

ICAR KRISHI VIGYAN KENDRA

Thiruvannamalai, Tamil Nadu.

ANNUAL REPORT (1st January 2022 to 31st December 2022)

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 : kvkvmalai91@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 : No:24, IInd floor, Crescent park street, T.Nagar, Chennai-600 017. Tamil Nadu.
 Phone : 044-24361319
 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 31.12.2022	Present status
Jeep : TN-97 V 1702	2023	917029/-	0.00	New vehicle purchased.
MF Tractor & Trailer : TN-25 AX 1058	2012	5,70,000/-	2561.8	Good
Hero Honda : TN-09 AP 4662	2006	36,890/-	102376	Need to be replaced
Hero Honda passion plus : TN-25 S 0563	2009	49,476/-	100540	Good

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 - 1/4HP 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 Model	3/9/2010	77520	Need to be replaced
35	Inverter-Usha Zentra digital-1400 VA with Tubular battery SR-2Nos	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	
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.	17.03.2022	24	-
2.	20.03.2023	27	Details given hereunder:

I. SALIENT RECOMMENDATIONS OF THE SAC MEMBERS

The President, TNBRD, Chennai.

- Export oriented training programmes may be organized in collaboration with APEDA.
- Importance may be given for the crop and animal insurance coverage by the Departments of Agriculture and Animal Husbandry.
- Documentation of success stories of Mr.M.Velayutham and Mrs.P.Manimozhi in cultivation of traditional paddy varieties may be taken up.
- Agri marketing facilities should be strengthen with the line departments. The line department should also engage FPOs and SHGs to strengthen the marketing facilities.

- The KVK may prepare a booklet on all department schemes with the support of line department in details.

The Director of Extension Education, TNAU, Coimbatore.

- The existing vacant positions if any may be filled for the effective functioning.
- Importance may be given for the promotion of Integrated Organic Farming System.
- The Indian Institute of Oilseeds Research, Hyderabad technologies on Groundnut value added products may be promoted.
- Promotion of Millets cultivation, traditional varieties and its value addition may be taken up by the KVK.
- Displays to be made available on all the department schemes in the KVK campus.
- The KVK may promote low cost machineries and equipments for the benefit of small and marginal farmers.
- The KVK may organize the training programmes on e-commerce to facilitate e-marketing facilities to the FPOs and farmer collectives.
- Demonstrations may be conducted on Rice fallow pulses and Millets in the KVK instructional farm.

The Joint Director of Agriculture, Thiruvannamalai.

- Training programmes on value added products in millets for the SHGs and FPOs may be given by the KVK.
- Demonstrations may be conducted on Rice fallow pulses in the KVK farm.
- Bund cropping technology with Blackgram and Marigold may be promoted.

The Dean, AC&RI, TNAU, Vazhavachanur, Thiruvannamalai.

- Training for BODs and CEOs of FPOs on alternate business opportunities may be organized.
- Training may be given on Nursery management, Mushroom production, new pest and disease management and Agro forestry.

The Professor and Head, Centre of Excellence in Millets, Thiruvannamalai.

- Demonstrations on new varieties released by CEM, Athiyandal may be promoted.
- The exposure visit of farmers may be organized to CEM, Athiyandal by the KVK.
- Importance may be given for the millet value added products in the KVK training Programmes.

Regional Joint Director, Department of Animal Husbandry, Thiruvannamalai.

- The trainings may be given on Goat farming, Mastitis management, Repeat breeding and Ecto parasite management.

Associate Professor and Head, VURTC, TANUVAS, Thiruvannamalai.

- Seasonal problem based training programmes on live stock management may be given.
- The KVK may concentrate trainings on Japanese quail farming and Rabbit farming.
- Displays on all the department schemes may be placed in the KVK campus.

The Deputy Director, Department of Agrimarketing and Agribusiness, Thiruvannamalai.

- Export oriented training to FPOs may be organized.

The District Development Manager, NABARD, Thiruvannamalai.

- Low cost IFS models may be promoted by the KVK in the farmer's field.
- The KVK may give importance on millet cultivation.
- The KVK may prepare booklet on all department schemes with the financial support of NABARD.

The Lead District Manager, Indian Bank, Thiruvannamalai.

- Monthly convergence meeting for the farmers may be organized in coordination with Indian Bank.

Assistant Director, Fisheries and Fisherman Welfare, Vellore.

- Convergence programme with fisheries department may be taken up by the KVK.

District Industrial Centre, Thiruvannamalai

- The KVK should give importance on value addition in groundnut
- Importance may be given in KVK activities for the promotion of value addition in Groundnut, since the crop is selected for One District One Product (ODOP) scheme.

The Deputy Horticulture Officer, Thiruvannamalai

- Training may be given on IPDM in Chillies.
- Organic farming, Mushroom production, Vermicompost production technology related training may be imparted to the farmers.
- Promotion of dry land horticulture may be taken up by the KVK.

The Executive Engineer, Agri Engineering, Thiruvannamalai

- Training may be conducted on Millet value addition to the farmers.
- The KVK may exhibit the products of entrepreneurs in the mega events organized by the KVK and other stakeholders.

Farmer Members

Mr.K.V.Palani, Farmer, Kalambur, Polur, Thiruvannamalai.

- Importance may be given for the introduction of new millet varieties at village level.
- KVK may promote other value added products in groundnut other than groundnut oil.

Mr.M.Velayutham, Farmer, Brammadesam, Vembakkam, Thiruvannamalai.

- The technology may be provided for organic method of paddy straw decompost by the KVK.
- Promotion of CO57 Kavuni paddy variety among the farmers may be taken up by the KVK.

List of members participated in the SAC meeting: Annexure-I

2. DETAILS OF DISTRICT (2022)

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
			Thurinapuram	47	57
2	Kilpennathur	Keelpennathur	Keelpennathur	45	77
3	Thandampattu	Thandampattu	Thandampattu	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 28.62°C. Hot during summer(35 - 37°C). Cool during winter periods (24 - 26°C). 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 2022. (Season: Kharif, Rabi and Summer)

S. No	Crop	Area (ha)	Production (tonnes)	Productivity (kg/ha)
1	Paddy	170608	687000	4027
2	Cumbu	6034	2482	2431
3	Cholam	37	45	1210
4	Ragi	4408	14207	3223
5	Samai	5418	10765	1987
6	Maize	965	5397	5593
7	Blackgram	39830	23699	595
8	Greengram	2136	1179	552
9	Redgram	1643	2083	1268
10	Groundnut	92990	252747	2718
11	Gingelly	2263	1122	496
12	Coconut	746	4898 (Nuts)	6566
13	Sugarcane	11819	305138	93000
14	Turmeric	294	1534	5217
15	Tapioca	1530	64570.6	42203

16	Cotton	282	261620	412
17	Tomato	717	9354.7	13047
18	Brinjal	991	10236.0	10329
19	Bhendi	653	4290.2	6570
20	Chillies	2344	1472	628
21	Banana	3281	112210	34200
22	Mango	405	2217.0	5474
23	Onion	247	0.891	8652
24	Mulberry	600	25.33 (Cocoons)	42.22
25	Others	29370	-	-
Total Cropped area (ha)		379611	-	-

2.5. Weather data

Month	Rainfall (mm)	Temperature °C		Relative Humidity (%)
		Maximum	Minimum	
January 2022	21.08	27.80	21.60	74.10
February	0.25	29.20	21.00	55.20
March	6.06	33.00	22.80	48.00
April	7.50	35.60	25.80	52.60
May	165.3	36.20	28.30	49.60
June	87.66	33.10	27.60	49.90
July	130.18	32.90	25.90	62.50
August	212.62	33.10	26.50	61.70
September	61.73	31.80	25.10	68.10
October	133.9	31.60	24.70	61.90
November	201.7	29.40	23.50	75.30
December 2022	153.2	27.30	21.90	76.10
Average/Total	1181.18	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			
<i>Crossbred</i>	694856	505260	6.86
<i>Indigenous</i>			
Buffalo	74741	104355	4.30
Sheep			
<i>Crossbred</i>	177712	424140	-
<i>Indigenous</i>			
Goats	248410	341440	-
Pigs			
<i>Crossbred</i>	5361	17200	-
<i>Indigenous</i>			
Rabbits	89	-	-
Poultry			
Hens, <i>Desi Improved</i> , Ducks Turkey and others	242311	8834000	-
Domestic dogs	4545	-	-

2.7. Details of Adopted Villages (2022)

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, lack of awareness on season specific varieties, High infestation of pest & diseases BPH, Stem borer, Tungro, BLB and Blast, High incidence of pest and disease, Yield reduction. Lack of knowledge on value addition.	Training, Special programme
				2016-17	Finger millet, Little millet	Cultivation of old varieties, Lack of awareness on high yielding & drought tolerant variety, High incidence of Blast disease, Lack of knowledge on value addition. Low market price.	FFS, 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, Special programme

				2016-17	Bhendi	Low yield, Imbalanced nutrition, Non adoption of improved technologies, YVMV. Lengthy time consuming and Crucial process during harvest.	Trainings, Awareness programme
				2016-17	Brinjal, Tomato, Chilli	Low yield, Flower drop, Lack of application of growth regulators, Cultivation of local variety, Lack of adoption of improved hybrids and technologies, Leaf curl in tomato, Incidence of shoot & fruit borer and little leaf, Wilt and Sucking pests. Imbalanced nutrition, No value addition.	FLD, Training, Method demonstration, Field day, Soil health camp
				2018-19	Cow	Low milk production, High disease incidence. Infertility due to repeat breeding, Lack of awareness on clean milk production.	Training, Health camp
				2018-19	Goat	Low body weight, High mortality, High morbidity.	Training, Health camp
				2018-19	Poultry	Less number of egg production, Low hatchability, Chick mortality, Less feed efficiency.	Trainings, Entrepreneurship development.
Details of DFI villages							
1	Vandavasi	Vandavasi	Kilsembedu	2016-17	Paddy	Cultivation of old varieties, lack of awareness on season specific 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,	Trainings, awareness programme, Soil health camp

						Tungro, False smut, wild boar & extensive use of chemical pesticides.	
					Blackgram	Prolonged cultivation of age old varieties, 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 and, winnowing of pulses.	Training and Extension activities, Soil Health camp
					Snake gourd, Bitter gourd	Low fruit set, Maleness, Lack of adoption of location specific hybrids, Imbalanced nutrition, High incidence of mosaic, fruit fly, Sucking pests, Downy mildew and powdery mildew.	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.	OFT, Trainings, Animal health camp
					Value addition-Fruits and Vegetables	No value addition, Low market price, Lack of knowledge on value addition.	OFT, Trainings, Method demonstration, Entrepreneurship development.
2	Arni	West Arni	Athanur	2016-17	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, Entrepreneurship development, Awareness camp

					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, Training, Method demonstration
					Brinjal	Low yield, Flower drop, Lack of application of growth regulators, Cultivation of local variety, Leaf curl in tomato, Incidence of shoot & fruit borer and little leaf, hadda beetle, Imbalanced nutrition, Poor quality seedlings and field establishment. Low market price.	Training, Method demonstrations.
					Fodder	Feeding of low protein fodder for dairy animals, Lack of awareness about cultivation of fodder crops.	FLD, Training, Method demonstrations, Field day

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.)	20	20
2.	On-farm trials conducted (No.)	10	10
3.	Frontline demonstrations conducted (No.)	20	20
4.	Farmers trained (in Lakh)	0.02314	0.02314
5.	Extension Personnel trained (No.)	187	187
6.	Participants in extension activities (in Lakh)	0.10830	0.10830
7.	Production and distribution of Seed (in Quintal)	72.78	72.78
8.	Planting material produced and distributed (in Lakh)	4.39981	4.39981
9.	Live-stock strains and finger lings produced and distributed (in Lakh)	0.02808	0.02808
10.	Soil samples tested by Mini Soil Testing Kit (No)	-	-
11.	Soil samples tested by Traditional Laboratory (No)	784	784
12.	Water, plant, manure and other samples tested (No.)	63	63
13.	Mobile agro-advisory provided to farmers (No.)	103046	103046
14.	No.of Soil Health Cards issued by Mini Soil Testing Kits (No.)	-	-
15.	No. of Soil Health Cards issued by Traditional Laboratory (No.)	784	784

Salient Achievements by KVK during the year in bullet points:

- Quality seeds of improved high yielding new varieties viz., VBN-8 (Black gram) 32.96 Qtl and Co-52 & Kullakar (Paddy) 16.82 Qtl, Kadiri 1812 (Groundnut) 21.27 Qtl and fodder seeds like, hedge leucerne, subabul, COFS 29 & 31 (1.56 Qtl) were supplied to the farmers.
- A total of 437200 numbers of quality CO5 fodder slips were supplied to the farmers of Thiruvannamalai in convergence with Aavin, Thiruvannamalai.
- Climate smart millet crops viz., Pearl millet, finger millet, little millet, foxtail millet, kodo millet, proso millet, banyard millet have been promoted in the district over an area of 12214 hectares, which increased the income of the farmers to the tune of rupees 37900/ha with Centre of Excellence in Millet and Department of Agriculture, Thiruvannamalai.
- With a view to increase the productivity of the vegetables by 20-30 %, foliar nutrition has been promoted by KVK. Total quantity of 490 kg of IIHR vegetable special (Micronutrient formulation) has been produced and distributed to farmers. At present the technology has spread over an area of 1220 ha in the district.
- A total of 26 Integrated Farming System models have been established in the district and being maintained under the technical support of KVK. They serve as model IFS farms in the district.

