ICAR KRISHI VIGYAN KENDRA
Thiruvannamalai, Tamil Nadu.

ANNUAL REPORT
(1st January 2023 to 31st December 2023)

1. GENERAL INFORMATION ABOUT THE KVK

1.1. Name and address of KVK with phone, fax and e-mail

Name of the KVK as per official records (MoU)	:	**ICAR - Krishi Vigyan Kendra**
Address	:	Kilnelli village, Chithathur post, Vembakkam Taluk, Thiruvannamalai District, Tamil Nadu- 604 410
Phone	:	04182, 290551, +916384093303
Fax	:	-
Email	:	kvktvmalai91@gmail.com

1.2 . Name and address of host organization with phone, fax and e-mail

Name of the Host Organization as per Official Records	:	**Tamil Nadu Board of Rural Development**
Status of the Host Organization (As per the MoU)	:	NGO
Address	:	359, Kilnelli Village, Chithathur post, Vembakkam Taluk, Thiruvannamalai District. Tamil Nadu-604410.
Phone	:	04182- 291024.
Fax	:	-
Email	:	tnbrd1978@gmail.com
Name of the Chairperson	:	Mr.S.Ramesh
Mobile No	:	9444021523
Email	:	tnbrd1978@gmail.com

1.3. Name of the Programme Coordinator with phone & mobile No.

Name of the Programme Coordinator / SS&H	:	Mr.V.Suresh
Residential Address	:	ICAR KVK Staff Quarters Kilnelli village, Chithathur post, Vembakkam Taluk, Thiruvannamalai District-604410.
Phone No.	:	-
Mobile No.	:	8220004286
Email	:	agrisuresh.v@gmail.com

1.4. Year of sanction of the KVK (as per Official Order) : 1991

1.5. Month and year of establishment : May 1991

1.6. Total land with KVK (in ha) (Consolidated figure) :

S. No.	Item	Area (ha)
1	Under Buildings	0.20
2.	Under Demonstration Units	0.50
3.	Under Crops	3.40
4.	Orchard/Agro-forestry	10.80
5.	Others (specify)	5.57
	Total	**20.47**

1.6. Infrastructural Development:

A) Buildings

S. No	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	1997	696	25,34,244.00	Not applicable		
2.	Farmers Hostel	ICAR	1998	305	14,96,643.00			
3.	**Staff Quarters**							
	1. SMS quarters	ICAR	1997	390	13,42,350.00			
	2. Assistant Quarters	ICAR	1998	300	9,00,000.00			
4.	**Demonstration Units**							
	1.Animal shed	ICAR	1996	145.0	173384.05			
	2.Poultry shed	ICAR		29.2	88793.75			
	3.Goat shed	ICAR		22.1	88793.75			
	4. Mushroom shed	ICAR		24.7	96797.35			
	5. Workshop	ICAR		65.79	181236.25			
5	Fencing	ICAR		6407.3 Meter	5,58,765.00			
6	Threshing floor	ICAR		270.8	2,92,757.00			
7	Vehicle shed	ICAR	1996	80.4	192764.00			

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms./ hrs Run as on 31.12.2023	Present status
Jeep : TN-97 V 1702	2023	917029/-	20426	Good
MF Tractor &Trailer : TN-25 AX 1058	2012	5,70,000/-	2850.8	Good
Hero Honda : TN–09 AP 4662	2006	36,890/-	109813	Need to be replaced
Hero Honda passion plus : TN–25 S 0563	2009	49,476/-	109197	Need to be replaced

C) Equipment & AV aids

Sl. No.	Name of the equipment	Year of purchase	Cost (Rs.)	Present status
1	Steel Almirah 5.5 ft. Green colour	9/15/1993	2750	Good
2	Steel Almirah 6.5 ft. Green colour	9/15/1993	15200	Good
3	Wooden table with cup-board L shape	11/20/1993	5500	Good
4	Wooden table with cup-board L shape	11/20/1993	6200	Good
5	Wooden Teapoy 5x2 ft.	11/20/1993	1750	Good
6	Wooden cupboard	11/20/1993	3300	Good
7	Polymer chairs-CH 23 type	3/7/1995	285000	Need to be replaced
8	Steel cot super size 6 x 4 ft	9/25/2004	33880	Need to be replaced
9	Steel dining table 5 x 2 x 2.5 ply wood top	9/25/2004	16120	Need to be replaced
10	Iron rack	3/1/2005	3500	Good
11	Revolving stool	3/8/2005	565	Good
12	Digital Conductivity meter	3/10/2005	10444	Good
13	Hot air oven - Guna Make	3/10/2005	15033	Good
14	Hot plate - Sunbim Make	3/10/2005	24998	Good
15	Refrigerator – Whirlpool	3/10/2005	19998	Good
16	Spectro photometer Model SL177	3/17/2005	60300	Good
17	Grinder - NACLE - 65mm x 25mm motor - 1/4 HP Stainless Steel	3/23/2005	30009	Good
18	Electronic balance -AUY 220, Capacity:20 gms	3/26/2005	100242.5	Good
19	Servo Voltage Stabilizer with 5 KVA Electronic High/Low Voltage cut off	3/30/2005	9008	Good
20	Teak plywood table 6 x 2.5 x 2.5 ft-8 x 2.5 x 2.5 ft	1/3/2006	86280	Good
21	LCD-Panasonic Projector	3/22/2007	55000	Good
22	Computer Tables	9/19/2008	0	Good
23	Printer Tables	9/19/2008	0	Good
24	Chairs	9/19/2008	0	Good
25	Pruning saw heavy duty	2/18/2010	3474	Good
26	Lopping shear	2/18/2010	1283	Good
27	Secature	2/18/2010	1624	Good
28	Garden tools	2/18/2010	386	Good
29	Garden hoe	2/18/2010	565	Good
30	Garden fork with steel handle	2/18/2010	291	Good
31	Leaf rabe with handle	2/18/2010	291	Good
32	Hand saw	2/18/2010	239	Good
33	Secature-Geneo	2/18/2010	445	Good
34	Portable Generator --Birla Ecogen-EG 3000 AS	3/9/2010	77520	Need to be

	Model			replaced
35	Inverter-Usha Zentra digital-1400 VA with Tubular battery SR-2 Nos	3/9/2010	27500	Need to be replaced
36	Tope-Round Vessel-10 G-6.700 kg	6/8/2010	1045	Good
37	Tope-Round Vessel-10 G-17.060 kg (52-60")	6/8/2010	2750	Good
38	Kaivadi Big Vegetable stainer-1.400 kg	6/8/2010	532	Good
39	Vegetable Kothu-SS 2.800 kg	6/8/2010	700	Good
40	Milk cane-SS-1.480 kg	6/8/2010	385	Good
41	Bucket- Satha-SS-1.580 kg	6/8/2010	253	Good
42	MS Jarnee-MS-2.060 kg	6/8/2010	134	Good
43	MS Stand-Fire wood Stove stand-16.080 kg	6/8/2010	1045	Good
44	Wet Grinder-Jumbo Junior 6" Plate grinding machine with stand, 1.5 HP single phase motor	7/5/2010	12540	Good
45	72 x 48 x 4 " Inch Cushion Double Bed Mattress	8/5/2010	76608	Good
46	72 x 36 x 4 " Cushion Mattress	8/5/2010	29352	Good
47	VST-Sakthi Power tiller-130DI with CT85 fitted diesel engine	8/13/2010	148190	Need to be replaced
48	Prestige mixture Grinder 3 Jar	2/17/2011	3465	
49	Idly Pannai – Small	2/26/2011	495	Good
50	Tabara with lid	2/26/2011	555	Good
51	Iron Kadai	2/26/2011	400	Good
52	Hot pack	2/26/2011	1300	Good
53	Public Address system - Ahuja PS x 1200 Amplifier Speaker	3/11/2011	10860	Good Good
54	Public Address system - Ahuja AW 490 VHL Cordless dual mike	3/11/2011	2513	Need to be replaced
55	Ahuja SRX 50 x T Speaker box	3/11/2011	5587	Good
56	DVD Player-Sony-SR700H	3/11/2011	4050	Good
57	Deep Freezer-110 lit capacity (-200C)-ELANPRO	3/31/2012	31500	Good
58	Refrigerated Centrifuge (Centrifuge tube two types 1.Rotor 2. Expend of) 20000 RPM speed-RCF37570 - 8 to 400C-Remi with Rotor	3/31/2012	198500	Good Good
59	Vacuum desiccators-Made 3.3 low expansion Borosilicate Glass	3/31/2012	5000	
60	Hot air oven-Double walled chamber	3/31/2012	30000	Good Good
61	Laminar Air flow chamber- Clean air model	3/31/2012	57250	
62	BOD Incubator - Horizontal - Capacity : 6 Cubic feet.-Lark	3/31/2012	74425	Good
23	Vortex mixer - 200-2800 RPM variable speed	3/31/2012	3738	Good
64	D.O Meter - Range 0-20 ppm, 0-600C	3/31/2012	8400	Good
65	Digital pH Meter - Range -2.00 to 16.00pH	3/31/2012	9450	Good
66	Digital Colony counter - 5 digit, Size 110mm	3/31/2012	5000	Good
67	Thermo hygrometer - Range 0-100 %	3/31/2012	1312	Good

68	Digital moisture meter-VFD Display	3/31/2012	86000	Good
69	Microscope with stand - Lens dia 145 mm,	3/31/2012	5250	Good
70	UV rays chamber - UV lamp long wave length 365nm	3/31/2012	6875	Good
71	Magnetic stirrer-Fitted with Pilot lamps, Variable speed stirring.	3/31/2012	4095	Good
72	Brix meter-0-45 %	3/31/2012	3500	Good
73	Brix meter-45 to 85 %	3/31/2012	3500	Good
74	Phase contrast microscope-Antifungal and anti reflection	3/31/2012	57000	Good
75	Dissection microscope-ISI standard with movable condenser	3/31/2012	1575	Good
76	Water bath - Tank-Double walled chamber with thermo stat	3/31/2012	4725	Good
77	Stereo zoom microscope - Digital imaging systems	3/31/2012	103050	Good
78	10 KVA Wide range single phase electronic servo voltage stabilizer	3/31/2012	21755	Good
79	Whirlpool Air Conditioner split 1.5 ton 5 Star with stabilizer	3/31/2012	33000	Need to be replaced
80	IFB Microwave oven-20 lits. Capacity	3/31/2012	4500	Good
81	Mridaparikshak-Mini Soil Testing kit	3/31/2017	180600	Good
82	Ahuja Portable Speaker with Mic	2019	9000	Good
83	HP Laptop with wireless	2020	60699	Good
84	Autoclave – 2 Nos	2020	35990	Good
85	Incubator with stabilizer (220 egg capacity)	2021	26941	Good
86	DELL-Desktop System with monitor	2021	85500	Good
87	HP Neverstop Laser MFP printer	2021	19899	Good
88	Shaktiman Rotavator-36 plate	2021	105000	Good
89	Augur	2022		
90	Automatic cold press oil extractor-20kg capacity with 3 HP 3 Phase	2023	194700.00	Good
91	Poultry vaccinator	2023	4999.00	Good
92	Poultry debeaking machine	2023	1460.00	Good
93	Groundnut decorticator cum grader machine 400 kg capacity-2HP 3phase	2023	102660.00	Good
94	Rotary power weeder-Varsha 5HP Hector TCS	2023	81000.00	Good

1.7. A). Details SAC meeting* conducted in the year

S.No.	Date	No of Participants	Salient Recommendations
1.	20.03.2023	27	-
2.	03.02.2024	32	Details given hereunder:

Copy of SAC proceedings and list of members participants : Annexure-I

2. DETAILS OF DISTRICT (2023)

2.0. Operational jurisdiction of KVKs

District	New districts governed by the KVK after division of the district, if applicable	Taluks/Tehsils and/or Mandals under the KVKs jurisdiction
Thiruvannamalai	-	Details given here under:

1. Geographical Position :
   North Latitude Between : *11 ° 55' and 13°* 15' N
   East Longitude Between : *78°*20' *and 79 °*50' E
2. Total Geographical area : 6188 Sq. Km
3. District Headquarters name : Thiruvannamalai
4. No. Taluk details : 12
5. No. of Block : 18
6. No. of Village panchayats : 860
7. No. of Revenue villages : 1067

8. Taluk and block wise village details of the district:

S. No	Name of the taluk	Taluk HQ	Name of Blocks covered	No. of Village Panchayat	No. of Revenue villages
1	Thiruvannamalai	Thiruvannamalai	Thiruvannamalai	69	78
			Thurinjapuram	47	57
2	Kilpennathur	Keelpennathur	Keelpennathur	45	77
3	Thandarampattu	Thandarampattu	Thandarampattu	47	63
4	Chengam	Chengam	Chengam	44	64
			Pudupalayam	37	43
5	Kalasapakkam	Kalasapakkam	Kalasapakkam	45	52
6	Polur	Polur	Polur	40	73
7	Jamunamarathur	Jamunamarathur	Jamunamarathur	11	34
8	Chetpet	Chetpet	Chetpet	49	76
9	Arni	Arani	Arani	38	26
			West Arani	37	23
10	Vandavasi	Vandavasi	Vandavasi	61	61
			Thellar	61	61
			Peranamallur	57	57
11	Cheyyar	Cheyyar	Cheyyar	53	70
			Anakavur	55	61
12	Vembakkam	Vembakkam	Vembakkam	64	91
Total				**860**	**1067**

2.1. Major farming systems/enterprises

S. No	Farming system/enterprise
1	Irrigated : Paddy – Paddy-Paddy
2	Irrigated : Paddy-Groundnut - Vegetables
3	Rainfed : Groundnut-Pulses
4	Irrigated : Vegetable-Vegetables

2.2. Description of Agro-climatic Zone & major agro ecological situations

S. No	Agro-climatic Zone	Characteristics
1	North Eastern Zone, Vellore	The Mean average temperature is 28.62ºC. Hot during summer(35 - 37ºC). Cool during winder periods (24 - 26ºC). The temperature regime is hyper thermic.
2	**Agro ecological situation:** Eastern ghats - (TN uplands) and Deccan plateau	Hot semi-arid eco region with red loamy soils.

2.3. Soil types in the jurisdiction

Sl.No.	Soil type	Characteristics	Area(ha)
1	Red Loam	The texture varies from sand to clay and the majority being loam. Porous and friable structure, absence of lime free from carbonates.	78256
2	Red sandy loam	Contain enough clay materials, dominated by sand particles, having visible particles and having very gritty structure.	63160
3	Black Loamy	Consist of mixture of sand clay and decaying organic matter having high nutritive value.	18793

2.4. Area, Production and Productivity of major crops cultivated in the district for 2023. (Season: Kharif, Rabi and Summer)

S. No	Crop	Area (ha)	Production ('000'tonnes)	Productivity (kg/ha)
1	Paddy	170692	625.25	3663
2	Cumbu	2218	4.70	2160
3	Cholam	20.4	0.02	1051
4	Ragi	2323	7.20	3099
5	Samai	5085	8.50	1690
6	Maize	2635	18.08	6862

S. No	Crop	Area (ha)	Production ('000'tonnes)	Productivity (kg/ha)
7	Blackgram	30620	35.02	847
8	Greengram	1363	0.71	522
9	Redgram	974	1.46	1497
10	Groundnut	68014	152.01	2234
11	Gingelly	925	0.65	703
12	Coconut	1117	13.16	11770
13	Sugarcane	17699	1.79	101
14	Turmeric	397	0.59	1491
15	Tapioca	1530	64570.6	42203
16	Cotton	2182	0.83 lint	379 (Lmt)
17	Tomato	717	9354.7	13047
18	Brinjal	991	10236.0	10329
19	Bhendi	653	4290.2	6570
20	Chillies	1923	2.83	1961
21	Banana	3039	85.58	31908
22	Mango	405	2217.0	5474
23	Onion	103	0.891	8652
24	Mulberry	1516	415.53 (Cocoons)	42.22
25	Others	35263	-	-
Total Cropped area (ha)		**352404.4**	-	-

2.5. Weather data

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
January 2023	0.27	27.80	21.60	74.10
February	0.00	29.20	21.00	55.20
March	47.69	33.00	22.80	48.00
April	33.23	35.60	25.80	52.60
May	182.95	36.20	28.30	49.60
June	88.33	33.10	27.60	49.90
July	75.42	32.90	25.90	62.50
August	118.67	33.10	26.50	61.70
September	312.08	31.80	25.10	68.10
October	65.23	31.60	24.70	61.90
November	149.33	29.40	23.50	75.30
December 2023	51.83	27.30	21.90	76.10
Average/Total	**1125.03**	**31.75**	**24.56**	**61.25**

2.6. Production and productivity of livestock, Poultry, Fisheries etc. in the district (2022)

Category	Population	Production	Productivity
Cattle			
Crossbred *Indigenous*	694856	505260	6.86
Buffalo	74741	104355	4.30
Sheep			
Crossbred *Indigenous*	177712	424140	**-**
Goats	248410	341440	**-**
Pigs			
Crossbred *Indigenous*	5361	17200	**-**
Rabbits	89	-	**-**
Poultry			
Hens, *Desi Improved,* Ducks Turkey and others	242311	8834000	-
Domestic dogs	4545	**-**	**-**

2.7. Details of Adopted Villages (2023)

Sl. No.	Taluk/ Mandal	Name of the block	Name of cluster villages	Year of Adoption	Major crops & Enterprises	Major problems identified in each crop/enterprise	Proposed type of interventions
Details of adopted villages							
1	Arni, Vandavasi, Polur, Vembakkam, Cheyyar	Arni, Vandavasi, Polur, Vembakkam, Cheyyar	Sathupperipalayam Vazhur, Padavedu, Kilnelli, Palli	2016-17	Paddy	Cultivation of old varieties, High infestation of pest &diseases BPH, Stem borer, Tungro, BLB and Blast, High incidence of pest and disease, Yield reduction. No value addition.	Training, Extensio activities, Special programme
				2016-17	Millet	Cultivation of old varieties, Lack of awareness on high yielding & drought tolerant variety, High incidence of Blast disease, Low yield, Lack of knowledge on value addition. Low market price.	Training, Awareness programme
				2017-18	Groundnut	Lack of awareness on the new varieties, less drought tolerant, Cultivation of VRI 2, Incidence of Root rot, leaf spot, rust and Spodoptera, poor yield. Lack of knowledge on value addition.	Training, Special programme
				2017-18	Blackgram	Prolonged cultivation of age old varieties, Non synchronized maturity, Incidence of YMV, Aphids, and Powdery mildew. More labour required for grading and, winnowing of pulses.	Training and Extension activitie
				2016-17	Banana	Low bunch grade and weight, Fusarium wilt, Nematode incidence and Sigatoka leaf spot, Imbalanced nutrition, Lack of knowledge on improved planting methods, Lack of knowledge on value addition.	OFT, FLD, Training, Extensio activities

				2016-17	Tomato	Low yield, Flower drop, Lack of application of growth regulators, Lack of adoption of improved hybrids and technologies, Leaf curl in tomato, Imbalanced nutrition, Poor quality seedlings and field establishment. No value addition.	OFT, Training, Extension activitie
				2018-19	Cow	Low milk production, High disease incidence. Infertility due to repeat breeding, Lack of awareness on clean milk production.	FLD, Training, Extension activities
				2018-19	Goat	Low body weight, High mortality, High morbidity.	
				2018-19	Poultry	Less number of egg production, Low hatchability, Chick mortality, Less feed efficiency.	
Details of DFI villages							
1	Vandavasi	Vandavasi	Kilsembedu	2016-17	Paddy	Cultivation of old varieties, Lack of adoption of improved varieties, low yield, lack of awareness on IPDM, Severe infestation of Brown plant hopper, Blast, BLB, stem borer, leaf folder Gall midge, Tungro, False smut, wild boar & extensive use of chemical pesticides.	Training and Extension activities
					Blackgram	Low market price for small size and non-shiny seeds, Non synchronized maturity, Incidence of YMV, Aphids, and Powdery mildew. More labour required for grading.	Training and Extension activities

