ICAR-KVK KRISHNAGIRI

ANNUAL PROGRESS REPORT

(1st January 2025 to 31st December 2025)

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	:	Elumichangiri, Mallinayanapalli Post, Krishnagiri, Tamil Nadu – 635 120.
Phone	:	04343 291944
Fax No.	:	–
E-mail	:	icarkvkkrishnagiri@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 (TNBRD)
Status of the Host Organization (As per the MoU)	:	Tamil Nadu Board of Rural Development (TNBRD)
Address	:	No.359, Kilnelli village, Chithathur Post, Vembakkam Taluk, Thiruvannamalai District – 604 410.
Phone	:	04182 291024
Fax No.	:	–
E-mail	:	tnbrd1978@gmail.com
Name of the Chairperson	:	Mr. S. Ramesh
Mobile No	:	+91 9444021523
Email	:	tnbrd1978@gmail.com

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

Name of the Programme Coordinator / SS&H	:	Dr. T. Sundarraj
Residential Address	:	Mullai Nagar, 3rd Cross, Krishnagiri District 635 002.
Phone No.	:	–
Mobile No.	:	+91 94438 88644
Email	:	drsundarraj@yahoo.com

1.4.	Year of sanction of the KVK (as per OfficialOrder)	:	1994
1.5.	Month and year of establishment	:	September, 1994

1.6. Total land with KVK (in ha): 20.3 ha.

S. No.	Item	Area (ha)
1	Under Buildings	0.80
2	Under Demonstration Units	2.00
3	Under Crops	14.3
4	Orchard/Agro-forestry	1.30
5	Others	1.90
Total		20.3

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	November, 2012	550	53,00,000	-	-	-
2	Farmers Hostel	ICAR	November, 2012	300	35,00,000	-	-	-
3	Staff Quarters (No.)	-	-	-	-	-	-	-
4	Demonstration Units:							
	i. Mango - Ultra High Density Planting	ICAR	October, 2013	607.03	11,100	-	-	-
	ii. Amla - High Density Planting	ICAR	September, 2014	607.03	9,000	-	-	-
	iii. Custard Apple - High Density Planting	ICAR	September, 2014	404.6	5,000	-	-	-
	iv. Slatted Floor Goat Rearing	ICAR	December, 2014	71	62,000	-	-	-
	v. Mother Plants	ICAR	January, 2017	404.6	3,000	-	-	-

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
	vi. Poultry Unit	ICAR	March, 2019	40.13	1,04,250	-	-	-
	vii. Vermicompost Unit	ICAR	March, 2019	13.4	30,800	-	-	-
	viii. Azolla Production Unit	ICAR	March, 2019	9.29	15,000	-	-	-
	ix. Honey Bee Rearing	ICAR	October, 2019	-	16,116	-	-	-
	x. Shade Net Nursery - Fruit Crop Nursery Unit	ICAR	December, 2019	83.61	69,609	-	-	-
	xi. Medicinal Park	ICAR	March, 2020	404.64	11,250	-	-	-
	xii. Future Fruit Crops	ICAR	August, 2021	404.64	7,130	-	-	-
	xiii. Sheep Rearing Unit	ICAR	November, 2021	53.51	1,25,148	-	-	-
	xiv. Ornamental Propagation Unit	ICAR	December, 2021	50	39,998	-	-	-
	xv. Germination Bed	ICAR	December, 2022	28	30,000	-	-	-
	xvi. Root Stock Nursery Unit	ICAR	December, 2023	80	68,303	-	-	-
	xvii. Bio-input Production Unit	ICAR	February, 2023	30	98,299	-	-	-
	xviii. Cattle Unit	ICAR	February, 2024	93	5,83,578	-	-	-
	xix. VAM Unit	ICAR	February, 2024	3.6	–	-	-	-
	xx. Shade Net Nursery - Flower & Ornamental Nursery Unit	ICAR	June, 2024	128	89,600	-	-	-
5	Fencing	ICAR	November, 2012	1520 rm.	5,00,000	-	-	-
6	Rain Water harvesting system	-	-	-	-	-	-	-
7	Threshing floor	-	-	-	-	-	-	-
8	Farm godown	-	-	-	-	-	-	-
9	Shed (Farm equipment)	-	-	-	-	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms covered as on 31.12.2025	Present status
Two-wheeler Hero Honda – CD Dawn (TN09AD4663)	2006	39,890	31,223	Good
Two-wheeler Hero Honda Passion (TN24E7592)	2009	50,000	9,064	Good
Scooter – Suzuki Access 125 Standard Edition (TN24BD1317)	2024	69,124	9,459	Good
Jeep – Mahindra Bolero B6 BS-VI (TN24BD0497)	2024	9,10,294	44,401	Good
Tractor – MF 5245 DI (TN24J9922)	2011	5,00,000	1785.6 (Hrs)	Good

C) Equipment & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Computer with accessories	2005	75,000	Not in Working condition
Copier	2005	75,000	Not in Working condition
Digital Camera	2005	20,000	Not in Working condition
LCD with accessories	2007	1,01,250	Not in Working condition
Fax Machine	2009	15,000	Not in Working condition
Power Generator	2011	1,00,000	Working
Printer D2600 – Inkjet	2010	2,150	Working
Power Tiller – VST Shakti 130 DI	2010	1,48,190	Working
Computer with Accessories - Nos 2	2022	82,600	Working
HP Printer with Scanner (Neverstop Laser MFP 120x)	2022	17,991	Working

1.7. A) Details SAC meeting conducted in the year: 2025

S.No.	Date	No of Participants	Salient Recommendations
1.	07.02.2025	23	SAC Details given below

PROCEEDINGS OF SCIENTIFIC ADVISORY COMMITTEE MEETING

VENUE: **ICAR - KVK, Krishnagiri** DATE: **07.02.2025**

Chairman of the SAC Meeting : **Thiru S. Ramesh**
President,
TNBRD, Thiruvannamalai.

Member from TNAU : **Dr. M. A. Vennila**
Programme Coordinator, KVK Dharmapuri,
Tamil Nadu Agricultural University.

Member Secretary : **Dr. T. Sundarraj**
Senior Scientist and Head,
ICAR- KVK, Krishnagiri.

No. of participants : **23**

Members Participated:

Sl. No	Name and Designation	Department
1	Mr. S. Ramesh President	Tamil Nadu Board of Rural Development Thiruvannamalai
2	Dr. A. Bhaskaran Principal Scientist (Soil Science)	ICAR – Agricultural Technology Application Research Institute, Zone X, Hyderabad
3	Dr. A. K. Thiruvenkadan Dean	College of Poultry Production and Management TANUVAS, Hosur, Krishnagiri
4	Mr. C. Pachaiyappan Joint Director of Agriculture	Department of Agriculture Krishnagiri
5	Mr. S. Ramesh AGM (District Development Manager)	NABARD Cluster Office Salem
6	Dr. M. A. Vennila Programme Coordinator	ICAR – TNAUKVK, Papparapatty Dharmapuri
7	Mrs. J. Gunavathi Deputy Director of Horticulture	Department of Horticulture Krishnagiri
8	Dr. R. Jansirani Professor (Agrl. Extn.)	Horticultural College & Research Institute Paiyur, Krishnagiri
9	Dr. N. Muniappan Assistant Professor & Head	Veterinary University Training and Research Centre, TANUVAS, Krishnagiri
10	Dr. R. Ramesh Veterinary Surgeon	Department of Animal Husbandry Krishnagiri
11	Dr. R. Ravi Forest Range Officer	Social Forestry and Extension Division Krishnagiri
12	Mr. S. Gopala Krishnan Programme Officer	All India Radio Dharmapuri
13	Mrs. V. Revathy Assistant Engineer	Agricultural Engineering Department Krishnagiri
14	Mrs. K. Buvana Technical Assistant	Social Forestry and Extension Division Krishnagiri
15	Mrs. V. Veeralakshmi Assistant Inspector of Sericulture	Department of Sericulture Bargur, Krishnagiri

Sl. No	Name and Designation	Department
16	Mr. M. Madhesh Agricultural Officer	Department of Agricultural Marketing and Agri Business, Krishnagiri
17	Mr. K. S. Mummoorthisozhan Agricultural Officer (Agri Business)	Department of Agricultural Marketing Hosur, Krishnagiri
18	Mrs. R. Sakthi Subashini District Social Welfare Officer	District Social Welfare Office Collectorate, Krishnagiri
19	Mr. A. Kalaimani Farmer member	Farmer Representative Belavarthi, Krishnagiri
20	Mrs. M. Vijaya Farmer Member	Farmer Representative Kottaiyoor Krishnagiri
21	Mrs. M. Deepa Farmer Member	Farmer Representative Jakkapan Nagar, Krishangiri
22	Mrs. L. Gayathri Thillagavathi Farmers Member	Farmer Representative Majithgollahalli, Krishnagiri
23	Dr. T. Sundarraj Member Secretary Senior Scientist and Head	ICAR- KVK, Krishnagiri

The programme was started with invocation song. The meeting was presided over by Mr. S. Ramesh, President, TNBRD, Thiruvannamalai. Dr. T. Sundarraj, Senior Scientist and Head of KVK and Member Secretary of SAC gave a welcome address and presented an overview of activities for the reporting period and the action taken report of the previous SAC meeting. The Members recommended the following points for the effective functioning of the Krishi Vigyan Kendra.

THE MAJOR RECOMMENDATIONS OF THE SAC MEETING ARE AS FOLLOWS:

Mr. S. Ramesh The President, TNBRD, Thiruvannamalai.	✓ Awareness to be created on mass cultivation of tree seedlings. ✓ Exposure visit to tree seedlings nursery production unit by all KVK staff may be done.
Dr. A. Bhaskaran Principal Scientist (Soil Science), ICAR – Agricultural Technology Application Research Institute Zone X, Hyderabad.	✓ Organic content of soil may be monitored with proper record maintenance to track soil health and improvements over time. ✓ The impact of training programs should be assessed and documented to evaluate their effectiveness in enhancing farmers' skills and knowledge. ✓ The impact of technologies on livelihood changes should be recorded annually to measure their contribution to improve farmers' lives. ✓ Proper records should be maintained for all seeds and seedlings sold by KVK to ensure traceability and accountability. ✓ Collaboration with the forestry sector should be established to promote sustainable practices and integrate forestry with agricultural initiatives.