- As an alternative income generation activity, the beekeeping has been promoted in the district by KVK. A total of 17 small scale bee farms have been established in the district and 463 farmers directly benefited.
- To diversify cropping system in the district, in collaboration with Ministry of AYUSH, the KVK created awareness on medicinal plants cultivation covering 100 farmers with the buyback arrangements through TAMPCOL and IMPCOPS.

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
10	10	20	20	10	10	70	70

FLD (crop/enterprise/CFLDs)

No of Demonstrations		Area in ha		Number of Farmers/Beneficiaries/ Replications	
Targets	Achievement	Targets	Achievement	Targets	Achievement
20	20	32.40	32.40	190	190

Training including sponsored, vocational and other trainings

Number of Courses			Number of Participants	
Clientele	Targets	Achievement	Targets	Achievement
Farmers and Farm Women	89	89	1451	1451
Rural youth	13	13	203	203
Extn. Functionaries	11	11	187	187
Vocational	3	3	39	39
Sponsored training	21	21	621	621

Extension Activities

Number of activities		Number of participants	
Targets	Achievement	Targets	Achievement
260	260	10830	10830

Seed Production (q)

Target	Achievement	Distributed to no. of farmers
72.78	72.78	547

Planting material (Nos.)

Target	Achievement	Distributed to no. of farmers
439981	439981	581

Bio Products (Kgs.)

Target	Achievement	Distributed to no. of farmers
3593.25	3593.25	472

4.1. Technology Assessments (OFTs) in Detail

4.1.1. Assessment of Little millet varieties (ATL – 1 and DHLM – 36 – 3) for higher productivity

1. **Thematic area** : Varietal evaluation
2. **Title** : Assessment of Little millet 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	Rabi	Sandy loam	L	M	H	13.81	2

5. Problem definition / description:

- Lack of knowledge and availability of improved varieties
- Lack of awareness on millet cultivation practices.
- Shortage of labor for production and processing.

6. Technology Assessed:

TO1 : Cultivation of Little millet variety ATL-1

TO2 : Cultivation of Little millet variety DHLM 36-3

FP : Cultivation of Local Little millet variety

7. Critical inputs given: (along with quantity as well as value)

Name of the input	Quantity	Value in Rupees
Little millet variety ATL-1	10 kg	870.00
Little millet variety DHLM 36-3	10 kg	400.00
<i>Azospirillum</i>	10 kg	300.00
Phosphobacteria	10 kg	300.00
<i>Bacillus subtilis</i>	20 kg	3000.00
Millet MN Mixture	12.5 kg	1057.00
Field board	5 nos	1000.00
Total Rs.		6927.00

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	12.62	28500	1.83
TO1:Technology 1(Little millet ATL-1)		14.5	37900	2.11
TO2:Technology 2(Little millet DHLM-36-3)		14.02	35500	2.04

Table 2 : Data on other performance indicators*

Parameters observed	Farmer practice	Technology Option 1	Technology Option 2
Number of plants/sqm	25.5	30.2	29.3
Plant height (cm)	112.3	129.2	122.0
Gross Cost (Rs./ha)	33650	34600	34150
Gross Income (Rs./ha)	62150	72500	68650

Description of the results: The Little millet varietal assessment trials were conducted in five locations covering five farmers, during *Rabi* season (2021-22). During the varietal assessment growth and yield parameters were observed and recorded. The plant population recorded very low in farmers practice (25.5 nos.) and it was higher in variety ATL 1 (30.2 nos.) followed by DHLM-36-3 (29.3 nos).The plant height are also higher in ATL 1 little millet variety (129.2 cm) compared to the local check.

The mean average yield (14.5 Qtl/ha) was recorded in ATL-1 little millet variety, which is 15% higher when compared local variety (12.62 Qtl/ha). Farmers have obtained the highest gross income of Rs. 72500/ha in little millet variety ATL -1 followed by DHLM-36-3 (Rs.68650/ha) and lowest net income was recorded in farmers practice (Rs.62150/ha). The cost benefit of 2.1 was recorded in ATL-1 against the farmer's practice (1.85).

9. Constraints : The improved seeds are not available on time.

10. Feedback of the farmers involved : The little millet variety ATL 1 has recorded higher yield and getting higher market price compared to local. This variety is highly suitable for both the seasons in Thiruvannamalai district.

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

The ATL 1 little millet seeds to be made available for the cultivation during the optimum season.

4.1.2. 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	376.34	13

5. Problem definition / description:

The farmers were not aware about the improved high yielding chilli hybrids and production technologies suitable for their location. Indiscriminate use of chemical pesticides resulted higher cost of cultivation. High incidence of Fruit borer, Fruit rot and leaf curl. The farmers were obtained poor yield (29%) and income.

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
CO1Chilli hybrid seeds	150 gm	3600.00
Arka Saanvi Chilli hybrid seeds	150gm	4500.00
Vegetable Special	20 kg	3500.00
Field board	5 Nos	1000.00
Total Rs.		12600.00

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: Private hybrids	5	195.37	200096.00	2.32	<ul style="list-style-type: none"> ▪ Days to 50%flowering ▪ Average fruit weight(g) ▪ Average fruit length(cm)
TO1: Arka Saanvi Chilli hybrid		218.30	234796.00	2.60	
TO2: CO1 Chilli hybrid		239.70	268989.00	2.89	

Table 2 : Data on other performance indicators*

Parameters observed	Farmer practice	Technology Option 1	Technology Option 2
Days to 50% flowering	45.87	44.56	43.24
Average fruit weight(g)	4.41	4.60	4.74
Average fruit length(cm)	8.91	11.43	9.83

Description of the results: It is observed that the CO1 chilli hybrid (TO2) has given 22.69% higher yield as compared to farmers practices. The variety is highly suitable for the locality. An additional net return of Rs.68893 per hectare was recorded.

9. **Constraints :** Seeds of improved hybrids are not available throughout the year. Resulted in delayed crop raising.
10. **Feedback of the farmers involved :** The TO2 CO1 chilli hybrid (239.7 Q/ha) yields higher than Arka saanvi (218.3 Q/ha) and also fetches good market price.
11. **Feed back to the scientist who developed the technology :** Improved dual purpose hybrids with resistance to fruit rot and thrips resistant hybrids may be developed as it damaged the crop severely.

4.1.3. Assessment of Improved hybrids for higher productivity in Tomato

1. **Thematic area :** Varietal evaluation
2. **Title :** Assessment of Improved hybrids for higher Productivity in Tomato
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:

The yield levels are low due to lack of adoption of location specific hybrids and cultivation of private hybrids with high incidence of pest and diseases by farmers. As a result, low yield and poor income was noticed.

6. Technology Assessed:

TO1 : Cultivation of Arka Abhed Tomato hybrid.

TO2 : Cultivation of CO4 Tomato hybrid.

FP : Cultivation of private hybrids.

7. Critical inputs given:

Name of the input	Quantity	Value in Rupees
CO4 Tomato hybrid seeds	100 gm	3000.00
Arka Abhed Tomato hybrid seeds	100gm	2400.00
Vegetable Special	20 kg	3500.00
Field board	5 Nos	1000.00
Total Rs.		9900.00

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: Private hybrids	5	719.20	133176.00	2.40	<ul style="list-style-type: none"> ▪ Days to 50% flowering ▪ Average fruit weight(g) ▪ Average fruit length(cm) ▪ PDI
TO1: Arka Abhed Tomato hybrid		767.81	146683.00	2.56	
TO2: CO4 Tomato hybrid		823.30	165836.00	2.81	

Table 2 : Data on other performance indicators*

Parameters observed	Farmer practice	Technology Option 1	Technology Option 2
Days to 50% flowering	35.47	33.17	32.6
Average fruit weight(g)	54.5	61.5	65.36
Average fruit length(cm)	4.87	6.07	4.98
PDI – Leaf curl viral disease	15.23	4.98	8.57

Description of the results: The CO4 tomato hybrid (TO2) has given 14.68% higher yield as compared to farmer practices. The average fruit weight is recorded (65.36 g) compared to TO1 (61.5 g) followed by farmers practices (54.5 g). An additional net return of Rs.32659.2 per hectare was recorded.

- 9. Constraints :** Crop raising season is delayed due to non-availability of improved hybrid seeds throughout the year.
- 10. Feedback of the farmers involved:** The higher yield was recorded in CO4 tomato hybrid and fetches higher market price than the farmers practices.
- 11. Feed back to the scientist who developed the technology:** This hybrid has long harvesting period with 20-22 harvests in 150 days. Hybrids with resistance to wilt disease may be developed.

4.1.4. Assessment of bio repellants against wild boar in paddy

1. **Thematic area** : Integrated Pest Management
2. **Title** : Assessment of bio repellants against wild boar in paddy
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	Kharif	Clay soil	L	M	M	872	16

5. Problem definition / description:

Paddy is the major crop, cultivated over an area of 1.71 lakh ha in Thiruvannamalai district. But, the yield levels are low due to wild boar damage in all crop growing season. A 30-40 percentage yield loss recorded due to wild boar damage.

6. Technology Assessed:

TO 1 : Spraying of Innovative Herboliv+ (10% and 20% dilution) with 10 days interval.

TO 2 : Tying of Neelbo treated ropes around the field. 20-30 days once replacement Required.

FP : Manual monitoring (Farmers' practice).

7. Critical inputs given:

S.No	Name of the input	Quantity	Value (Rs.)
1	Herboliv	120 lit	11156.00
2	Neelbo	5 lit	4160.00
3	Field Board	5 Nos	1000.00
4	Soil testing	5 Nos	250.00
Total			16566.00

8. Results

Technology Option	No. of trials	Yield (q/ha)	Net Return (Rs./ ha)	BCR	Other performance indicators
					Percent Damage (%)
FP		48.75	32165.00	1.83	30.16
TO 1	5	59.59	48080.00	2.25	3.51
TO 2		54.53	42455.00	2.16	12.59

Description of the results: The TO1 (Farmer Innovation) recorded higher yield (59.59 q/ha) as compared to TO2 (54.53 q/ha) and farmers' practice (48.75 q/ha). Besides, average increase in yield to the tune of 22.23 percent with higher BCR of 2.25 and low damage percentage of wild boar (3.51%) was recorded in TO1 as compared to other technological options.

Overall, the Farmer innovation for the management of Wild boar (TO1) has been found effective to control the wild boar damage in paddy and also it performed well in terms of yield and net income (Rs.48080.00) as compared to TO2 and farmers' practice.