					Gourds	Low fruit set, Maleness, Lack of adoption of location specific hybrids, Imbalanced nutrition, Lack of adoption of improved technologies, High incidence of mosaic, fruit fly, Sucking pests, Downy mildew and powdery mildew.	OFT, FLD, Trainings, Method demonstration, Field day and Awareness camp.
					Cattle	Low milk production, High disease incidence. Infertility due to repeat breeding, Lack of awareness on clean milk production, Wounds by flies and Maggots occurs.	OFT, Training and Extension activities
					Fruits and Vegetables	No value addition, Low market price, Lack of knowledge on value addition.	Training and Extension activities
					Fodder	Feeding of low protein fodder for dairy animals, Lack of awareness about cultivation of fodder crops.	FLD, Training and Extension activities
2	Arni	West Arni	**Athanur**	2016-17	Paddy	Cultivation of old varieties, Yield reduction. Lack of adoption of improved varieties, low yield, lack of awareness on IPDM, Severe infestation of Brown plant hopper, Blast, BLB, stem borer, leaf folder Gall midge, Tungro, False smut, wild boar & extensive use of chemical pesticides.	FLD, Trainings, Extension activities

					Groundnut	Lack of awareness on the new varieties, less drought tolerant, Cultivation of VRI 2, Incidence of Root rot, leaf spot, leaf minor and Spodoptera, poor yield. Lack of knowledge on value addition.	Trainings, Extension activities
					Bhendi	Low yield, Imbalanced nutrition, Non adoption of improved technologies, Yellow vein Mosaic Virus. Lengthy time consuming process, crucial process during harvest (Thorny stems leads cuts injuries and rashes).	OFT, Trainings, Extension activities
					Fodder	Feeding of low protein fodder for dairy animals. Lack of awareness about cultivation of fodder crops.	Trainings, Extension activities
					Poultry	Less number of egg production, Low hatchability, Chick mortality, Less feed efficiency, Low body weight gain.	FLD, Trainings, Extension activities

2.8. Priority/thrust areas

Crop/Enterprise	Thrust area
Paddy, Groundnut, Blackgram, Millets, Brinjal, Chillies, Bhendi, Cucurbits, Turmeric	Integrated Crop Management
Paddy, Greengram, Groundnut, Chillies	Varietal assessment
Paddy, Groundnut, Finger millet, Little millet, Ridgegourd, Bhendi	Demonstration of high yielding hybrids/varieties
Paddy, Groundnut, Blackgram, Vegetables	Integrated Nutrient and weed Management
Paddy, Groundnut, Maize, Pulses, Sugarcane, Snakegourd, Banana, Brinjal, Chilli	Integrated Pest and Disease Management
Paddy, Groundnut and Blackgram	Quality seed production
Paddy	Conservation of traditional varieties
Paddy, Groundnut, Pulses, Vegetables, Coconut	Farm Mechanization
Banana, Vegetables	Precision farming
Brinjal, Chilli, Tomato	Scientific nursery management
Paddy, Groundnut, Banana and vegetables	Organic farming/Natural farming
Paddy, Pulses, Fruits and Vegetables	Post harvest management
Livestock and Poultry	Integrated Farming System, Poultry farming, Dairy farming and Goat rearing
Field crops, Fruits, Vegetables, Milk	Value addition, Drudgery reduction

3. Salient Achievements

Achievements of Mandated activities (1st January 2022 to 31st December 2022)

S.No	Activity	Target	Achievement
1.	Technologies Assessed and refined (No.)	24	24
2.	On-farm trials conducted (No.)	12	12
3.	Frontline demonstrations conducted (No.)	25	25
4.	Farmers trained (in Lakh)	0.01384	0.01384
5.	Extension Personnel trained (No.)	109	109
6.	Participants in extension activities (in Lakh)	0.07535	0.47865
7.	Production and distribution of Seed (in Quintal)	72.1	122.84
8.	Planting material produced and distributed (in Lakh)	0.26750	8.39726
9.	Live-stock strains and finger lings produced and distributed (in Lakh)	1560	1795
10.	Soil samples tested by Mini Soil Testing Kit (No)	50	66
11.	Soil samples tested by Traditional Laboratory (No)	950	1261
12.	Water, plant, manure and other samples tested (No.)	100	218
13.	Mobile agro-advisory provided to farmers (No.)	80000	210392
14.	No.of Soil Health Cards issued by Mini Soil Testing Kits (No.)	50	66
15.	No. of Soil Health Cards issued by Traditional Laboratory (No.)	950	1261

Salient Achievements by KVK during the year in bullet points:

- Quality seeds of improved high yielding new varieties viz., VBN-8 (Black gram) 61.65 Qtl and Co-51 paddy 31.23 Qtl, Kadiri 1812 (Groundnut) 11.35 Qtl and fodder seeds like, hedge leucerne, subabul, COFS 29 & 31 (15.11 Qtl) were supplied to the farmers.
- A total of 826400 numbers of quality CO5 fodder slips were supplied to the farmers of Thiruvannamalai in convergence with Aavin, Thiruvannamalai.
- Animal feed supplement viz mineral mixture and salt lick (163.3 qtl) were supplied covering 3717 farmers in Thiruvannamalai and Chenglepet district in collaboration with Tamil Nadu Vazhnthu Kattuvom Project.
- With a view to increase the productivity of the vegetables by 20-30 %, foliar nutrition of IIHR vegetable has been promoted by KVK. Total quantity of 343 kg of IIHR vegetable special (Micronutrient formulation) has been produced and supplied to the farmers. At present the technology has spread over an area of 1370 ha in the district.
- Out of 28 Integrated Farming System models established by the KVK, 11 IFS models are running successfully and became model units in the district under the technical support of KVK.
- As an alternative income generation activity, the beekeeping has been promoted in the district by KVK. A total of 47 small scale bee farms have been established in the district and 963 farmers directly benefited.

4. TECHNICAL ACHIEVEMENTS

Details of target and achievements of mandatory activities by KVK during 2022

OFT (Technology Assessment)

No. of OFTs		Number of technologies		Number of locations (Villages)		Total no. of Trials / Replications / beneficiaries	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
12	12	24	24	12	12	65	65

FLD (crop/enterprise/CFLDs)

No of Demonstrations		Area in ha		Number of Farmers / Beneficiaries / Replications	
Targets	Achievement	Targets	Achievement	Targets	Achievement
25	25	39.40	39.40	225	225

Training including sponsored, vocational and other trainings

Number of Courses			Number of Participants	
Clientele	Targets	Achievement	Targets	Achievement
Farmers and Farm Women	92	92	1220	1220
Rural youth	3	3	33	33
Extn. Functionaries	5	5	109	109
Vocational	4	4	50	50
Sponsored training	3	3	81	81

Extension Activities

Number of activities		Number of participants	
Targets	Achievement	Targets	Achievement
400	411	7535	47865

Seed Production (q)

Target	Achievement	Distributed to no. of farmers
72.1	122.84	810

Planting material (Nos.)

Target	Achievement	Distributed to no. of farmers
26750	839726	2714

Bio Products (Kgs.)

Target	Achievement	Distributed to no. of farmers
9400	11539	1343

4.1. Technology Assessments (OFTs) in Detail

4.1.1. Assessment of Paddy varieties for higher productivity

1. Thematic area : Varietal Assessment

2. Title : Assessment of the performance of paddy varieties (ADT 54 and RNR 15048) in Samba season.

3. Scientists involved : Subject Matter Specialist (Agronomy)

4. Details of farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Rainfed	Kharif	Clay loam	L	M	M	1179	18

5. Problem definition / description:

Lack of awareness on improved varieties leads to poor yield. High incidence of BPH, Stem borer and Bacterial leaf blight disease. Non availability of quality inputs.

6. Technology Assessed:

TO1 : Paddy variety - ADT 54 - The duration is 130 days, High yielding , Medium slender rice, Medium tall erect variety, Resistant to leaf folder, Moderately resistant to stem borer and blast. Average yield is 6305kg/ha

TO2 : Paddy variety – RNR 15048 – The duration is 125 days , short slender grain type, resistant to leaf blast. Potential yield is 6500kg/ha.

FP : Cultivation of BPT & NLR

7. Critical inputs given:

Name of the input	Quantity	Value in Rupees
Paddy seed ADT 54	75 kg	3125.00
Paddy seed RNR 15048	75 kg	3300.00
Bacillus subtilis	10 kg	1750.00
Field board	5	1504.50
Total Rs.		**9679.50**

8. Results :

Table :Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Return (Rs./ha)	BCR	Other performance indicators*
FP : Cultivation of BPT & NLR	5	50.28	35580	1.65	▪ Number of plants/sqm ▪ No. of productive tillers/plant
TO 1 : Paddy variety- ADT 54		59.62	60182	2.13	
TO 2 : Paddy variety – RNR 15048		60.18	64884	2.31	

Table :Data on other performance indicators

Parameters observed	Farmer practice	Technology Option 1	Technology Option 2
Number of plants/sqm	30.0	33.8	32.4
Number of productive tillers	11.0	14.0	15.2

Description of the results:

- It is observed that from the trials that number of productive tillers were low in farmers practice viz., BPT (11.00 nos.), ADT 54 (14.00 nos.) followed by RNR 15048 (15.20 nos).

- The average yield in RNR 15048 was recorded 60.18 Qtl/ which is 20% higher than BPT variety (50.28 Qtl/ha) followed by ADT 54 paddy variety (59.62 Qtl/ha). The net income recorded Rs.64884/ha in RNR 15048 followed by ADT 54 (Rs.60182/ha) and lowest net income was recorded in farmers practice BPT (Rs.35580/ha). The benefit cost ratio of 2.31 was recorded in RNR 15048.

9. Constrains: Availability of quality seeds throughout the year may be ensured.

10. Feed back of the farmers involved:

The Paddy variety RNR 15048 has recorded higher yield and fetched higher market price compared to BPT. This variety is highly suitable for *Kharif* season.

11. Feed back to the scientist who developed the technology:

Competitive varieties of fine grain varieties with stem borer resistance may be developed.

4.1.2. Assessment of improved varieties for higher productivity in Groundnut

1. Thematic area : Varietal evaluation

2. Title : Assessment of Improved varieties for higher productivity in Groundnut

3. Scientists involved : Subject Matter Specialist (Agronomy)

4. Details of farming situation:

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi	Sandy loam	L	M	M	196.8	5

5. Problem definition / description:

- Lack of knowledge and availability of improved varieties
- Poor yield

6. Technology Assessed:

TO1 : Cultivation of Groundnut variety Kadiri 1812 – Profuse bearing Spanish variety, resistant to pest and diseases, duration 112 days, yield 15-20q/ha.

TO2 : Cultivation of Groundnut variety TMV 14 – medium sized pods, moderately resistant to late spot and rust, duration 110 days, yield 22 – 23q/ha.

FP : Cultivation of Groundnut variety VRI 2

7. Critical inputs given:

Name of the input	Quantity	Value in Rupees
Groundnut variety Kadiri 1812	87.5 kg	7875.00
Groundnut variety TMV 14	87.5 kg	7438.00
Rhizobium	2.5 litre	750.00
Phosphobacteria	2.5 litre	750.00
Trichoderma viride	5 kg	875.00
Bacillus subtilis	5 kg	875.00
Groundnut rich	10 kg	2250.00
Field board	5 nos	1504.50
Total Rs.		**22317.50**

8. Results:

Table : Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio
Farmers Practice	5	13.42	50490	1.90
TO1: Technology 1(Groundnut variety Kadiri 1812)		22.39	117540	2.94
TO2: Technology 2(Groundnut variety TMV 14)		20.24	93520	2.37

Table : Data on other Performance indicators*

Parameters observed	Farmer practice	Technology Option 1	Technology Option 2
Plant height (cm)	30.0	31.47	30.39
Number of pods/sqm	20.6	138.7	32.87

Description of the results: The plant height recorded in Kadiri 1812 is 31.47 cm followed by TMV 14 (30.4 cm) and farmers practice (30 cm) cm). The number of pods per plant recorded in Kadiri 1812 was also higher Groundnut variety (139 nos) compared to the local check (21 nos).

The average yield of Kadiri1812 was recorded 22.39 Qtl/ha followed by TMV-14 20.24 Qtl/ha and farmer practice 13.42 q/ha. The farmers of demo plot obtained an average net income of Rs. 117540/ha in Kadiri 1812 followed by TMV 14 (Rs.93520/ha). The benefit cost ratio of 2.94 was recorded in Kadiri 1812 against the farmer's practice (1.9).

4.1.3. Assessment of Redgram varieties for higher productivity

1. Thematic area : Varietal evaluation

2. Title : Assessment of Redgram varieties for higher productivity

3. Scientists involved : Subject Matter Specialist (Agronomy)

4. Details of farming situation:

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Rainfed	Kharif	Sandy loam	L	M	M	595.98	12

5. Problem definition / description:

- Lack of knowledge and availability of improved varieties
- Poor yield.

6. Technology Assessed:

TO1 : Cultivation of Redgram variety CO 8 - matures in 170 to 180 days. Grain yield 15-16 kg/ha. The variety is resistant to Sterility Mosaic Disease, root rot and moderately resistant to pod borer complex.

TO2 : Cultivation of Redgram variety WRGE 93 - matures in 170 to 175 days. Grain yield 14 - 15 q/ha. Moderately resistant to Wilt and SMD diseases.

FP : Cultivation of Local Redgram variety

7. Critical inputs given

Name of the input	Quantity	Value in Rupees
CO 8 seed	15 kg	1500.00
WRGE 93 seed	15 kg	1950.00
Rhizobium	2.5 litre	750.00
Phosphobacteria	2.5 litre	750.00
Trichoderma viride	10 kg	1750.00
Pulse wonder	10 kg	2500.00
Field board	5 nos	1504.50
Total Rs.		**10704.50**

8. Results:

Table :Performance of the technology

Technology Option	No.of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio
Farmers Practice	5	10.20	42220	1.71
TO1: Technology 1(Redgram variety CO 8)		13.56	75820	2.35
TO2: Technology 2 (Redgram variety WRGE 93)		11.42	56200	1.97

Table 2 : Data on other Performance indicators*

Parameters observed	Farmer practice	Technology Option 1	Technology Option 2
Plant height (cm)	178.7	180.8	184.5
Number of pods/sqm	120.2	184.2	159.9

Description of the results: The plant height in WRGE-93 was recorded 184.5 cm follow by CO8 redgram variety 180.8cm though the number of pods was higher in CO 8 (184.2 nos) compared to the local check (120.2 nos).

The average yield was recorded as 13.56 Qtl/ha in CO 8, which is 25% higher than the local variety (10.2 Qtl/ha). The benefit cost ratio of 2.28 was with a gross income of Rs. 135600/ha in CO8 followed by WRGE-93 (Rs.114200/ha).

4.1.4. Assessment of bio repellants against wild boar in Groundnut 2023

1. Thematic area : Integrated Pest Management

2. Title : Assessment of bio repellants against wild boar in Groundnut

3. Scientists involved : Subject Matter Specialist (Plant Protection).

4. Details of farming situation:

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi	Sandy loam	L	M	H		

5. Problem definition / description:

Groundnut is an important oilseed crop and has been cultivated in an area of 68044 ha in Thiruvannamalai district. In groundnut cultivation, labor shortage, uncertain climate (heavy rain/ severe drought) and pest and disease incidence cause severe yield lose to farmers. It has been found that from the recent study that wild boar damage casued30-35% yield loss among the groundnut growers.

6. Technology Assessed:

TO 1 : Wild boar repellant @ 500 ml per acre. Pour in 100 bottles @ 5 ml per bottle and it needs to be tied in the poles at a distance of 10 feet around the field bunds..

TO 2 : Spraying of Innovative Herboliv+ (10% dilution) with 10 days interval – 3 Application

FP : Manual monitoring (Farmers' practice).

7. Critical inputs given:

S.No	Name of the input	Quantity	Value (Rs.)
1	Herboliv	75 lit	6375.00
2	Biorepellent	5 lit	2950.00
3	Plastic bottle	250 Nos	999.00
4	Field Board	5 Nos	1504.50
Total			**11828.50**

8. Results

Technology Option	No. of trials	Yield (q/ha)	Net Return (Rs./ ha)	BCR	Percent Damage (%)
FP		19.35	47321.00	2.06	28.63
TO 1	5	22.52	54260.00	2.17	15.21
TO 2		24.35	66320.00	2.57	7.57

Description of the results: The TO2 (application of Herboliv) recorded higher yield (24.35 q/ha) as compared with TO1 (22.52 q/ha) and farmers' practice (19.35 q/ha). Besides, the average yield increased by 25.84 percent with higher BCR of 2.57. It also revealed that the damage caused by wild boar is reduced by 7.57 % with application of Herboliv followed by TNAu developed bio repellent 15.21 percent.

9. Constrains: The farmers faced difficulty on application methodology of TNAU developed bio repellent is harder than Herboliv.

10. Feed back of the farmers involved : The farmers felt that management of wild boar using biorepellent with IPM package (TO2) has given higher yield and higher economic returns of Rs. 66320.00/ ha with low damage of wild boar compared to other technologies.

11. Feed back to the scientist who developed the technology: Standardized bio repellent with easy application methods and procedure may be developed.

4.1.5. Assessment of bio repellants against wild boar in Groundnut

1. Thematic area : Integrated Pest Management

2. Title : Assessment of bio repellants against wild boar in Groundnut

3. Scientists involved : Subject Matter Specialist (Plant Protection).

4. Details of farming situation:

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi	Sandy loam	L	M	H	355.08	8

5. Problem definition / description:

Groundnut has been second most important crop cultivated in an area of 92990 ha in Thiruvannamalai district. In the recent years, the groundnut production slowly decrease due to biotic and abiotic factors. Wild boar is the major threat faced by groundnut growing farmers in recent days which caused 30-35 percentage yield loss.

6. Technology Assessed:

TO 1 : Wild boar repellant @ 500 ml per acre. Pour in 100 bottles @ 5 ml per bottle and it needs to be tied in the poles at a distance of 10 feet around the field bunds..

TO 2 : Spraying of Innovative Herboliv+ (10% dilution) with 10 days interval – 3 Application

FP : Manual monitoring (Farmers' practice).

7. Critical inputs given:

S.No	Name of the input	Quantity	Value (Rs.)
1	Herboliv	75 lit	6375.00
2	Biorepellent	5 lit	2950.00
3	Plastic bottle	250 Nos	999.00
4	Field Board	5 Nos	1504.50
Total			**11828.50**

8. Results

Technology Option	No. of trials	Yield (q/ha)	Net Return (Rs./ ha)	BCR	Percent Damage (%)
FP		20.08	41791.00	1.98	23.69
TO 1	5	22.47	52300.00	2.24	14.58
TO 2		24.59	61061.00	2.45	7.63

Description of the results:

The TO2 (application of Herboliv) recorded higher yield (24.59 q/ha) as compared with TO1 (22.47 q/ha) and farmers' practice (20.08 q/ha). Besides, the average yield increased by 22.46 percent with higher BCR of 2.45. It also revealed that the damage caused by wild boar is reduced by 7.63 % with application of Herboliv followed by TNAU developed bio repellent 14.58 percent.

Constrains : The farmers faced difficulty on application methodology of TNAU developed bio repellent is harder than Herboliv.

10. Feed back of the farmers involved : The farmers felt that management of wild boar using biorepellent with IPM package (TO2) has given higher yield and higher economic returns of Rs. 61061.00/ ha with low damage of wild boar compared to other technologies.