Dr. A. K. Thiruvenkadan Dean, College of Poultry Production and Management, TANUVAS, Hosur, Krishnagiri	✓ KVK should associate with VUTRC for promoting NLM and conducting relevant training programs. ✓ Support for the rearing of poultry chicks should be provided to farmers to improve poultry farming practices.
Mr. C. Pachaiyappan Joint Director of Agriculture, Department of Agriculture, Krishnagiri.	✓ Front Line Demonstrations (FLDs) on millets (Tenai, Varagu, Samai) should be emphasized. These demos should promote new varieties like ATL1 and ATL2. ✓ The promotion of vegetable Redgram and cultivation may be considered. ✓ There should be a greater emphasis on promoting yellow sticky traps and pheromone traps for pest management. ✓ Create awareness among farmers on Parthenium management.
Mr. S. Ramesh AGM (District Development Manager), NABARD Cluster Office, Salem.	✓ Training on organic and natural farming practices should be conducted, focusing on the use of organic inputs, pre and post organic content, and soil testing. ✓ Trainings on the preparation of bio inputs should be organized with progressive farmers to promote sustainable farming practices. ✓ Pre and post indicators for organic farming should be developed as part of project initiatives to monitor and evaluate the effectiveness of organic practices. ✓ A database of organic farmers should be created to facilitate better access to resources, information, and training.
Dr. M. A. Vennila Programme Coordinator, ICAR – TNAU KVK, Papparapatty, Dharmapuri.	✓ Efforts should be made to ensure that all blocks are reached and included in awareness and training programs. ✓ Awareness on the preparation and use of organic farming inputs should be increased to promote sustainable farming practices. ✓ Booklets detailing government schemes should be created and distributed to farmers to ensure they are informed about available support and resources.
Mrs. J. Gunavathi Deputy Director of Horticulture, Department of Horticulture, Krishnagiri.	✓ Awareness programs on the management of wilt and whitefly infestations should be conducted to educate farmers on effective control measures. ✓ Awareness on the use of bio-pesticides should be promoted to encourage environment-friendly pest control practices among farmers.
Dr. R. Jansirani Professor (Agrl. Extn.), Horticultural College & Research Institute, Paiyur, Krishnagiri.	✓ Awareness on micro-nutrient deficiencies in crops should be created, particularly targeting farmers groups, to ensure better crop nutrition & improved yields. ✓ Effective pest management practices especially fruit fly management in mango cultivation may be promoted.
Dr. N. Muniappan Assistant Professor & Head, Veterinary University Training and Research Centre, TANUVAS, Krishnagiri.	✓ Awareness programs on the use of pesticide sprays for controlling LSD (Lumpy Skin Disease) should be conducted through KVK to educate farmers on effective management practices. ✓ Awareness to be created on use of TANUVAS smart mixture for dairy cattle to address calcium deficiency.

	✓ Promotion of improved desi chicken strains to SC/ST farmers to be done.
Dr. R. Ramesh Veterinary Surgeon, Department of Animal Husbandry, Krishnagiri.	✓ Training on poultry management, including the rearing of indigenous breeds to enhance productivity and sustainability. ✓ Awareness programs on Mastitis should be conducted to educate farmers on its prevention and management.
Dr. R. Ravi Forest Range Officer, Social Forestry and Extension Division, Krishnagiri	✓ Training on waste land management should be conducted to promote sustainable land use and improve productivity in underutilized areas. ✓ Training on precision farming and post-harvest management techniques should be provided, with a focus on tree crops.
Mr. S. Gopala Krishnan Programme Officer, All India Radio, Dharmapuri.	✓ Awareness programs on sustainable and climate resilient agricultural practices should be intensified to help farmers adapt to changing weather patterns. ✓ Training sessions on advanced horticulture crop technologies should be given to AIR to enhance the skills of farmers in growing high-value crops. ✓ Even small, informative messages on agricultural practices may be shared through All India Radio (AIR) to reach a broader farmer audience effectively.
Mrs. V. Revathy Assistant Engineer, Agricultural Engineering Department, Krishnagiri	✓ Training and awareness programs on the use of farm machinery for groundnut cultivation should be conducted, with a focus on improving efficiency and productivity. ✓ Demonstrations on the use of harvesters for groundnut should be organized to enhance farmers' understanding of efficient harvesting techniques.
Mrs. V. Veeralakshmi Assistant Inspector of Sericulture, Department of Sericulture, Krishnagiri	✓ Awareness programs on pest management in mulberry cultivation to be conducted.
Mr. K. S. Mummoorthisozhan Agricultural Officer (Agri Business), Department of Agricultural Marketing, Hosur, Krishnagiri	✓ Digital marketing training should be provided to FPOs (Farmer Producer Organizations) and SHGs (Self-Help Groups) to enhance their market reach and business skills.
Mr. V. Navaneeth Programme Executive, Doordarshan Kendra, Chennai. (By Mail)	✓ KVK may send the list of successful farmers and faculties willing to participate in Doordarshan programmes.
Mrs. R. Sakthi Subashini District Social Welfare Officer, District Social Welfare Office, Collectorate, Krishnagiri.	✓ Training for women entrepreneurs, including skill improvement programs for widows, should be organized by KVK with support from the Social Welfare Department.
Mr. A. Kalaimani Farmer member, Belavarthi, Krishnagiri.	✓ Subsidy schemes of millets and minor millets, subsidy schemes for machineries are to be promoted.

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2. DETAILS OF DISTRICT (2025)

2.0. Operational jurisdiction of KVK

District	New districts governed by the KVK after division of the district, if applicable	Taluks/Tehsils and/or Mandals under the KVK jurisdiction
Krishnagiri	NA	Krishnagiri

2.1. Major farming systems/enterprises (based on the analysis made by the KVK)

S. No	Farming system/enterprise
1	Agriculture + Horticulture + Animal husbandry
2	Horticulture + Animal husbandry
3	Horticulture
4	Agriculture + Animal husbandry
5	Agriculture + Horticulture
6	Animal husbandry
7	Sericulture

2.2. Description of Agro-climatic Zone & major agro ecological situations (based on soil and topography)

S. No	Agro-climatic Zone	Characteristics
1	North western zone	• The North Western Zone comprising the revenue districts of Dharmapuri, Krishnagiri, Salem, Namakkal (excluding Tiruchengode taluk) and Perambalur taluk of Perambalur District is situated between 11 and 12°55' north latitude & 77° 28' and 78° 50' east longitude. It is completely land locked, covering an area of 16,150 Sq.km. equivalent to 12.4 % of the state area. • Of the total geographic area of 17.31 lakh ha, 8.01 lakh ha (46.3%) are cultivated. The area under forest is 4.86 lakh ha. Representing 28.1 per cent of the area. Barren land and cultivable waste represent 5.8 per cent of the total area • The climate in the zone ranges from semi-arid to sub-humid with frequent occurrence of drought • The mean annual rainfall of the North Western Zone is 877.6 mm. The zone enjoys the rainfall from both South-West and North-East monsoon seasons. The contributions by winter, summer and South-West and North-East monsoon are 1.5, 17.5, 46.4 & 34.6 % respectively. • The maximum temperature ranges from 20°C to 47°C and minimum from 10°C to 31°C; the evapotranspiration is very high. The driest months are January and February. • The major soil types occurring in the zone are 1) Red non-calcareous, 2) Red- calcareous

S. No	Agro-climatic Zone	Characteristics
		3) Alluvial 4) Black soil 5) Hill soil 6) Forest soil 7) Saline/alkali soil. Of this major area comes under red non-calcareous and red calcareous soils. In the above major soil types, saline & alkali soil also occur in sizable proportion in the zone. Totally 1.7 lakh ha of area is affected by high salinity and alkalinity. Out of this 0.2 lakh ha is under Non-calcareous type and 1.5 lakh ha under calcareous type • Paddy (1.29 lakh ha), sorghum (1.43 lakh ha), finger millet (1 lakh ha), little millet (0.45 lakh ha) horsegram, blackgram, redgram &greengram • Among the oilseeds, groundnut (2.11 lakh ha), sesame (0.21 lakh ha), sunflower (0.06 lakh ha) and castor (0.25 lakh ha) • Cotton (0.33 lakh ha), sugarcane (0.45 lakh ha) • The spices and condiments such as coriander, chillies, turmeric are being cultivated in small portions throughout the zone • Vegetables (0.24 lakh ha), tapioca (0.59 lakh ha), mango (39,680 ha). The other crops are: potato (0.25 lakh ha), banana (0.28 lakh ha) and onion (0.08 lakh ha).
2	**AES – I** (Krishnagiri, Veppanapalli, Bargur, Uthangarai and Mathur blocks)	Red soil, altitude 1000 – 2000 ft, well irrigated and rainfed
	AES – II (Kaveripattinam block)	Red soil, altitude 1000 – 2000 ft, canal irrigated
	AES – III (Hosur, Shoolagiri, Thally and Kelamangalam blocks)	Red soil, altitude 2000 – 3000 ft, well irrigated and rainfed

