf folder and stem borer. • Moderately resistant to blast, sheath blight, sheath rot.
Season and year	:	Samba, Rabi 2023
Farming situation	:	Irrigated, Clay loam
Source of fund	:	ICAR
No of locations (Villages)	:	6
No. of demonstrations (replications/farmers/beneficiaries)	:	10(SC 3)
Area proposed (ha)	:	4 (SC 0.8)
Feedback from farmers	:	The farmer Mr. Thirunavaukarasu noted that, ADT 58 was performed well even under poor nutrient soil.
Feedback of the Scientist	:	ADT 58 has recorded mean yield of 5475 kg/ha. Non lodging and resistance to Stem borer.
Photographs:		



FLD 3: Demonstration of Rice fallow Blackgram ADT 7 in Nagapattinam Dt.

Crop/Enterprise	:	Blackgram
Thematic area	:	Varietal Demonstration
Details on the performance of the technology sent to the Extension Department	:	Yes
Horizontal spread of the technology (No. of Villages, farmers, and area in ha)	:	25 ha.
Crop	:	Blackgram
Title of the Demonstration	:	Demonstration of Rice fallow Blackgram ADT 7 in Nagapattinam Dt
Technology demonstrated	:	<p>Blackgram ADT 7</p> <ul style="list-style-type: none"> • Duration: 65-70 days; Rice Fallow (Dec-Jan) • Yield:724 kg/ha (19.6 % over ADT 3) • Superior cooking quality and with overall acceptability score of 9.0 • Resistant to MYMV, leaf crinkle and stem necrosis. • Resistant to stem fly and moderately resistant to pod borer and pod bug.
Season and year	:	Rice fallow, 2024
Farming situation	:	Irrigated, Clay loam
Source of fund	:	ICAR
No of locations (Villages)	:	5
No. of demonstrations	:	10 (SC 3)
Area proposed (ha)	:	4 (SC 0.8)
Feedback from farmers	:	Farmers noted that ADT 7 shown resistance to MYMV and tolerance to drought.
Feedback of the Scientist	:	ADT 7 found suitable alternate variety for ADT 3. ADT 7 recorded higher yield of 5.9 q/ha. Which is 14 % higher than the farmers practice ADT 3.

FLD 4: Demonstration on Cocoponics in terrace gardening

Crop/Enterprise	Vegetable
Thematic area:	ICM

Title of Demonstration	Demonstration on Cocoponics in terrace gardening
Crop:	Vegetables
Technology demonstrated:	<ul style="list-style-type: none"> ➤ Growing vegetables by using containers on terraces. ➤ Use of fermented cocopeat as growing media. ➤ Application of ArkaNutri Grow in the growing media. ➤ Foliar application of Panchagavya 3%.
Season and year:	Kharif, 2023
Farming situation:	Cultivation of vegetables on Terraces
No of locations (Villages):	4
No of demonstration	10 (5 SC farmers)
Actual area (ha):	1.0
Feedback from farmers:	Lifting of soil to the terrace was very much difficult. But in case of cocoponics technology it was very easy to lift the media to terrace.
Feedback of the Scientist:	Cultivating crops in terraces by Cocoponics technology is very much useful to the participants. Crops were grown well in all seasons except rainy season. During rainy season the tiny rooted crops were prone to rotting due to high moisture content in the growing media.
Extension activities on the FLD: (Field days, Farmers training, media coverage, training to Extension Functionaries)	<ul style="list-style-type: none"> ➤ Two numbers of trainings were conducted at on campus. ➤ Frequent field visits and necessary advisories had been given to the farmers during implementation of the demonstration. ➤ The technology has been disseminated to others through newspaper coverage.

FLD 5: Demonstration on Yield augmentation techniques in Mango

Crop	Mango
Thematic area:	Integrated Crop Management practices
Title of the Demonstration	Demonstration on Yield augmentation techniques in Mango
Technology demonstrated:	<ul style="list-style-type: none"> ➤ Foliar application of Potassium Nitrate 0.1% during January. ➤ Foliar application of Mango special @5g/lit twice before flowering and twice during flowering. ➤ Setting up of IIHR Fruit fly trap @ 10nos/acre. ➤ Foliar application of Azadiractin 0.2%.
Season and year:	Rabi-Summer, 2023
Farming situation:	Irrigated
No. of demonstrations	10 (3 SC farmers)
Actual area (ha):	2
Feedback from farmers	By adoption of these technologies the bearing in mango trees was good. Decaying of fruits during ripening was reduced due to effective control of fruit flies by using fruit fly traps.
Feedback of the Scientist	<p>Application of Potassium nitrate @1% induced flowering in Mango trees which were not attained flowering during the season.</p> <p>Application of IIHR Mango special resulted in increased fruit size and appearance.</p> <p>Fruit flies were effectively managed by installation of IIHR Fruit fly trap.</p>
Extension activities on the FLD:	<ul style="list-style-type: none"> ➤ Method demonstrations on foliar application of IIHR Mango special and installation of IIHR Fruit fly trap were conducted at