11. Feed back to the scientist who developed the technology: Standardized bio repellent with easy application methods and procedure may be developed.

4.1.6. Assessment of improved hybrids for higher productivity in Chilli

1. Thematic area : Varietal evaluation

2. Title : Assessment of Improved hybrids for higher Productivity in Chilli

3. Scientists involved : Subject Matter Specialist (Horticulture).

4. Details of farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi	Sandy clay loam	L	H	M	272	6

5. Problem definition / description:

- The farmers were not aware of improved high yielding chilli hybrids suitable for their location and resistant to pest and diseases.
- Poor yield.

6. Technology Assessed:

TO1 : Cultivation of Arka Saanvi Chilli hybrid.
TO2 : Cultivation of CO1 Chilli hybrid.
FP : Cultivation of private hybrids.

7. Critical inputs given:

Name of the input	Quantity	Value in Rupees
Arka Saanvi Chilli hybrid seeds	150gm	4500.00
CO1Chilli hybrid seeds	150 gm	3600.00
Vegetable Special	20 kg	3500.00
Field board	5 Nos	1504.50
Total Rs.		**13104.50**

8. Results :

Table 1 : Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net returns (Rs./ha)	BCR	Data on Other performance indicators*
FP: Private hybrids	5	201.03	205749	2.32	▪ Days to 50%flowering ▪ Average fruit weight(g) ▪ Average fruit length(cm) ▪ PDI (%)
TO1: Arka Saanvi Chilli hybrid		219.54	236362	2.60	
TO2: CO1 Chilli hybrid		244.11	269191	2.84	

Table 2 : Data on other performance indicators*

Parameters observed	Farmer practice	Technology Option 1	Technology Option 2
Days to 50% flowering	47.6	45.1	44.0
Average fruit weight(g)	4.6	4.8	5.5
Average fruit length(cm)	11.0	12.1	11.9
PDI (%)	20.1	10.8	7.5

Description of the results: The CO1 chilli hybrid (TO2) has recorded 21.43% higher yield as compared to local hybrids with the BCR of 2.84. An additional net return of Rs.63442 per hectare was recorded in Co1 Chilli Hybrid.

9. Constraints: Non availability of improved hybrids was the problem to take up the planting in the right season.

10. Feedback of the farmers involved: CO1 chilli hybrid (244.11 Q/ha) yields higher than Arka saanvi (219.54 Q/ha) and also fetches good market price as well as high fruit quality. Income point of view both hybrids are equal.

11. Feed back to the scientist who developed the technology: Improved dual purpose hybrids with resistance to black thrips, Leaf curl and fruit rot with higher pungent fruits and hybrids may be developed.

4.1.7. Assessment of microbial inoculants for yield enhancement in Bhendi

1. Thematic area : Crop Production and Management

2. Title : Assessment of microbial inoculants for yield enhancement in bhendi

3. Scientists involved : Subject Matter Specialist (Horticulture).

4. Details of farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi	Sandy loam	L	M	H	650.29	18

5. Problem definition / description:

- Lack of aLack of awareness on Microbial nutrient solution in bhendi cultivation.
- Poor yield due to imbalanced nutrition.

6. Technology Assessed:

TO1 : Application of CSR – Grow Sure.
TO2 : Application of Arka Microbial Consortium.
FP : Application of NPK.

7. Critical inputs given:

Name of the input	Quantity	Value in Rupees
CSR grow sure	15 lit	3975.00
AMC powder	15 kg	2205.00
Field board	5 Nos	1504.50
Total Rs.		**7684.50**

8. Results :

Table 1 : Performance of the technology

Technology Option	No.of trials	Yield (q/ha)	Net returns (Rs./ha)	BCR	Data on Other performance indicators*
FP: Application of NPK	5	193.60	197868	2.53	▪ Days to 50%flowering ▪ Average fruit weight(g) ▪ Average fruit length(cm)
TO1: Application of CSR grow sure		232.74	230818	2.90	
TO2: Application of Arka Microbial Consortium		221.9	218191	2.73	

Table 2 : Data on other performance indicators*

Parameters observed	Farmer practice	Technology Option 1	Technology Option 2
Days to 50% flowering	42.3	39.3	40.8
Average fruit weight(g)	13.7	15.5	15.2
Average fruit length(cm)	`13.3	16.2	14.9

Description of the results: Application of CSR grow sure (TO2) was recorded 20.21% higher yield (232.74 q/ha) as compared to other technologies. A net return of Rs. 230818.00 per hectare was recorded than other treatments.

9. **Constraints:** Poor or non availability of grow sure medium for the farmers directly.

10. **Feedback of the farmers involved:** Easy handling and application of CSR grow sure and given higher yield.

11. **Feed back to the scientist who developed the technology:** The CSR grow sure is very effective in improving the crop health and yield. It made available to the farmers easily through various stakeholder.

4.1.8. Assessment of pest management modules against Brinjal Shoot and Fruit borer

1. **Thematic area** : Integrated Pest Management

2. **Title** : Assessment of Pest Management modules against brinjal shoot and fruit borer

3. **Scientists involved** : Subject Matter Specialist (Plant Protection).

4. **Details of farming situation:**

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi	Sandy clay loam	L	M	M	240.00	5

5. **Problem definition / description:**

- Shoot and fruit borer, is the most important pest in Brinjal cultivation.
- Yield loss up to 30 %.
- Lack of awareness on IPM technologies.

6. **Technology Assessed:**

TO 1 : Soil application of neem cake @250Kg/ha, Installation of pheromone traps @5 no/acre, Spraying of neem oil 1% EC @ 2ml /lit, Release of Trichogramma chilonis @ 50,000/ha @10days interval 6 times, Need based insecticide of Emamectin benzoate 5 % SG @ 4g/10 lit.

TO 2 : Pheromone traps @ 1 for 400 sq.m, Weekly release of 50,000 to 60,000 Trichogramma chilonis + Two sprays of Bacillus thuringensis @1ml/L at 10 days interval at peak flowering stage for control

FP : Spraying of insecticides

7. Critical inputs given:

S.No	Name of the input	Quantity	Value (Rs.)
1	Pheromone trap (Water)	25 Nos	1888.00
2	Lucin lure	50 Nos	1711.00
3	Neem oil	2.5 lit	1624.00
4	Emamactin benzoate	500 gm	1000.00
5	Field Board	5 Nos	1000.00
Total			**7223.00**

8. Results

Technology Option	No. of trials	Yield (q/ha)	Net Return (Rs./ ha)	BCR	Percent Infestation (%)
FP	5	286.17	193056	2.17	23.80
TO 1		331.85	258647	2.66	5.92
TO 2		318.66	238614	2.49	8.75

Description of the results: The TO1 (TNAU) module was recorded higher yield of 331.85 q/ha. than TO2 318.66 q/ha and farmer practices 286.17 q/ha. The TO1 technology module increased the yield by 15.96% with a net return of Rs.258647.00 and a BCR of 2.66. The TO1 module also recorded less incidence of shoot and fruit borer by 5.92%.

9. Constrains: The availability of critical inputs viz., Pheromone trap, lure are major constrain.

10. Feed back of the farmers involved

The farmers felt that management of shoot and fruit borer with IPM modules has given higher yield and higher economic returns with low incidence of shoot and fruit borer.

11. Feed back to the scientist who developed the technology

Shoot and fruit borer resistant Brinjal hybrids may be developed.

4.1.9. Assessment of herbal extract for managing ectoparasite infestation in cattle

1. Thematic area : Disease management

2. Title : Assessment of herbal extract for managing ectoparasite infestation in cattle

3. Scientists involved : Subject Matter Specialist (Animal Science).

4. Details of farming situation : Not applicable

5. **Problem definition / description:**

- Insects such as flies, mosquitoes, cattle grubs, and lice as well as ticks and mites are the major external parasites of dairy animals.
- These pests cause obvious discomfort to livestock and economic effects in dairy farming.

6. **Technology Assessed:**

TO 1 : Herbal extract base liquid spray (Megatex liquid spray)

TO 2 : Tick shield

FP : No usage of herbal extracts base liquid spray.

7. **Critical inputs given:**

S.No	Name of the input	Quantity	Value (Rs.)
1	Herbal extract base liquid spray (Megatex liquid spray)	80 Nos	8400.00
2	Tick shield	80Nos	5880.00
3	Field board	10 Nos	3004.50
Total			**17284.50**

8. **Results:**

Table 1: Performance of the technology

Technology Option	No. of trials	Production Milk Yield/lactation	Net Return (Rs.)	BCR	Ectoparasite Infestation %
FP	10	1850	19750.00	1.20	86
TO1		3300	141440.00	2.52	13
TO2		2950	110600.00	2.27	25

Description of the results: It is observed that TO1 (CIRG) technology reduced the ectoparasite infestation by 87% when compared to TO2 (TRBVP,TANUVAS) and farmers' practice with higher BCR of 2.52.

Overall, the CIRG developed Herbal extract base liquid spray found effective in reducing the ectoparasite infestation and gained higher net income of Rs.141440.00 as compared to farmers' practice.

9. **Constrains:** Poor availability of technological inputs at farmer's level.

10. Feed back of the farmers involved : The Herbal extract base liquid spray is safe to handle and found to be effective compared to Tick shield. It is observed that wastage of tick shield during mixing with water and its application.

11. Feed back to the scientist who developed the technology : It is very difficult to open the tick shield by the farmers for usage. The scientist may develop user friendly container for easy application.

4.1.10. Assessment of AFTD based mineralized salt lick over Mineral Mixture for goat on growth performance

1. Thematic area : Livestock Nutrition management
2. Title : Assessment of AFTD based mineralized salt lick over mineral mixture for Goat on growth performance.
3. Scientists involved : Subject Matter Specialist (Animal Science).
4. Details of farming situation : Not applicable
5. **Problem definition / description:**

- The Goats are not supplemented with concentrated feed and mineral mixture.
- The mineral mixtures are available only for large ruminants like cattle and buffalo not for small ruminants.

6. Technology Assessed:

TO 1 : NIANP Small ruminants mineral mixture

TO 2 : AFTD based mineralized Salt

FP : No mineral mixture feeding. (Farmers practice)

7. Critical inputs given:

S.No	Name of the input	Quantity	Value (Rs.)
1	NIANP Small ruminants mineral mixture	50Kg	8000.00
2	AFTD based mineralized Salt	50Kg	2000.00
3	Field board	5 Nos	1500.00
Total			**11500.00**

8. Results:

Table 1: Performance of the technology

Technology Option	No. of trials	Production No. of Kids per year	Net Return (Rs.)	BCR	Weight at 6 month age (Kg)
FP	5	7	7525.00	1.55	8
TO1		13	27655.00	2.38	14
TO2		11	19700.00	1.94	11

Description of the results: Among the two technologies assessed, the TO1(NIANP) recorded higher body weight of 14 Kg as compared to TO2 (IAN,TANUVAS) of 11kg and farmers' practice 8 kg and recorded higher BCR of 2.38.

Overall, the NIANP developed small ruminant's mineral mixture (TO1) had been found effective in growth performance and gained high net income of Rs.27655.00 as compared to TO2 and farmers' practice.

9. Constrains: Poor availability of technological inputs at farmer's level.

10. Feed back of the farmers involved : The product of AFTD salt lick is found to be broken and leads to more wastage during feeding. It cannot be stored for longer time.

11. Feed back to the scientist who developed the technology : The AFTD salt licks developed by the IAN, TANUVAS is not properly bound it seems. So the salt licks are happened to break during feeding, The scientists who developed technology may concentrate on proper binding during processing.

4.1.11. Assessment of different types of herbal powder incorporated instant nuti-mix

1. Thematic area : Value Addition
2. Title : Assessment of different types of herbal powder incorporated instant nutria mix
3. Scientists involved : SMS – Home Science
4. Details of farming situation : -

5. Problem definition / description:

- Underutilized high medicinal value edible flower.
- Poor Shelf life,
- Lack of knowledge on Post harvest and value addition.

6. Technology Assessed:

TO1 : Solar dried hibiscus incorporated herbal drink.
TO2 : Shade dried Clitoria ternatea incorporated herbal
FP : No processing in Clitoria ternatea and underutilized in edible flower

7. Critical inputs given:

Sl. No	Name of input	Qty	Cost (Rs.)
1	Sugar	25 kg	950.00
2	Dried ginger	1 kg	600.00
3	Empty tea bag	400 no.s	1196.00
4	Fresh lemon	15kg	825.00
5	Fresh Hibiscus	13 kg	1625.00
6	Fresh clitoria ternatea	13 kg	2340.00
Total			**7536.00**

8. Results:

Table : Performance of the technology

Technology Option	No. of trials	Production (kg)	Net Return (Rs.)	BCR	Data on Other performance indicators	
					Consumer acceptability (5 point scale)	Shelf life
FP	5	10 kg	16250.00	1.38	3.5	4 months
TO1		10 kg	36800.00	2.30	3.9	6 months
TO2		10 kg	55650.00	2.59	4	6 months

Description of the results : The Shade dried Clitoria ternatea incorporated herbal drink (TO2) has received higher consumer acceptability (4/5.0). It also resulted in higher net return of Rs. 55650/- compared to TO1 and farmer practice with a BCR of 2.59.

9. Constraints : The herbal plant may not be available throughout the year.

10. Feedback of the farmers involved : Shade Clitoria ternatea incorporated herbal drink are highly acceptable based on the high shelf life (6 months), Consumer acceptability (based on liquid colour, appearance on dry tea, leaves infusion, aroma, and taste) and its therapeutic properties.

11. Feed back to the scientist who developed the technology: Highest consumer acceptability based Clitoria ternatea formulations may be developed

4.1.12. Assessment of different storage methods for pulses

1. Thematic area : Post harvest technologies
2. Title : Assessment of different storage methods for pulses.
3. Scientists involved : SMS – Home Science

4. Details of farming situation : -

5. **Problem definition / description:**
   - Lack of awareness on post harvest technologies and storage methods.
   - High incidence of storage pests.

6. **Technology Assessed:**

TO1 : Sweet flag treatment 6EC @ 10 ml/kg of pulses (TNAU, 2020)

TO2 : Super grain bag (IRRI, 2018)

FP : Normal gunny bag with no treatment

7. **Critical inputs given:**

Sl. No	Name of input	Qty	Cost (Rs.)
1	Grain bag	50 no.s	4543.00
2	TNAU sweet flag	5 lit	1680.00
3	Demo board	5 no.s	1505.00
Total			**7728.00**

8. Results:

Table 1 : Performance of the technology

Technology Option	No.of trials	Yield (q/ha)	Net returns (Rs./ha)	BCR	Data on Other performance indicators*
FP: Normal gunny bag with no treatment	5	50 kg	-	-	▪ Shelf life (days) ▪ Pest incidence (%)
TO1: Sweet flag treatment 6EC @ 10 ml/kg of pulses		50 kg	-	-	
TO2: Super grain bag		50 kg	-	-	

Table 2 : Data on other performance indicators*

Parameters observed	Farmer practice	Technology Option 1	Technology Option 2
Shelf life (days)	62	120	120
Pest incidence (%)	17	2	6

Description of the results: The technology option viz., usage of sweet flag treatment (TO2) found lowest pest incidence (17%) as compared to farmer practices. The average shelf life was recorded (120 days) compared to farmers practices (62 days).

9. **Constraints :** Non availability of sweet flag at farmer's level.

10. **Feedback of the farmers involved:** The higher shelf life period was recorded in usage of sweet flag.

11. **Feed back to the scientist who developed the technology:** The usage of sweet flag is easy to treat pulses for storage and eco friendly.

4.1.2. Frontline Demonstrations in Detail

A. Follow-up of FLDs implemented during previous years

S. No.	Crop/ Enterprise	Thematic Area	Technology demonstrated as a follow-up from OFT	Feedback sent to the Research System	Details on the performance of the technology sent to the Extension Department	Horizontal spread of technology		
						No. of villages	No. of farmers	Area in ha
1	Paddy	Varietal demonstration	Demonstration of CO51 paddy	▪ Variety which is resistant to light rain without lodging may be develop	▪ Supply of seeds at low cost. ▪ Conduction of training, demonstration and Mass media coverage.	832	34850	26640
2	Paddy	IPDM	Integrated pest and disease management in paddy	▪ High yielding, pest (Stem borer) and disease (False smut) resistant variety may be develop.	▪ Trainings, Demonstration, Exhibition, Advisory service, Mass media coverage	84	3259	1840
3	Paddy	Drudgery reduction	Direct sown paddy drum seeder	▪ Efficient weed control tools may be introduced in area which direct sown paddy drum seeder is used	▪ Supply of drum seeder at nominal cost. ▪ Conduction of training, demonstration, Exhibition and Mass media coverage.	684	19620	22752
4	Maize	IPM	Integrated Fall Army worm management in Maize	▪ High yielding hybrids with resistance to FAW	▪ Trainings, Demonstration, Exhibition, Advisory service, Mass media coverage	23	789	295
5	Little millet	Varietal demonstration	Demonstration of Little millet variety ATL 1	▪ Variety which is tolerant to shoot fly and sheath blight. It shows uniform maturity and non lodging	▪ Supply of seeds at low cost. ▪ Conduction of training, demonstration and Mass media coverage.	72	5600	2240

6	Greengram	Varietal demonstration	Demonstration of Green gram variety VBN-4	▪ High yielding pest (Stem borer) and disease (False smut) resistant variety may develop.	▪ Trainings, Demonstration, Exhibition, Advisory service, Mass media coverage	692	7900	3800
7	Blackgram	Varietal demonstration	Demonstration of VBN- 8 blackgram	▪ Powdery mildew resistant variety may be develop.	▪ Supply of seeds at low cost. ▪ Conduction of training, demonstration, Exhibition and Mass media coverage.	730	8520	6200
8	Groundnut	Varietal demonstration	Demonstration of kadiri lepakshi groundnut	▪ High yielding varieties suitable for both seasons may developed.	▪ Supply of seeds at low cost rate. ▪ Conduction of training, demonstration and Mass media coverage.	302	5310	1120
9	Chilli	Varietal demonstration	Demonstration of CO(CH)1 Chilli hybrid	▪ Higher yielder. Improved hybrids with resistance to Leaf curl virus may be developed.	▪ Report on results given. Suggested popularisation methods viz., Supply of seeds at subsidized rate, Conduction of training, demonstration and Mass media coverage.	48	623	158

10	Bittergourd	ICM	Integrated Crop Management in Bittergourd	▪ ICM technologies are economically viable and yielding best results at field level.	▪ Report on results given. Suggested popularisation methods viz., Supply of technological inputs at subsidized rate, Conduction of training, demonstration, Exhibition and Mass media coverage.	41	586	193
11	Bitter gourd	IPDM	Integrated pest and disease management.	▪ High yielding viral disease and fruit fly resistant hybrid may develop.	▪ Trainings, Demonstration, Exhibition, Advisory service, Mass media coverage.	22	274	78
12	Brinjal	Varietal demonstration	Demonstration of VRM(Br) 2 with ICM practices	▪ Higher yielder. Keeping quality is low compared to local variety.	▪ Report on results given. Suggested popularisation methods viz., Supply of seeds at subsidized rate, Conduction of training, demonstration and Mass media coverage.	58	736	146
13	Banana	IPDM	Integrated pest and disease Management in banana	High yielding disease resistant varieties may develop	Report on results given. Suggested popularization methods viz., Trainings, Demonstration, Exhibition, Advisory service, Mass media coverage.	20	325	162

14	Banana	ICM	Integrated Crop Management in banana	▪ ICM technologies are economically viable and yielding best results at field level.	▪ Report on results given. Suggested popularisation methods viz., Supply of technological inputs at subsidized rate, Conduction of training, demonstration, Exhibition and Mass media coverage.	39	467	163
15	Turmeric	ICM	Integrated Crop Management in turmeric	▪ ICM technologies are economically viable and yielding best results at field level. A micro nutrient formulation may be developed especially for Turmeric.	▪ Report on results given. Suggested popularisation methods viz., Supply of technological inputs at subsidized rate, Conduction of training, demonstration, Exhibition and Mass media coverage.	35	367	198
17	Bhendi	Varietal demonstration	Demonstration of CO4 Bhendi hybrid	▪ Higher yielder. Highly resistant to Yellow Vein Mosaic Virus disease.	▪ Popularisation methods viz., Supply of seeds at subsidized rate, Conduction of training, demonstration and Mass media coverage.	28	187	59
18	Millet	Value addition	Preparation of convenience food (Health mix, Adai mix, Laddu mix, Muruku mix)	▪ District wise marketing avenues may develop for farmer's level value added products.	▪ Trainings, Demonstration, Exhibition, Mass media coverage.	40	256	-

B. Details of FLDs implemented during the reporting period

1. Organic cultivation and demonstration of Paddy variety ADT 57

Crop/Enterprise : Paddy

Thematic area : Varietal demonstration

Technology Demonstrated :

- Demonstration of Paddy variety ADT 57
- The Parentage is ADT 45 X ACK 03002
- It is medium slender rice with 115 days
- It has milling of 69% and head rice recovery of 60%
- It is suitable for all season
- The yield of this variety is 6500kg/ha

Season and year : Rabi 2022-23

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Kharif	Sandy clay loam	L	M	M	352.2	8

Source of fund : ICAR

No of locations (Villages) : 1 (Vallam, Peranamallur)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	9	1	4	4	-

Feedback from farmers : Paddy ADT 57 variety yielded 58.84 qtl/ha with a net income of Rs.77185/- when compared to the local variety Rs.52188/-

Feedback of the Scientist : Organic inputs improved the quality of produce and fetched higher market price.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field day	1	20.06.23	10	-
2	Farmers Training	2	20.01.23, 15.02.23	32	-
3	Media coverage	1	21.02.23	-	Kalam news, Public tv.