9. **Constrains:** The availability of herboliv and neelbo is the major constrain reported by the farmers.
10. **Feed back of the farmers involved :** The farmers felt that management of wild boar using Herboliv with IPM package (TO1) has given higher yield and higher economic returns with low damage of wild boar compared to other technologies.
11. **Feed back to the scientist who developed the technology:** Standardized bio repellent with low cost products may be developed against the wild boar by the SAUs.

4.1.5. Assessment of technologies for management of sucking pests in Chillies

1. **Thematic area** : Integrated Pest Management
2. **Title** : Assessment of technology for management of sucking pests in Chilli
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	Red loamy soil	L	M	H	200	6

5. Problem definition / description:

This major pest on Chilli crops affects the plants throughout their life, starting from the nursery. The infested leaves develop crinkles and upward and downward curling, acting as vector for viral disease. Leads to 38% yield reduction by the sucking pests viz., Thrips, Aphids, Mites.

6. Technology Assessed:

TO 1 : Application of Neem Cake@250kg/ ha, Intercrop with Sesbania, to provide barrier which regulate the thrips, Yellow sticky trap @ 12/ ha, Spraying of Emamectin benzoate 5SG@ 200g/ ha.

TO 2 : Seed treatment with Imidacloprid 70% WS@ 12g/ kg, Border Crop with Maize, Blue sticky trap@ 12/ ha, Foliar application of Neem oil 1% @ 1000ml/ ha + adjuvant 1ml/ lit.

FP : Spraying of insecticides.

7. Critical inputs given:

S.No	Name of the input	Quantity	Value (Rs.)
1	Yellow sticky trap	25 Nos	1000.00
2	Blue sticky trap	25 Nos	1000.00
3	Azadirachtin	2.5 Lit	1008.00
4	Emamectin benzoate	250 g	1250.00
5	Field Board	5 Nos	1000.00
Total			5258.00

8. Results

Technology Option	No. of trials	Yield (q/ha)	Net Return (Rs./ ha)	BCR	Percent Infestation (%)		
					Thrips	Aphids	Mites
FP	5	190.85	186019.00	2.18	26.35	24.77	30.21
TO 1		235.57	287099.00	2.93	5.04	5.41	5.57
TO 2		214.99	245989.00	2.62	7.13	8.21	7.98

Description of the results: The TO1 recorded higher yield of 235.57 q/ha which is 23.43% higher than farmers' practice. An additional net returns of Rs. 287099/- with higher BCR of 2.93 was recorded. The incidence of Thrips (5.04 %), Aphid (5.41 %), Mites (5.57 %) found reduced as compared with the farmer practices.

9. Constrains: -

10. Feed back of the farmers involved : The farmers felt that management of sucking pests with IPM technologies has given higher yield and higher economic returns with reduced incidence of Thrips, Mites, Aphid as compared to other technologies.

11. Feed back to the scientist who developed the technology : Mite resistant high yielding hybrids may be developed.

4.1.6. Assessment of AFTD based mineralized salt lick over Mineral Mixture for sheep on growth performance

1. Thematic area : Livestock Nutrition management
2. Title : **Assessment of AFTD based mineralized salt lick over mineral mixture for sheep on growth performance**
3. Scientists involved : Subject Matter Specialist (Animal Science).
4. Details of farming situation : Not applicable
5. **Problem definition / description:**
 - The animals 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	25Kg	3500.00
2	AFTD based mineralized Salt	25Kg	1000.00
3	Field board	5 Nos	1000.00
Total			5500.00

8. Results:

Table 1: Performance of the technology

Technology Option	No. of trials	Production No. of Lambs per year	Net Return (Rs.)	BCR	Data on Other performance indicators
					Weight at 6 month age(Kg)
FP	5	7	3838.00	1.29	10.2
TO1		12	20786.00	2.18	14.4
TO2		11	18649.00	2.12	12.6

Description of the results: Among the two technologies assessed, the TO1(NIANP) recorded higher body weight of 14.4 Kg as compared to TO2(IAN,TANUVAS) of 12.6kg and farmers' practice 10.2kg and recorded higher BCR of 2.25.

Overall, the NIANP developed small ruminant's mineral mixture (TO1) had been found effective in growth performance and gained high net income of Rs.20786.00 as compared to TO2 and farmers' practice.

9. Constrains: -

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.

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.

4.1.7. 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. (Farmers practice)

7. Critical inputs given:

S.No	Name of the input	Quantity	Value (Rs.)
1	Herbal extract base liquid spray (Megatex liquid spray)	40 Nos	4200.00
2	Tick shield	40Nos	4000.00
3	Field board	10 Nos	1000.00
Total			9200.00

8. Results:

Table 1: Performance of the technology

Technology Option	No. of trials	Production Milk Yield/lactation	Net Return (Rs.)	BCR	Data on Other performance indicators
					Infestation %
FP	10	1890	38353.00	1.43	88
TO1		3250	139990.00	2.51	14
TO2		2940	108390.00	2.23	28

Description of the results: It is found that the TO1 (CIRG) high reduction in ectoparasite infestation 86% when compared to TO 2(TRBVP,TANUVAS) 72% and farmers' practice 88% with higher BCR of 2.51.

Overall, the CIRG developed Herbal extract base liquid spray found effective in reduction of ectoparasite infestation and gained high net income of Rs.139990.00 as compared to farmers' practice.

9. Constrains: -

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.

4.1.8. Assessment of suitable banana varieties for preparation of nutri mix

1. Thematic area : Value Addition
2. Title : Assessment of suitable banana varieties for preparation of nutri mix
3. Scientists involved : SMS – Home Science
4. Details of farming situation : -
5. Problem definition / description:

Low market price, Poor Shelf life of fruits because of its perishable in nature, Lack of Post harvest facilities i.e Non availability of refrigerated transport and high quality cold storage facilities for food manufactures and sellers, and incident of mal nutrition among children.

6. Technology Assessed:

TO1 : Nutri mix enriched with banana flour (Monthan)
(TNAU, 2015)

TO2 : Nutri mix from Red banana (NRCB, 2016)

Farmers Practice : Millet based health mix

7. Critical inputs given:

Sl. No	Name of input	Qty	Cost (Rs.)
1	Ragi	14 kg	532.00
2	Bajra	14 kg	420.00
3	Wheat	20 kg	800.00
4	Green gram	14 kg	1372.00
5	Roasted Bengal gram	14 kg	1400.00
6	Country sugar	30 kg	2100.00
7	Poly covers	200 no.s	420.00
8	Red banana (Cleaned weight)	30 kg	1220.00
9	Monthan banana (Cleaned weight)	30 kg	760.00
Total			9024.00

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	50	4700.00	2.09	3.5	4 months
TO1		50	10400.00	3.26	4.2	6 months
TO2		50	14750.00	3.81	4.5	6 months

Description of the results : The red banana incorporated health mix (TO2) has received higher consumer acceptability (4.5/5.0),. It also resulted in higher net return of Rs. 10400/- compared to TO1 and farmer practice with a BCR of 4.5.

9. Constraints : Nil

10. Feedback of the farmers involved : Red banana incorporated health mix are highly acceptable based on the high shelf life (6 months), Consumer acceptability (based on colour, appearance, texture, flavour and taste) and its therapeutic properties.

11. Feed back to the scientist who developed the technology: Low cost solar drier may be supplied to the entrepreneur at subsidized rates.

4.1.9. Assessment of Different Coating Formulations to improve the Shelf life of Fruits and Vegetables

1. Thematic area : Value Addition
2. Title : **Assessment of different Coating formulations to improve the shelf life of fruits and vegetables**
3. Scientists involved : SMS – Home Science
4. Details of farming situation : -
5. Problem definition / description:

Lack of awareness on farmer friendly technologies. Poor Shelf life of fruits and vegetables. Lack of Post harvest facilities viz., Low market price.

6. Technology Assessed:

TO1 : Dipping in 2 % ICAR-IINRG Fresh coat for 5 minutes, surface drying & packing. (ICAR-IINRG, Ranchi 2019).

TO2 : Dipping in 2 % TNAU Fruity Fresh coat for 5 minutes, surface drying & packing. (TNAU, 2020).

Farmers Practice : No coating

7. Critical inputs given:

Sl. No	Name of input	Qty	Cost (Rs.)
1	IIRG – Fresh coat	5 lit	5900.00
2	TNAU Fruity fresh	5 lit	0.00
3	Field board	5 no.s	1000.00
Total			6900.00

8. Results:

Table : Performance of the technology

Technology Option	No. of trials	Data on Other performance Indicators*			Net income (Rs.)	BCR
		Shelf life in days	Shrinkages in days	Rotting days		
Farmers Practice	5	5	6	7	17264.00	1.94
TO1:(IINRG Fresh coat)		7	8	11	29224.00	2.45
TO2:(TNAU Fruity Fresh coat)		10	11	13	33227.00	2.76

Description of the results : The TNAU fruity fresh coating formulation has got higher shelf life of 10 days when compared to TO1 and Farmers practice. The TO2 also fetched higher net return of Rs. 33227/- with a BCR of 2.76 compared other practices.

9. Constraints : Nil

10. Feedback of the farmers involved : The TO2 technology found to be effective in terms of shelf life, net return and longer number of days for rotten of fruits and vegetables.

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

4.1.10. Assessment of effectiveness of opinion leaders in dissemination of paddy cultivation technologies

1. Thematic area : ICT
2. Title : Assessment of effectiveness of opinion leaders in dissemination of paddy cultivation technologies
3. Scientists involved : Subject Matter Specialist (Agri.Extension).
4. Details of farming situation : Irrigated, red sandy loam

5. Problem definition / description:

Technology transfer mechanism from farmer to farmer need to be improved to reach the individual farmers' farm holding in time. Adoption levels of different technologies are also leading to low productivity in paddy, It is necessary to assess the effectiveness of opinion leaders in dissemination of paddy cultivation technologies

6. Technology Assessed:

- TO 1** : Farmer Friends of ATMA
TO 2 : Farmer Interest Group Leaders
FP : Contact with local Extension workers for getting advisory service on paddy cultivation

7. Critical inputs given:

S.No	Name of the input	Quantity	Value (Rs.)
1	Paddy Multicolor technical booklet	20	4012.00
Total			4012.00

8. Results:

Table 1: Performance of the technology

Technology Option	No. of trials	Post knowledge score	Adoption Percentage	Data on Other performance indicators	
				Spreading of Knowledge to others %	Cultivation information %
FP	2 group	40.01	48.50	22.01	33.20
TO1		60.71	73.00	38.40	57.21
TO2		51.00	64.00	30.28	40.60

Description of the results: The Farmer friends of ATMA gaining more knowledge 60.71% through various trainings organized by ATMA and other agencies compared to the FIG leaders 51% as they have minimum access of resources. It also observed that the knowledge spread to other farmers by ATMA farmer friends are higher i.e 38.40% compared to FIG leaders 30.28%.

Constraints: There were few of the beneficiaries expressed their views that location specific cultivation practices to be formulated by the research stations and extension agencies for the effective productivity of the crops.