2.3. Soil types

S. No	Soil type	Characteristics	Area in ha
1	Sandy clay loam-Hosur series	Soil structure-Moderate coarse crumb, Soil depth-125 cm, Soil Erosion-Moderate, Soil colour-Dark brown to reddish brown, Non-calcareous, CEC-low, Water holding capacity-High	1,11,317
2	Sandy clay loam-Kelamangalam series	Soil structure-Moderate coarse crumb Soil depth-125cm, Soil Erosion-Moderate, Soil colour-Brown to very dark grayish brown Non calcareous, CEC-low, Water holding capacity-low	10,863
3	Sandy loam-Sonnepuram series	Soil structure-Strong medium sub angular blocky Soil depth-128cm, Soil Erosion-Moderate Soil colour-Brown, Non calcareous, CEC-medium, Water holding capacity-low	8,342
4	Sandy loam-Mathigiri series	Soil structure-Moderate coarse crumb, Soil depth-191 cm, Soil erosion-moderate, Soil colour-Reddish brown to brown, Non calcareous, CEC-Low	7,834
5	Sandy loam-Krishnagiri series	Soil structure-Moderate medium sub angular blocky Soil depth-102 cm, Soil erosion-moderate Soil colour - Grayish brown, Calcareous, CEC-Medium, Water holding capacity-Medium	10,195
6	Sandy loam-Sulakkarai series	Soil structure-Weak medium sub angular blocky, Soil depth-32 cm, Soil Erosion-Slight, Soil colour-Dark brown to very dark grey Calcareous, CEC-Low, Water holding capacity-Low	2,833
7	Sandy loam-Thoppur series	Soil structure-Weak fine to medium crumb, Soil depth-180 cm, Soil Erosion-Moderate, Soil colour-Dark brown, Calcareous, CEC-Low, Water holding capacity-Medium	4,276
8	Loamy sand-Vannapatti series	Soil structure-Weak fine crumb, Soil depth-45 cm Soil erosion-Moderate, Soil colour-Yellowish red to red Non-calcareous, CEC-Medium Water holding capacity-Low	1,39,329
9	Loamy sand-Salem series	Soil structure-Weak fine to medium crumb, Soil depth-80 cm, Soil Erosion-Moderate, Soil colour-Dark reddish brown, Non-calcareous, CEC-Low Water holding capacity-Low	4,163
10	Silty clay loam-Harur series	Soil structure-Moderate medium sub angular blocky, Soil depth-98 cm, Soil Erosion-Slight, Soil colour-Dark brown to dark grayish brown Calcareous, CEC-Medium Water holding capacity-High	4,209
11	Forest and hills	Soil colour-Dark brown to very dark brown	2,06,278
12	Water bodies	Soil colour-Reddish brown to brown	934

2.4. Area, Production and Productivity of major crops cultivated in the district for 2025

Kharif:

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	Paddy	18,832	8,28,608	44
2	Sorghum	4,200	1,09,200	26
3	Finger Millet (Ragi)	45,000	14,40,000	32
4	Little Millet	480	4,320	9
5	Pearl Millet	1,150	32,200	28
6	Maize	6,500	2,47,000	38
7	Red Gram	8,900	89,000	10
8	Green Gram	1,100	7,700	7
9	Black Gram	2,600	24,700	9.5
10	Groundnut	15,800	3,79,200	24
11	Sesame	720	6,480	9
12	Cotton	880	6,600	7.5
13	Banana	1,000	4,80,000	480
14	Mango	42,000	33,60,000	80
15	Chillies	1,050	5,250	52
16	Brinjal	3,000	5,40,000	180
17	Tomato	13,500	26,32,500	195
18	Cabbage	2,900	17,40,000	600
19	Sugarcane	620	5,27,000	850
20	Turmeric	2,050	47,150	23

Rabi:

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	Paddy	12,591	5,54,004	44
2	Finger millet	5,500	1,81,500	33
3	Maize	31,407	10,41,142	33.15
4	Horse gram	17,800	1,29,406	7.27
5	Green gram	359	10,501	29.25
6	Black gram	1,683	65,216	38.75
7	Groundnut	14,461	1,53,287	10.6
8	Banana	533	2,55,840	480
9	Chilies	650	33,800	52
10	Brinjal	2,300	4,25,500	185
11	Tomato	9,500	19,00,000	200
12	Cabbage	2,800	17,08,000	610

2.5. Weather data

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
January 2025	5.08	28	17	58.00
February 2025	7.62	31	18	48.00
March 2025	12.7	34	21	44.00
April 2025	33.02	36	24	52.00
May 2025	63.5	35	25	65.00
June 2025	60.96	32	23	74.00
July 2025	68.58	31	22	78.00
August 2025	93.98	31	22	79.00
September 2025	120.32	30	21	76.00
October 2025	121.92	29	21	73.00
November 2025	88.9	27	19	72.00
December 2025	35.56	27	18	68.00

2.6. Production and productivity of livestock, Poultry, Fisheries etc. in the district (2025)

Category	Population	Production	Productivity
Cattle			
Crossbred	2,62,829	225.168 tons	1600 lit/annum
Indigenous	1,00,434	123.377 tons	600 lit/annum
Buffalo	18,051	120.157 tons	1200 lit/annum
Sheep			
Crossbred	29,993	371.952 tons	20 kg b.wt
Indigenous	3,41,887	456.258 tons	14 kg b.wt
Goats	1,54,809	220.122 tons	14 kg b.wt
Pigs	4,064	580.167 tons	60 – 70 kg b.wt
Crossbred	-	-	-
Indigenous	-	-	-
Rabbits	-	-	-
Poultry			
Hens	3,09,034	-	-
Desi	21,81,895	458.39 lakh eggs	160 – 180 eggs
Improved	58,769	863.90 lakh eggs	300 – 310 eggs
Ducks	190	28891.5 eggs	215 eggs
Turkey and others	768 & 3,970	42084 &133859 eggs	80 eggs & 45 eggs

2.7. Details of Adopted Villages (2025)

S.No.	Taluk/ Mandal	Name of the block	Name of the village	Year of adoption	Major crops & enterprises	Major problem identified	Identified Thrust Areas
KVK adopted villages							
1	Krishnagiri	Mathur	Mathur, Samalpatti/ Kunathur, Ikuntham	2021	Groundnut, Redgram, Mango, Dairy Cattle, Cassava	Less yield due to repeated cultivation of old varieties like Dharani; Less yield due to repeated cultivation of old varieties like LRG 41; Low yield due to pest incidence; Disease management; Low yield due to improper crop management; Low yield due to improper nutrient management; Improper crop management; Low yield due to improper pest management;	ICM, IPDM, INM, Feed Management
2	Krishnagiri	Krishnagiri	Kattinayanapalli, Dhasiripalli, Krishnagiri	2020	Finger Millet, Groundnut, Paddy, Dairy cattle, Cowpea, Dairy cows, Poultry, Ribbed guard, Marigold, Banana, Horsegram, Moringa	Low yield due to repeated cultivation of existing variety ML 365; Low yield due to improper nutrient management; Low yield due to improper nutrient management; Low yield due to improper pest management; Feed management; Low yield due to improper crop management; Low yield due to improper crop management; Lack of knowledge on feeding of Mineral mixture and less aware of Mineral deficiency; Lack of knowledge on desi-bird poultry rearing; Lack of knowledge in value addition;	ICM, INM, IPDM, Feed Management, Poultry, Value Addition
3	Krishnagiri	Kaveripattinam	Bannihalli, Kaveripattinam, Arasampatti, Jagadap	2021	Paddy, Tomato, Dairy cattle, Millet	Low yield and susceptible to pest and diseases in existing non-descript; Low yield due to improper nutrient management; Unavailability of skilled labour and huge wages; Low yield due to improper pest management; Lack of knowledge on prophylactic anionic salt for milk fever; Tick infestation cause loss of appetite and prone to vector borne disease; Poor shelf-life, low market potential during sales, low price during glut;	INM, Farm Mechanization,IPM, Nutrient Management, Value Addition

S.No.	Taluk/ Mandal	Name of the block	Name of the village	Year of adoption	Major crops & enterprises	Major problem identified	Identified Thrust Areas
4	Krishnagiri	Bargur	Varatanapalli, Bargur	2021	Banana, Marigold, Nutrigarden	Low yield due to improper crop management; Low yield due to poor crop management; Lack of knowledge in nutri garden;	ICM, Nutri Garden
5	Krishnagiri	Uthangarai	Nappirampatti, Ettipatti, Karapattu, Mettahalli, Nadupatti, Nochipatti, Perumalnayakanpatti	2022	Redgram, Groundnut	Low yield due to improper crop management.	ICM
DFI villages							
1	Krishnagiri	Krishnagiri	Periyakottapalli	2021	Decomposition, Horsegram	More time taken to decomposition of farm waste; Low yield due to improper crop management;	ICM, Waste Management
2	Krishnagiri	Veppanapalli	Kangojikuthur, Veppanapalli	2022	Brinjal, Chilli	Low yield in existing variety; low yield due to improper crop management; Low yield due to improper disease management;	ICM, IPDM

2.8. Priority/thrust areas

Crop/Enterprise	Thrust area
Horsegram, Groundnut, Blackgram, Paddy, Banana, Little Millet	Varietal Evaluation
Redgram	Integrated Pest and Disease Management
Paddy, Horsegram, Tomato, Cassava, Banana	Integrated Nutrient Management
Paddy, Finger Millet, Cowpea, Mango, Tube rose, Ribbed gourd	Integrated Crop Management
Mango, Tomato, Groundnut	Integrated Pest Management
Dairy Cattle, Dairy Cow	Disease Management
Desi-bird, Dairy Cow	Production and Management
Sheep, Dairy Cow, Desi-chicken	Nutrition Management
Agriculture Drone, Seed Drill Groundnut Stripper	Farm mechanization
Moringa, Millets	Value Addition

3. Salient Achievements

Achievements of Mandated activities (1st January 2025 to 31st December 2025)

S. No	Activity	Target	Achievement
1	Technologies Assessed and refined (No.)	30	30
2	On-farm trials conducted (No.)	15	15
3	Frontline demonstrations conducted (No.)	22	22
4	Farmers trained (in Lakh)	0.01200	0.01329
5	Extension Personnel trained (No.)	200	213
6	Participants in extension activities (in Lakh)	0.91000	0.91062
7	Production and distribution of Seed (in Quintal)	110	111.276
8	Planting material produced and distributed (in Lakh)	0.27700	0.27769
9	Live-stock strains and finger lings produced and distributed (in Lakh)	0.0030	0.0031
10	Soil samples tested by Mini Soil Testing Kit (No)	250	250
11	Soil samples tested by Traditional Laboratory (No)	0	0
12	Water, plant, manure, and other samples tested (No.)	0	0
13	Mobile agro-advisory provided to farmers (No.)	3,76,000	3,76,032
14	No.of Soil Health Cards issued by Mini Soil Testing Kits (No.)	250	250
15	No.of Soil Health Cards issued by Traditional Laboratory (No.)	0	0

Salient Achievements by KVK during January – December 2025:

- To enhance mango quality and productivity by 30–40%, KVK promoted foliar nutrition practices. A total of 774 kgs of IIHR Mango Special was produced and distributed to farmers, covering 325 hectares during the reporting period.
- To manage mango fruit fly infestation, KVK produced and distributed 3,907 mango Fruit Fly traps to farmers. This intervention covered 312 hectares during the reporting period.
- High-quality fodder seeds, including Hedge Lucerne, Fodder Sorghum, Agathi and Stylo were supplied to farmers, total 14.26 qtl**.** These improved varieties have been cultivated across 2,293 ha. in the district.
- A total of 27,769 seedlings**,** including fruit crops, coconut, forest species, and vegetables, were produced and supplied to farmers and other agencies.