2. Demonstration of Rice reap

Crop/Enterprise : Paddy

Thematic area : Nutrient Management

Technology Demonstrated :

- Demonstration of Rice reap
- It improves spikelet fertility and grain filling rate
- It increases grain yield upto 15%
- It improves tolerance against drought and high temperature

Season and year : Kharif 2023

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Kharif	Sandy clay loam	L	M	M	594.5	12

Source of fund : ICAR

No of locations (Villages) : 1 (Aadhanur, Arni)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	1	9	4	4	-

Feedback from farmers : Rice reap increased the yield from 48.23 qtl/ha to 55.4 qtl/ha. The net income of the farmer recorded was Rs.53,289 compared to the check.

Feedback of the Scientist : Foliar application of rice reaps at the booting stage increased the grain filling rate and increased the yield up to 13% with a BCR of 2.03.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field day	1	20.09.23	15	-
2	Farmers Training	1	25.07.23	10	-

3. Demonstration of Little millet variety ATL-1

Crop/Enterprise : Little millet

Thematic area : Varietal demonstration

Technology Demonstrated :

- Demonstration of Little millet variety ATL-1
- The Parentage is CO 4 X TNAU 141
- It has the duration of 85-90 days
- It is drought tolerant and suitable for mechanical harvesting
- It has high milling recovery
- The yield of this variety is 1587 kg/ha

Season and year : Kharif 2022-23

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Rainfed	Kharif	Sandy clay loam	L	M	M	304.1	6

Source of fund : ICAR

No of locations (Villages) : 1 (Mottur, Kalasapakkam)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	10	-	4	4	-

Feedback from farmers : Cultivation of Little millet ATL 1 variety given more productive tillers (19.64) and observed an higher yield of 13.79 qtl/ha with a net income of Rs.21467 with a BCR of 2.08.

Feedback of the Scientist : The availability of seeds may be ensured by the SAUs to take up the cultivation on time. Marketing facilities may be created in linkages with other stakeholders for easy sale of the produce.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field day	1	14.07.23	10	-
2	Farmers Training	2	18.03.23 21.03.23	27	-
3	Media coverage	1	15.07.23	-	Kalam news, Public tv.

4. IPDM in Paddy and pesticides application through drone

Crop : Paddy

Thematic area : Integrated Pest Management

Technology demonstrated :

- *Bacillus subtilis*- Seed treatment @ *10 g/kg,* Soil application @ 1kg/acre, Seedling root dip @ 1kg/acre
- Release of *Trichogramma japonicum* @ 2 cc & *Trichogramma chilonis* @ 2 cc.
- Installation of solar light trap @ 1/acre
- Installation of Yellow sticky trap @ 5/acre
- Installation of Stem borer pheromone trap @ 10/acre
- Need based application of Neem oil @ 3% & Camphor oil 400 ml/acre
- Foliar application of Cartop Hydrochloride 50% SP@ 400 g/ac, Azoxystrobin 25 SC @ 200 ml ac through drone.

Season and year : Kharif 2022

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Kharif	Clay soil	L	M	M	112.2	5

Source of fund : ICAR

No of locations (Villages) : 1 (Rantham)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	4	6	4	4	-

Feedback from farmers : Adoption of IPDM technologies in paddy increased the yield 59.61 q/ha and net income of Rs. 58806.00 with a BCR 2.38. It also reduced the application of pesticides and also effectively managed the pest and diseases.

Feedback of the Scientist : The IPDM Technologies reduced the pest and diseases incidence viz, Stem Borer (4.42%), Tungro (5.55%), Blast (7.61%) and BLB (6.42 %). Technologies found increasing the yield by 20.16% and higher net return of Rs. 46950.00/ha.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organized	Date	Number of participants	Remarks
1	Field day	1	08.03.2023	28	-
2	Farmers Training	1	18.10.2022	16	-
3	Media coverage	2	19.10.2022	-	Kalam News

5. Demonstration of VBN 11 Black gram variety for higher productivity

Crop/Enterprise : Blackgram

Thematic area : Varietal demonstration

Technology Demonstrated :

- Demonstration of VBN 11 Black gram variety
  - The Parentage is PU 31 X CO 6
  - It has the duration of 70-75 days
  - It is resistant to yellow mosaic virus and leaf curl disease
  - The yield of this variety is 865kg/ha

Season and year : Rabi 2022-23

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi	Clay loam	L	M	M	78.68	4

Source of fund : ICAR

No of locations (Villages) : 1 (Soraputhur, Thellar)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	2	8	4	4	-

Feedback from farmers: Synchronized maturity was noted in Blackgram VBN11 variety. It also found resistant to mungbean yellow mosaic virus. The yield obtained was 7.58 qtl/ha while, other local variety possess 5.98 qtl/ha. The net income increased from Rs.22,450/- to Rs.35,226/.

Feedback of the Scientist: The variety may be made available to the farmers through various agencies to take up the cultivation on time.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field day	1	04.04.23	10	
2	Farmers Training	1	06.01.23	10	-
3	Media coverage	-	-	-	-

6. Demonstration of IPDM in Groundnut 2023

Crop : Groundnut

Thematic area : Integrated Pest Management

Technology demonstrated :

- Planting of Castor as border crop and Black gram as Intercrop
- Seed treatment with carbendazim @ 2 g/kg or *Trichoderma asperellum* @ 4 g /kg of seed
- Soil application of *Bacillus subtilis* and *Trichoderma asperillum* @ 2.5kg/ha (Each)
- Setting of *Spodaptera litura* and *Helicoverpa* Pheromone trap @ 12 per ha
- Setting of Yellow sticky trap 12 per /ha,
- Need based application Azadiractin 0.03%
- Foliar application of Hexaconazole 0.1 % and imidachloprid 17.8 % SL 100 ml/ ac.

Season and year : Kharif 2023

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Kharif	Red loamy soil	L	M	M	571.4	9

Source of fund : ICAR

No of locations (Villages) : 1 (Siruveliyanallur)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	0	10	4	4	-

Feedback from farmers : Adoption of IPDM technologies in Groundnut increased the yield by 24.26 q/ha with a net income Rs.60250.00/ha and reduced the pest and disease incidence.

Feedback of the Scientist : The IPDM Technologies reduced the pest and diseases incidence viz, Root rot (8.66 %), Tikka leaf spot (7.52 %) and Spodaptera (7.99 %). Technologies found increasing the yield (19.68 %) and additional net return (21615.00/ha).

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	1	19.10.2023	17	-
2	Farmers Training	2	27.06.2023 10.08.2023	27	-
3	Media coverage	1	20.10.2023	-	Kalam News

7. Demonstration on management of Fall Army Worm in Maize

Crop : Maize

Thematic area : Integrated Pest Management

Technology demonstrated :

- Application of neem cake @ 250 kg/ha
- Seed treatment with Cyantraniliprole 19.8% + Thiamethoxam 19.8% FS @ 4 ml/kg seed.
- Installation of pheromone traps @ 12/ha, Border Crop with fodder sorghum, Spray of Chlorantraniliprole @ 4 ml/10 l 40 DAS or Flubendiamide @ 5ml/10 (15-20 DAS), Spraying of Azadirachtin @ 1500PPM @50ml/10l
- Spraying of Metarhizium anisopliae @ 80g/10l (35-40 DAS) Spray of Emamectin benzoate 5 SG @ 4 g/10 l or Spinetoram 111.7 SC @ 5 ml/10 l (40-60 DAS), Spinetoram 11.70 SC @0.5ml/lit or Emamectin Benzoate 5 SG @ 0.4g/lit at Tasselling & Cob formation stage (60 DAE) if required.

Season and year : Rabi 2022

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi	Sandy loam	L	M	M	78.68	3

Source of fund : ICAR

No of locations (Villages) : 1 (Ammapalayam)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	2	8	4	4	-

Feedback from farmers : Cultivation of maize with IPM practices has increased the yield by 14.13 %, higher economic returns Rs.98101.00 with low incidence of fall army worm (13.03%).

Feedback of the Scientist : Cultivation of maize with IPM package has given increased yield (95.31 q/ha) and additional net returns (Rs.23352.00) with low incidence of fall army worm (13.03 %) compared to normal practice (28.91%). The benefit cost ratio recorded was 2.34.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	1	26.05.2023	24	-
2	Farmers Training	1	04.01.2023	15	-
3	Media coverage	1	06.01.2023	-	Kalam News

8. Demonstration of refined IPM Module for Maize Fall Armyworm 2023

Crop : Maize

Thematic area : Integrated Pest Management

Technology demonstrated :

- Monitoring of FAW adults using pheromone traps @ 12/ha and damage score at weekly intervals following TNAU 1-5 scale.
- Release of *Telenomus remus @ 1,25,000/ha* @ early vegetative stage.

Application of insecticides as follows:

- Chlorantraniliprole 18.5 SC @ 0.4 ml/ lit (or) flubendiamide 480 SC @ 0.5 ml/lit followed by azadirachtin 1500 ppm @ 5 ml/lit on need basis.
- *Metarhizium anisopliae (TNAU-MA-GDU isolate)* @ 2.5 kg/ha (1.6 x 1011 spores / ml) or emamectin benzoate 5 SG @ 0.4 g/lit or novaluron 10 EC @1.5 ml/lit or spinetoram 11.70 SC @ 0.5 ml/lit
- Spinetoram 11.70 SC @ 0.5 ml/lit (or) emamectin benzoate 5 SG @ 0.4 g/lit on need basis (Do not repeat insecticide sprayed at late whorl stage)

Season and year : Kharif 2023

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi	Sandy loam	L	M	M	459.98	12

Source of fund : ICAR

No of locations (Villages) : 1 (Ammapalayam)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	0	10	4	4	-

Feedback from farmers : Cultivation of maize with IPM practices has increased the yield 18.73 %, higher economic returns Rs.93630.00 with low incidence of Fall army worm (11.52%).

Feedback of the Scientist : Cultivation of maize with IPM package has given increased yield (97.54 q/ha) and additional net returns (Rs.31022.00) with low incidence of fall army worm (11.52 %) compared to normal practice (29.86 %). The benefit cost ratio recorded was 2.36.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field day & Extension activity	2	26.09.2023, 13.10.2023	30	-
2	Farmers Training	1	25.07.2023	12	-
3	Media coverage	1	26.07.2023	-	Kalam News

9. Demonstration of improved variety VRM(Br)2

Crop : Brinjal

Thematic area : Varietal demonstration

Technology demonstrated :

- Introduction of new variety
- Application of vegetable special @ 0.5%
- Application of neem soap & pongamia soap @1%
- Usage of water traps and lure.

Season and year : Kharif 2022-23

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Kharif	Sandy loam	L	M	H	427.62	13

Source of fund : ICAR

No of locations (Villages) : 1 (Keekaloor)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	4	6	2	2	-

Feedback from farmers : The brinjal variety VRM (Br)2 has given higher yield of 334.59 Q/ha with a net income of Rs. 252247.

Feedback of the Scientist : The brinjal variety VRM(Br)2 has recorded higher yield (17.61%) as compared to VRM(Br)1 – Spiny brinjal. Harvesting of VRM (Br) 2 made easy due to absence of spines.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	-
2	Farmers Training	1	10.02.2023	10	-
3	Media coverage	1	11.02.2023		Public digital
4	Training for extension functionaries	-	-	-	-

10. Demonstration of Tomato hybrid COTH4

Crop : Tomato

Thematic area : Varietal demonstration

Technology demonstrated :

- Introduction of new tomato hybrid
- Application of Vegetable foliar spray @0.5%
- Application of bacillus @2.5 kg/ha
- Usage of pheromone trap and yellow sticky trap @12 no /ha

Season and year : Rabi 2022-23

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi	Sandy loam	L	H	H	427.62	12

Source of fund : ICAR

No of locations (Villages) : 1 (Kalambur)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	2	8	2	2	-

Feedback from farmers : Tomato hybrid COTH4 yields 610.0 Q/ha which is higher than local hybrids with a net income is Rs.160744.10. It also fetched good market price as well as high fruit quality.

Feedback of the Scientist : Tomato hybrid COTH4 has resulted in 22.55% higher yield as compared to farmer practice (497.7 Q/ha). The BCR recorded was 2.72.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days				-
2	Farmers Training	1	23.03.23	10	
3	Media coverage	1	24.03.23		Public TV
4	Training for extension functionaries	-	-	-	-

11. Demonstration on management module against sucking pests in Chilli

Crop : Chilli

Thematic area : Integrated Pest Management

Technology demonstrated :

- Application of Neem Cake@250kg/ ha.
- Growing Agathi as border crop.
- Intercrop with Sesbania, to provide barrier which regulate the thrips
- Yellow sticky trap @ 12/ ha.
- Need based application of Fipronil 5 % SC – 1.5 ml/l for thrips, Spiromesifen 5 ml / 10 l for mites.

Season and year : Rabi 2022

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi	Red loamy soil	L	M	M	595.08	13

Source of fund : ICAR

No of locations (Villages) : 1 (Mattapiraiyur)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	1	9	2	2	-

Feedback from farmers : The farmers felt that adoption of TNAU developed IPM module for sucking pest management in chilli increased the yield 230.44 q/ha and gained net income of Rs. 278718.00 with the BCR of 2.89.

Feedback of the Scientist : The IPM modules reduced the sucking pest incidence viz, Thrips (5.19%), Mite (6.55%), Aphid (6.24%). Technologies found increasing the yield (22.95 %) and additional net return of Rs. 97937.00/ha.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	1	20.05.2023	26	
2	Farmers Training	2	09.11.2022	16	
3	Media coverage	1	14.11.2022	-	Kalam News

12. Integrated Pest and Disease Management in Snakegourd

Crop : Snakegourd

Thematic area : Integrated Pest Management

Technology demonstrated :

- Soil Application of Neem cake @ 100kg/acre
- Soil application of *Bacillus subtilis* @ 1kg/ac
- Soil application of *Trichoderma asperellum* @ 1kg/ac
- Installation of Pheromone traps and lures for fruit fly @ 12/ha
- Installation of yellow sticky trap @ 12/ha, Foliar application of Neem oil 3 %

Season and year : Rabi 2022

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi	Sandy loaml	L	M	M	498.6	12

Source of fund : ICAR

No of locations (Villages) : 1 (Kilsembedu)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	2	8	2	2	-

Feedback from farmers : The farmers felt happy with adoption of IPDM technologies in snakegourd increased the yield by19.45 % and net income by Rs. 503146.00 with the BCR of 2.80.

Feedback of the Scientist : The IPDM technologies in snakegourd has reduced the pest and disease incidence viz, fruitfly (8.77%) and mosaic (8.03%) and the technologies found increasing the yield (652.15q/ha) and additional net return of Rs. 97937.00/ha.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	1	26.08.2024	30	
2	Farmers Training	1	23.03.2023	16	

13. Integrated Crop Management in Bittergourd

Crop : Bittergourd

Thematic area : Varietal demonstration

Technology demonstrated :

- Soil application of Bacillus subtilis @ 2.5kg/ha
- Vegetable special foliar Spray @ 0.1 %
- Spraying of Neem, Pongamia soap @ 1%
- Installation of Pheromone traps @ 12No/ha

Season and year : Rabi 2022-23

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi	Sandy loam	L	M	H	249.22	11

Source of fund : ICAR

No of locations (Villages) : 1 (Kilsembedu)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	-	10	2	2	-

Feedback from farmers : The adoption of ICM technologies given higher yield and income. The quality of the fruits improved and fetched good market price. Fruit fly attack was minimized.

Feedback of the Scientist : The adoption of ICM technologies resulted in 17.80% higher yield (370.1 Q/ha) as compared to farmer practice in Bittergourd. The BCR recorded was 2.51.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	-
2	Farmers Training	1	24.11.22	11	-
3	Media coverage	1	25.11.22		Public digital
4	Training for extension functionaries				

14. Demonstration of Cassava YTP2

Crop : Cassava

Thematic area : Varietal demonstration

Technology demonstrated :

- Introduction of new cassava variety with cultivation practices
- Application of cassava booster

Season and year : Rabi 2022-23

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi	Sandy clay loam	L	H	H	858.64	19

Source of fund : ICAR

No of locations (Villages) : 1 (Vanapuram)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	-	10	1	1	-

Feedback from farmers : The cassava variety YTP 2 has given higher yield (414.02 Q/ha) and net income of Rs. 192733.00. The tuber thickness also found very high.

Feedback of the Scientist : Cassava YTP 2 has given 13.53% higher yield than the local check. The produce fetched higher market price due to better quality.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days				-
2	Farmers Training	1	04.01.23	12	
3	Media coverage	1	05.01.23		Kalam news
4	Training for extension functionaries	-	-	-	-

15. Demonstration on Rotary dibbler (Multi crop seed drill) through EDP mode

Crop/Enterprise : Rotary dibbler

Thematic area : Farm machineries

Technology Demonstrated :

- Demonstration on Rotary dibbler
- It is used for sowing of all kind of seed like cereals, pulses, oilseeds, beans.
- The coverage of seed drill is 0.6 to 1 ha/day
- It maintains uniform spacing and depth.

Season and year : Rabi 2022-23

Source of fund : ICAR

No of locations (Villages) : 1 (Athimoor, Polur)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	10	-	4	4	-

Feedback from farmers : Sowing with the rotary dibbler is a time saving technique. Sowing with dibbler took only 1 hour when compare to manual sowing which need 4 hours 20 minutes.