- 10. Feed back of the beneficiaries :** The location specific crop varieties and its availability to be ensured by the SAU's and other agencies and training on improved package of practices needs to be disseminated properly.
- 11. Feed back to the scientist who developed the technology :** -

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	<ul style="list-style-type: none"> Variety which is resistant to light rain without lodging may be developed 	<ul style="list-style-type: none"> Supply of seeds at low cost. Conduction of training, demonstration and Mass media coverage. 	812	34450	26130
2	Paddy	IPDM	Integrated pest and disease management in paddy	<ul style="list-style-type: none"> High yielding pest (Stem borer) and disease (False smut) resistant variety may develop. 	<ul style="list-style-type: none"> Trainings, Demonstration, Exhibition, Advisory service, Mass media coverage 	82	3175	2895
3	Paddy	Drudgery reduction	Direct sown paddy drum seeder	<ul style="list-style-type: none"> Efficient weed control tools may be introduced in area which direct sown paddy drum seeder is used 	<ul style="list-style-type: none"> Supply of drum seeder at nominal cost. Conduction of training, demonstration, Exhibition and Mass media coverage. 	654	19320	22452
4	Little millet	Varietal demonstration	Demonstration of Little millet variety ATL 1	<ul style="list-style-type: none"> Variety which is tolerant to shoot fly and sheath blight. It shows uniform maturity and non lodging 	<ul style="list-style-type: none"> Supply of seeds at low cost. Conduction of training, demonstration and Mass media coverage. 	72	3400	3410
5	Greengram	Varietal demonstration	Demonstration of Green gram variety VBN-4	<ul style="list-style-type: none"> High yielding pest (Stem borer) and disease (False smut) resistant variety may develop. 	<ul style="list-style-type: none"> Trainings, Demonstration, Exhibition, Advisory service, Mass media coverage 	752	7800	12800

6	Blackgram	Varietal demonstration	Demonstration of VBN- 8 blackgram	<ul style="list-style-type: none"> ▪ Powdery mildew resistant variety may be develop. 	<ul style="list-style-type: none"> ▪ Supply of seeds at low cost. ▪ Conduction of training, demonstration, Exhibition and Mass media coverage. 	420	7162	8100
7	Groundnut	Varietal demonstration	Demonstration of kadiri lepakshi groundnut	<ul style="list-style-type: none"> ▪ High yielding varieties suitable for both seasons may developed. 	<ul style="list-style-type: none"> ▪ Supply of seeds at low cost rate. ▪ Conduction of training, demonstration and Mass media coverage. 	302	4210	5130
8	Chilli	Varietal demonstration	Demonstration of CO(CH)1 Chilli hybrid	<ul style="list-style-type: none"> ▪ Higher yielder. Improved hybrids with resistance to Leaf curl virus may be developed. 	<ul style="list-style-type: none"> ▪ Report on results given. Suggested popularisation methods viz., Supply of seeds at subsidized rate, Conduction of training, demonstration and Mass media coverage. 	38	567	123
9	Bittergourd	ICM	Integrated Crop Management in Bittergourd	<ul style="list-style-type: none"> ▪ ICM technologies are economically viable and yielding best results at field level. 	<ul style="list-style-type: none"> ▪ Report on results given. Suggested popularisation methods viz., Supply of technological inputs at subsidized rate, Conduction of training, demonstration, Exhibition and Mass media coverage. 	34	456	174
10	Bitter gourd	IPDM	Integrated pest and disease management.	<ul style="list-style-type: none"> ▪ High yielding viral disease and fruit fly resistant hybrid may develop. 	<ul style="list-style-type: none"> ▪ Trainings, Demonstration, Exhibition, Advisory service, Mass media coverage. 	19	232	65

11	Brinjal	Varietal demonstration	Demonstration of VRM(BR)1 Spiny brinjal with ICM practices	<ul style="list-style-type: none"> Higher yielder. Keeping quality is low compared to local variety. 	<ul style="list-style-type: none"> Report on results given. Suggested popularisation methods viz., Supply of seeds at subsidized rate, Conduction of training, demonstration and Mass media coverage. 	41	414	127
12	Banana	IPDM	Integrated pest and disease Management in banana	High yielding disease resistant varieties may develop	Report on results given. Suggested popularisation methods viz., Trainings, Demonstration, Exhibition, Advisory service, Mass media coverage.	18	290	150
13	Banana	ICM	Integrated Crop Management in banana	<ul style="list-style-type: none"> ICM technologies are economically viable and yielding best results at field level. 	<ul style="list-style-type: none"> Report on results given. Suggested popularisation methods viz., Supply of technological inputs at subsidized rate, Conduction of training, demonstration, Exhibition and Mass media coverage. 	42	384	269

14	Turmeric	ICM	Integrated Crop Management in turmeric	<ul style="list-style-type: none"> ICM technologies are economically viable and yielding best results at field level. A micro nutrient formulation may be developed especially for Turmeric. 	<ul style="list-style-type: none"> Report on results given. Suggested popularisation methods viz., Supply of technological inputs at subsidized rate, Conduction of training, demonstration, Exhibition and Mass media coverage. 	27	279	168
15	Bhendi	Varietal demonstration	Demonstration of CO4 Bhendi hybrid	<ul style="list-style-type: none"> Higher yielder. Highly resistant to Yellow Vein Mosaic Virus disease. 	<ul style="list-style-type: none"> Popularisation methods viz., Supply of seeds at subsidized rate, Conduction of training, demonstration and Mass media coverage. 	27	364	91
17	Millet	Value addition	Preparation of convenience food (Health mix, Adai mix, Laddu mix, Muruku mix)	<ul style="list-style-type: none"> District wise marketing avenues may develop for farmer's level value added products. 	<ul style="list-style-type: none"> Trainings, Demonstration, Exhibition, Mass media coverage. 	35	135	-

B. Details of FLDs implemented during the reporting period

1. Demonstration of Finger millet variety ATL-1.

Crop/Enterprise : Finger millet

Thematic area : Varietal demonstration

Technology Demonstrated :

- The Parentage is TNAU 900 X CO(RA)14
- It has the duration of 105-110 days
- It has synchronized maturity and non lodging growth habit
- It moderately resistant to leaf, neck and finger blast
- The yield of this variety is 3128kg/ha

Season and year : Kharif 2021

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Kharif 2021	Sandy clay loam	L	H	H	503.63	13

Source of fund : ICAR

No of locations (Villages) : 1 (Ariyur, Cheyyar)

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 :

The Finger millet ATL 1 variety gave more productive tillers and yielded 24.81 qtl/ha with a net income of Rs.49930/- when compared to the local variety Rs.35260/- and recorded BCR of 2.06.

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 days	1	22.12.21	10	
2	Farmers Training	1	12.08.21	15	-
3	Media coverage	2	12.08.21		Kalam news, Public tv.
4	Training for extension functionaries	-	-	-	-

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

Crop/Enterprise : Blackgram

Thematic area : Varietal demonstration

Technology Demonstrated :

- 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 2021-22

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi 2021-22	Clay loam	L	H	H	27.39	2

Source of fund : ICAR

No of locations (Villages) : 1 (Marudhadu, Vandavasi)

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:

The blackgram VBN11 gives matured at a time and easy to harvest mechanically. Resistant to mungbean yellow mosaic virus. The yield obtained was 719.1 qtl/ha while,

other local variety possess 577.4qtl/ha. The net income of the farmer increased from Rs.22,188/- to Rs.32,236 with the BCR of 2.3.

Feedback of the Scientist:

The availability of seeds to take up the sowing in the right season is very poor. It may be available to the farmers through various agencies on time.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	1	29.03.22	10	
2	Farmers Training	1	02.02.22	15	-
3	Media coverage	2	17.01.22		Kalam news, Public app
4	Training for extension functionaries	-	-	-	-

3. Demonstration of Greengram variety VBN 4

Crop/Enterprise : Greengram

Thematic area : Varietal demonstration

Technology Demonstrated :

- The Parentage is PDM139 X BB2664
- It has the duration of 65-70 days
- This variety has multibloom, non shattering, moderately resistance to mung bean yellow mosaic virus and powdery mildew diseases
- The yield of this variety is 1024kg/ha

Season and year : Rabi 2021-22

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi 2021-22	Sandy loam	L	M	H	6.31	1

Source of fund : ICAR

No of locations (Villages) : 1 (Sathuperipalayam, West 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:

The green gram variety VBN 4 gave higher yield of 767.4qtl/ha when compared to green gram variety, which is 25% higher than the local variety with the net income of Rs.32263/ha.

Feedback of the Scientist:

The availability of seeds to take up the sowing in the right season is very poor. It may be available to the farmers through various agencies on time.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	1	02.03.22	10	-
2	Farmers Training	1	23.02.22	12	-
3	Media coverage	2	30.01.22		Nugarvor arikkai local Newspaper, Kalam news
4	Training for extension functionaries	-	-	-	-

4. Demonstration of Groundnut variety TMV 14

Crop/Enterprise : Groundnut

Thematic area : Varietal demonstration

Technology Demonstrated :

- The Parentage is VRI 6 X R 2001-2
- It has the duration of 95-100 days
- This variety has complete resistance to rust disease and tolerant to late leaf spot
- The yield of this variety is 2286kg/ha

Season and year : Rabi 2021-22

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi 2021-22	Clay loam	L	H	H	179.11	9

Source of fund : ICAR

No of locations (Villages) : 1 (Dhuli, Cheyyar)

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:

The groundnut variety TMV 14 gives higher yield of 2010qtl/ha. The net income of the is Rs.77,200 which is 19% higher than the local variety VRI2 with the BCR of 2.22.

Feedback of the Scientist:

The location specific high yielding groundnut varieties may be developed on par with the Andhra and Telengana varieties by SAUs.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	1	13.04.22	10	
2	Farmers Training	1	12.02.22	18	-
3	Media coverage	2	13.02.22	-	Kalam news, Public app
4	Training for extension functionaries	-	-	-	-

5. Demonstration of Ridge gourd hybrid COH 1

Crop : Ridge gourd
Thematic area : Varietal demonstration

Technology demonstrated :

- Medium viny plant (5.79 m) and Fruits are 40-45 cm long.
- Duration: 140-150 days.
- Less incidence of fruit fly.
- Less incidence of Downy mildew, Powdery mildew.
- Yield:34t/ha.

Season and year : Kharif 2021-22

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	1149.73	24

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	1	9	2	2	-

Feedback from farmers : The Ridge gourd hybrid COH1 given higher yield (424.76 Q/ha) which is 28.4% higher than the local private hybrids and net income of Rs. 508699/-. The market preference was good and Benefit cost ratio is 2.93.

Feedback of the Scientist : Varieties with fruit fly and fruit borer resistant may be developed.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days				-
2	Farmers Training	1	27.7.21	10	-
3	Media coverage	2	27.7.21	-	Kalam news and public app
4	Training for extension functionaries				

6. Demonstration of Snake gourd hybrid COH 1 (Changed to ICM concept)

Crop : Snake gourd
Thematic area : Integrated Crop Management

Technology demonstrated :

- NPK application based on soil test.
- Soil application of *Bacillus subtilis*@2.5kg/ha
- Soil application of neem cake @250kg/ha
- Vegetable spray @0.1%
- Spraying of Ethrel 250ppm
- Spraying of neem, pongamia soap @1%
- Installation of pheromone traps@12 no/ha.

Season and year : Rabi 2021-22
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	397.14	15

Source of fund : ICAR
No of locations (Villages) : 1 (Vazhuthalangunam)

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	5	5	2	2	-

Feedback from farmers : The adoption of ICM technologies given higher yield (555.46 Q/ha) and net income obtained is Rs. 403113/-. The quality of the fruits improved and fetched good market price.

Feedback of the Scientist : The adoption of ICM technologies resulted in higher yield as compared to farmer practice in snake gourd. The produce fetched higher market price due to better quality. Farmers obtained higher income. Farmers preferred earliness with fruit fly resistance variety.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days				-
2	Farmers Training	1	29.01.22	10	
3	Media coverage				
4	Training for extension functionaries	-	-	-	-

7. Demonstration of Improved brinjal variety VRM(Br)2

Crop : Brinjal
Thematic area : Varietal demonstration

Technology demonstrated :

- Fruits are dark violet in colour
- Oval shape with green tinge in the distal end.
- Fruits are with less seeds and more flesh.
- Moderately resistant to pest and diseases.
- Suitable for both Kharif and Rabi seasons.
- Yield: 500-550q/ha.

Season and year : Rabi 2021-22

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	418.2	14

Source of fund : ICAR

No of locations (Villages) : 1 (Sathupperipalayam)

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 brinjal variety VRM (Br)2 has given higher yield of 339.5 Q/ha which is 26.43% higher than the local check and net income obtained is Rs. 283388/-. It fetches good marketing preference and high price.