4. TECHNICAL ACHIEVEMENTS

Details of target and achievements of mandatory activities by KVK during 2025

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**
15	15	30	30	15	15	75	75

FLD (crop/ enterprise/ CFLDs)

No of Demonstrations		Area in ha		Number of Farmers / Beneficiaries / Replications	
Targets	**Achievement**	**Targets**	**Achievement**	**Targets**	**Achievement**
22	22	45	45	225	225

No of CFLD		Area in ha		Number of Farmers / Beneficiaries / Replications	
Targets	**Achievement**	**Targets**	**Achievement**	**Targets**	**Achievement**
1	1	30	30	75	75

Training

Number of Courses			Number of Participants	
Clientele	**Targets**	**Achievement**	**Targets**	**Achievement**
Farmers and Farm Women	60	69	1,200	1,231
Rural youth	3	3	30	38
Extn. Functionaries	10	10	200	213
Vocational Training	3	3	60	60
Sponsored Training	4	4	850	853

Extension Activities

Number of activities		Number of participants	
Targets	**Achievement**	**Targets**	**Achievement**
320	329	91,000	91,062

Seed Production (q)

Target	Achievement	Distributed to no. of farmers
110.00	111.276	2,634

Planting material (Nos.)

Target	Achievement	Distributed to no. of farmers
27,700	27,769	760

Technology Assessments (OFTs) in Detail

OFT-01: Assessment on TNAU Crop Shine for improving Abiotic Stress Tolerance in Groundnut

1. **Thematic area** : Crop Production and Management
2. **Title** : Assessment on TNAU Crop Shine for improving Abiotic Stress Tolerance in Groundnut
3. **Scientists involved** : SMS (Soil Science)
4. **Details of farming situation** :

Groundnut is a major rainfed crop cultivated in Krishnagiri district under red loamy soils. The region frequently experiences erratic rainfall and prolonged dry spells, especially during critical crop growth stages. The soils are neutral to slightly alkaline with low organic carbon and moderate fertility status. Moisture stress during flowering and pegging stages significantly affects pod formation and yield in groundnut.

5. **Problem definition / description** :

Abiotic stresses, particularly drought and moisture stress, are major constraints in groundnut cultivation under rainfed conditions. These stresses lead to poor flowering, reduced peg penetration, and lower pod development, ultimately affecting yield. Farmers lack effective and affordable solutions to mitigate stress impacts. Foliar applications of stress-tolerant formulations like TNAU Crop Shine and bio-products like PPFM can enhance plant resilience by improving physiological efficiency and reducing stress damage. This On Farm Trial aims to evaluate the performance of these technologies in improving stress tolerance, yield, and economic returns in groundnut.

6. **Technology Assessed** :

Technology Option 1	**TNAU Crop Shine** *(TNAU, 2024)* Foliar spray of TNAU Crop shine @ 1.25 lit/ha during the moisture stress conditions
Technology Option 2	**Spraying of PPFM** *(TNAU, 2020)* Foliar spray of PPFM @ 500 ml /ha at 35 & 70 DAS
Farmers practice	No foliar sprayings for drought mitigation

7. **Critical inputs given** :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
TNAU Crop Shine	0.5 lit	1181.20	2.5 lit	5,906.00
PPFM	0.5 lit	187.43	2.5 lit	9,37.13
Field board	1 no	200.00	5 nos	1,000.00
Total				**7,843.13**

8. **Results** : **Performance of the technology**

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Average No. of Pods/ Plant
Farmers Practice	5	17.90	44,080	1.74	19.6
Technology 1 **TNAU Crop Shine**		22.03	71,005	2.25	23.2

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Average No. of Pods/ Plant
Technology 2 **Spraying of PPFM**		21.60	67,340	2.16	22.4

9. Constraints **:** Nil

10. Feedback of the farmers involved :

Farmers observed better plant vigour, reduced wilting, and improved pod formation in treated plots. TNAU Crop Shine was found to be more effective during prolonged dry spells, while PPFM also improved crop growth. Farmers expressed satisfaction with the visible reduction in stress symptoms and increased yield.

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

TNAU Crop Shine showed promising results in enhancing abiotic stress tolerance and improving yield in groundnut under rainfed conditions. The technology is simple, cost-effective, and suitable for drought-prone areas. Further refinement on timing and frequency of application is suggested for wider adoption.

OFT-02: Assessment of stem borer management technologies in Rice

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

2. Title **:** Assessment of stem borer management technologies in Rice

3. Scientists involved **:** Senior Scientist and Head

4. Details of farming situation :

Paddy is a primary food crop in Krishnagiri with cultivation spanning approximately 24,800 to 25,333 hectares across the district. Rice is grown across multiple seasons in the district, yielding substantial annual production. Average Productivity: Approximately 4,792 kg/ha overall, though advanced techniques like SRI can push yields to 9,200 kg/ha. Paddy is cultivated in three main seasons in Krishnagiri. Kar / Kuruvai / Sornavari (April–July): Cultivated in roughly 3,492 hectares. Samba / Thaladi / Pishanam (August–November): The largest season, covering about 14,304 hectares. Navarai / Kodai (December–March): Covers approximately 7,537 hectares.

5. Problem definition / description :

The rice stem borer, particularly the Yellow Stem Borer (*Scirpophaga incertulas*), is one of the most destructive pests in rice cultivation. It attacks the crop at all growth stages, from seedling to maturity, potentially causing yield losses between 10% and 80%. The damage varies depending on the growth stage of the rice plant. The dead heart symptoms appeared in the vegetative stage because of the larvae bore into the central shoot and causing it to dry up and turn brown or yellow. These dead hearts can be easily pulled from the base. Infestation during flowering results in dried, whitish panicles that contain empty or chaffy grains. These white heads stand erect in the field. Look for brown-colored egg masses near leaf tips, tiny boreholes on stems, and frass (faecal matter) inside damaged tillers.

6. Technology Assessed :

Technology Option 1	Clip the seedling tips before transplanting to eliminate egg masses; Install light trap @ 1 / ha; Pheromone trap @ 5/ac; Release egg

	parasitoid, *Trichogramma japonicum* @ 2cc /ac 3 times at weekly interval from 37 DAT; Spray Azadirachtin 0.03% 400 ml/ac.; Need based spraying of Chlorantraniliprole 18.5% SC 60 ml/ac; *(TNAU, 2023)*
Technology Option 2	Release egg parasitoid, *Trichogramma japonicum* @ 2cc /ac at 30 DAT; Pheromone trap @ 8 / ac for mass trapping; Need based spraying of Chlorantraniliprole 18.5% SC 60 ml/ac; *(NRRI, 2019)*
Farmers practice	Spraying of combination of insecticides during all stages of the crop

7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Funnel trap	9	265.50	45	1,327.05
Rice Yellow stem borer lure	18	424.80	90	2,124.00
Azadirachitin	1 lit	819.00	5 lit	4,095.00
Field board	1 no.	200	5 no.	1,000.00
Total				**8,546.05**

8. Results : Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Stem borer incidences
Farmers Practice	5	52.35	46,563	1.68	21.3
Technology 1		60.39	74,089	2.26	7.28
Technology 2		57.49	66,944	2.16	13.4

9. Constraints : Nil

10. Feedback of the farmers involved :

Combination of Biological control agents and bio pesticides effectively manage the yellow stem.

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

Effective bio pesticides needed.

<u>OFT-03: Assessment of IDM practices for Groundnut root rot diseases</u>

1. Thematic area : Integrated Pest Management

2. Title : Assessment of IDM practices for Groundnut root rot diseases

3. Scientists involved : Senior Scientist and Head

4. Details of farming situation :

Groundnut is a key oilseed crop in Krishnagiri district, cultivated over roughly 10,000 hectares, with significant production under both irrigated and rainfed conditions. Major cultivation, particularly in rainfed areas, follows the Adi Pattam (July–August) season. Key challenges include dry root rot, necessitating proper, disease-resistant seed selection. Cultivation Area & Production: The district produces around 2.1 lakh quintals of groundnut, with productivity around 20.97 qtl/hectare (irrigated) and 15.2 qtl/hectare (rainfed). Growing Seasons: Rainfed: Sown in July–August (Adi Pattam). Irrigated: Sown in January – February (Thai Pattam). Rotation Practices: Groundnut is commonly rotated with

pulses, gingelly, or millet (ragi/maize) in the northwestern zone. High incidence of dry root rot (*Macrophomina phaseolina)* was reported in the region.

5. Problem definition / description :

Several factors are responsible for low productivity among them diseases like leaf spot, collar rot, stem rot, bud necrosis etc. are very important. Several fungal species have been reported to be associated with groundnut seed. Among the different pathogens attacking the crop, *Aspergillus niger*, *Aspergillus flavus*, *Rhizoctonia bataticola* and *Sclerotium rolfsii* are the most important fungi causing seed and seedling rots and stem rot diseases. Among the soil-borne fungal diseases, stem rot caused by *Sclerotium rolfsii* is a potential threat to successful groundnut cultivation. The disease is distributed throughout the world and prevalent particularly in warm dry climates.