Feedback of the Scientist : The technology is a substitute to meet out the labour shortage problem. The cost of cultivation is also reduced by 25% using rotary dibbler.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	-
2	Farmers Training	1	17.03.23	10	-

16. Demonstration of rapid vermicomposting techniques

Crop/Enterprise : Vermicompost

Thematic area : Nutrient Management

Technology Demonstrated :

- Demonstration of Rapid Vermicomposting techniques
- The size of the bag is 8ft x 4ft x 2ft
- It is a cost effective method
- It is a speedy process

Season and year : Kharif 2022-23

Source of fund : ICAR

No of locations (Villages) : 1 (Thenkazhani, Hasanamapettai)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	-	10	-	-	-

Feedback from farmers : The rapid vermicomposting technique produced 51.96 qtl/year with a net income of Rs.21674/- when compared to the conventional composting technique of Rs.5600/- and recorded BCR of 1.99.

Feedback of the Scientist : Rapid vermicompost increases the beneficial bacteria in the soil which reduced disease and pest infestation. It enhances the soil structure, texture, porosity and retains the water holding capacity.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	1	10.01.24	10	
2	Farmers Training	2	06.01.23 23.01.23	35	-
3	Media coverage	1	12.12.23	10	Kalam news, Public tv.
4	Training for extension functionaries	-	-	-	-

17. Demonstration on mixed fodder (10 cent model)

Crop : Mixed Fodder

Thematic area : Fodder production and Mangement

Technology demonstrated :

- 4 cent of high yielding multi cut grass variety (CO 5)
- 3 cent of high yielding multi cut desmanthus
- 3 cent of high yielding multi cut COFS 31 or single cut fodder cowpea.
- Agathi and Subabul as Border crops

Season and year : Kharif 2022

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Kharif 2022	Sandy loam	L	M	M	923.84	21

Source of fund : ICAR

No of locations (Villages) : 1 (Marusur)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
10	2	8	0.4	0.4	-

Feedback from farmers : The 10 cent model supplied continues fodder for the animal round the year at the rate of 2.17 tonnes. Increase the milk yield and quality.

Feedback of the Scientist : The body weight of the calf was improved and healthy. The incidence of repeat breading is also minimized by 45%.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	
2	Farmers Training	2	28.07.22 29.09.22	25	-
3	Media coverage	2		-	Kalam news and Public app
4	Training for extension functionaries	1	23.11.22	17	-

18. Demonstration of GIF Tilapia fish Variety

Crop/Enterprises : Fish

Thematic area : Fish Production and Management

Technology demonstrated :

- Fish farming practices
- Disease management in fish farming.
- Feeding management in fish farming.

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Season and year : Rabi 2022
Farming situation : -
Source of fund : ICAR
No of locations (Villages) : 1 (Veliyanallur)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (Fish fingerlings in Nos.)	Actual area (Fish fingerlings in Nos.)	Justification for shortfall if any
10	10	-	2500	2500	-

Feedback from farmers : The GIF Tilapia fish variety is growing faster than local fish varieties. It can be grown with other carps variety without feed competition. Mortality occurs during summer season.

Feedback of the Scientist : The availability of fish fingerlings to be made available the farmers very easily.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	-
2	Farmers Training	1	16.12.22	21	-
3	Method Demonstration	-	-	-	-
4	Training for extension functionaries	-	-	-	-

19. Demonstration of tree leaf meal incorporated concentrate feed for backyard native chickens

Crop/Enterprises : Poultry

Thematic area : Feed Management

Technology demonstrated :

- Tree leaf meal incorporated (2.5-5 %) concentrated feed.
- Feeding management in poultry.

Season and year : Kharif 2022
Farming situation : -
Source of fund : ICAR
No of locations (Villages) : 1 (Athanoor)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (Tree leaf meal in Kg)	Actual area (Tree leaf meal in Kg)	Justification for shortfall if any
10	10	-	375 kg (25 birds)	375kg (25 birds)	-

Feedback from farmers : The product of tree leaf concentrated feed was too powdery. Hence the birds are wasting the feed while taking the feed.

Feedback of the Scientist : The tree leaves in combination with other locally available conventional feed ingredients may be incorporated as feed component, In order to reduce the feed wastage the feed can be made as crumple feed.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	-
2	Farmers Training	3	04.06.22 27.07.22 26.09.22	54	-
3	Method Demonstration	-	-	-	-
4	Training for extension functionaries	-	-	-	-

20. Demonstration on Mastiguard in milch Cow

Crop/Enterprises : Cattle

Thematic area : Disease Management

Technology demonstrated :

- Spraying of Mastiguard twice daily after milking
- Clean milk production practices

Season and year : Rabi 2022
Farming situation : -
Source of fund : ICAR
No of locations (Villages) : 1 (Mattapiraiyur)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	No. of animals	No. of animals	Justification for shortfall if any
10	10	-	10	10	-

Feedback from farmers : The application of TANUVAS MASTI GUARD spray is ecofriendly but wastage may occur during spraying of medicine in improper restraining of cow.

Feedback of the Scientist : It was noted that 100% success in TANUVAS MASTI GUARD without any post treatment complications in subclinical mastitis in field condition. The TANUVAS teat protect application for subclinical mastitis had given good results and increased one liter of milk per day in a cow which could be due to the action of constituent ingredients present the preparation

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	-
2	Farmers Training	5	03.06.22 27.08.22 28.09.22 28.10.22 11.11.22	82	-
3	Method Demonstration	1	09.11.22	10	-
4	Training for extension functionaries	-	-	-	-

21. Demonstration of Nandanam chicken-IV under backyard condition

Crop/Enterprises : Poultry birds

Thematic area : Production and Management

Technology demonstrated :

- Scientific rearing of native chicken under backyard condition
- Deworming, deticking and vaccination of chicks.
- Feeding management of poultry
- Disease management in poultry.

Season and year : Kharif 2022
Farming situation : -
Source of fund : ICAR
No of locations (Villages) : 1 (Melnagarampedu)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (No of birds)	Actual area (No of birds)	Justification for shortfall if any
10	10	-	250	250	-

Feedback from farmers : The Nandanam Chicken IV laying dark brown thick shelled eggs and it is very easy to sell. Family laborers who are not able to perform other works like old age family members or children can look after the poultry farming. Poultry farming acts as an ATM, because as per family need the birds and eggs can be sold at any time.

Feedback of the Scientist : As the performance of Nandanam Chicken IV is very good in terms of egg laying, egg production and body weight, the farmers from rural areas can rear Nandanam Chicken IV birds for their livelihood and nutritional security.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	-
2	Farmers Training	2	03.01.23 2302.23	30	-
3	Method Demonstration	-	-	-	-
4	Training for extension functionaries	-	-	-	-

22. Demonstration of Banana pseudo stem RTS beverage

Crop	:	Banana
Thematic area	:	Value addition
Technology demonstrated	**:**	Ginger flavoured RTS beverages
Season and year	:	Rabi 2023
Farming situation	:	-
Source of fund	:	ICAR
No of locations (Villages)	:	1 (Ramanathapuram)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
5	5	0	-	-	-

Feedback from farmers **:** Easy to prepare and storage life is good.

Feedback of the Scientist **:** The adoption of ginger flavoured RTS beverages are highly acceptable based on the consumer acceptability and its therapeutic properties the shelf life of beverage is 30 days. The BCR recorded was 3.59.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	-
2	Farmers Training	1	21.03.23	13	-
3	Media coverage	1	22.03.23	-	Public app TV.
4	Training for extension functionaries	-	-	-	-
5	Extension actitivies	1	22.03.23	12	-

23. Demonstration of Tomato powder

Crop : Tomato

Thematic area : Value addition

Technology demonstrated : Tomato powder is a product made from dehydrated tomatoes that can be used as instant mix, seasoning and garnish.

Season and year : Rabi 2023

Farming situation : -

Source of fund : ICAR

No of locations (Villages) : 1 (Kaganam)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
5	5	0	-	-	-

Feedback from farmers : Easy to use for instant mix preparation.

Feedback of the Scientist : The tomato powder is highly acceptable based on consumer acceptability. It has high shelf life of 120 days. The BCR recorded was 1.60.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	-
2	Farmers Training	1	10.03.23	10	-
3	Media coverage	1	11.03.23	-	Public app TV
4	Training for extension functionaries	-	-	-	-

24. Demonstration of improved Ring harvester for Bhendi

Crop : Bhendi

Thematic area : Drudgery reduction

Technology demonstrated : Improved ring harvester for bhendi

Season and year : Rabi 2023

Farming situation : -

Source of fund : ICAR

No of locations (Villages) : 1 (Kilsembedu)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (ha)	Actual area (ha)	Justification for shortfall if any
5	5	0	-	-	-

Feedback from farmers **:** Easy to handle, saves 5 man days per ha.

Feedback of the Scientist **:** The improved ring harvester (Efficiency /hour/kg) resulted in 58 % labour efficiency higher than farmers practice and farmers saved labour cost. The BCR recorded was 3.06.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	-
2	Farmers Training	2	10.01.23 23.06.23	36	-
3	Media coverage	1	11.01.23	-	Public app TV
4	Training for extension functionaries	-	-	-	-
5	Extension activity	1	23.06.23	32	-

25. Demonstration of Nutrigarden

Crop : Nutri-garden

Thematic area : Nutritional security

Technology demonstrated : Growing nutrient rich crops in backyard or in their vicinity to meet the requirements of the family round the year.

Season and year : Kharif 2022

Farming situation : -

Source of fund : ICAR

No of locations (Villages) : 1 (Mukkurumpai)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	proposed (Unit)	Actual (Unit)	Justification for shortfall if any
5	5	0	5	5	-

Feedback from farmers : Consumption of daily intake of vegetables considerably increased.

Feedback of the Scientist : The nutrigarden increases in average intake of vegetable from 60 gram per day to 185gram per day/ person in daily diet. The BCR recorded was 3.70.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	-
2	Farmers Training	2	04.07.23 28.08.23	26	-
3	Media coverage	1	04.07.23	-	Public news app
4	Training for extension functionaries	-	-	-	-
5	Extension activity	1	28.08.23	12	-

4.3 Extension Studies :

1. Impact of CFLD Oilseeds on yield, economics and spread of technology in Thiruvannamalai district

Groundnut is an important and major oilseed crop, covering an area of 338300 hectares with a production of 783200 tonnes in Tamil Nadu. Out of which 70% of the area is covered under rainfed crop and the remaining 30% is under irrigated conditions. In Tamil Nadu, majority of the groundnut area (43%) is covered in North Eastern Zone comprises of Cuddalore, Villupuram, Tiruvannamalai, Vellore, Kancheepuram, Tiruvallur districts and parts of Ariyalur district.

In Thiruvannamalai, groundnut occupies an area of 68044 ha with production of 152.01 tonnes and with an average productivity of 2234.0 kg/ha and the groundnut identified as an ODOP . It is being cultivated in 19.30 per cent of the area under irrigated condition and he remaining in rainfed condition.. Productivity of groundnut in Thiruvannamalai under irrigated and rain-fed conditions were 986.0 kg/ha and 685.0 kg/ha, respectively.

The technology gap is a major constraint in increasing yield and sustainability due to poor knowledge on the latest improved technologies among farmers in groundnut cultivation in the district. Cluster Frontline Demonstrations (CFLDs) is an unique approach with the main objective of conducting demonstration in larger area on the farmers' field and creating awareness on the latest crop production technologies among the farmers.

In keeping view of this, KVK, Thiruvannamalai had conducted Cluster Frontline Demonstrations with improved technologies in groundnut under different farming situations with monitoring of the KVK Scientists which helps in increasing productivity, economic returns, and sustainability.

Methodology

Cluster Frontline Demonstrations (CFLDs) were conducted by Krishi Vigyan Kendra, Thiruvannamalai District, Tamil Nadu on ICM Practices in recently released varieties in groundnut during five consecutive Kharif and Rabi seasons i.e. from 2019-20 to 2022-23. The CFLDs were conducted in six selected clusters in Thiruvannamalai district i.e Arni, Vandavasi and Cheyyar blocks of different farming situations under National Mission on Oilseeds and Oil Palm (NMOOP). The selection of beneficiaries was through, baseline survey, focused group discussions, and field diagnostic visits. A total of 300 demonstrations were conducted in five consecutive Kharif and rabi seasons i.e. from 2019-20 (100 Nos.), 2020-21 (100 Nos.), 2021-22 (100 Nos.) and 2022-23(100 Nos).

The improved technology was demonstrated in one acre area of selected farmers' field and adjacent one acre was considered as control plot of same the farmer. To study the yield gap between potential and actual yields, beneficiaries were selected through group discussions. The selected beneficiaries were given pre- seasonal training and briefed about the improved package of practices for successful implementation of CFLDs, and provided the need based critical inputs for an area of one acre viz., groundnut seed of TCGS 1042, TMV 14 and Kadhiri Lepakshi and

VRI 10, seed treatment with Trichoderma viride@10g/kg Bacillus subtilis @10g/kg seed, Imidacloprid @ 1 ml/7ml of water for one kg seed, rhizobium @ 10 g/kg seed, pheromone traps @ 10/ha for monitoring of Spodoptera and TNAU Pulse wonder 2kg/acre and Gypsum 160 kg/acre

The percent yield comparison of improved practice with local check, district and state averages were calculated and also assessed the yield impact, impact of adoption and horizontal area spread. The technology gap, technology index, and economic parameters were compared with farmers' practice.

SALIENT FINDINGS

- The Cluster Frontline Demonstrations organized by KVK, Thiruvannamalai had significantly increased yield in groundnut and rapid horizontal spread in 17623ha in the district.
- The pod yield of groundnut was increased upto 25.96% in improved practices over the farmers' practice.
- The gross returns (Rs. 149006/-) net returns (Rs. 96490/-) and benefit-cost ratio 2.81 were higher in demonstrations as compared to the farmers' practice. The additional gross returns, net returns, additional cost with incremental benefit-cost ratio were high in improved practice.
- The groundnut varieties VRI 2 and TMV 7 replaced by TCGS 1042 and TMV 14 through large scale demonstrations in long run.
- CFLDs have made a significant impact on horizontal spread of area under groundnut in the district over the last 5 years and it has been observed that the area under groundnut in 2022-23 is 68014 ha.

2. Survey - Farmers socio-economic survey

Introduction

The KVK has implemented a survey project involving students on Rural Outreach Programme through Amrit Interns - an initiative of IPL Centre for Rural Outreach to farmers of Thiruvannamalai district in Tamil Nadu. Farmers socio-economic survey were carried out by the Interns identified by KVK Thiruvannamalai and the collected information from the farmers were filled in the Google sheet created by ICRO by all the interns in the field itself. Each interns was given a target of 100 farmers and a total of 5000+ farmers were covered in three months period.

Objectives and Goals

- To promote productivity related employment and enhancing vocational skills among rural youth and rural people.
- To create awareness on enhancement of agriculture productivity.
- To create network of youth entrepreneurs with skill development to work in the rural areas.
- To work towards knowledge improvement resources on youth interface.
- To ensure environmental sustainability and conservation of natural resources.

Scope

This internship programme is designed to introduce and provide youth power to the country and also provide hands on experience of the challenges in various facts of agriculture and rural development. The interns use their academic learning experience for real life contexts; acquire new skill and draws lession which will help them in their professional careers.

Duration of the Internship

The period of the internship programme was three months and the selected interns issued an internship completion certificate upon successful completion of the internship.

Roles and Responsibilities of the KVK

- KVK to shortlist a list of 50 candidates and guide the procedure to apply online registration of the interns on ICRO portal
- Arrange orientation programme
- selection of villages and farmers
- Reporting and feedback
- Final report submission

Salient findings

The interns have collected the relevant information from 5068 farmers of various blocks in Thiruvannamalai district. The information related to gender and socio category responses, block wise Landholdings, literacy level of farmers, Improved agricultural practices of farmers, Adoption of farm equipment, Adoption of source of irrigation, Irrigation method, usage of Fertilizers/bio-fertilizers, Details of Pesticides/ Bio pesticides Used were collected by the Interns.

- A Total of 5068 farmers have been involved in the survey in 17 blocks of Thiruvannamalai district. Out of which 86.80% male farmers and 13.20% female farmers participated.
- Majority of farmers belong to OBC (45.87%) and followed by General group (42.54 %) as per social classification.
- Only 15.09 % farmers were illiterate while all other are literate at different level of education.
- Adoption of recommended package of practice: Majority of the respondents were having good knowledge of agriculture so that the majority farmers adopted all the package of practices. The practices of harvesting/threshing is adopted more i.e. 86.29 % followed by fertilizer application 82.04 %, field preparation is 80.80 %, timely sowing 80.60%, weed management 80.27% adopted. The vermicomposting production technology has not aware by 34.04% followed by soil treatment 24.61%, Seed treatment 21.86%, micro treatment 16.87% were the farmers does not get awareness. Adoption of new high yielding varieties has been 66.87% of farmers adopted.
- Farm equipment usage, 89.13 % farmers are aware and used the rotavator.

- The farmers of Thiruvannamalai adopting highly on surface method of irrigation (83.39%).
- Crop rotation has been adopted in most of the farmers.
- Majority of farmers are using Urea (96.90 %) followed by DAP (88.95 %), FYM (52.15%) and MOP (49.15%).
- The maximum purchase of chemical fertilizer/ Bio fertilizers from Private agencies (79.22%) of nearby towns and followed by Cooperative societies (45.82 %).
- Most of farmers are taking loan as local financiers and KCC from bank..
- Place of selling was nearby town 50.96 % of farmers while 48.54 % farmers preferred to sell their product regulated market - mandi.
- Farmers are more emphasizes for technical assistant in agriculture on KVK, Agri clinics and linedepartments.

3. Technology Week Celebration : Nil

6. Training/workshops/seminars etc. attended by KVK staff

Name of the staff	Title	Dates	Duration	Organized by
Mr.R.Vijayakumar SMS Horticulture	Online training on Protected cultivation of high value vegetables	19.07.23 – 21.07.23	3 days	MANAGE, Hyderabad
Mrs.M.Santhi, Farm Manager	Effective farm management	03-08-2023 to 04-08-2023	2 days	TNAU, Coimbatore
Mr.P.Narayanan SMS-Plant Protection	Webinar on Chilli Black Thrips Management	18.08.2023	1 day	Extension Education Institute, Hyderabad
Mr.V.Suresh SS &Head	On line training on Leadership skill and Management Techniques	21-08-2023 to 25-08-2023	5 days	TNAU Coimbatore and National Institute of Agricultural Extension Management, Hyderabad.
Mr.R.Vijayakumar SMS Horticulture	Tree cultivation techniques for the higher economic returns	20.09.23 – 22.09.23	3 days	Institute of Forest Genetics and Tree Breeding, Coimbatore.
Mr.P.Narayanan SMS-Plant Protection	Sustainable Management of Fall Army Worm in Maize	03.10.2023 to 04.10.2023	2 days	National Institute of Plant Health Management, Hyderabad.
Mr.V.Suresh SS &Head	Post harvest dip for enhancing the shelf life of Mango, Nano Urea and its field applications	11-10-2023	1 day	TNAU, Coimbatore
Mr.P.Narayanan SMS-Plant Protection	Webinar on Orientation training to master trainers for safe and judicious use of Glyposate by PCOs	18.10.2023	1 day	National Institute of Plant Health Management, Hyderabad.
Mr.P.Narayanan SMS-Plant Protection	International Conference on Plant Health Management	15.11.2023 to 18.11.2023	4 days	Professor Jayashankar Telangana State Agricultural University, Hyderabad

7. Details of sponsored projects/programmes implemented by KVK

S. No	Title of the programme / project	Sponsoring agency	Objectives	Duration (Days)	Amount (Rs)
1	Natural farming under Capacity Building for Adoption of Technology	NABARD, Thiruvannamalai	▪ To create awareness among the farmers high nutritional quality produce in sufficient quantity. ▪ To encourage, promote and development of natural farming system in the district. ▪ To encourage the use of organic and biological sources (biofertilizers, organic manure, compost, bio-pesticides, bio-control agents etc.,) in crop production. ▪ To promote an alternative strategy over chemical farming.	3	126000.00
2	Organic production of Fruits and Vegetables under Skill Training of Rural Youth	ATMA, Thiruvannamalai	▪ To create awareness on organic cultivation of fruits and vegetables among rural youth. ▪ To provide knowledge and skill on the preparation of bio inputs. ▪ To promote organic farming at village level through skilled youth. ▪ To establish organic farm models at the village level in the farmers field.	6	42000.00
3	Advanced technology in agriculture, Drone technology and Precision agriculture under Skill Training of Rural Youth	ATMA, Thiruvannamalai	▪ To create awareness on usage on agri drones for various agriculture operations among the rural youth. ▪ To develop entrepreneurs among rural youth in agri drone for various agri operations. ▪ Capacity building of rural youth as pilot to operate agri drone.	6	42000.00

Detailed report of each project/programme separately : Annexure II

8. Success stories

A. Little millet ATL 1-Small but effective in improving livelihood of farmers.

Farmer Detail : Mr. G. Munusamy S/o Godhandan
Mottur village, Kalasapakkam taluk.
Thiruvannamalai district.