Feedback of the Scientist : Harvesting of VRM (Br) 2 variety was easy due to absence of spiny. Varieties with shoot and fruit borer resistance may be developed.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days				-
2	Farmers Training	1	15.12.21	10	-
3	Media coverage	1	15.12.21	-	Public app
4	Training for extension functionaries	-	-	-	-

8. Integrated Crop Management in Turmeric

Crop : Turmeric

Thematic area : Integrated Crop Management

Technology demonstrated :

- NPK application based on soil test, FYM25t/ha.
- Soil application of Azospirillum and Phosphobacteria each@10kg/ha
- Basal application of FeSO₄ @30kg and ZnSO₄ @15 kg per hectare.
- Foliar application of IISR turmeric micro nutrient mixture @ 5g/litre on 60 and 90 DAP.
- Soil application of neem cake@200 kg/ha, *Bacillus subtilis*&*Trichoderma asperellum* each@ 2.5 kg/ ha.
- Seed treatment with *Trichoderma asperellum*@4g per kg of rhizome to avoid rhizome rot.
- Spraying of propiconazole@500ml per hectare for leaf blotch.

Season and year : Kharif 2021-22

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	H	H	1328.59	25

Source of fund : ICAR

No of locations (Villages) : 1 (Padavedu)

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 adoption of ICM technologies given higher yield (266.05 q/ha of fresh rhizome and cured rhizome of 55q/ha and net income recorded was Rs.268381/ha. The quality of the rhizome improved and fetched good market price.

Feedback of the Scientist :

Rhizome rot is the major problem. Hence the varieties resistant to rhizome rot may be developed.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days				-
2	Farmers Training	1	30.09.21	10	
3	Media coverage	1	30.09.21	-	Kalam news
4	Training for extension functionaries	-	-	-	-

9. Demonstration on Integrated Pest and Disease Management in Brinjal

Crop : Brinjal
Thematic area : Integrated Pest Management

Technology demonstrated :

- Soil application of neem cake 250 kg/ ha
- Soil application of *Bacillus subtilis* and *Trichoderma asperillum* @ 2.5 kg/ ha Each
- Clipping of borer damaged shoots, Maize as border crop against movement of whiteflies
- Installation of Yellow sticky trap @12/ha
- Installation of shoot and fruit borer pheromone trap @12/ha
- Release of *Trichogramma chilonis* @ 5 cc/ha
- Application of Neem oil formulations 10000ppm @1% / Neem seed kernel extract (5%).

Season and year : Rabi 2021
Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi	Sandy loamy soil	L	M	H	287	10

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 that IPDM technologies in Brinjal increased the yield of 329.31 q/ha and net income of Rs. 68275/ha. It reduced the number of application of pesticide spray with the integrated pest and disease management practices.

Feedback of the Scientist : The IPDM Technologies reduced the pest and diseases incidence viz, Wilt (3.95%), little leaf (6.25 %) and Shoot and fruit borer (6.92%). Technologies found increasing the yield (14.96 %).

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	-
2	Farmers Training	1	20.01.2022	12	-
3	Media coverage	1	22.01.2022	-	Circle TV
4	Training for extension functionaries	1	07.02.2022	14	-

10. Demonstration on management of panama wilt disease in banana

Crop : Banana
Thematic area : Integrated Disease Management

Technology demonstrated :

- Uproot and destroy severely affected plants
- Apply lime at 1 – 2 kg in the pits after removal of the affected plants
- *Bacillus subtilis* and *Trichoderma asperillum* 2.5 kg/ha (Each) + FYM + neem cake for 3 times at 2nd, 4th, 6th month after planting.
- Corm injection of Carbendazim 0.2 % for 3 times at 2nd, 4th, 6th month after planting

Season and year : Rabi 2020-21

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 soil	L	M	M	1158	30

Source of fund : ICAR

No of locations (Villages) : 1 (Sandhavasal)

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	5	5	4	4	-

Feedback from farmers : The farmers felt that cultivation of Banana with integrated Panama wilt management practices has increased the yield of 542.42 q/ha and higher economic returns of Rs. 393463/ha, with the BCR of 2.88. Observed the low incidence of panama wilt disease.

Feedback of the Scientist : Cultivation of Banana with integrated panama wilt management practices has increased yield (13.37%) with low incidence of Panama wilt disease (4.25 %) compared to normal practice (29.64).

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	1	22.12.2022	17	-
2	Farmers Training	1	25.11.2021	10	-
3	Media coverage	1	26.11.2021	-	Kalam News
4	Training for extension functionaries	1	07.02.2022	14	-

11. Demonstration of Soil Moisture Indicator tool for scheduling of irrigation**Crop/Enterprise** : Sugarcane**Thematic area** : Farm machinaries**Technology Demonstrated** :

- Soil moisture indicator gives the instant indication of soil moisture status
- It is suitable for use in agricultural farm as well as in potted plants and suitable for different soil
- It indicates soil moisture level with more objectivity by ten different coloured LED's

Season and year : Rabi 2021-22**Farming situation** :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi 2021-22	Clay loam	L	M	M	1181.22	

Source of fund : ICAR**No of locations (Villages)** : 1 (Marudhadu, Vandavasi)

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:

Soil moisture indicator is very useful for scheduling of irrigation, especially for high water requiring crop like sugarcane. The colour of LED glow indicates the moisture availability in soil sub surface which helps the farmers to reduce the quantity of irrigation. Out of 50 irrigation in cultivating sugarcane, this practices reduced the number of irrigation by 20%.

Feedback of the Scientist:

The low cost farmer friendly devices like this will be made available to the farmers locally for efficient irrigation management in sugarcane.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	1	20.01.23	10	
2	Farmers Training	2	16.09.21 14.02.22	22	-
3	Media coverage	2	16.09.21, 15.02.22		Kalam news, Public app
4	Training for extension functionaries	-	-	-	-

12. Demonstration of NCOF Waste Decomposers

Crop : Compost
Thematic area : Compost production

Technology demonstrated : National Centre of Organic Farming (NCOF) has developed a waste decomposer culture which is used for quick composting from organic waste, soil health improvement and as plant protection agent. It is a consortium of micro organism extracted from desi cow dung.

Season and year : Kharif 2021

Farming situation : -

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Kharif 2021	Clay loam	L	M	M	234.9.	8

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	3	7	4	4	-

Feedback from farmers : NCOF Waste decomposer application 1000 liter per acre changes biological and physical properties of acidic type of soil within 21 days of application and it helps to generate earthworm population in the soil considerable in 1 acre land in just six months.

Feedback of the Scientist : The NCOF waste decomposer to be made available locally for the easy purchase and use by the farmers.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	
2	Farmers Training	1	24.09.21	15	-
3	Media coverage	2	24.09.21	-	Kalam news and Public app
4	Training for extension functionaries	-	-	-	-

13. Demonstration of Prosync – Nano Creams (NC) for augmenting fertility through oestrous synchronization

Crop/Enterprises : Cattle

Thematic area : Production and Management

Technology demonstrated :

- Prosynch is a non invasive, farmer friendly method which can be applied on the skin without the need of veterinary assistance
- It induces ovulatory heat within week of application thereby facilitating artificial insemination.

Season and year : Kharif 2021

Farming situation : -

Source of fund : ICAR

No of locations (Villages) : 1 (Enthuvambady)

No. of demonstrations	No of SC/ST Farmers	No of Farmers and women farmers	Area proposed (No of NC)	Actual area (No NC)	Justification for shortfall if any
10	10	-	20	20	-

Feedback from farmers : The Restraining of animal for fixing of Nano cream is difficult, hence it needs trevis.

Feedback of the Scientist : The Progesterone loaded nano cream has been used on bovine for estrous synchronization. It is very beneficial tool for dairy producer. It has major advantages in making artificial insemination for bovines and great opportunity to advances the genetics of any herd. The disadvantage is that, pasted nano creame may peel out after fixing in the hind leg of the animal due to exposure to rain and sunlight during grazing.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	-
2	Farmers Training	1	28.10.21	14	-
3	Method Demonstration	1	28.10.21	14	-
4	Training for extension functionaries	-	-	-	-

14. 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 : Rabi 2021

Farming situation : -

Source of fund : ICAR

No of locations (Villages) : 1 (Kilnelli)

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	-	750 kg (25 birds)	750 kg (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	1	28.12.21	10	-
3	Method Demonstration	1	28.12.21	10	-
4	Training for extension functionaries	1	26.10.21	20	-

15. Demonstration of Jayanti Rohu

Crop/Enterprises : Fish

Thematic area : Varietal evaluation

Technology demonstrated :

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

Season and year : Rabi 2021

Farming situation : -

Source of fund : ICAR

No of locations (Villages) : 1 (Thensenthamangalam)

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
5	5	-	2500	2500	-

Feedback from farmers : The Jayanti Rohu 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	1	09.12.22	19	-
2	Farmers Training	1	01.03.22	9	-
3	Method Demonstration	1	01.03.22	9	-
4	Training for extension functionaries	-	-	-	-

16. Demonstration of Nandanam chicken-IV under backyard condition

Crop/Enterprises : Poultry birds (Aseel)

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 : Rabi 2021

Farming situation : -

Source of fund : ICAR

No of locations (Villages) : 1 (Thensenthamangalam)

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	1	28.12.21	10	-
3	Method Demonstration	1	04.01.22	11	-
4	Training for extension functionaries	-	-	-	-

17. Demonstration of multicut fodder sorghum CO (FS) 31

Crop : Fodder Sorghum

Thematic area : Varietal demonstration

Technology demonstrated : Fast growing and high tillering, First cut (60-65 days), subsequent cuts (every 45 days), Average green fodder yield (t/ha): 190-(6-7 cuts).

Season and year : Rabi2021

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi 2021	Clay loam	L	M	M	223.2.	13

Source of fund : ICAR

No of locations (Villages) : 1 (Mukkurumbai)

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 : The COFS 31 fodder sorghum started harvest in 75 days and subsequent harvest done at 50 days interval. The highest green fodder yield of 160tonnes/year/ha was notices.

Feedback of the Scientist : The COFS 31 quality seeds to be made available locally for the easy purchase and use by the farmers.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	
2	Farmers Training	2	17.11.21, 11.03.22	15	-
3	Media coverage	2	17.11.21	-	Kalam news and Public app
4	Training for extension functionaries	-	-	-	-

18. Demonstration on nutrigarden at anganwadi

Technology : **Demonstration on Nutri garden at Anganwadi**

Crop : Nutri garden

Thematic area : Nutritional security

Technology demonstrated : Nutri garden is the growing nutrients rich crops in Anganwadi or in their vicinity to meet the requirements of the family all year round, fresh and safe (Chemical free).

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		
	Rabi 2022	-	-	-	-	-	

Source of fund : ICAR

No of locations (Villages) : 5 (Osar, Malaiyittan kuppam, Kalankuthu, Avanavadi, Vandavasi)

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	-	-	-	-

Feedback from farmers: This technology recorded an higher yield of 242 kg of vegetables through nurtigarden compared with conventional practices (28 kg). It is also observed that higher net returns of Rs. 2432/-unit was recorded with a BCR of 2.35. The consumption of vegetables has increased by 40% among the anganwadi students.

Feedback of the Scientist : The low cost location specific nutrigarden models may be developed and promoted to all the anganwadi centres.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	1	26.12.2022	12	-
2	Farmers Training	3	10.05.2022 28.07.2022 21.09.2022	48	-
3	Media coverage	2	28.01.2022	-	Circle TV, Kalam News
4	Training for extension functionaries	3	11.01.2022 11.10.2022 22.11.2022	56	-

19. Demonstration on herbal value added products (EDP mode)

Technology : **Demonstration on herbal value added products**
 Crop : Herbs
 Thematic area : Value addition
 Technology demonstrated : Instant mix, Pickles
 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		
-	Rabi 2022	-	-	-	-	-	

Source of fund : ICAR

No of locations (Villages) : 1 (Kilsenbagathoppu)

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
1	2	8	-	-	-

Justification for shortfall if any : Nil

Feedback from farmers: Proper value addition of herbals improves shelf life by six months with an additional income of Rs.10750/unit with the BCR of 2.59.