Biological control has attained importance in modern agriculture to minimize the residual effects due to continuous and indiscriminate use of toxic chemicals for disease control. Though chemical pesticides have played an important role in increasing groundnut production and management of root rot, their indiscriminate use for the control of pests has led to several environmental problems such as development of resistance in pests to pesticides, pesticide residues and the destruction of beneficial parasites and predators of pests. Thus, other alternative disease management options were considered among which biological control appears promising. Majority of the existing bio-control agents for management of soil-borne diseases, were isolated from the rhizosphere. Trichoderma have been used as effective biocontrol agents against soil-borne, *Trichoderma spp.* are widely used in agriculture as bio-pesticides, bio-protectants, bio-stimulants.

6. Technology Assessed :

Technology Option 1	Seed Treatment with carbendazim @ 2 g/kg; Soil application of T. viride @ 2.5 kg/ha mixed with 50 kg FYM basally and on 40 DAS. *(TNAU, 2020)*
Technology Option 2	Deep summer ploughing with mould board plough; Seed Treatment with tebuconazole @ 1.5 g/kg and PGPR @ 625 g/Kg of seed; Soil application of *T. asperellum*@ 4 kg/ha with enriched 250 Kg FYM first at the time of sowing, 2nd and 3rd on 35 and 70 DAS.; *(DGR, 2018)*
Farmers practice	Application of fungicides

7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Trichoderma viride	4 kg	168	20	3,360.00
Field Board	1	200	5	1,000.00
Total				**4,360.00**

8. Results : Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Disease incidences in %age
Farmers Practice	5	16.13	44,375	1.99	15.5
Technology 1		20.56	66,278	2.25	4.7

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Disease incidences in %age
Technology 2		18.35	60,080	2.20	9.1

9. Constraints **:** Nil

10. Feedback of the farmers involved :

Seed treatment and soil application of with Trichoderma -bio agents and need based application of carbendazim effectively manage the disease.

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

Influence of soil temperature and soil moisture on causal agent of the root rot and Trichoderma is needed.

OFT-04: Assessment of suitable Blast Resistant Ragi varieties (CFMV 1 and ATL 1) for higher productivity in Krishnagiri district

1. Thematic area **:** Varietal Assessment

2. Title **:** Assessment of suitable Blast Resistant Ragi varieties (CFMV 1 &ATL 1) for higher productivity in Krishnagiri

3. Scientists involved **:** SMS (Agronomy)

4. Details of farming situation :

Finger millet *(Eleusine coracana)*, commonly known as ragi. In India, finger millet is the third most important millet after sorghum and pearl millet, contributing significantly to food security in semi-arid regions. In Tamil Nadu, Krishnagiri covers an area of 34,500 ha with an average production of 2,200 kg ha-1. Most of the farmers in Balanoor village of Krishnagiri district cultivating old variety (ML 365) which was susceptible to blast disease under irrigated condition, leading to yield losses ranging from 18% to over 22% in epidemic conditions. To consider this situation, an OFT was conducted in that area. The soil type was clay loam in nature, well suited for finger millet cultivation. This OFT varietal assessment research contributes to find out better variety and also the effective cropping techniques.

5. Problem definition / description :

Due to repeated cultivation of old variety ML 365, which is susceptible to blast disease during rabi season. It leads to a low yield (1,800 Kg ha-1). And also farmers have not been followed to cultivate blast resistant high yielding varieties and also failed to adopt modern package of practices. These are the significant reasons for getting low yield in finger millet crop during rabi season in Balanoor village.

6. Technology Assessed :

Technology Option 1	**Cultivation of Finger millet variety – CFMV 1** *(ANGRAU, 2020)*
Technology Option 2	**Cultivation of Finger millet variety – ATL 1** *(TNAU, 2021)*
Farmers practice	Cultivation of old variety – ML 365

7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
CFMV 1 Seeds	2 kg	140	10 kg	700
ATL 1 Seeds	2 kg	140	10 kg	700
Field board	1 no.	200	5 no.	1,000

8. Results : Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	No. of productive tillers
Farmers Practice	5	21.11	50,321	1.92	2.90
Technology 1 **Cultivation of Finger millet variety – CFMV 1**		26.37	79,177	2.52	3.40
Technology 2 **Cultivation of Finger millet variety – ATL 1**		27.04	84,239	2.68	3.80

Description of the results: From the OFT result, the ATL 1 variety recorded the highest grain yield (27.04 qtl ha^{-1}), followed by CFMV 1 (26.37 qtl ha^{-1}) and the farmers' check ML 365 (21.11 qtl ha^{-1}). The average number of productive tillers per plant was greater in ATL 1 (3.80), compared to CFMV 1 (3.40) and ML 365 (2.90). Economic analysis revealed that farmers achieved a higher average net return with ATL 1 (Rs. 84,239 ha^{-1}), relative to CFMV 1 (Rs.79,177 ha^{-1}) and ML 365 (Rs. 50,321 ha^{-1}). The benefit-cost ratio was also superior in ATL 1 (2.68), compared to CFMV 1 (2.52) and ML 365 (1.92), underscoring the economic viability of ATL 1 under field conditions.

9. Constraints : Nil

10. Feedback of the farmers involved :

The ATL 1 finger millet variety demonstrated superior yield performance, recording significantly higher grain output compared to CFMV 1 than the farmers' check ML 365. In addition to its yield advantage, ATL 1 exhibited moderate resistance to blast disease. Furthermore, the grains of ATL 1 were characterized by desirable cooking quality and taste, coupled with high milling efficiency, as reflected in its enhanced flouring capacity.

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

The ATL 1 ragi variety exhibited superior agronomic performance, characterized by significantly higher grain yield, sturdy culm with a non-lodging growth habit.

OFT-05: Assessment of Suitability of Cover crop in mango orchards of Krishnagiri District

1. Thematic area : Crop Production

2. Title : Assessment of Suitability of Cover crop in mango orchards of Krishnagiri District

3. Scientists involved : SMS (Horticulture)

4. Details of farming situation :

Mango is one of the important fruit crops in Krishnagiri district. It is cultivated in an area of 40,000 hectares. The annual production is about 3.8 lakhs tones. Above 70 % of total production is used for processing into mango pulp. Bangalora and Alphonsa are the major varieties used for the production of pulp. Above Seventy %age of mango cultivated area is under rain fed condition. The average rain fall of the district is 830 mm. spread over an average of 71 rainy days in a year. The maximum rainfall occurs during August to October and lowest during January. The maximum temperature ranges between

20 ° C to 40 ° C during April to May and the lowest temperature 15°C to 28 ° C observed during December and January. The low night temperature during the flowering season helps in better fruit set. The low rainfall and low humidity (60% to 70%) helps in reducing spread of diseases.

5. Problem definition / description :

In about 85% of the mango orchards horse gram is grown as cover crop. Horse gram is sown during Sep - Oct months. The duration of horse gram is 90 days. So, the cover crop will be available from September to December. Hence rains obtained during North East monsoon alone are harvested by the cover crops. Whereas the rains during South West monsoon season goes waste and are not utilized. So there is a need to harvest the month right from May to January. So, assessment with mucuna can be sown during may and is able to harvest the monsoon rains during May to Jan. The advantages of this is that mucuna leaves dry and wet as a mulch during summer. Hence these 2 crops were assessed in Samalpatti village of Mathur block.

6. Technology Assessed :

Technology Option 1	**Cover cropping with Mucuna Arka Subhra sown in May** *(IIHR, 2019)*
Technology Option 2	**Cover Cropping with Horse gram, Paiyur 2 sown in October** *(TNAU, 2014)*
Farmers practice	No cover crop

7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Arka Subhra Mucuna seeds	10 kg	1200	50 Kg	6,000
Horse gram Paiyur 2 seed	10 kg	800	50 kg	4,000
Field Board seed	1 No	200	5 Nos	1,000
Total				11,000

8. Results : Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio
Farmers Practice	5	132.42	55,638	1.98
Technology 1 **Cover cropping with Mucuna Arka Subhra sown in May**		141.46	72,626	2.53
Technology 2 **Cover Cropping with Horse gram, Paiyur 2 sown in October**		135.75	66,172	2.35

9. Constraints :

- ✓ Mucuna was found to be highly aggressive, climbing on mango trees and requiring frequent cutting.
- ✓ Increased labour requirement for management (cutting, incorporation, monitoring).
- ✓ Difficulty in handling excess biomass produced by mucuna.
- ✓ Horsegram provided less ground cover, leading to partial weed control only.

- ✓ Poor performance of both crops under shade and low moisture conditions.
- ✓ Concerns about competition with young mango plants for nutrients and water.
- ✓ Difficulty in mechanization (orchards are mostly no-till systems)
- ✓ Seed availability issues
- ✓ Lack of farmer awareness

10. Feedback of the farmers involved :

- ✓ Farmers observed effective weed suppression, especially with Mucuna, reducing the need for manual weeding.
- ✓ Improvement in soil moisture retention.
- ✓ Noticed gradual improvement in soil fertility and organic matter content.
- ✓ Horsegram was appreciated for being easy to manage and less aggressive compared to mucuna.

Economic Concerns:

- ✓ Additional cost for seed and labour was a concern for small farmers.
- ✓ Some farmers felt the practice is not suitable for all orchard conditions, especially dense or older orchards

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

- ✓ Performance of both crops is poor under shade and low moisture conditions; suitability guidelines are needed.
- ✓ Labour requirement is high for cutting and biomass management; simpler methods are required.
- ✓ Need for location-specific recommendations based on soil and rainfall conditions. Horsegram is easy to manage but low in biomass; improvement in varieties as cover crops is needed.

OFT-06: Assessment of nutrient formulation for higher productivity in cassava

1. Thematic area : Crop Production

2. Title : Assessment of nutrient formulation for higher productivity in cassava

3. Scientists involved : SMS (Horticulture)

4. Details of farming situation :

Tapioca (cassava) is an important commercial and industrial crop in Krishnagiri district, where it is predominantly cultivated under rainfed conditions in red and black soils. The crop plays a significant role in supporting local starch and sago industries and provides livelihood to small and marginal farmers. However, the productivity of tapioca in farmers' fields (around 15–25 t/ha) remains much lower than its potential yield (40–50 t/ha) due to several constraints. A major issue is widespread nutrient deficiency, particularly micronutrients such as zinc, boron, and iron, arising from continuous cultivation and non-application of balanced fertilizers. Farmers generally follow blanket fertilizer recommendations without soil testing, leading to nutrient imbalance and declining soil fertility. These deficiencies adversely affect tuber development and also increase the crop's susceptibility to pests and diseases, In addition, the use of infected planting materials, moisture stress due to erratic rainfall, and limited adoption of improved production technologies further aggravate the problem. Socio-economic factors

such as small landholdings, fluctuating market prices, and lack of awareness about micronutrient management also contribute to the low productivity. Overall, the existing farming situation clearly indicates that imbalanced nutrient management and micronutrient deficiencies are key limiting factors, making the assessment of improved nutrient formulations highly relevant for enhancing tapioca productivity in the district. The trial was conducted in Soolakarai village of Mathur block.