Situation analysis/Problem statement

Mr. G. Munusamy S/o Mr. Godhandan aged 50 from Mottur village of Kalasapakkam block is holding one hectare. He has been cultivating local varieties of little millet and got poor yield. His net income is also not upto the expected level. He didn't know improved varieties and new technologies and he had no idea about use of micronutrients.

Plan, Implement and Support

He had attended four training programmes on ICM in millets organized by the KVK. Training covers Integrated Crop Management practices in Millets. The ATL 1 Little millet variety has been introduced to the farmer in the year 2023 in Rabi season with improved practices. The farmer was taught about the recent practices like seed treatment, plant population maintenance, use of micronutrient mixtures and soil health based nutrition. With the proper guidance of KVK, he got an idea to improve the yield and income by reducing the cost of inputs.

Intervention Technology

The farmer adopted the following improved practices.

- Seed treatment with biofertilizers like *Rhizobium, Phosphobacteria.*
- Usage of Improved varieties.
- Adopting the use of millet micronutrient mixtures.

Output

Following the guidance given by the scientists of KVK, he started cultivating little millet variety ATL 1 the yield increased to 14.97 qtl/ha and net income of Rs. 25310/-. He has been registered in the seed village programme of department of agriculture for the production and supply of little millet.

Outcome

By witnessing the economic benefits of Mr.G.Munusamy, other farmers interested to cultivate millets in their fields and minimized the cost on fertilizers and pesticide application. The cultivation of ATL-1 variety has spread to 120 farmers in the locality.

Impact

The ATL1 variety got spread over an area of 125 ha in the region with the support of KVK and Centre of Excellence in Millets (CEM). A separate Farmers Producer Company has been established in polur block of Thiruvannamalai district specifically for the seed production, supply and value added products in millets.

B. Improved cultivation of gourds in pandal system

Farmer's details : Mr.S.Varadhan, S/o. Subbarayan
Kilsembedu village, Vandavasi taluk,
ThiruvannamalaiDist – 604408
Mobile No.: +91 8870836514

Situation analysis/Problem statement

Shri. Varadhan S/o. Subbarayan, aged 54 is a vegetable gourds farmer in Kilsembedu village of Vandavasi taluk in Thiruvannamalai district. He has been growing vegetables like snake gourd, bitter gourd, Ribbed gourd on commercial basis in last four years. An area of 254 acres are under the cultivation of gourds in the village and the farmers have been facing issues on pest, disease and quality. The income of the gourd farmers was not satisfactory due to the said problems.

Plan, implementation of activities and support by KVK

Considering the problems faced by the farmers in the region, the KVK had implemented Front Line Demonstrations, Trainings and other extension activities to address the issues. Mr.S.Varadhan is one among the progressive farmers included in all the KVK activities.

Intervention technology

i). Training programmes

He participated in 4 training programmes and two diagnostic field visits conducted by the KVK. He also visited the successful guards growers to strengthen his knowledge in the region on Cucurbits cultivation in pandal system. He also visited various Horticultural Research Stations, Universities in Tamil Nadu and interacted with eminent scientists on cucurbits cultivation.

ii). OFT and FLD

The KVK team inspected his farm and selected him as one of the beneficiary farmers for the OFT on assessment of suitable ridge gourd varieties for higher productivity and FLD on Integrated Crop Management in bitter gourd in the subsequent years. The critical inputs were also provided to him. The important technologies

demonstrated were :

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- Foliar nutrition with vegetable special (micro nutrient formulation) application.
- Integrated Plant Nutrition System with major emphasis on fertigation, vermicompost and neem cake application as per the soil fertility status.
- Integrated Pest and Disease Management practices with major emphasis on flight-T pheromone traps usage for the mass trapping of fruit fly, usage of yellow, blue sticky traps pongamia & neem soaps for the control of sucking pests and there by viral diseases.
- Soil application of *Trichoderma viride* & microbial consortium for the disease control and yield improvement.

Output:

The gourd farmer Mr. Varadhan, under the technical support of KVK has adopted various improved technologies in gourds cultivation. As a result, the productivity and income levels have increased to the satisfactory level as detailed here under:

Crop		Yield (Q/ha)	Gross cost (Rs./ha)	Gross return (Rs./ha)	Net return (Rs./ha)	BC Ratio
Ridge gourd	Before Intervention	352.93	268904	602368	333464	2.24
	After Intervention	437.23	242542	712369	469787	2.93
Bitter gourd	Before Intervention	296.14	232698	512197	279499	2.20
	After Intervention	382.49	213782	543619	329837	2.54

Outcome:

By seeing the economic benefits accrued by Mr. Varadhan of Kilsembedu village, the technologies have spread to a significant extent in the locality and are being adopted by 230 farmers in 275 acres of land at present in the locality. It is one of the significant achievements of KVK.

Impact

The area under gourds cultivation has been considerably increasing every year in Vandavasi block due to economic returns in shorter period. By seeing the interest of the farmers, the State Department of Horticulture has been supporting in the supply of various inputs and machineries on subsidized rates.

C. Bee Keeping – An alternative enterprise to making money from honey

Farmer's details : **Mr.K.Govindhasamy**
Athanoor village, Arni Block,
Thiruvannamalai Dist – 636301
Mobile No.: +91 9976954983

Situation analysis/ Problem statement:

Thiruvannamalai district is known for diversified crop growing viz., Paddy, Pulses, Groundnut, Brinjal, Chillies, Gourds, Tomato, Banana, Coconut etc. in considerable areas.

Mr K.Govindasamy S/o. Kannan is a progressive farmer in Athanoor village of Arni block in Thiruvannamalai district. He owns 2.5 acre of land. He is getting low yield and income because of mono cropping, high cost of agricultural inputs, non-availability of labour, deficit rainfall, non-adoption of advanced technologies and devastation of natural pollinators by indiscriminate application of chemical pesticides. He wanted to earn more money from various agricultural enterprise by establishing integrated farming system model unit in his farm. In this situation he approached the KVK for agriculture related business opportunities.

Plan, implementation of activities and support by KVK

Being a progressive and enthusiastic farmer, KVK selected in as one of the contact farmers in Arni area by involving in various activities in the KVK. He had participated in various on and off campus training on Honey bee keeping. He showed very good interest on honey bee keeping technologies. The KVK conducted hands on training on bee keeping, honey value addition, production of honey bee hives in his village also. In 2023-24 he has selected as one of the beneficiary farmers under Integrated Farming System programme established by the KVK in various blocks. The KVK took him TNAU Coimbatore and Manjary honey farm, Erode under NABARD sponsored CAT training programme

Output:

As a result of the various interventions and technological support by the KVK Thiruvannamalai, he succeeded in honey bee keeping and installed five honey bee rearing units farm. He has been getting an additional income of Rs. 53950.00/year and the crop yield increased by 12.35 % when compared to earlier practices. In addition, he has been converted as master trainer to share his experience to other farmers in various training programmes organized by the KVK and other stakeholders.

Outcome:

By seeing the economic benefits accrued by the bee keeping, other farmers are also showing interest in bee keeping in their fields. The bee keeping technology has spread over 250 farmers in the district with the support of State department of Horticulture, ATMA and Non-Governmental Organisation. It is one of the significant achievements of KVK.

Impact:

The demand of pure honey has been considerably increasing every year due to high nutritional properties of honey and very good demand in market. Honeybee is playing vital role in cross pollination and it increases the crop yields. Adoption of bee keeping technologies in Thiruvannamalai district significantly increased and the crop yields also expected to increase in the upcoming years

D. Livelihood security through poultry rearing under backyard condition

Farmer's details **:** Mrs.S.Kaliyammal W/o. Saktivel
Melnagarampedu village
Cheyyar Block, ThiruvannamalaiDist – 604408
Mobile No.: +91 9894870775

Situation analysis/Problem statement

Poultry is an imperative factor for improving nutritional security to the rural poor. Rural poor rear desi bird with low egg and meat production in backyard system causes poor hatchability and high mortality rate. In rural poultry sector, the production remains restricted due to less research and low production potential nature of native chicken breeds.

Plan, Implement and Support:

ICAR KVK Thiruvannamalai implemented a FLD on Demonstration of Nandanam Chicken IV rearing under backyard condition. The KVK had organised five numbers of one day trainings both on and off campus on Backyard poultry farming including selection, handling and brooding, feeding, disease management, hatchery operation and chick management including scientific method of backyard poultry farming with Nandanam Chicken IV. KVK Thiruvannamalai has selected Mrs. Kaliyammal as one of the FLD beneficiaries and trained on scientific management of backyard poultry rearing. She also provided 25 nos of Nandanam Chicken IV of two week old chicks.

Output

As a result of technological intervention by the KVK, Thiruvannamalai the farmer had obtained good revenue. Backyard poultry rearing with Nandanam Chicken IV with 20+5 numbers along with improved rearing technologies of poultry farmer could able to get Rs. 39,000.00/year.

Outcome

In Melnagarampedu village of Thiruvannamalai district, 56 farm families are doing rearing of Nandanam Chicken IV under backyard condition as of now. A total of 350 farmers are rearing Nandanam Chicken IV under backyard condition in the district.

Impact:

Nandanam Chicken IV is eliminating the poverty in Melnaragampedu village significantly. Small and marginal farmer can get more income through backyard poultry rearing with improved varieties of chicken.

E. Entrepreneurship through millet based value added products

Name of the Farmer : **Mrs. Mohana W/o. Mr.Subramani**
Cheyyar, Thiruvannamalai District – 604407.

Situation analysis/Problem statement:

Mrs.Mohana W/o Mr.Subramani aged 49 is a Paddy farmer belongs to backward community from Cheyyar taluk of Thiruvannamalai District. She owned five acres of land owns 4 acre of land. She has been cultivating traditional rice on commercial scale in 3 acre of land and the remaining 2 acre has been allotted for millet cultivation to meet out her family's food requirement. She depends mainly millet and paddy for her family's income. But, she couldn't able to earn sufficient income from cultivation of millet and paddy. In this situation, she approach KVK in the year 2019 and wanted to prepare value added products from millets on a commerical basis.

Plan, Implement and Support:

Mrs.Mohana participated in the OFT programmes on Assessment of alternate sweetners in millet cookies preparation in 2019. In addition, she also participated various training programmes conducted by KVK on millets based value added products since March 2019. After completion of trainings, she started collecting the required information to start up small scale enterprises for millet value added products and finally she has decided to start the production unit on her own as trial basis. She visited various units established with the support of KVK in Thiruvannamalai and Polur region.

After the all arrangements made by her, she started the production unit for millet based value added products at her home during 2019-20. Initially she started preparing millet based snacks viz., Murrukku, simili, and instant mix. She sold her products at nearest villages of Cheyyar. Slowly her products received higher interests among the consumers in terms of taste and shelf life. She named her production unit as **Thej.**. She standardizes all her products by use of quality raw materials during processing, preparation under hygienic condition, packing and labeling. This unit is entirely maintained by her family members.

Output:

Mrs.Mohana regularly supply the value added products viz., murrukku, instant mix, cookies, laddu to nearby area local shops. The price of one Kilo gram products average price is Rs.300/-. The average production capacity of the unit is 200-250 kg per month. She is earning an amount Rs.41,250/- per month as net income from all her units.

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Outcome

By hearing and seeing the economic return obtained by Mrs.Mohana, other neighbors and locality have started to value added products production units. At present there are two units were established and functioning effectively in Cheyyar Block and it is expected more units will be established in the forthcoming years.

Impact

Mrs. Mohane has been promoted as master trainer by the KVK to share her experience and handling sessions on value added products from millets to the needy entrepreuners in the district. Since the area under millet cultivation is significantly improved in the last two years, there will be a large scope for establishing such value added units in the district with the help of KVK.

9. Details of innovative methodology, innovative technology and transfer of Technology developed and used during the year by the KVK

Video Consultations

The Krishi Vigyan Kendra in collaboration with Reliance foundation organizing the video dial out conference focusing on providing advanced technical information to farmers instantly across the district. The Technical information to provide instant solution to the soil issues, pest and disease problems, seed availability, preventive measures against livestock diseases and marketing information..

This practice enables the farmers to adopt better decisions on crop management, nutrient deficiencies, and pest and disease management practices. Need based video dial out conferencing will be arranged by the messengers at the village level whenever the farmers facing issues during crop cultivation. The farmers were given chance to interact with the scientists directly for the better management practices.

10. Details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development.

S. No	Crop	ITK Practiced	Purpose
1	Paddy	Keeping Palmyra leaves around the paddy field.	To protect the paddy plants from the storks and rats.
2		Tying of Compact Disc (CD) around the paddy field.	To control damage by the birds
3		Spraying of plain water	To control thrips.
4		Chilli powder spray @ 1kg in 1 litre of water	To control aphids and hairy caterpillars.
5		Spraying of Kerosene @ 1 litre mixed with soap and 1 litre of water	To control leaf folder and stem borer
6		Installation of thermocol blocks as bird perches in paddy field.	To avoid the bird problem in the early stage.
7		Vasambu (Acotus calamus) powder and cow urine mixed in water to be boiled and cooled over night. The seeds are soaked in the solution and floating seeds are removed. The settled seeds can be used for sowing.	For seed selection and treatment of seed borne disease.
8	Redgram	Coating the redgram seed with red soil.	To avoid the incidence of Storage pests
9	Field and Horticultural crops	Spreading of hairs around the bunds.	For control of wild Boar damage.
10	Vegetables & Millets	Spraying of garlic extract and Kerosene (1 kg Garlic, 200 ml Kerosene and 100 litres water)	To control fruit borers
11		Millet grains with neem leaves	To avoid storage pest damage.
12		Planting of seeds during no moon day	For the better germination of seeds.
13		Spraying of Cow Urine	To avoid pest & disease problem and better growth of the plants
14	Chilli	Scary thermocol device to be planted in the field.	To prevent wild boar and bird issues.

Photographs for ITK Technologies

Tying of rope and plastic covers in paddy field

Redgram seeds trated with red soil to avoid storage pest

11. Impact of KVK activities

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Introduction of paddy variety ADT 54	206	68	72720.00	87300.00
Introduction of little millet ATL-1	230	78	69100.00	91300.00
Introduction of Blackgram Vamban8	1150	91	57500.00	63600.00
Precision farming in Solanaceous vegetables	450	76	52598.00	92683.00

Integrated crop management in cucurbitaceous vegetables	681	81	68639.00	98942.00
Cultivation of CO1 chilli hybrid	605	75	74400.00	141600.00
Foliar Nutrition in vegetables	1998	95	656200.00	781750.00
Integrated Pest and Disease Management in paddy	2680	58	70135.00	97850.00
Management of maize fall army worm (FAW)	315	48	72340.00	97670.00
Integrated Panama wilt management in Banana	230	59	213650.00	350920.00
Integrated Pest and Disease Management in Brinjal	238	68	189620.00	280630.00
Mushroom production	120	51	2300.00/ Month	8500.00/ Month
Beekeeping technologies	356	39	12300.00/ Year	36800.00/ Month
Fruits and vegetable preservation	582	41	Rs.6,700.00/ Month	Rs.23,000.00/ Month
Value addition in milk	232	27	Rs.9,300.00/ Month	Rs.24,000.00/ Month
Preparation Instant mix	245	42	Rs.7,000.00/ Month	Rs.26,800.00 /Month

12. Impact of five select technologies assessed/demonstrated/popularized by the KVK in the district (in QRT format)

Sl. No.	Name of specific technology/skill transferred	Source of technology	No. of farmers	Extent (ha)	Increase in net return Rs/ha	Economic Impact /benefit (Rs) (5X6)	KVK Intervention OFTs/FLDs/ Trainings	Convergence /Partners involved in up scaling of technology	Remarks
1	2	3	4	5	6	7	8	9	10
1	Direct Seeded Rice technology	TNAU	76112	48920	29120	1,42,45,50,400/-	Nine Front Line Demonstration conducted covering 36ha and 75 farmers. Organized 47 trainings covering 486 farmers.	State Department of Agriculture, Thiruvannamalai	Yield increased 23.80%
2	Integrated pest and disease management in paddy	TNAU	2680	3596	17950	6,45,30,250	Conducted Eight front line demonstration covering 80 farmers and organized 35 training programmes covering 596 famers	State Department of Agriculture and ATMA, Thiruvannamalai	Yield increased 20.16 %
3	Demonstration on Blackgram Variety VBN 11	TNAU	4120	3350	27310	9,14,88,500	Four Front Line Demonstration conducted covering 95 ha and 230 farmers. Organized 35 trainings covering 720 farmers.	State Department of Agriculture, Thiruvannamalai	Higher yield - 26.40 %

4	Improved non spiny brinjal VRM2	TNAU	645	324	98453	3,18,98,772	Two Front Line Demonstrations conducted covering 4 ha and 20 farmers. Organized 14 trainings covering 284 farmers.	State Department of Horticulture, Thiruvannamalai	Yield increased by 17.61%
5	Improved Chilli hybrid CO1	TNAU	486	179	112436	2,01,26,044	Three Front Line Demonstrations, Two OFTs conducted covering 6 ha and 40 farmers. Organized 20 trainings covering 294 farmers.	State Department of Horticulture, Thiruvannamalai	Yield increased by 21.41%

13. Box item

"The innovative approach to seedling production has bolstered my confidence to venture into entrepreneurship. Each seedlings serves as a testament to my efforts and carries my identity forward" said Saravanan.

"*A small quantity of mineral mixture feeding indirectly changes my business positively, gives confident for doing goat business for longer period*" said Vasanth.

"*I am tired of dealing pesky insects in my paddy field. KVK altered my mindset using solar light trap for manage pests. Easy transferable, Automatic on and off, effective device to attract harmful insect by UV rays. I am happy on chemical cost reduced*" said by Rajaram, Rantham village.

"KVK is an eye opener to use innovative Herboliv for wild boar keeps the boar away from my crop and increased the yield by 15%." said by Selvam.

"*My Family member who is not able to perform other works like grandpa, can look after the poultry farming. Poultry act as an ATM, because the birds and eggs can be sold at any time*." Said Shanmugam.

"The vegetable special contributes not only higher income and premium quality fruits, also brings a sense of joy; evident in the smiles it generates" said Varadhan.

14. Report on entrepreneurship development programmes

Livelihood enhancement through entrepreneurship development for the under privileged

Introduction

Groundnut is one of the major oil seed crop cultivated in Thiruvannamalai district, it is being cultivated in an area of 68014ha. Most of the SC populations in Thiruvannamalai district are not economically empowered; they are not given much importance to commit entrepreneurship activities. The small scale industries running by the SC/ST populations are very less in Thiruvannamalai district. To empower the SC peoples economically, both state and central government have been implementing various development schemes. Self employment is an alternative way to empower them economically.