Feedback of the Scientist: Awareness on underutilized herbal plants and their value added products may be promoted for effective utilization of the existing herbal plants.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	1	09.05.2022	15	-
2	Farmers Training	3	01.03.2022 07.03.2022 27.09.2022	46	-
3	Media coverage	2	02.03.2022	-	Circle TV, Kalam News
4	Training for extension functionaries	-	-	-	-

20. Demonstration of TNAU Sugarcane Expert Mobil App among Sugarcane growers

Crop : Sugarcane

Thematic area : ICT

Technology demonstrated : Mobile application based technology dissemination and Its Application

Season and year : Rabi 2021

Farming situation :

Farming situation	Season	Soil type	Fertility status			Seasonal rain fall (mm)	No. of rainy days
			N	P	K		
Irrigated	Rabi 2021	Clay loam	L	M	M	639.6	18

Source of fund : ICAR

No of locations (Villages) : 1 (Vazhur)

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 : The TNAU sugarcane expert system having lot of information on the season, varieties, portray nursery techniques, improved cultivation practices including pest and disease management techniques which is very useful during sugarcane cultivation by the farmers

Feedback of the Scientist : Market related info and value addition practices to be included in the expert system for the additional benefits of farmers.

Extension activities on the FLD:

Sl. No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	-	-	-	
2	Farmers Training	1	01.02.22	15	-
3	Media coverage	2	01.02.22	-	Kalam news and Public app
4	Training for extension functionaries	-	-	-	-

4.3 Extension Studies : -

5. Technology Week Celebration : Nil

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

Name of the staff	Title	Dates	Duration	Organized by
Mr.P.Narayanan SMS-Plant Protection	7 th National Tamil conference held at TANUVAS, Chennai	02-09-2022 to 03-09-2022	2 days	Agricultural Scientific Tamil society, New Delhi
Mr.P.Narayanan SMS-Plant Protection	Workshop on Emerging challenges in horticultural crops and Livestock.	28-09-2022	1 day	KVK, Kallakurichi
Mr. V.Suresh, Mrs.T.Margaret. Miss.M.Ishwarya	Exhibition cum seminar on Genetic diversity fair	19-10-2022	1 day	AC&RI, Vazhavachanur, Thiruvannamalai district
Mr. V.Suresh SS &Head	State Level Refresher Training on Recent Technologies in Agriculture for Scientists	08-11-2022 to 10-11-2022	3 day	TNAU Coimbatore
Mr.P.Narayanan SMS-Plant Protection	State Level Refresher Training on Recent Technologies in Agriculture for Scientists	14-11-2022 to 16-11-2022	3 day	TNAU Coimbatore
Miss.M. Ishwarya SMS-Agronomy	State Level Refresher Training on Recent Technologies in Agriculture for Scientists	21-11-2022 to 23-11-2022	3 day	TNAU Coimbatore
Mr. V.Suresh, Mrs.T.Margaret. Miss.M.Ishwarya	Seminar on medicinal plants cultivation	14-11-2022 to 16-11-2022	3 day	ICAR National Institute for Research on Commercial Agriculture, Research Station, Vedasandur,

7. Details of sponsored projects/programmes implemented by KVK

S. No	Title of the programme / project	Sponsoring agency	Objectives	Duration (Days)	Amount (Rs)
1	Soil conservation under Skill Training of Rural Youth	ATMA, Thiruvannamalai	To improve the soil fertility status by educating the farmers through recent technologies like Contour farming, Choice of crop and Crop rotation for soil conservation, Cover crops to minimize the evaporation of water, Intercropping, Strip cropping, Mixed cropping, Mulching, Conservation tillage, Green manuring and Various irrigation systems.	6	42000.00
2	Capacity Building of Farmers through Training Programmes on Profitable Dairy Farming and Livestock Management	Ministry of Fisheries, Animal Husbandry and Dairying, GOI, New Delhi	<ul style="list-style-type: none"> ▪ To impart knowledge and develop skill of the farmers in the field of livestock management and dairy farming. ▪ To enhance income and generate employability among the farmers through adoption of scientific livestock management and dairy farming. 	3 (5 topics)	200000.00

8. Success stories

I Blackgram VBN 11- Enhanced productivity through improved technologies

Farmer Detail : Mr. K. Krishnan S/o Kuppan
Marudhadu village, Vandavasi taluk.
Thiruvannamalai district.

1. Situation analysis/Problem statement

Mr.K. Krishnan S/o Mr. Kuppan aged 50 from Marudhadu village of Vandavasi block is holding one hectare. He has been adopting old blackgram varieties in one hectare and got poor yield. His net income is also not upto the expected level. He didn't know the improved varieties and new technologies and he had no idea about use of micronutrients and herbicides.

2. Plan, Implement and Support:

He had attended four training programme on ICM in pulses organized by the KVK. Training covers seed treatment practices, irrigation management, weed management, nutrient management and pest, disease management practices. The VBN 11 blackgram variety has been introduced to the farmer in the year 2022 in Rabi season with improved practices. The farmer was taught about the recent practices like seed treatment, plant population maintenance, use of pulse wonder 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.

3. Intervention Technology:

The farmer adopted the following improved practices.

- *Phosphobacteria* before sowing
- Seed treatment with biofertilizers like *Rhizobium*, *Phosphobacteria* and
- Soil test based fertilizer application.
- Spraying of Pulse wonder during flowering and pod filling stages of blackgram.
- Multi bloom technology .

4. Output:

Following the guidance given by our scientists he started the cultivation of high yielding blackgram variety VBN 11 the yield increased to 7.89 quintals and net income raised to **Rs. 41,120/-** and he also involved in seed production of black gram

5. Outcome:

By witnessing the economic benefits achieved by this farmer, other farmers interested to cultivate VBN 11 in their fields and minimized the cost on fertilizers through soil test based fertilizer application.. Due to positive results, the variety spread to 120 farmers in his locality.

6. Impact:

By seeing the success of this farmer other farmers from the same village showed interest to use the new variety of blackgram VBN 11 for the seed production. The variety got spread in 230 ha in his surrounding locality.



II Enhancement of income through pandhal system of ridge gourd cultivation

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

1. Situation analysis/Problem statement

Shri. Varadhan S/o. Subbarayan, aged 51 is a vegetable farmer in Kilsembedu village of Vandavasi taluk in Thiruvannamalai district. He grows vegetables like snake gourd, bitter gourd, Ribbed gourd have been cultivated on commercial scale.

However, the income of the gourd farmer was not that much satisfactory in the village during previous years, due to fluctuation in yield level of gourds and increased cost of cultivation as a result of **problems mentioned here under:**

- High male flowers
- Lack of micro nutrition.
- Late flowering
- Imbalanced nutrition.
- Higher incidence of pests (fruit fly & sucking pests) and diseases (Powdery and downy mildew, viral diseases).
- Lack of adoption of improved production practices.
- Repeated use of own seeds of gourds.



2. Plan, implementation of activities and support by KVK

By seeing the intensive agrarian nature of the village, the KVK, Thiruvannamalai taken it as a prime village in implementing various activities for enhancing the income of the farmers especially gourd growers. The details of activities implemented by KVK are detailed hereunder step by step:

1. Conduction of training:

He participated in trainings conducted by KVK on Cucurbits cultivation in pandal system and strengthened his knowledge and confidence. He also visited various Horticultural Research Stations, Universities in Tamil Nadu and interacted with eminent scientists on cucurbits cultivation by participating in the educational tour organized by KVK.

2. Conduction of Front Line Demonstration programmes

The KVK team inspected his vegetable growing field and selected him as one of the beneficiary farmers for the FLD on Integrated Crop Management in bitter gourd and COH1

ridge gourd. Various improved technologies were demonstrated in his field by the KVK team. The critical inputs were also provided to him. The important technologies demonstrated are:

- Sex regulation through ethrel application.
- 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.

3. Organization of workshop and exhibitions

With a view to bring all the technology providers at a single point and create linkage with farmers, exhibitions and workshops on improved technologies have been organized on regular basis in which almost all the gourd growers have been taking part and acquiring knowledge.

4. Field visits and Farm Advisory Services

The KVK scientists have made need-based visits to Kilsembedu village and the production problems of the farmers mainly the gourd farmers were addressed immediately which resulted in reduction of unwanted production expenses and higher crop yield and income.



3. Intervention technology

By keeping the confidence on the advanced technologies gained from KVK, he cultivated Ridge gourd (COH1 hybrid) in one acre of his land. He adopted new technologies viz., Integrated Plant Nutrition System with major focus on foliar nutrition, IPM with major emphasis on usage of Pungam and Neem soaps, Pheromone traps, yellow sticky traps, sex regulation etc., with the technical back up of KVK team.

As a result of adoption of improved technologies, effective utilization of resources and market demand driven production approach, he succeeded in ridge gourd cultivation by obtaining an yield of **435.39 Q/ha** which was 27.60 percent higher when compared to average yield obtained by other farmers in the locality.



Impact of horizontal spread

After seeing the effectiveness of improved technologies adopted by Mr. Varadhan, other vegetable growers in the locality have started adopting the same. At present 265 acres of land is under cultivation in the locality and it is expected to increase further.

4. 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	344.63	268904	602368	333464	2.24
	After Intervention	435.39	242542	712369	469787	2.93

It has been assessed that the level of technological adoption has been 88% as per the surveys and group discussion conducted by the KVK.

5. Outcome:

By seeing the economic benefits accrued by the gourd farmer Mr. Varadhan of Kilsembedu village started adopting the technologies disseminated by KVK, as a result, the technologies have spread to a significant extent in the locality and are being adopted by about 210 farmers in 230 acres of land at present in the locality. It is one of the significant achievements of KVK.

6. Impact

The areas under gourds has been increasing year by year in Kilsembedu taluk of Thiruvannamalai district due to very good economic return in short period and close proximity of the location to one of the major markets of south India viz., Koyambedu vegetable market, Chennai. By seeing the interest of the farmers, the State Department of Agriculture and Horticulture have been supporting farmers in terms of supplying machineries viz., tractor, power tillers, weeders, drip irrigation systems under various schemes on subsidized rates.

III Apiculture – An alternative enterprise to boost the crop yield and sustainable income

Farmer's details : **Mr.K.Govindhan**
 Melnellimarathur village, Jamunamarathur
 Block, Thiruvannamalai Dist – 635703
 Mobile No.: +91 9047716495

1. Situation analysis/ Problem statement:

Thiruvannamalai district is known for diversified crop growing viz., Paddy, Pulses, Groundnut, Brinjal, Chillies, Gourds, Tomato, Banana, Coconut etc. are cultivated in considerable areas. Mr K.Govindhan S/o. Kannan is a progressive bee keeping farmer in Melnellimarathur village of Jamunamarathur block in Thiruvannamalai district. He owns 1.5 acre of land. He had 18 honey bee colonies in his land for the 4 years. He faced high investment on purchase of new honey bee box from various suppliers. He get poor yield of honey from, already he owned bee colonies.

2. Plan, implementation of activities and support by KVK

Keeping this in view, the KVK and NABARD Thiruvannamalai had conducted Honey value chain project to 100 farmers from Jamunamarathur block. Mr.Govindhan is one among the beneficial farmer under this programme. He showed very good interest on honey bee keeping and low cost bee hives production technologies. The KVK conducted hands on training of bee keeping, honey value



addition, production of honey bee hives in his village. For the wider coverage of farmers, the KVK Thiruvannamalai had recorded a programme on successful bee keeping farmer and it was telecasted in Podhigai TV.

3. Output:

As a result of the various interventions and technological support by the KVK Thiruvannamalai, he succeeded in honey bee keeping by getting additional income of Rs. 17528.00 and crop yield increased 11.35 % when compared to earlier practices. In addition, he has produced low cost Bee hive boxes using Lantana camera since April 2021. He could able to sell the Bee boxes for Rs.2000/- which is very low when compared to other suppliers across Tamil Nadu state. Presently he had created employment for 4 local rural youths on production of low cost bee hives.