5. Problem definition / description :

Tapioca cultivation in Krishnagiri district is facing a significant decline in productivity due to imbalanced and inadequate nutrient management, particularly the widespread deficiency of micronutrients such as zinc, boron, and iron. Farmers largely depend on blanket fertilizer recommendations without soil test–based application, leading to poor soil health and reduced nutrient use efficiency. These deficiencies not only limit tuber yield and starch content but also increase the crop's vulnerability to pests and diseases, especially Cassava Mosaic Disease, resulting in substantial yield losses. The situation is further aggravated by the use of infected planting materials, moisture stress under rainfed conditions, and low awareness about integrated nutrient management practices. Consequently, the existing yield levels (15–25 t/ha) are far below the potential productivity, highlighting the urgent need to assess and promote suitable nutrient formulations to improve crop performance and farmer income.

6. Technology Assessed :

Technology Option 1	**TNAU Cassava Booster** *(TCRS Yethapur, 2019)*
Technology Option 2	**CTCRI Cassava special** *(CTCRI, 2021)*
Farmers practice	No spraying

7. Critical inputs given :

Particulars	**Qty./ trial**	**Cost/trial (Rs.)**	**Total Qty.**	**Total Cost (Rs.)**
TNAU Cassava Booster	15 Kg (3 packets)	1,800	75 Kg	9,000
CTCRI Cassava special	3 lit	815.79	15 lit	4,067
Field Board	1	200	5 Nos	1,000
Total				**14,067**

8. Results : Performance of the technology

Technology Option	**No. of trials**	**Yield (q/ha)**	**Net Returns (Rs. /ha)**	**B:C ratio**	**CMV**	**Whitefly**
Farmers Practice	5	323.55	1,30,286	1.99	4.05	9.4
Technology 1 **TNAU Cassava Booster**		375.14	1,77,693	2.41	3.08	7.78
Technology 2 **CTCRI Cassava special**		359.54	1,65,035	2.31	3.42	8.4

9. Constraints :

- ✓ Lack of awareness among farmers about the importance of micronutrient application and scientific nutrient management.

- ✓ Non-availability or limited supply of micronutrient inputs at the right time, affecting uniform implementation of the trial across locations.
- ✓ Variability in soil fertility and field conditions among farmers' fields, making it difficult to maintain uniformity and compare results accurately.
- ✓ Dependence on rainfall (rainfed conditions) causing moisture stress, which influences nutrient uptake and affects the performance of the tested formulation.
- ✓ Incidence of pests and diseases, especially Cassava Mosaic Disease, interfering with the assessment of nutrient effects.
- ✓ Use of non-uniform or infected planting materials by farmers, leading to variability in crop growth and yield.

10. Feedback of the farmers involved :

- ✓ There was a perceived increase in tuber size and yield potential, especially where micronutrients were applied. Farmers reported reduction in leaf yellowing and deficiency symptoms, indicating improved crop health.
- ✓ Some farmers noted a slight reduction in pest and disease incidence, particularly in healthier nutrient-treated plots.
- ✓ Farmers appreciated the technology but expressed concern about additional input cost and availability of micronutrient mixtures.
- ✓ Overall, farmers showed positive interest in continuing the practice, provided inputs are affordable and easily accessible

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

- ✓ The TNAU Cassava booster was found to be more effective in improving plant growth and reducing deficiency symptoms compared to CTCRI Cassava special.
- ✓ Farmers suggested that the TNAU Cassava booster should include simplified and clearly defined dosage and application schedule for easy adoption.
- ✓ Performance was affected in some fields due to Cassava Mosaic Disease, so integrated management is suggested.
- ✓ Suggestion to integrate the nutrient formulation with rainfed moisture management practices for better results.

OFT-07: Assessment of suitable micronutrients mixture for higher productivity in Banana

1. Thematic area : Crop Production

2. Title : Assessment of suitable micronutrients mixture for higher productivity in Banana

3. Scientists involved : SMS (Horticulture)

4. Details of farming situation :

Banana is one of the important horticultural crops grown in Krishnagiri district, cultivated under both irrigated and partially rainfed conditions as part of the diversified cropping system. The district has a total horticultural crop area of about 80,499 ha, and banana is grown extensively in an area of 2500 ha

along with mango, vegetables, and flower crops due to favourable agro-climatic conditions and good market demand.

Krishnagiri is also recognized as a major fruit-producing region in Tamil Nadu, supported by irrigation sources such as dams and groundwater, enabling commercial cultivation of banana varieties like Cavendish and Nendran. Banana cultivation is carried out mostly by small and marginal farmers using traditional and semi-intensive management practices, though precision farming and drip fertigation systems have been introduced in some pockets, improving yield and uniformity. However, productivity varies widely due to uneven nutrient management, water stress during dry periods, and limited adoption of balanced fertilizer and micronutrient application practices. Overall, banana farming in Krishnagiri remains commercially important but is constrained by input imbalances and needs improved micronutrient management to achieve higher and stable productivity under OFT conditions.

5. Problem definition / description :

Banana cultivation in Krishnagiri district is an important commercial horticultural activity, but its productivity remains inconsistent due to imbalanced nutrient management, particularly inadequate and non-specific application of micronutrients. Farmers predominantly follow blanket fertilizer practices without soil test–based recommendations, resulting in deficiencies of essential micronutrients such as zinc, boron, magnesium, and iron, which are critical for proper bunch development, fruit filling, and overall plant vigor. These nutrient imbalances lead to symptoms like poor bunch size, uneven finger development, reduced fruit quality, and lower marketable yield. In addition, improper irrigation scheduling, partial adoption of drip fertigation, and soil degradation further aggravate the problem. The situation is also influenced by pest and disease pressures, which are more severe in nutritionally weak plants. As a result, the realized yield of banana in farmers' fields remains below the potential productivity levels.

Therefore, micronutrient mixture – Sampoorna from Kerala Agriculture University and IIHR Banana Special were assessed in Periyakottapalli village of Krishnagiri block for improving growth, yield, and quality of banana under local farming conditions.

6. Technology Assessed :

Technology Option 1	**IIHR Banana Special** (IIHR, 2019)
Technology Option 2	**Micronutrient mixture – Sampoorna** (KAU, 2018)
Farmers practice	No spraying

7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
IIHR Banana Special	8 kg	1760	10 Kg	8,800
Sampoorna	4 kg	2,861.4	10 lit	14,300
Field Board	1	200	5 Nos	1,000
Total				**24,100**

8. Results : Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Plant mortality (%)	No. of fruits/ plant
Farmers Practice	5	269.45	2,48,127	1.98	7.8	56.28
Technology 1 **IIHR Banana Special**		312.52	3,56,044	2.42	5	58.52
Technology 2 **Micronutrient mixture – Sampoorna**		305.54	3,37,422	2.32	5.4	58.36

9. Constraints :

- ✓ Variability in soil fertility and field conditions across farmers' plots in Krishnagiri district affected uniform crop response to treatments.
- ✓ Limited awareness and initial reluctance of farmers to adopt new micronutrient formulations such as Sampoorna and IIHR Banana Special.
- ✓ Use of non-uniform planting material and varied crop management practices by farmers, leading to variability in growth and yield data.
- ✓ Incidence of pests and diseases, particularly in nutrient-deficient plants, which interfered with clear assessment of treatment effects.

10. Feedback of the farmers involved :

- ✓ Farmers observed better plant growth, improved leaf colour, and higher vigor in treatments using micronutrient mixtures compared to their usual practice.
- ✓ Among the two formulations tested, ICAR-Indian Institute of Horticultural Research Banana Special was reported to give better overall performance than Sampoorna.
- ✓ Farmers noted improvement in bunch size, finger development, and fruit uniformity, especially under IIHR Banana Special treatment.
- ✓ Concerns were expressed regarding cost of micronutrient mixtures and timely availability in local markets.
- ✓ Overall, farmers showed strong preference for IIHR Banana Special and willingness to adopt it in future cultivation with proper support.Farmers suggested cost reduction or subsidy support to make the technology more economically viable.

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

- ✓ The micronutrient formulations were found to be effective in improving growth, yield, and bunch quality of banana under field conditions in Krishnagiri district.
- ✓ Farmers expressed that ICAR-Indian Institute of Horticultural Research Banana Special performed better than Sampoorna, especially in terms of bunch size and fruit uniformity.
- ✓ Integration of micronutrient application with drip irrigation and fertigation practices is recommended for better efficiency.

OFT-08: Assessment of effect of Arka Microbial Sahishnu for irrigation water saving in Tomato in Krishnagiri district

1. **Thematic area** : Crop Production
2. **Title** : Assessment of effect of Arka Microbial Sahishnu for irrigation water saving in Tomato in Krishnagiri district
3. **Scientists involved** : SMS (Horticulture)
4. **Details of farming situation** :

Tomato is one of the most important vegetable crops cultivated in Krishnagiri district, contributing significantly to the district's horticultural economy due to its high market demand, suitability to agro-climatic conditions, and proximity to major consumption markets like Bengaluru and Chennai. The district has a total horticultural cropped area of about 80,499 ha, and tomato is grown extensively among vegetables along with brinjal, beans, and cabbage under both irrigated and partially rainfed conditions. Krishnagiri is recognized as a major tomato-producing region in Tamil Nadu, with an estimated area of about 26,051 ha, production of around 7.8 lakh tonnes, and productivity of about 30.1 t/ha during 2020–21. The district experiences a semi-arid tropical climate with an average annual rainfall of about 842 mm, mostly received during monsoon seasons, making irrigation support crucial for vegetable cultivation. Tomato is generally grown in three seasons per year under irrigated conditions, with drip irrigation and hybrid varieties improving yield and quality in progressive farms.