(Field days, Farmers training, media coverage, training to Extension Functionaries)	Vedharanyam and Thamaraipulam village. ➤ Frequent field visits and necessary advisories had been given to the farmers during implementation of the demonstration.
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FLD 6: Demonstration of IDM for false smut (*Ustilagoidea virens*) in paddy

Crop/Enterprise	Paddy
Thematic area	IDM
Source of Technology	TNAU
Title of demonstration	Demonstration of IDM for false smut (<i>Ustilagoidea virens</i>) in paddy
Technology demonstrated	Two sprays with Propiconazole 25 EC @ 500 ml/ha or copper hydroxide 77 WP @ 1.25 kg/ha before boot leaf emergence and during flowering stage.
Farming situation:	Irrigated, Clay loam
Season	Rabi 2023
No. of Demo	10 (SC 3)
Results	
Feedback from farmers:	Reduced the applications fungicides. Scientist field visit and proper fungicide application controlled the diseases.
Feedback of the Scientist:	Application of fungicides at initial stages were very effective in controlling the disease.

FLD 7: Demonstration on management module against sucking pests in Chilli

Crop/Enterprise	Chilli (Vegetable)
Thematic area	IPM
Source of Technology	TNAU
Title of Demonstration	Demonstration on management module against sucking pests in Chilli
Technology demonstrated	<ul style="list-style-type: none"> • Seed treatment with Imidacloprid 70% WS @ 12 g/ kg, • Intercrop with Sesbania, • Yellow sticky trap and Blue sticky trap @ 5/ac, • Need based Spraying of Emamectin benzoate 5SG@ 80g/ac
Farming situation:	Irrigated dry, Sandy loam
Season	Rabi
No. of Demo	10 (SC 3)
Results	
Feedback from farmers:	Reduced the applications insecticide Scientist field visit and proper insecticide application control the disease.
Feedback of the Scientist:	The application of insecticide whenever required is very effective. Sticky trap attracted more numbers of sucking pests.
Extension activities on the FLD:	Field visit Training on Integrated Disease Management in Paddy

FLD 8: Demonstration of IPDM in Snake gourd

Crop/Enterprise	Vegetables – Snake gourd
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Thematic area	IPDM
Source of Technology	TNAU CPG 2020
Title of Demonstration	Demonstration of IPDM in Snake gourd
Technology demonstrated	<ul style="list-style-type: none"> • Collect affected fruits and destroy • Adjust sowing time, Expose pupae by ploughing, • Install fruit fly trap @ 4/ acre • Spray Neem oil @ 3.0 % , Apply Neem cake @ 50g/Pit • Two sprays of <i>Bacillus thuringiensis var kurstaki</i> 5% WP @1g / lit • Seed treatment with <i>Trichoderma viride</i> @ 10g/kg of seed and SA 2.5 kg /acre; • Need based spray of Chlorantraniliprole 18.5 SC @ 2ml or Mancozeb or Chlorothalonil @ 2 gm per lit.
Farming situation:	Irrigated Dry, Sandy loam
Season	Rabi
No. of demo	10 (SC 3)
Results	
Feedback from farmers:	Reduced the applications insecticide Application of neem oil is very effective and installation of fruit fly trap was also very effective in collecting more numbers of fruit flies
Feedback of the Scientist:	Comparatively, the farmers who used our inputs like neem oil, fruit fly trap, <i>Bacillus thuringiensis var kurstaki</i> observed higher level of pest and disease control. Integrated pest and disease management were also effective.