Implementation

Keeping in this view, ICAR Krishi Vigyan Kendra, Thiruvannamalai had established wood pressed oil extraction unit for the under privilege involving 13 SHG members under SC/SP programme during 2022-2023. The establishment cost for the oil extraction unit borne by the KVK and 2% of the net income has been charged for the maintenance work of the unit.

KVK provided training on groundnut based oil extraction, packing, branding, labeling and marketing, to encourage the participants by effective utilization of established oil extraction unit. This unit entirely maintained by women SHGs members belongs to SC/ST through Public Private Partnership mode.

Outcome

To the SHG members continuously utilized the services of the unit and could able to produce 420 kg of groundnut oil per month. They have been selling their produce in domestic market apart from their own consumption. On an average, a sum of Rs. 16800/month has been earned by the SHGs members as net income. Employment opportunities for 15 SHG's women made per month through the oil extraction unit.

15. One case of successful technology application and dissemination

Backyard poultry farming for enhancing livelihood and nutritional status of SC families in Thiruvannamalai District

Situation analysis/Problem statement

Backyard Poultry is easy to manage and generates good income. Traditionally, backyard poultry comprising mainly the native breeds adapted well to the local and varying climatic conditions, accounted for 70 per cent of meat and egg production in the country. In over three decades, poultry in India has moved rapidly from the backyard to intensive commercial

production. Modern poultry is one of the fastest growing industries across the world. However, it often involves large-scale commercially produced crossbreeds. Although large-scale intensive commercial poultry production has tremendously increased the availability of meat and eggs in the country, it has also had serious health and environmental consequences.

The small-scale, often free ranging, backyard poultry is still the widespread animal production system in India. Backyard poultry rearining has tremendous potential and is ideal to augment the income and nutrition of small and marginal farmers. It could be promoted either commercially or as part of an integrated model involving small and marginal farmers across the country, especially in the rainfed areas.

Plan, Implement and Support

ICAR Krishi Vigyan Kendra, Thiruvannamalai District was identified Somasipadi village in Kilpennathur block and Kilnelli village in Vembakkam block of Thiruvannamalai District. The ICICI foundation working in village was collaborated for mobilization SC farmers for organising meetings and given orientation about importance of Backyard poultry farming The KVK was randomly selected 30 Sc Farmers in Somasipadi village and 20 SC farmers in Kilnelli village and given training on Backyard poultry farming with objective of improving the income and nutrition of family. The interventions include improvement to production systems, brooding management, vaccination and healthcare services,

Output

All the households of the village rearing backyard poultry, the traditional culture of rearing native chicken breeds has come alive at Somasipadi and Kilnelli village. The family members are able to consume eggs and meat produced from their backyard, on a regular basis. Also, the chicken and eggs, produced in the backyards are healthy compared to commercially produced chicken, thus ensuring better health to the families.

Outcome

In the Somasipadi and Kilnelli village of Thiruvannamalai district is around 78 farm families are rearing Desibirds under backyard condition. In the district whole more than 450 farmers are rearing Aseel Desi bird under backyard condition.

Impact

The Aseel chicken laying dark brown shelled eggs with thick shell hence it is easy to sell. Family labours that are not able to perform other works like old family members or children can look after the poultry farming. Poultry farming acts as an ATM, because as per family need, the birds and eggs can be sold at any time with cash in hand.

16. Linkages

Sl.No	Name of organization	Nature of linkage
1	State Dept. of Agriculture	Trainings and Demonstrations in various blocks under ATMA project. Conduction of field days under FLD, Farm Advisory and diagnostic Services.
2	State Dept. of Horticulture	
3	Department of Agri Business and Agri Marketing.	Trainings, FPO consortium business advisories, BOD and CEOs trainings and Demonstrations.
4	State Department of Animal husbandry	Animal Health camp, trainings & Advisory services.
5	NABARD	Establishment of Farmer Producer company, CAT and LEDP training programmes.
6	State department of Agriculture, Kanchipuram	Lecture delivered on various topics in different discipline.
7	Tamil Nadu Vazhnthu Kattuvom Project	Credit linkages to FPO and capacity building trainings to farmers and Community Resource persons.
8	Integrated Child Development Scheme (ICDS)	Capacity building programmes to farm women and Anganwadi workers
9	MahalirThittam	Colloborative training programmes
10	ICICI foundation	Training to the farmers, technical convergence and other extension activities.
11	SST Trust	Farmer training, awareness programme, field visit and promotion of organic farming.
12	Hand in Hand	Training and Awareness programme
13	Ministry of Ayush	Training, Awareness and Demonstration programme
14	Mivipro products	
15	IPL Centre for Rural Outreach	Farmers data collection
16	The Fertilizers and Chemicals Travancore Ltd (FACT)	Training and awareness programme

17. Awards and Recognitions

- Dr.K.Mayakrishnan, Subject Matter Specialist (Animal Science) awarded as Eminent Scientist award by TRIARD (Thanthai Rover Institute of Agriculture and Rural Development), Perambalur.
- Shri. V.Suresh, Senior Scientist & Head received Best performance award during republic day celebration on 26.01.2023 from the District Collector.
- Smt. T.Margaret, Subject Matter Specialist (Home Science) received Best performance award during Independence day celebration on 15.08.2023 from the District Collector.
- Shri. P.Narayanan, Subject Matter Specialist (Plant Protection) received Best performance award during Independence day celebration on 15.08.2023 from the District Collector.

- Dr.K.Mayakrishnan, Subject Matter Specialist (Animal Science) received Best performance award during Independence day celebration on 15.08.2023 from the District Collector.
- Selvi.M.Ishwarya, Subject Matter Specialist (Agronomy) received Best performance award during Independence day celebration on 15.08.2023 from the District Collector.
- KVK bagged an appreciation for the SCSP project implementation during Annual Zonal Workshop held at TNAU, Coimbatore for the year 2022-23.
- KVK received best stall award during summer festival (Kodai Vizha) organized by District collectorate, Thiruvannamalai at Jawathu hills on 21.07.2023.
- KVK received an appreciation for the participation of Regional Millet Mela held at KVK Dharmapuri from by TNAU, Coimbatore.
- Shri. V.Suresh, Senior Scientist & Head and Smt.T.Margaret, Subject Matter Specialist (Home Science) received best project implementation award for Amrit Internship programme by IPL ICRO, New Delhi.

IPL Centre for Rural Outreach

CERTIFICATE OF RECOGNITION

This certificate is proudly awarded to

Dr. V. Suresh
Senior Scientist and Head
ICAR - Krishi Vigyan Kendra Thiruvannamalai,
Tamil Nadu

For his extraordinary service in organizing and successfully completing the

ICRO AMRIT INTERNSHIP PROGRAMME
From April – September, 2023.

Sponsored by

IPL Centre for Rural Outreach
NPC Building, 3rd Floor, Utpadakta Bhawan, 5-6 Institutional Area, Lodhi Road, New Delhi-110003

Mr. Shirish Paliwal
Deputy Director General,
National Productivity Council

Dr. Rajeev Ranjan
Director,
IPL Centre for Rural Outreach

18. Important Visitors to KVKs during 2023

Smt.M.Priyadarshini, District Revenue Officer, Thiruvannamalai participated in the Genetic Fair organised by KVK and ATMA, Thiruvannamalai

Annexure - I

I. SALIENT RECOMMENDATIONS OF THE SAC MEMBERS

- **Mr. S. Ramesh, President, TNBRD** suggested that KVK should promote natural farming practices and bio inputs among farmers. He also suggested that KVK should prepare a booklet containing all department schemes and circulate it to farmers during all its activities.

- **Dr. P. P. Murugan, Director of Extension Education, TNAU, Coimbatore** stressed the importance of promoting natural/organic farming and soil health management practices in the district. He also recommended that KVK ensure its activities cover all sections of farmers in the entire district.

- **Dr. Shaik N. Meera, Director, ICAR ATARI, Zone X, Hyderabad** suggested that KVK should identify 20 critical problems that affect farmers' income and agriculture development in the district. KVK should provide end-to-end solutions for the identified problems in the form of OFT/FLD and capacity building trainings to farmers, entrepreneurs and other stakeholders in collaboration with all the line departments. KVK should also develop more narratives/success stories for the impact-oriented activities implemented in the district. Furthermore, KVK should concentrate on promoting secondary agriculture practices like animal husbandry, particularly backyard poultry, sericulture, and fisheries to bring employment opportunities and livelihood changes for farmers and entrepreneurs.

- **Mr. C. Harakumar, JDA, Thiruvannamalai** suggested that KVK should promote the use of agri drones involving rural youth. He recommended that KVK should provide more training on value addition in millets and promote newly released varieties in blackgram (VBN-11) and groundnut (VRI-10) in the district. Additionally, KVK should give fish farming training to beneficiaries who have farm ponds established by various stakeholders.

- **Dr. N. Muthukrishnan, Dean, AC&RI, TNAU, Vazhavachanur, Thiruvannamalai** recommended that KVK may engage in the production and supply of organic inputs. He suggested that KVK should take up an awareness program on tapioca mealy bug with the concern line department.

- **Dr. G. Somasundram, Regional Joint Director, Animal Husbandary, Thiruvannamalai** recommended that KVK may promote multi-cut fodder varieties among farmers. He also suggested that KVK should create awareness on milking machines among dairy farmers.

- **Dr. K. Premavalli, Professor and Head, FTC, TANUVAS, Kanchipuram** recommended that KVK should organize an exposure visit to Poultry Research Station, Madavaram, Chennai, for farmers. She also suggested that KVK should concentrate on value addition in milk, meat, and egg.

- **Dr. M. Vaithiyalingan, Professor and Head, CEM, Thiruvannamalai** recommended that KVK should take up demonstrations on newly released millet varieties by CEM, Athiyandal. He also recommended that KVK should give importance to millet value-added products and utilize the services of CEM experts for the conduction of training programs.

- **Mr. M. Vijay Neehar, DDM, NABARD, Thiruvannamalai** recommended that KVK should impart training on value-added products in millets for the FPOs in the district. He also recommended that KVK should create awareness on digital platforms established for the FPOs to enhance the marketing opportunities. Additionally, convergence programs should be taken up by KVK for the tribal families of Jawadhu hills in collaboration with other line departments.

- **Mrs. S. Gowri, Lead District Manager, Indian Bank, Thiruvannamalai** recommended that KVK should utilize the services of bankers during its activities to create awareness on bank schemes available for farmers and SHGs.

- **Mr. R. Panchapakesan, Executive Engineer, Agri Engineering, Thiruvannamalai** recommended that KVK should undertake demonstrations on power weeder.

- **Mr. M. Shanmugam, ADA, Department of Agriculture and Farmers Welfare, Vembakkam** recommended that KVK should demonstrate Nithya haritha groundnut variety and barnyard millet variety in Cheyyar and Vembakkam blocks.

- **Mr. N. Arulmani, ADH, Department of Horticulture and Plantation Crops, Vembakkam,** recommended that KVK should conduct training on crop diversification and should promote oil palm under dry land horticulture in collaboration with the Department of Horticulture and Plantation Crops. Additionally, IPM trainings should be conducted in coconut, watermelon, and brinjal. Awareness should also be created on wild boar management.

- **Mrs. E. Gayathri, AO, Department of Agri-marketing and Agribusiness, Thiruvannamalai** recommended that KVK should conduct flower-based value-added training programs.

- **Mr. B. Vivek, Sub-inspector, Fisheries and Fisherman Welfare, Thiruvannamalai** suggested that KVK should conduct training programs on recent technologies in fish farming.

- **Mr. K. Dhanapal, District Industrial Centre, Thiruvannamalai**, recommended that collaborative training programs should be organized with District Industrial Centre.

- **Mr. K. V. Palani, Farmer, Kalambur, Polur, Thiruvannamalai** suggested that KVK should conduct training on low-cost household fish farming and promote millet cultivation in the district.

- **Mr. M. Velayutham, Farmer, Brammadesam, Vembakkam, Thiruvannamalai** suggested that KVK should prepare and circulate pamphlets on crop production technologies.

- **Mr. K. Karthikeyan, Farmer, Mottur, Kalasapakkam, Thiruvannamalai,** suggested that KVK should organize an exposure visit to the Central Tuber Crop Research Institute, Trivandrum, Kerala.

- **Mr. P. Manimozhi, Farm woman, Sorappathur, Thiruvannamalai,** suggested that KVK should develop entrepreneurs in agri and related value-added products.

II. List of members participated in the SAC meeting

Sl.No.	Name and Address	Affiliation
1.	**Mr. S. Ramesh** President, Tamil Nadu Board of Rural Development, Chennai.	Chairperson
2.	**Dr.P.P.Murugan** Director of Extension Education, TNAU Coimbatore	Member
3.	**Dr.Shaik N Meera** Director, ICAR-ATARI, Zone X, Hyderabad.	Member
4.	**Mr.C.Harakumar** Joint Director of Agriculture, Thiruvannamalai	Member
5.	**Dr.N.Muthukrishnan** Dean, Agriculture College and Research Institute, TNAU, Vazhavachanur, Thiruvannamalai.	Member
6.	**Dr.G.Somasundaram** Regional Joint Director, Department of Animal Husbandry, Thiruvannamalai	Member
7.	**Dr.M.Vaithiyalingan** Professor and Head, Centre for Excellence in Millets, Athiyandal, Thiruvannamalai.	Member
8.	**Dr. K.Premavalli** Professor and Head, Farmers Training Centre, TANUVAS, Kanchipuram.	Member
9.	**Mr.M.Vijay Neehar** District Development Manager, NABARD, Chennai Metro Cluster	Member

Sl.No.	Name and Address	Affiliation
10.	**Mr.R.Panchapakesan** Executive Engineer, Department of Agriculture Engineering, Thiruvannamalai.	Member
11.	**Mrs.S.Gowri** Lead Manager, Indian Bank, Thiruvannamalai.	Member
12.	**Mr.K.Dhanapal** Survey and Statistical Inspector, District Industrial Centre, Thiruvannamalai.	Member
13.	**Mr.M.Shanmugam** Assistant Director of Agriculture, Vembakkam	Member
14.	**Mr.N.Arulmani** Assistant Director of Horticulture, Vembakkam, Thiruvannamalai.	Member
15.	**Mr.B.Vivek** Sub Inspector of Fisheries, Fisheries and Fisherman Welfare, Vellore.	Member
16.	**Mrs.E.Gayathri** Agriculture Officer, Department of Agrimarketing and Agribusiness, Cheyyar, Thiruvannamalai.	Member
17.	**Mrs.C.Kavitha** Assistant Inspector, Department of Sericulture, Thiruvannamalai	Member
18.	**Mr.A.Chinnappan** Ranger, Department of Forest, Cheyyar	Member
19.	**Mr.S.Kannagi** CDPO, Social Welfare & Women Empowerment Department, Vembakkam.	Member
20.	**Mr.N.Ravichandran,** District Correspondent, All India Radio/ Doordarsan, Chennai	Member
21.	**Mr.K.V.Palani** S/o.Vellai, Kalambur, Polur taluk, Thiruvannamalai.	Member (Farmer)
22.	**Mr.M.Velayutham** S/o.Munusamy, Brammadesam, Vembakkamtaluk,Thiruvannamalai.	Member (Farmer)
23.	**Mr.K.Karthikeyan** S/o. Kannan, Mottur, Kalasapakkam taluk, Thiruvannamalai.	Member (Agripreneur)
24.	**Mrs.N.Meenatchi** W/o. Nandakumar, Chinnasenkadu, Cheyyar taluk, Thiruvannamalai.	Member (Farm women)
25.	**Mrs.P.Manimozhi** W/o.Perumal, Sorappathur village, Thellar block, Thiruvannamalai.	Member (Farm women)
26.	**Mrs.S.Bhuvaneswari** W/o.Selvathambi, Chithathur,	Member (SHG)

Sl.No.	Name and Address	Affiliation
	Vembakkam taluk, Thiruvannamalai.	
27.	**Dr.T.Sundarraj,** Senior Scientist and Head, ICAR KVK, Krishnagiri.	Special invitee
28.	**Dr.M.Senthilkumar,** Associate Professor, Directorate of Extension Education, TNAU, Coimbatore	Special invitee
29.	**Mr.S.Tamilmaran** District Executive Officer, Tamil Nadu Vazhndhu Kattuvom Project, Thiruvannamalai	Special invitee
30.	**Mr.M.Narasimmapallavan** Assistant Horticulture Officer, Vembakkam	Special invitee
31.	**Mr.Murugan,** Manager, Mannuyir FPO, Cheyyar	Special invitee
32.	**Mr.V.Suresh** Senior Scientist and Head i/c, ICAR KVK, Thiruvannamalai.	Member Secretary

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Annexure II

Programme – 1

Capacity building for Adoption of Technology (CAT) on Natural Farming (20.02.2023 –22.02.2023)

Introduction

Thiruvannamalai district is an agrarian district. The area available for the cultivation is 3,04,929 ha. Red and red series loam is the major soil type available in the district. The soil and climatic conditions prevailing in the district are very much suitable for the agricultural crop cultivation.

At present, the farmers of Thiruvannamalai district are facing poor outcome in agriculture by water dearth, high prevalence of pest and diseases, labor shortage, poor soil fertility, high cost of cultivation, less awareness on usage of available resources for plant protection. Majority of the farmers are using abundant quantity of chemical pesticides and fertilizers for higher production in all the predominant crops in the recent years. This will defenetely increase the production cost, Soil health concern poor quality and decreased income of their produce.

Natural farming system is a method of farming system which primarily aimed at cultivating the land and raising crops in such a way, as to keep the soil alive and in good health by use of organic wastes and other biological materials along with beneficial microbes to release nutrients to crops for increased sustainable production in an eco friendly pollution free environment.

Objectives

- To create awareness among the farmers high nutritional quality produce in sufficient quantity.
- To encourage, promote and development of natural farming system in the district.
- To encourage the use of organic and biological sources (biofertilizers, organic manure, compost, bio-pesticides, bio-control agents etc.,) in crop production.
- To promote an alternative strategy over chemical farming.

DAY – I (20.02.23)

ICAR – Krishi Vigyan Kendra, Thiruvannamalai had organized a 3 days training programme for 25 farmers alias shareholders of various farmer producer organisations in Thiruvannamalai district with the financial support of NABARD from 20.02.23 to 22.02.23.

In the inaugural session, Mr. V. Suresh, Senior Scientist and Head i/c has given welcome address and lecture about the importance and scope of natural farming practices in agriculture and horticulture crops. He also emphasized the farmers to produce bioinputs on large scale for commercial supply.

Miss. P.Ishwarya, Subject Matter Specialist (Agronomy) handled the session on Scope and importance of organic agriculture, Compost production technology and soil Fertility Management technigues with demonstrations. She also handled the session on organic cultivation of field and horticulture crops.

Mr. P.Narayanan, Subject Matter Specialist (Plant protection) had given lecture on bio agents production like *Trichoderma viride*, *Bacillus subtilis* and their uses in natural farming practices. He also demonstrated seed treatment and soil application practices in field crops using *Trichoderma* and *Bacillus subtilis*.

DAY -2 (21.02.23)

As part of the training programme, an exposure visit had been organized on 21.02.23 for the participants. The participants had visited Mr.Gomathivinayagam's Organic farm, Puliyankudi village of Sankarankovil block in Tenkasi district of Tamil Nadu. They have learnt about different bioinputs preparation techniques used for agriculture and horticulture crops. They also visited Mr. Anthonysamy's Natural farm in the same village and learnt about varios natural farming practices followed for the quality production of fruit crop and sugarcane. Mr.P.Narayanan Subject Matter Specialist (Plant Protection) KVK Thiruvannamalai had coordinated the exposure visit.

The farmers also taken to ICAR Krishi Vigyan Kendra, Tenkasi and had a discsiion with technical experts regarding organic farming practices. Smt.Monica, SMS (PP), KVK Tenkasi took the farmers in different bio input units established by the KVK in the instructional farm.