4. Outcome:

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

5. Impact:

The requirement of pure honey has been increasing year by 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 in an area of 2 Km surroundings from the bee hives. As the farmers shows interest in bee farming, the state department of Horticulture, ATMA, NABARD, NGOs and private organization have been supporting the farmers by providing free trainings, supplying bee hives and creation of marketing facilities in linkage with other stakeholders.

Adoption of this bee keeping technologies in Thiruvannamalai district can significantly increase the district yield in upcoming years and also reduce the migration of people through developing small scale entrepreneurship among unemployed rural people.

IV Success stories: Tree leaf meal incorporated concentrated feed for backyard native chicken

Situation analysis/Problem statement: Poultry is an imperative factor for improving nutritional security to the rural poor. Rural poor rear natty type of chicken with low egg and meat production in backyard system, poor hatchability and increase mortality. In poultry sector impressive growth has been achieved in intensive poultry meat production in India but rural poultry sector remained restricted due to less research and low production potential nature of native breeder chicken and cost feed is high.



Plan, Implement and Support: ICAR KVK Thiruvannamalai implemented a FLD on Demonstration of tree leaf meal incorporated concentrated feed for backyard native chicken. Also KVK had organised one day on campus training on Backyard poultry farming on selection, handling and brooding, feeding, disease management, hatchery operation and chick management including tree leaf meal incorporated concentrated feed for backyard native chicken

Output: Mr.P.Shanmugam an innovative farmer from Kilnelli village of Vembakkam Block, Thiruvannamalai District, Tamil Nadu was successful in backyard poultry farming with tree leaf incorporated concentrated feed of IAN Kattuppakkam. He is 30 years old, qualified in 10th standard, he used to rear local bird for the regular source of income and he could able to get very low income. Mr.P.Shanmugam was unaware about tree leaf incorporated concentrated feed, KVK, Thiruvannamalai has selected him one of the FLD farmer and trained on scientific management of backyard poultry rearing including tree leaf meal incorporated concentrated feed for backyard native chicken. Input like tree leaf meal incorporated concentrated feed both brooder mash and grower mash was distributed. As a result of technological intervention by the KVK, Thiruvannamalai the farmer had obtained good revenue. Backyard poultry rearing with Aseel cross with 20+5 numbers along with

improved rearing technologies of poultry farmer can get Rs. 7406.00 /year. Small and marginal farmer can get more income through backyard poultry rearing with improved varieties of chicken.

Outcome: IAN, TANUVAS technology against farmers' practice, the technology recorded higher Egg production (185 Nos/Bird/year) as compared to farmers' practice (105 Nos/Bird/year). Besides, average increase in yield to the tune of 25.53 percent with higher BCR of 2.92. Overall, the IAN, TANUVAS developed Tree leaf meal had been found effective in high egg production with thick egg shell and gained high net income (Rs.7406.00) as compared to farmers' practice. The product of tree leaf concentrated feed was too powdery. Hence the birds are wasting the feed while taking the feed.

The tree leaves in combination with other locally available conventional feed ingredients could be utilized as feed component for poultry. This Inclusion would be enhance the protein requirement for the poultry and also reduce the cost of production of the feed. In order to reduce the feed wastage while taking the feed by the birds, the feed can be made as crumple feed.

V. Entrepreneurship through value addition in millets, Fruits and Vegetables

Name of the Farmer : Mr. Sivapalan S/o. Mr. Annamalai
Kelur village, Polur Taluk,
Thiruvannamalai District – 606 907.

1. Situation analysis/Problem statement

Mr. Sivapalan S/o Mr. Annamalai aged 51 is a farmer Polur taluk of Thiruvannamalai District. He owned three acres of land and he was regularly cultivates paddy and millets. But, he couldn't satisfy with the irregular income. The other rural people in neighboring village are regularly earned high income by committing agriculture and other related works.

In this situation Mr. Sivapalan was heard about KVK trainings programme on income generation related activities. He was continuously approaching the KVK to enroll his name in the training Programmes.

2. Plan, Implement and Support

He has been attending three days residential training programme on Fruits and Vegetable preservation and millets based value added products organized by KVK Since November 2018. He enrolled the course because He's having large area under fruits viz., Amla, banana etc, vegetable viz., tomato and chillies, and millets (Little millets). After completion of trainings, he started collecting all the information through SMS – Home Science and finally he has decided to start millets based ready to eat products and pickles production unit on his own as trial basis.

3. Output

Our KVK scientists team continuously motivating him for the expansion of the production cum preservation unit by visiting him on a regular basis. Initially he was facing the problems on purchase of packing materials (hesitates how it will succeed), preservatives, obtain **FSSAI** license, labeling and marketing. The KVK provided technical support for all types of sourcing materials for packing, licensing and branding directly to him. Moreover guidance and linkage to suppliers, traders and licensing authorities was made to him directly.

After the all arrangements made by him, he started the production unit for millets based ready to eat products and pickles production unit in his native place during May 2019. Initially he started preparing millets based murukku, Adhirasam, Laddu, cookies, amla and banana based products like pickles. He sold his products at nearest village of Polur and Kannamangalam Weekly market, Kalasapakkam Friday market and Vellur Nam Sandai regularly. In this situation millet based snacks and pickle receives higher interests among the consumers in terms of taste and shelf life. He named his production unit as **Logashree**. After receiving consumer preferences and interests, he was planning to include other millet based products and pirandai pickle.

He standardizes all his products by use of quality raw materials during processing, preparation under hygienic condition, use of recommended quantity of preservatives, packing and labeling.

This unit is entirely maintained by his family members. He procures millets, seasonal fruits and vegetable from nearby areas on need basis.

4. Outcome

By hearing and seeing the economic return obtained by Mr.A.Sivapalan, other neighbors and locality have started to millets based products production units. At present there are two units were established and functioning effectively in Polur Block and it is expected more units will be established in the forthcoming years.



5. Impact

Mr.A.Sivapalan regularly supply the millet based ready to eat products and pickle varieties at nearest village of Polur and Kannamangalam Weekly market, Kalasapakkam Friday market and Vellur Nam Sandai regularly. The price of one Kilo gram products average price is Rs.300/-. The average production capacity of the unit is 40-45 kg per week. He is earning an amount Rs.19840.00/- per month as net income from his units.

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)
Fruits and vegetable preservation	582	28	Rs.7,400.00/ Month	Rs.22,000.00/ Month
Value addition in milk	232	27	Rs.9,000.00/ Month	Rs.25,000.00/ Month
Preparation Instant mix	216	22	Rs.7,500.00/ Month	Rs.18,000.00 /Month

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 / Enterprise	ITK Practiced	Purpose of ITK
1	Paddy	Using of thermocol blocks bird perches in paddy cultivation	To control birds damage
		Soaking the paddy seeds in diluted cow's urine before sowing,	To reduce the incidence of leaf spot and blast
		10 kg. of cow dung ash is mixed with 2 kg. of lime powder and 1 kg. of powdered tobacco waste and dusted on the rice crop during morning hours.	To control earhead bugs
		Palmyra (Borassue flabellifer) fronds are tied on to poles and kept on the corners of rice fields.	To control grain damage by birds like ducks and sparrows
		Dusting chulah ash in the early morning to control the pests of vegetable crops.	To control the sucking pests.
		Tiding of ropes by using stakes for sitting of birds in field.	To control caterpillars

2	Groundnut	Dried sorghum or coconut leaves are powdered and boiled in water to 60 C for one hour, filtered, diluted and sprayed for two times at 10 and 20 days after sowing.	To control ring mosaic
		Spraying of Neem oil solution 4% and turmeric powder 20g/lit.	To control pest and disease
3	Chilli	Scary thermocol device to prevent the wild boar movement in chilli	To control wild boar issues.
4	Milch animal	Turmeric powder, Alovera gel and lime	For mastitis treatment
5	Fruits and vegetables	Spraying of butter milk	For flower induction and control flower drop.
		Dusting of ash during the vegetative stage	For sucking pest and powdery mildew management.

Photographs for ITK Technologies



Using of thermocol blocks bird perches in paddy cultivation



Scary thermocol device to prevent the wild boar movement in chilli

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 53	796	64	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 cucurbits	366	74	70588.00	107322.00
Protray Seedlings Production in Solanaceous Vegetables.	1061	76	181250.00	272650.00
Cultivation of CO1 chilli hybrid	605	75	414400.00	511600.00
Integrated Crop Management in Brinjal	732	71	354870.00	414665.00
Cultivation of improved bhendi hybrid CO4	213	80	341265.00	392542.00
Foliar Nutrition in vegetables	1998	95	656200.00	781750.00
Integrated Pest and Disease Management in paddy	1908	59	68350.00	87250.00
Management of maize fall army worm (FAW)	299	69	70900.00	91240.00
Integrated Panama wilt management in Banana	175	70	437840.00	218530.00
Integrated Pest and Disease Management in Brinjal	209	61	236720.00	288460.00
Mushroom production	95	55	3300.00/ Month	8200.00/ Month
Beekeeping technologies	321	64	7100.00/ Month	12250.00/ 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	71970	48760	29120	1,41,98,91,200	Six Front Line Demonstration conducted covering 28ha and 60 farmers. Organized 37 trainings covering 426 farmers.	State Department of Agriculture, Thiruvannamalai	Yield increased 23.10%
2	Integrated pest and disease management in paddy	TNAU	1908	3200	18900	6,04,80,000	Conducted seven front line demonstration covering 70 farmers and organized 28 training programmes covering 361 famers	State Department of Agriculture and ATMA, Thiruvannamalai	Yield increased 19.86 %
3	Demonstration on Blackgram Variety VBN 8	TNAU	4020	3400	27310	9,28,54,000	Four Front Line Demonstration conducted covering 85 ha and 220 farmers. Organized 34 trainings covering 680 farmers.	State Department of Agriculture, Thiruvannamalai	Higher yield - 26.00 %

4	Improved spiny brinjal VRM1	TNAU	1220	312	92050	2,87,19,600	Two Front Line Demonstrations conducted covering 4 ha and 20 farmers. Organized 10 trainings covering 205 farmers.	State Department of Horticulture, Thiruvannamalai	Yield increased by 29.78%
5	Improved Chilli hybrid CO1	TNAU	477	98	90950	89,13,100	Three Front Line Demonstrations, Two OFTs conducted covering 6 ha and 40 farmers. Organized 15 trainings covering 234 farmers.	State Department of Horticulture, Thiruvannamalai	Yield increased by 24.51%

13. Cases of large scale adoption/impact of specific technologies

IIHR Micronutrient Mixture – A real yield booster in vegetable crops

A. Situation analysis / problem statement

In Thiruvannamalai district, the area under vegetable crops is 4260 ha. The major vegetable crops cultivated in the district are cucurbits (Cucumber, Gourd, Watermelon, pumpkin), solanaceous vegetables (Brinjal, Bhendi, Tomato, Chilli), and leafy vegetables. The vegetable growing has been one of the main sources of income for larger number of farmers in the district. The farmers are only using recommended fertilizers by the local retail shop which is not equal to the recommendations by the university and other stakeholder. Moreover, the farmers have not aware of the use of micronutrients in vegetable cultivation which minimized the expected yields in the field conditions.

Problems identified

Farmers in Thiruvannamalai district are spending huge money on fertilizers. It is of great concern that each farmer is spending about 60-70 % of cost of production only on fertilizers. KVK has conducted a survey in the vegetable growing area in the district revealed that farmers are applying fertilizers indiscriminately. No farmer is aware of recommended dosage of fertilizers for vegetable crops. The role of micronutrients was known to very few farmers. The yield and income levels of vegetables have started fluctuating due to problems mentioned here under :

- Imbalanced nutrition
- Lack of micronutrient application and organic addition
- Reduction in soil fertility

B. Plan, implementation of activities and support by KVK

The KVK has acquired from IIHR, Bengaluru the successful technology called Vegetable special, a micronutrient formulation which can boost the yield in vegetable crops by 20-30%. In order to make available the product in the locality for the easy adoption by farmers, the KVK has established the vegetable special production unit and supplying it to farmers since 2016.