However, productivity is highly variable due to fluctuations in rainfall, high pest and disease incidence (especially leaf curl and bacterial wilt), rising input costs, and uneven adoption of scientific practices. Overall, tomato farming in Krishnagiri is commercially important and highly profitable in good seasons, but remains constrained by water stress and management inefficiencies, making technologies like microbial formulations for irrigation water saving highly relevant for sustainable production.

5. **Problem definition / description** :

Tomato cultivation in Krishnagiri district is highly intensive and dependent on assured irrigation due to its continuous demand for water throughout the crop growth stages. However, farmers face significant constraints arising from irregular water availability, declining groundwater levels, and inefficient irrigation practices, leading to moisture stress and reduced crop productivity. Excessive or unscientific irrigation practices further increase production costs and contribute to nutrient leaching and poor water use efficiency. In addition, tomato is highly susceptible to pest and disease complexes, particularly under stress conditions, resulting in yield instability. Despite the availability of improved varieties and drip irrigation systems in some areas, adoption of water-saving and bio-enhancing technologies remains limited. Consequently, there is a considerable gap between potential and realized yield. Therefore, there is a clear need to assess the effect of Arka Microbial Sahishnu for improving irrigation water use efficiency, reducing water requirement, and enhancing tomato productivity under local farming conditions.

6. **Technology Assessed** :

Technology Option 1	**Arka Microbial Sahishnu** *(IIHR, 2022)*
Technology Option 2	**PPFM** *(TNAU, 2013)*

Farmers practice	No Treatment

7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Arka Microbial Sahishnu	10 kg	-	50 kg	-
PPFM (TNAU)	2 lit	848	10	4,240
Field Board	1	200	5 Nos	1,000
Total				**5,240**

8. Results : Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Wilt (%)
Farmers Practice	5	577.45	75977	1.60	7.8
Technology 1 **Arka Microbial Sahishnu**		664.43	106600	1.85	5
Technology 2 **PPFM (TNAU)**		652.62	100492	1.79	5.4

9. Constraints :

- ✓ Absence of significant moisture stress during the trial period limited the ability to clearly assess the advantage of Arka Microbial Sahishnu and PPFM in improving drought tolerance.
- ✓ Minimal variation in irrigation conditions across treatments, resulting in reduced differentiation between TO1 and TO2 performance.
- ✓ Similar crop response observed in both treatments, making it difficult to draw strong comparative conclusions on water-saving efficiency.
- ✓ Field-level variability in soil and management practices among farmers' plots affected uniformity of observations.

10. Feedback of the farmers involved :

- ✓ Farmers observed slightly better plant growth and vigor in plots treated with Arka Microbial Sahishnu compared to PPFM treatment.
- ✓ Improved root development and greener foliage was noticed in Sahishnu-treated plants during early growth stages.
- ✓ Farmers felt better overall crop uniformity in TO1 (Sahishnu) plots.
- ✓ A marginal increase in flowering and fruit set was reported under Sahishnu application.
- ✓ Some farmers noted slightly better tolerance to minor moisture fluctuations, though major stress was not observed during the trial period.
- ✓ Overall, farmers expressed those differences were small but consistently in favour of Sahishnu under the given field conditions.

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

- ✓ The microbial formulation Arka Microbial Sahishnu showed slightly better plant growth and vigor compared to PPFM under field conditions.

- ✓ Farmers observed improved root growth, foliage colour, and crop uniformity in Sahishnu-treated plots.
- ✓ The advantage of the technology was not strongly expressed due to absence of significant moisture stress during the trial period.
- ✓ Integration with drip irrigation systems and fertigation practices may enhance effectiveness.
- ✓ Overall, the technology is promising for improving plant growth and resilience, but requires further validation under stress environments.

OFT-09: Assessment on Foliar spray of TNAU Multi Micronutrients to increase the yield in Tomato

1. **Thematic area** : Crop Production and Management
2. **Title** : Assessment on Foliar spray of TNAU Multi Micronutrients to increase the yield in Tomato
3. **Scientists involved** : SMS (Soil Science)
4. **Details of farming situation** :

Tomato is cultivated in Krishnagiri district widely in irrigated conditions. The soil pH ranges from 6.4 to 8.6 in most of the cases and the organic carbon status is low. The available nutrient status of the soil is low in nitrogen, medium in phosphorus and medium to high in potassium contents. The texture of the soil is sandy loam mostly.

5. **Problem definition / description** :

Tomato is a nutrient-intensive crop that requires a balanced supply of micronutrients for optimal growth, flowering, fruit set, and yield. Deficiencies of essential micronutrients such as zinc, boron, iron, and manganese can lead to poor plant vigour, reduced fruit size, and lower marketable yield. Soil application of micronutrients often faces challenges like nutrient fixation and leaching, reducing their availability to plants. Foliar nutrition is an efficient method to address these deficiencies by providing direct nutrient uptake through leaves, ensuring rapid plant response. This On Farm Trial assessed the performance of TNAU Multi Micronutrient and IIHR Vegetable Special in improving plant health and increasing tomato yield under field conditions and compared the impact of these foliar formulations with farmers' conventional nutrient management practices besides evaluating the parameters such as plant growth, fruit yield, quality and economic return.

6. **Technology Assessed** :

Technology Option 1	**Foliar spraying of TNAU Multi Micronutrients** *(TNAU, 2022)* Foliar spraying of TNAU Multi MN @ 1 % at Vegetative and Flowering stage
Technology Option 2	**Foliar spraying of IIHR Vegetable special** *(IIHR, 2016)* Foliar spraying of IIHR Vegetable special @ 0.5 % on 25-30 DAS - 2 times at 15 days interval
Farmers practice	No foliar nutrition followed

7. **Critical inputs given** :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
TNAU Multi micronutrients	1 liter	–	5 liters	–

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
IIHR Vegetable special	1 kg	220.00	5 kgs	1,100.00
Field board	1 no	200.00	5 nos	1,000.00
Total				**2,100.00**

8. Results : Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Average No. of Fruits/plant
Farmers Practice	5	612.5	2,65,670	2.63	35.4
Technology 1 **Foliar spraying of TNAU Multi Micronutrients**		713.5	3,40,110	3.14	41.4
Technology 2 **Foliar spraying of IIHR Vegetable special**		745.0	3,62,560	3.28	43.7

9. Constraints : Nil

10. Feedback of the farmers involved :

Farmers reported better flowering, reduced flower drop, and increased fruit set with foliar application of IIHR Vegetable Special. The treated crops had larger, better-quality fruits with an extended harvesting period. They found foliar nutrition more effective than soil application in correcting micronutrient deficiencies and boosting overall yield.

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

Foliar application of IIHR Vegetable Special resulted in higher fruit set, improved quality, and extended harvest duration. Farmers found it superior to conventional methods.

OFT-10: Assessment on Potash releasing bacteria for maximizing yield in paddy

1. Thematic area : Crop Production and Management

2. Title : Assessment on Potash releasing bacteria for maximizing yield in paddy

3. Scientists involved : SMS (Soil Science)

4. Details of farming situation :

Paddy is cultivated in Krishnagiri district under both canal and borewell irrigated conditions. The soils are predominantly red loam to clay loam with pH ranging from 6.8 to 8.5. Organic carbon content is generally low to medium. The available nitrogen status is low, phosphorus is medium, and potassium is medium to high in most of the paddy-growing areas. However, despite adequate potassium status, crop response to potash is often limited due to fixation and low availability in soil solutions.

5. Problem definition / description :

Potassium is an essential macronutrient required for grain filling, disease resistance, and water regulation in paddy. In many fields, potassium is present in unavailable forms due to soil fixation, leading to inefficient utilization of applied fertilizers. Farmers generally depend on chemical fertilizers, increasing the cost of cultivation. There is a need to improve potassium use efficiency through biological

means. Potash Releasing Bacteria can solubilize native soil potassium and make it available to plants, thereby reducing fertilizer requirement and enhancing yield. This OFT aims to assess the effectiveness of two different strains of Potash Releasing Bacteria in improving yield, nutrient uptake, and economic returns in paddy under field conditions.

6. Technology Assessed :

Technology Option 1	**Potash releasing bacteria – *Paenibacillus mucilaginous*** *(TNAU, 2020)* Seed treatment with *Paenibacillus mucilaginous* (KRB-9) @ 250 ml/ha; Soil application of 500 ml/ha with 25 kg FYM and 25 kg sand and broadcast uniformly before transplanting; Seedling root dip @ 250ml/ha
Technology Option 2	**Bio Potash – *Frateuria aurantia*** *(NBAIM, 2019)* Seed treatment of Bio Potash – *Frateuria aurantia* @ 125 ml/ha; Soil application @ 500 ml/ha; Seedling root dip @ 375 ml/ha
Farmers practice	Soil application of MOP fertilizer

7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Potash releasing bacteria – *Paenibacillus mucilaginous*	1 lit	350.00	5 lit	1,750.00
Bio Potash – *Frateuria aurantia*	1 lit	300.00	5 lit	1,500.00
Field board	1 no	200.00	5 nos	1,000.00
Total				**4,250.00**

8. Results : Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Average No.of Tillers/plant
Farmers Practice	5	52.68	60,157	1.76	30.9
Technology 1 ***Potash releasing bacteria – Paenibacillus mucilaginous***		62.28	78,753	1.91	37.4
Technology 2 ***Bio Potash – Frateuria aurantia***		61.88	77,074	1.89	36.8

9. Constraints : Nil

10. Feedback of the farmers involved :

Farmers observed improved plant vigour, better tillering, and greener leaves in Potash Releasing Bacteria -treated fields. They reported that even with reduced potash fertilizer application, yield was higher compared to conventional practice. Farmers expressed interest in adopting the technology as it reduces fertilizer cost and improves soil health.