DAY-3 (22.02.23)

Miss.M.Ishwarya, SMS (Agronomy) and Mrs.M.Shanthi, Farm Manager demonstrated the preparation of Panchakavyam, Jeevamirtham and Fish Amino acid to the farmers. They also demonstrated the application of Jeevamirtham in Paddy field existing in the KVK farm.

Shri. V.V.Vasudevan, a progressive organic grower from Vazhur village in Vandvasi had shared his 15 long years experience in cultivating Paddy, Groundnut and vegetables organically. He also had given procedures in preparing different bio products to control pest and diseases.

Shri. Vijay Neehar, District Development Manager, NABARD, Chennai Cluster had participated and addressed the farmers during the valedictory session. He also collected the feedback from farmers about the training programme and distributed technical guide on Natural farming and certificates to 25 farmers. Dr.K.Maayakrishnan, Subject Matter Specialist (Animal Science) delivered vote of thanks.

Details of participants

S. No.	Name of farmers	Address	Mobile No	Age	Sex	Community
1	V.Prabagaran S/o Veerathiran	Chithathur, Vembakkam tk, Thiruvannamalai Dt.	9994644324	30	M	MBC
2	Vijayan S/o Muthusamy	Kilnelli, Vembakkam tk, Thiruvannamalai Dt.	9787549107	40	M	MBC
3	Tamizhvanan S/o Vadivel	Kilnelli, Vembakkam tk, Thiruvannamalai Dt.	7010777500	30	M	MBC
4	Sankar S/o Chinnappan	Kilnelli, Vembakkam tk, Thiruvannamalai Dt.	8940962278	63	M	MBC
5	Venkatesan S/o Nelavazhagan	Arathri vellore, Cheyyat tk. Thiruvannamalai Dt.	9688532188	42	M	BC
6	Gopal S/o Jambulingam	Chithathur, Vembakkam tk, Thiruvannamalai Dt.	9361566920	65	M	BC
7	Pannerselvam S/o Sabapathi	Thiruvadirayapuram Vembakkam tk, Thiruvannamalai Dt.	9751006586	66	M	MBC
8	Shanmugavel S/o Pachiyappan	Kilnelli, Vembakkam tk, Thiruvannamalai Dt.	8940966678	65	M	MBC
9	Manikkam S/o Elumalai	Nedumpirai, Cheyyat tk. Thiruvannamalai Dt.	9715825853	65	M	MBC
10	Theerthagiri S/o Natesan	Kilnelli, Vembakkam tk, Thiruvannamalai Dt.	9943970515	62	M	MBC
11	Ramesh S/o Arumugam	Kilnelli, Vembakkam tk, Thiruvannamalai Dt.	9943602145	41	M	MBC
12	Thiyagarayan S/o. Kuppan	Chithathur, Vembakkam tk, Thiruvannamalai Dt.	9786628330	47	M	MBC
13	Pandurangan S/o Manogaran	Kilnelli, Vembakkam tk, Thiruvannamalai Dt.	808921170	47	M	MBC
14	Jaiganesh S/o Mohanasundaram	Palli, Cheyyar tk, Thiruvannamalai Dt.	6379040574	22	M	MBC
15	Venkatesan S/o Devaraj	Arathri vellore, Cheyyar tk, Thiruvannamalai Dt.	9787158804	32	M	MBC
16	Magesh S/o Shanmugavel	Kilnelli, Vembakkam tk, Thiruvannamalai Dt.	9787366797	45	M	MBC
17	Captain Prabakaran S/o Deivasigamani,	Kilnelli, Vembakkam tk, Thiruvannamalai Dt.	9787475405	30	M	MBC

18	Perumal S/o Panjacharam	Thiruvadirayapuram, Vembakkam tk, Thiruvannamalai Dt.	8489311037	62	M	MBC
19	Varathan S/o Polsamy	Thiruvadirayapuram, Vembakkam tk, Thiruvannamalai Dt.	9751237642	40	M	MBC
20	Panjacharam S/o Rajagopal	Kilnelli, Vembakkam tk, Thiruvannamalai Dt.	9787669148	59	M	MBC
21	Devaraj S/o Subramani	Kilnelli, Vembakkam tk, Thiruvannamalai Dt.	9787641682	40	M	MBC
22	Palani S/o Ganesan	Dusi, Vembakkam tk, Thiruvannamalai Dt.	9789924110	36	M	MBC
23	Boobathi S/o Thandavarayan	Kilnelli, Vembakkam tk, Thiruvannamalai Dt.	9585690551	34	M	MBC
24	Thanigaimalai S/o Muniyan	Kilnelli, Vembakkam tk, Thiruvannamalai Dt.	9751837135	43	M	MBC
25	Harikrishnan S/o Murugan	Kilnelli, Vembakkam tk, Thiruvannamalai Dt.	7639992344	47	M	MBC

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Programme – 2

Skill Training of Rural Youth (STRY) on Organic Production of Fruits and Vegetables (28.08.2023 – 02.09.2023)

I. Brief description on the Skill training on Organic Production of fruit and vegetables (STRY)

The skill training of rural youth (STRY) on Organic Production of fruits and vegetables was conducted at the ICAR Krishi Vigyan Kendra, Kilnelli, Thiruvannamalai district from 28th August 2023 to 02th September 2023 under the financial assistance of ATMA, Thiruvannamalai.

The inaugural function of the programme was held on 28th August 2023 at 11.00 am. Shri.C.Harakumar,The Joint Director of Agriculture, Thiruvannamalai had participated as chief guest and inaugurated the programme. Dr.M.R.ramanathan, Deputy Director (Farmers Training Centre) Thiruvannamalai gave lecture on the importance of organic farming and soil management practices for the problematic soil in the district. Mr.J.Soundar, Agricultural officer (Farmer Training Center) participated and explained about the objectives of the training for the rural youth.

The experts from ICAR Krishi Vigyan Kendra, Thiruvannamalai have participated and handled various technical sessions during the six days training programme. The valedictory function of the programme was held on 02th September 2023 at 3.00pm, Dr.M.R.ramanathan,

Deputy Director (Farmers Training Centre) Thiruvannamalai participated as chief guest and Mr.J.Soundar, Agriculture officer (Farmers Training Centre), distributed certificates to the trainees and listened to their feedback. Mr. V. Suresh, Senior Scientists and Head, KVK, Kilnelli addressed the vote of thanks to all the trainees.

Total numbers of 28 farmers from Vembakkam, Cheyyar and Vandavasi block of Thiruvannamalai district were participated and benefited through this Skill Training of Rural Youth (STRY) training programme on Organic production of fruit and vegetables.

Annexure - A

Details of candidates for Skill Training of Rural Youth (STRY)

Name of the Training Institute	ICAR – Krishi Vigyan Kendra	Address of the Training Institute:	**Senior Scientist and Head,** ICAR – Krishi Vigyan Kendra, Kilnelli, Chithathur post, Vembakkam taluk, Thiruvannamalai district – 604410 Tamil Nadu.
Phone (Office):	+91 6384093303	E-mail ID:	kvktvmalai91@gmail.com
Name of the Programme Coordinator	Mr.V.Suresh	Designation:	Senior Scientist and Head
Mobile No:	8220004286		
Sector	Horticulture	Skilling area:	Organic production of fruits and vegetables
Period of the training:	28.08.2023 To : 02.09.2023 (6 days)	No of participants:	28

Sl. No.	Name of the Candidate	Gender	Age	Category	Postal Address of the candidate	Mobile No
1	Mr.Y.Harikrishnan S/o. Yoganantham	M	28	OBC	53, Road street, Keezhneerkundram, Cheyyar taluk- 604401	9940860612
2	Mrs.N.Meenatchi S/o.Nandhakumar	F	36	OBC	583, Kavankari street, Sengadu, Cheyyar - 604407	7402073855
3	Mr.S.Venkatesan S/o. Subramani	M	35	OBC	35, Pillayarkovil street, Periyakovil village, Nedunthirai (po), Cheyyar. - 604407	9787906878
4	Mr.J.Prakash S/o.Janarthanam	M	37	OBC	75, Big street, Kilnelli, Chithathur, Vembakkam tk-604410	9047881169
5	Mr.E.Suresh S/o.Elumalai	M	29	OBC	754,Palla street, Chinnasengadu, Cheyyar - 604505	8754997335
6	Mrs.A.Yogalakshmi W/o. Anbusekar	F	33	OBC	214 A, Mettu street, Namandi vilalge, Vembakkam tk -604410	9944681869

Sl. No.	Name of the Candidate	Gender	Age	Category	Postal Address of the candidate	Mobile No
7	N.Balaji S/o.Nataraj	M	33	OBC	427, Pillayar kovilstreet, Ammapalayam,Seengadu, Cheyyar – 604505	8597802856
8	Mr.N.Lingeshwaran S/o.Narayanan	M	36	OBC	74, Braminar street, Vengalathur, Vembakkam tk-604410	9944194704
9	Mr.S.Suresh S/o. Subramani	M	25	OBC	405, Kulallarai street, Chithathur village, Vembakkam tk -604410	6380431059
10	Mr.Muthuselvam S/o.Venkatesan	M	36	SC	230, Nethaji street, Elaneerkunram, Anakavoor - 604401	7092429777
11	Mr.K.Ramadoss S/o.Krishnan	M	27	OBC	127, Mariyamman Kovil street, Vengalthur, Vembakkam - 604410	9597787817
12	Mrs.K.Sagunthala W/o.Karuna	F	37	SC	334, Mariyamman kovil street, kilnelli, vembakkam – 604410	9042668566
13	Mr.S.Abinesh S/o.Sivaperumal	M	22	OBC	483, Kulaikarai street, Chithathur, Thiruvadirayapuram, Vembakkam tk -604410	8925685768
14	C.Appandai raj S/o.Chandiranathan	M	35	General	Nainar street, Moranam, Vembakkam – 604410	9043962423
15	Mrs.T.Kavitha S/o.Thirulogachander	F	37	SC	502/1, Mariyamman kovilstreet,Chithathur, Vembakkam tk -604410	7418237592
16	Mr.P.Chakravarthi S/o. Perumal	M	31	OBC	41/2, Amman koil street, Soraputhur, Japthikaranai, Vandavasi tk-604406	6383847780
17	Mrs.A.Suganya D/o. Arumugam	F	22	OBC	41/2, Amman koil street, Soraputhur, Japthikaranai, Vandavasi tk-604406	7904707029
18	Mr.K.Venkatesan S/o. Kotteswaran	M	37	OBC	49, Perumal kovil street, Karanthai village, Vembakkam tk- 604410	9787366581
19	Mr.D.Sakthi S/o.Dharuman	M	35	OBC	492, Pillaiyar Kovil street, Chinnachengadu, Cheyyar taluk-604505	9788269273

Sl. No.	Name of the Candidate	Gender	Age	Category	Postal Address of the candidate	Mobile No
20	Miss.L.Saranya D/o.Lakshman	F	22	OBC	208, Perumal kovil street, Vanniyanthangal, Vinnavadi (po), Cheyyar-604407	7502420967
21	Mr.A.Manogar S/o.Adhikesavan	M	30	OBC	53, Middle street, Nalleri, Ponnur, Vandavasi - 604408	7667094952
22	Mr.D.Soundarajan S/o.Dhanapal	M	39	SC	453, Road street, Vengalathur, Vembakkam tk.	9003619015
23	Mr.P.Soundar S/o.Parasuraman	M	39	OBC	507, Mettu street, Vadamanapakkam, Vembakkam tk- 604402	7418740100
24	Mr.L.Velayutham S/o.Loganathan	M	35	SC	495, Mariyamman koil street, Chithathur, Vembakkam tk- 604410	9751896692
25	Mr.S.Anbazhagan S/o.Sivaperumal	M	28	OBC	483, Kulaikarai street, Chithathur, Thiruvadirayapuram, Vembakkam tk -604410	6369100451
26	Mrs.S.Jayanthi W/o.Sekar	F	36	OBC	143A, Mettu street, Vanniyathangal, Vinnavadi, Cheyyar- 604407	8825517271
27	Mrs.V.Adhilakshmi S/o.Visu	F	27	OBC	147B, Kanniyammal kovil street, Vinnavadi, Vanniyathangal, Cheyyar-604407	8637458675
28	Mr.S.Gopalkrishnan S/o, Sangaralingam	M	34	OBC	199, Veerapathran kovil street, KK Nagar, Thenkazhani, Vembakkam - 604410	9944171499

Programme – 3

Skill Training of Rural Youth (STRY) on Advanced technology in agriculture, drone technology and Precision agriculture
(04.12.2023 –09.12.2023)

I. Brief description on the Skill training on Advanced technology in agriculture, drone technology and Precision agriculture

The skill training of rural youth (STRY) on advanced technology in agriculture, drone technology and Precision agriculture was conducted at the ICAR Krishi Vigyan Kendra, Kilnelli, Thiruvannamalai district from 4th December 2023 to 09th December 2023 under the financial assistance of ATMA, Thiruvannamalai.

The inaugural event of the programme was held on 04th December 2023 at 11.00 am at the KVK premises. Shri.C.Harakumar, Joint Director of Agriculture, Thiruvannamalai participated as chief guest and inaugurated the training programme. Mr. V. Suresh, Senior Scientists and Head, ICAR KVK, Kilnelli addressed the gathering and briefed about the importance of advanced technologies in agriculture. Mr Ramanathan, Deputy Director, Farmer Training Center and Mr. J.Soundhar, Agriculture Officer were also participated and narrated about the skill trainings being conducted by ATMA with involvement of KVK and other stakeholders in the district.

The Subject Matter Specialists from ICAR Krishi Vigyan Kendra, Thiruvannamalai have participated as resource person in the training programme and handled various technical sessions during the programme.

The valedictory session of the programme was held on 09th December 2023 at 4.00pm, Shri. S. Ramesh, Chairman, TamilNadu Board of Rural Development and Shri.C.Harakumar, Joint Director of Agriculture, Thiruvannamalai participated as chief guests and distributed the training certificates to all the participants and listened to their feedback.

A total number of 28 farmers from all over Thiruvannamalai district participated and benefited though this STRY training programme.

Annexure - A

II. Details of candidates trained under Skill Training of Rural Youth (STRY)

Details of candidates

Name of the Training Institute	ICAR – Krishi Vigyan Kendra	Address of the Training Institute:	**Senior Scientist and Head,** ICAR – Krishi Vigyan Kendra, Kilnelli village, Chithathur post, Vembakkam taluk, Thiruvannamalai district – 604410 Tamil Nadu.
Phone (Office):	04182 – 6384093303, 290551	E-mail ID:	kvktvmalai91@gmail.com
Name of the Programme Coordinator:	Mr.V.Suresh	Designation:	Senior Scientist and Head
Mobile No:	8220004286	-	-
Sector	Agriculture	Skilling area:	Advanced technology in agriculture, Drone technology and Precision agriculture
Period of the training	04.12.2023 To : 09.12.2023 (6 days)	No. of participants:	28

Sl. No	Name of the Candidate	Gender	Age	Category (SC/ ST/OBC/ Gen)	Postal Address of the candidate	Mobile no
1	P.Senthamilnilavan S/o. Pichairaj	M	23	SC	No.509, Ambedkar street Keekalur, Kilpennathur Tk.,	7010074208
2	N.Pachaiyappan S/o. Natarajan	M	29	OBC	No.274,Pillaiyar koil street, Maandangal, Vedal Post, Vandavasi Tk.,	8754816632
3	R.Dhivagar S/o. Ramalingam	M	33	OBC	No.43 ,Pillaiyar koil street, Maandangal, Vedal Post, Vandavasi Tk.,	7339030821
4	R.Ramarajan S/o. Ravi	M	32	MBC	No.64, Pillaiyarkoil street, Kilsesamangalam, Salaivedu post, Vandavasi.	9840888440

Sl. No	Name of the Candidate	Gender	Age	Category (SC/ ST/OBC/ Gen)	Postal Address of the candidate	Mobile no
5	U. Vimalraj S/o. Umapathy	M	29	OBC	No.35/15, Aathangarai Street, Thiruvathur, Cheyyar	8300889839
6	U.Vetriyalagan S/o. Umapathy	M	33	OBC	No.35/15, Aathangarai Street, Thiruvathur, Cheyyar	8608418535
7	Ramachandiran S/o. Munusamy	M	37	MBC	No.134, Kazhikulam village, Kilpennatur	9943416062
8	S.Thirunavukarasu S/o. Sankar	M	36	MBC	No.519,Road street, Mamandur, Vembakkam Tk.	9943226001
9	V.Babu S/o. Vengatesan	M	29	OBC	No.152, Dhraupathi amman koil street Alathur, Cheyyar	8870394442
10	K.Manigandan S/o. Kumar	M	33	MBC	No.181, Periyareddy, Alathur, Cheyyar	9655797936
11	A.John Baptise S/o.Anthony	M	29	OBC	No.300, Nadu Theru, Ilayangkanni, Thandrampat	7812019705
12	K.Abinesh S/o. Kulasekaran	M	24	OBC	No.200, Nattu street, Kilkachirapattu, Maiyur, T.V Malai Tk.	9994485671
13	M.Perumal S/o Murugan	M	33	MBC	No.24, Nayakkar street, Mamandur village, Vembakkam	9361915692
14	S.Kabilan S/o.Subramani	M	19	MBC	No.138, Karnapoondi street, Sirunathru, Thiruvannamalai Tk.	9092169204
15	A.Anbazhagan S/o.Annadurai	M	28	SC	No.566, Mettu street, Vedanthavadi, Kilpennathur	9363539353
16	M.Kannadasan S/o.Maruthan	M	34	SC	No.509, Ambedkar street, Keekalur, Kilpennathur	8608264017
17	M.Dhillibabu S/o. Muniyandi	M	18	SC	No.980, Kamarajar nagar, Ariyapadi, Arni	6381867551
18	E.Anbarasan S/o. Elumalai	M	36	SC	No.354,Gangaiammank oil street, Adaiyur post, Cheyyar Tk.	9585696025

Sl. No	Name of the Candidate	Gender	Age	Category (SC/ ST/OBC/ Gen)	Postal Address of the candidate	Mobile no
19	A.Prashanth S/o. Anandhan	M	31	SC	No.184, Road st. Perumpallam village, Arudhavur post, Cheyyar Tk.	9677276761
20	S.Pawnkumar S/o. Sambasivam	M	24	OBC	No.209, Mariyamman koil street, Kottaiyur, Thenkarumbalur post, Thandrampat Tk.	9751726095
21	P.Chakravarthy S/o. Perumal	M	30	MBC	No.41/2, Ammankoil street, Soraputhur, Vandavasi	6383847780
22	R.Aravinth S/o. Rajamanikkam	M	32	SC	No.209,Pillaiyarkoil 2ND street, Kadambai village, Somasipadi post, Kilpennatur	8220453757
23	E.Vetritamilselvan S/o. Elumalai	M	34	MBC	No.65, Padasalai street, Konalur village	9500842606
24	G.Logeshwaran S/o. Gembulingam	M	27	SC	No.561, Road street Irumbadhangal, Palli Post, Cheyyar	9688621010
25	E.Ramkumar S/o. Elumalai	M	28	MBC	No.21, Bajanakoil street, Madavilagam village, Goodalur Post, Polur Tk.	9688865431
26	M.Vijayakumar S/o. Muniyappan	M	28	OBC	No.2/429, Road street, Echur village,Cheyyar Tk.	7418890525
27	R.Narasimman S/o.Ravi	M	23	BC	No.78, Main road street, Alathur village & Post, Cheyyar Tk.	7639065171
28	A. Peraman S/o.Annamalai	M	29	MBC	No.30, Mettu street Mathalambadi, Thiruvannamalai Tk..	9942363678

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