Benefits of vegetables special:

- Higher yield (20-30 %).
- Improved quality of vegetables
- Better colour and uniform size vegetables.
- Higher keeping quality

The KVK has included vegetable special as one of the important critical inputs in its activities related to vegetable crops under OFT/FLD, trainings and other extension activities.

The details of the KVK activities are given hereunder:

Name of the activity	No. of programmes	No of farmers benefitted
On Farm testing	5	32
Front Line Demonstration	10	100
Trainings	51	768
Extension activities	36	860
Total	102	1760

Apart from the above activities, awareness on vegetable special technology being created through various in house, off campus and sponsored trainings in collaboration with Department of Horticulture across the district. After seeing the positive results of the technology, it is rapidly spreading to other vegetable growers existing in the district.

C. Output

- Farmers stated that an increase in yield by 20 to 30% was recorded in tomato, brinjal, chillies and gourd crops after using recommended quantity of vegetable special as foliar spray for 3-4 times.
- By using the technology, farmers feel that the quality of the produce in terms of size, weight, taste was also improved.
- The cost on fertilizer also minimized by 15% as the technology has all the required micronutrients.
- The technology also proved that it gives more resistance to crop against pest and diseases.

Details of change in yield and income

Parameters	Tomato		Brinjal		Chillies		Gourds	
	BI	AI	BI	AI	BI	AI	BI	AI
Yield (Q/ha)	463.35	596.12	271.38	344.61	24.63	29.53	342.62	428.20
Yield increase (%)	-	28.65	-	26.98	-	19.89	-	24.98
Net income (Rs.)	176908	270247	210855	246331	85249	153962	234332	349721
BCR	2.27	2.98	2.57	2.92	1.86	2.59	2.41	3.15

Note : **BI** : Before Intervention, **AI** : After Intervention

D. Outcome

The IIHR Vegetable special technology has spread over an area of 1120 hectares in Thiruvannamalai district due to the effort taken by KVK in collaboration with State Department of horticulture and it is expected to reach all the vegetable growing area of the district very soon.

E. Impact

There has been a constant increase in the area and productivity of vegetables in Thiruvannamalai district. Use of IIHR vegetable special is directly contributing an average yield increase by 20-30 % in vegetable crops. As the technology has been used by 7280 farmers in 1220 ha as of now, the demand for vegetable special is increasing regularly not only from Thiruvannamalai district, but also from neighboring districts after seeing the positive results by the farmers.

14. Details of impact analysis of KVK activities carried out during the reporting period

❖ Impact Analysis of Black gram VBN 11 variety in Thiruvannamalai district

To replace the old varieties in blackgram, the KVK has introduced VBN 11 blackgram variety in the year 2021, it fetches good market price in the local market. Owing to the short duration nature, resistant to Yellow Mosaic Vein and few pests, higher yield, this variety has earned very good response and name from the farmers.

As a result of the intensive efforts of KVK in collaboration with line department for the past four years, this variety has spread over an area of 762 hectares in Thiruvannamalai district. The average yield obtained by farmers cultivating VBN 11 blackgram is 724 kg/ha which is 59.57% higher than the district productivity compared to other old varieties. The average net income obtained by the farmers was Rs.21,400/- per hectare.

❖ Impact analysis of IIHR- vegetable special in Thiruvannamalai district.

The KVK has demonstrated foliar application of vegetable special, a micro nutrient formulation developed by IIHR (Indian Institute of Horticultural Research), Bengaluru. About 6482 farmers have gained knowledge on the technology directly through various activities of KVK viz., training, demonstrations and extension activities. In order to make the technology (Vegetable special) locally available to the farmers, the KVK has acquired the vegetable special technology from IIHR and supplied to farmers at nominal cost.

It has been recorded that adoption this technology has improved the yield to an extent of 25 to 30 % in almost all the vegetable crops it was applied. The technology has been adopted in an area of about 1120 hectares in Thiruvannamalai district and it is expected to reach all the vegetable growing area of the district very soon.

15. Linkages

Functional linkage with different organizations

Name of organization	Nature of linkage
Ministry of Ayush	Awareness and trainings for medicinal plant cultivation
District collector office	Technical assistance during monthly Farmers Grievance and Skill trainings
State Dept. of Agriculture	Trainings and Demonstrations in various blocks under ATMA project. Conduction of field days under FLD, Farm Advisory Services.
State Dept. of Horticulture	
Department of Agri Business and Agri Marketing.	Trainings and Demonstrations in fruits and vegetable preservations, Marketing linkage of FPO.

State Department of Animal husbandry	Animal Health camps, Trainings, Demonstrations & Kisan Mela
NABARD	Establishment of Farmer Producer company, MEDP and CAT training programmes.
ICDS	Conduction of Awareness programmme, Poshan Maah, Training and Demonstration.
ICICI foundation	Training to the farmers, Technical convergence and other field activities.
Centre for Indigenous Knowledge system. (CIKS)	
Srinivasan Services Trust (SST)	Training to the farmers, Technical convergence and other field activities.
Tamil Nadu Rural Transformation Project (TNRTP)	Assessment and Training to CRP's, Skill development programmes
Mivipro Pvt Ltd, Gobichettipalayam	Demonstration on wild boar, rat and other wild animals at the farmers field.
Garuda Aerospace Limited, Chennai	Demonstration on Spraying of pesticides using agridrones in the farmers field.
Marutham FPCL & Cheyyar FPCL	Skill trainings, quality seed production and supply
IPL Centre for Rural Outreach, New Delhi	Survey, farmers data collection using student volunteers
Hand in Hand NGO	Farmer training, field visit and promotion of organic farming.
National Agro Foundation	Capacity building training to BODs, CEO and Shareholders

16. List of special programmes undertaken by the KVK and operational now, which have been financed by State Govt./Other Agencies

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Food Processing Training Centre	March 2015	Ministry of Food Processing Industries, New Delhi.	15,00,000.00
Farmer Producer Company	December 2019	NABARD	1144000.00

17. Awards and Recognitions

- Shri. V.Suresh, Senior Scientist & Head received Best Extension Worker award during Independence Day celebration on 15.08.2022 from the District Collector.
- Shri. V.Suresh, Senior Scientist & Head and Smt.T.Margaret, Subject Matter Specialist (Home Science) received appreciation certificates for Women Entrepreneurial activities from Vishwa Yuva Kendra, New Delhi on 02.11.2022.
- Shri.P.Narayanan, Subject Matter Specialist (Plant Protection) awarded as Best article Contributor from Agricultural Scientific Tamil Society, New Delhi during the 7th National Tamil Conference held at TANUVAS, Chennai on 03.09.2022.

- Shri. V.Suresh, Senior Scientist & Head and Smt.T.Margaret, Subject Matter Specialist (Home Science) received appreciation awards for the collaborative activities with Sri Akilandeswari Womens College, Wandiwash on 05.03.2022.
- Shri.P.Narayanan, Subject Matter Specialist (Plant Protection) awarded as Life time award for article contribution from Pachai Bhoomi on 02.05.2022.



18. Important Visitors to KVKs during 2022



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



Dr.P.P.Murugan, Director of Extension Education, TNAU, Coimbatore visited Exotic fruit garden during SAC meeting

Annexure I

Proceedings of the 22nd Scientific Advisory Committee Meeting

The 22nd Scientific Advisory Committee Meeting of ICAR Krishi Vigyan Kendra, Thiruvannamalai district, Tamil Nadu was held on 20.03.2023 at KVK premises. The meeting started with the welcome address by Mr.V. Suresh, Senior Scientist and Head. Mr. S. Ramesh, President, Tamil Nadu Board of Rural Development, Chennai delivered the presidential address and introduced the members of the Scientific Advisory Committee.

Dr. P. P. Murugan, Director of Extension Education, Tamil Nadu Agricultural University, Coimbatore had participated and explained the objectives, role of the members and activities to strengthen the KVK. He also instructed the KVK to give more importance to the promotion of millet cultivation, Natural farming and Integrated Organic Farming System models.

Mr. V. Suresh, Senior Scientist & Head i/c, presented the action taken report on the recommendations of 21st SAC meeting held on 17th March 2022 and the Annual Progress report of the KVK for the year 2022-23. Two model demonstration units, viz., Groundnut oil extraction unit for SC/ST self help group and fencing system for free grazing of poultry birds in the instructional farm has been inaugurated by the chief guests. In the Scientific Advisory Committee, three new farmers and a farm woman were included, since the tenure of the old members was completed.

The SAC members from various line departments, farmers, farm women, entrepreneurs and SHG members participated in the meeting and gave their ideas and suggestions for the effective implementation of KVK activities.

The 22nd SAC meeting came to an end with a vote of thanks by Mrs. T.Margret, Subject Matter Specialist (Home Science).

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.	Mr.C.Harakumar Joint Director of Agriculture, Thiruvannamalai	Member
4.	Dr.M.Vaithiyalingan Professor and Head, Centre for Excellence in Millets, Athiyandal, Thiruvannamalai.	Member
5.	Dr.G.Somasundaram Regional Joint Director, Department of Animal Husbandry, Thiruvannamalai	Member
6.	Mr.Vijay Neehar District Development Manager, NABARD, Chennai Metro Cluster	Member
7.	Mr.K.Subramaniyan Senior Manager, Indian Bank, Vembakkam.	Member
8.	Dr. P.Balamurugan Associate Professor and Head, VURTC, TANUVAS, Thiruvannamalai.	Member
9.	Mr.R.Panchapakesan Executive Engineer, Department of Agriculture Engineering, Thiruvannamalai.	Member
10.	Mr.N.Mohan Assistant Director of Horticulture, Cheyyar, Thiruvannamalai.	Member
11.	Mr.K.Dhanapal District Industrial Centre, Thiruvannamalai.	Member
12.	Mr.B.Vivek Sub Inspector of Fisheries, Fisheries and Fisherman Welfare, Vellore.	Member
13.	Mrs.T.Soundarya Agriculture Officer, Department of Agrimarketing and Agribusiness, Cheyyar, Thiruvannamalai.	Member
14.	Mrs.C.Kavitha Assistant Inspector, Department of Sericulture, Thiruvannamalai	Member
15.	Mrs.V.Sathya Extension Officer, Department of Social Welfare, Thiruvannamalai.	Member
16.	Mr.R.Murugan Block Mission Manager, Mahalir Thittam, Vembakkam	Member
17.	Mr.K.V.Palani S/o.Vellai, Kalambur, Polur taluk, Thiruvannamalai.	Member (Farmer)
18.	Mr.M.Velayutham	Member (Farmer)

Sl.No.	Name and Address	Affiliation
	S/o.Munusamy, Brammadesam, Vembakkamtaluk,Thiruvannamalai.	
19.	Mr.K.Karthikeyan S/o. Kannan, Mottur, Kalasapakkam taluk, Thiruvannamalai.	Member (Agripreneur)
20.	Mrs.N.Meenatchi W/o. Nandakumar, Chinnasenkadu, Cheyyar taluk, Thiruvannamalai.	Member (Fam women)
21.	Mrs.P.Manimozhi W/o.Perumal, Sorappathur village, Thellar block, Thiruvannamalai.	Member (Fam women)
22.	Mrs.S.Sagunthala W/o.Sundarraj, Chithathur, Vembakkam, Thiruvannamalai.	Member (SHG)
23.	Dr.N.Muthukrishnan Dean, Agriculture College and Research Institute, Vazhavachanur, Thiruvannamalai.	Special invitee
24.	Dr.T.Sundarraaj, Senior Scientist and Head, ICAR KVK, Krishnagiri.	Special invitee
25.	Mr.E.Arasu Executive Officer, TamilNadu Vazhdhu Kattuvom Project, Thiruvannamalai	Special invitee
26.	Mr.P.Sathishkumar District Officer, ICICI Foundation, Thiruvannamalai	Special invitee
27.	Mr.V.Suresh Senior Scientist and Head i/c, ICAR KVK, Thiruvannamalai.	Member Secretary