FLD 9: Demonstration on biological control of aquatic weeds in ponds

Crop/Enterprise	Fisheries
Thematic area	Production and Management
Problem identified	<ul style="list-style-type: none"> • Accumulation of aquatic weeds in community tanks/ponds results in depletion of oxygen for fishes • Poor growth of fishes due to excess vegetation which restrict space for movement of fishes • Absorption of nutrients decrease plankton production in pond water
Title of Demonstration	Demonstration on biological control of aquatic weeds in ponds
Source of Technology	ICAR-Directorate of Weed Science research, 2017
Technology demonstrated	Demonstration on growth of Grass carp fishes in farm ponds and community tanks affected by excess growth of water hyacinth as a feed for fishes
Farming situation	Canal Irrigation and Clay loam soil
Season	Throughout the year
No. of demo for SC farmer	1 no.
Results	Demo is in progress. Grass carp seeds stocked. Awaiting for observation and harvest
Feedback from farmers	-
Feedback of the Scientist	Farmers doing Indian major carp culture doesn't remove excess weeds from the pond system. They don't utilise this grass carp for reducing the

	aquatic weeds
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FLD 10: Popularization of formulated floating pellet feeds for freshwater fish culture

Crop/Enterprise	Fisheries
Thematic area	Production and management
Source of Technology	CAU, Imphal, 2017
Problem identified	<ul style="list-style-type: none"> • Lack of feed based fish culture • Lack of awareness on importance of feeding fishes for better growth rate • Lack of proper nutrient in farm made feeds
Title of Demonstration	Popularization of formulated floating pellet feeds for freshwater fish culture
Technology demonstrated	Demonstration on importance of feeding formulated pellet feed for better growth rate of fishes and higher yield. This also maintains the water quality in ponds.
Farming situation:	Canal Irrigation and Clay loam soil
Season	--
No. of demo for SC farmer	1 no.
Results	Demo is in progress. Feeding of Floating feed completed. Awaiting for observation and harvest
Feedback from farmers	---
Feedback of the Scientist	Farmers doing Indian major carp culture doesn't feed fishes usually. They feed irregularly and the feed lack balanced diet which imparts the growth of fishes.

FLD 11: Demonstration of Value Added Products from Millets – Multi Millets Bread

Crop/Enterprise	Value Addition
Thematic area:	Home Science
Title of Demonstration	Demonstration of Value Added Products from Millets – Multi Millets Bread
Problem identified	<ol style="list-style-type: none"> 1. Lack of awareness of Value Added Products from Millets. 2. Lack of knowledge of different method of Value Added Products preparation from Millets. 3. Lack of /less popularization of Millets Value Added Products from although huge demand in market 4. Low income of farmer, women and rural youth entrepreneurs.
Technology demonstrated	<ul style="list-style-type: none"> • CFTRI 2022- wheat flour & millets flour blends with other ingredients to get optimum consistency dough, bulk fermentation of dough for 1h at 28 - 30°C then remix & scaling of the dough, proofing in pans for 60-70 min at 30° C then baking for 25 min at 220°C, cooling to room temperature & packing. Recently, Millets & their value products are gaining importance because they can offer several medicinal

	<p>prosperities - nutraceuticals, health benefits and also being rich in dietary fiber, iron, calcium and B vitamins. They prevents nutritional deficiency disorders and provide nutritional security.</p> <ul style="list-style-type: none"> FP: Conventional method – conventional method of bread making.
Season and year:	June – Sep. 2023
Farming situation:	nil
No. of demonstration for SC farmer	2
Feedback from farmers:	Demonstration is under progress (Baking Oven & Bread molds are purchased)
Feedback of the Scientist:	--

FLD 12: Demonstration of Vacuum Packaging Technology for Dry fishes

Crop/Enterprise	Value Addition
Thematic area:	Home Science
Title of Demonstration	Demonstration of Vacuum Packaging Technology for Dry fishes
Problem identified	<ol style="list-style-type: none"> 1. Lack of awareness of Vacuum Packaging Technology for Dry fishes. 2. Lack of knowledge of different method of packaging techniques. 3. Lack of /less popularization of Vacuum Packed dry fish although huge demand in market 4. Low income of women and rural youth entrepreneurs
Technology demonstrated:	<ul style="list-style-type: none"> TNJFU 2020 - Discoloration of dry fish & masala dry fish are happened due to atmospheric/storage condition. Dry fishes packed in Vacuum or Modified Atmospheric condition will prevents the discoloration & also increase the shelf and consumer preference of the dry fishes. FP: Conventional method- Direct sun drying of fish in open areas.
Season and year:	Throughout year 2023
Farming situation:	nil
No. of demonstration for SC farmer	2 no.
Feedback from farmers:	Storage studies is under progress
Feedback of the Scientist:	Storage studies is under progress

4. Success stories of KVK interventions under SCSP during 2023-24: Nil

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