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

Potash Releasing Bacteria showed promising results in enhancing potassium availability and improving paddy yield. The technology is cost-effective and suitable for wider dissemination in paddy-growing areas. Further refinement on dosage and integration with nutrient management practices is suggested.

OFT-11: Assessment on Phosphorus supplementation to enhance the fertilizer use efficiency in paddy

1. **Thematic area** : Crop Production and Management
2. **Title** : Assessment on Phosphorus supplementation to enhance the fertilizer use efficiency in paddy
3. **Scientists involved** : SMS (Soil Science)
4. **Details of farming situation** :

Paddy is cultivated in Krishnagiri district in around 25,000 ha under irrigated conditions through borewells and tanks. The soils are predominantly red loam to clay loam with pH ranging from 6.5 to 8.4. Organic carbon status is low to medium. The available nutrient status indicates low nitrogen, low to medium phosphorus, and medium to high potassium. Due to alkaline soil conditions, a considerable portion of applied phosphorus gets fixed and becomes unavailable to the crop.

5. **Problem definition / description** :

Phosphorus is a critical nutrient for root development, tillering, and early crop establishment in paddy. However, phosphorus use efficiency is low due to fixation losses in soil. Farmers generally apply basal phosphatic fertilizers like DAP, but much of it becomes unavailable, leading to inefficient use and higher cultivation cost. Recently, nano fertilizers like IFFCO Nano DAP have been introduced, which can be applied as foliar spray for efficient nutrient delivery. This On Farm Trial aims to assess the effectiveness of foliar application of Nano DAP compared to conventional basal phosphorus application in improving yield, fertilizer use efficiency, and economic returns.

6. **Technology Assessed** :

Technology Option 1	**Spraying of Nano DAP** *(IFFCO, 2023)* Foliar spray of IFFCO Nano DAP @ 2 to 4 ml per lit of water (500 ml /ac) at critical stages of crop.
Technology Option 2	**Application of P2O5 @ 50 Kg/ ha** *(CPG, 2020)* Blanket recommendation of P:50 kg/ha (108 kg of DAP) as basal application
Farmers practice	Basal application of Complex fertilizers

7. **Critical inputs given** :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Nano DAP	0.5 lit	577.60	2.5 lit	2,888.00
Field board	1 no	200.00	5 nos	1,000.00
Total				**3,888.00**

8. **Results** : **Performance of the technology**

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Average No.of Tillers/plant
Farmers Practice	5	52.38	51,223	1.59	29.7
Technology 1 **Spraying of Nano DAP**		61.83	77,782	1.91	35.8
Technology 2 **Application of P2O5 @ 50 Kg/ ha**		61.75	76,383	1.88	34.9

9. Constraints **:** Nil

10. Feedback of the farmers involved :

Farmers observed better tillering in fields received Nano DAP and reported ease of application and reduced fertilizer requirement. The foliar spray method was found effective in correcting nutrient deficiency quickly and improving overall crop performance.

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

Foliar application of Nano DAP showed better phosphorus use efficiency and higher yield compared to conventional basal applications. The technology is economical and suitable for improving fertilizer efficiency in paddy. Further studies on stage-specific application and integration with soil fertilization are suggested for wider recommendation.

OFT-12: Assessment on Performance of Microbial Consortia for decomposition of Farm waste

1. Thematic area **:** Crop Production and Management

2. Title **:** Assessment on Performance of Microbial Consortia for decomposition of Farm waste

3. Scientists involved **:** SMS (Soil Science)

4. Details of farming situation :

In Krishnagiri district, large quantities of crop residues such as paddy straw, groundnut haulms, and other farm wastes are generated after harvest. Due to lack of proper decomposition practices, farmers often resort to burning of residues or leave them for natural decomposition which leads to nutrient loss, environmental pollution, and deterioration of soil health. The soils are predominantly red loam with low to medium organic carbon content, necessitating the recycling of organic residues to improve soil fertility and structure.

5. Problem definition / description :

The decomposition of farm waste, including paddy straw, can indeed require significant time and space. The rate of decomposition depends on various factors such as temperature, moisture, microbial activity, and the carbon-to-nitrogen ratio of the material. Generally, lignocellulosic materials like straw decompose more slowly than other organic matters. Farmers lack awareness and access to efficient microbial consortia for rapid decomposition. Use of microbial formulations can accelerate decomposition, improve nutrient recycling, and enhance soil organic carbon. This On Farm Trial aims to assess the performance of different microbial consortia in decomposing farm waste effectively under field conditions.

6. Technology Assessed :

Technology Option 1	**Pusa Decomposer capsules** *(IARI, 2020)* A mixture of 25 lit. can be produced with the help of 4 capsules of Pusa decomposer, jaggery, and flour made with chickpeas. Such a mixture shall be sufficient to cover an area equivalent to 1 acre of land.
Technology Option 2	**TNAU Biomineralize** *(TNAU, 2019)* 2 kg of TNAU Biomineralizer is recommended for one ton of straw decomposition. The 2 kg of Biomineralizer should be mixed with 20 liters of water and made as a slurry and applied for decomposition of straw.

Farmers practice	No microbial consortia used for decomposition

7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Pusa Decomposer capsules	4 Packs	285.80	20 Packs	1,429.00
TNAU Biomineralizer	4 kg	252.00	20 kg	1,260.00
Field board	1 no	200.00	5 nos	1,000.00
Total				**3,689.00**

8. Results : Performance of the technology

Technology Option	No. of trials	Compost produced (t/ha)	Net Returns (Rs. /ha)	B:C ratio	Number of days to decompose
Farmers Practice	5	1.5	1,300	1.40	72
Technology 1 **Pusa Decomposer capsules**		3.5	7,500	2.25	29
Technology 2 **TNAU Biomineralizer**		4.0	9,000	2.50	26

9. Constraints : Nil

10. Feedback of the farmers involved :

Farmers reported faster decomposition of crop residues and ease in land preparation for the next crop. They observed improved soil softness and moisture retention. Farmers preferred microbial consortia over burning and expressed willingness to adopt the technology for sustainable residue management.

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

Both microbial consortia performed effectively in accelerating decomposition of farm waste. TNAU Biomineralizer showed slightly faster decomposition compared to Pusa Decomposer. The technologies are eco-friendly, cost-effective, and suitable for large-scale adoption. Further refinement in application methods and awareness programs are suggested for wider dissemination.

OFT-13: Assessment of technology modules against mango fruit borer *Citripestis eutraphera* (Meyrick) (Pyralidae: Lepidopteara)

1. Thematic area : Integrated Pest Management

2. Title : Assessment of technology modules against mango fruit borer *Citripestis eutraphera* (Meyrick) (Pyralidae: Lepidopteara)

3. Scientists involved : Senior Scientist and Head

4. Details of farming situation :

Mango considered as 'King of fruits', is the most important commercially grown fruit of India due to its wide range of adaptability, high nutritive value, richness in variety, delicious taste and excellent flavour. It is a rich source of vitamin A and C. The fruit, utilized raw or ripe, is well-liked by the people and has great export potential. Mango is well adapted to tropical and sub-tropical climates. It may not be desirable to grow mango commercially in areas above 600 m above MSL in subtropics Mango thrives well in places with annual rainfall in the range of 75 to 375 cm. It can also do well in areas having

average annual rainfall of as low as 25 cm with irrigation during peak requirement of plant establishment and fruit development. Heavy rainfall prior to flowering induces excessive vegetative growth at the expense of flowering. Frequent rains and high humidity (about 80%) during flowering and fruit set are conducive to the incidence of pests and diseases and impair pollination and fruit set. In general, places with well distributed rainfall and dry summer are ideal for mango cultivation. Light rains during fruit development are good but heavy rains and hail cause damage to the fruits. It is better to avoid areas with heavy winds and cyclones, which may cause flower and fruit shedding and also breaking of branches.

Mango comes up well on a wide range of soils which are deep (minimum 6 feet) and well drained except clay, extremely sandy, rocky, calcareous, alkaline and water-logged soils. Mango prefers slightly acidic soils though it can tolerate pH range of 5.5 to 7.5 and can also tolerate salinity up to 4.5 dSm-1. Slightly acidic to neutral, well drained and aerated loamy or alluvial deep soils rich in organic matter are ideal for mango cultivation.

5. Problem definition / description :

Citripestis eutraphera has been recorded damaging mango fruits in Krishnagiri district. The larvae have been found boring and feeding on immature mango fruits causing extensive fruit damage. The infested fruits have bored holes and the fruit often blackened around the bored area. Several infested fruits also exhibited split. The young larvae were found scraping the fruit skin causing characteristic scab like patch and the later stage larvae found boring in to the fruit. Even the adjacent fruits also found bored indicating single larva can damage several fruits. Hence this oft is proposed.

6. Technology Assessed :

Technology Option 1	First spray of an insecticide, spinetoram (1.25 ml) or deltamethrin (1 mL L-1), followed by; Second spray with IIHR Neem Soap @ 10 g L-1 or Azadirachtin 1% (3 mL L-1) after two weeks; Spraying should commence when fruits are lemon size; *(IIHR, 2021)*
Technology Option 2	Removal of dead wood from the trees; Removal and destruction of damaged and MFB infested fruits especially at pea and marble stages of the fruit; In Second fort night of January spray of Neem oil 3ml + chloripyriphos 1 ml per litre of water at marble stage of the fruit; Spraying of NSKE 5 % at 10 days interval during the months of April and May up to 15 days before harvest; *(DR. YSR, Horticultural University, AP, 2010)*
Farmers practice	Spraying of combination of Insecticides during flowering to harvest

7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Spinetoram	100 ml	1,520	500 ml	7,600.00
IIHR Neem soap	1 kg	280	5 kg	1,400.00
Neem oil	1 lit	700	5 lit	3,500.00
Field board	1 no.	200	5 no.	1,000.00
Total				**13,500.00**

8. Results : Performance of the technology

Technology Option	No. of trials	Fruit Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Pest incidences
Farmers Practice	5	67.49	51,435	2.03	15.95
Technology 1		76.51	72,112	2.69	3.25
Technology 2		73.15	61,725	2.29	11.34

9. Constraints **:** Nil

10. Feedback of the farmers involved :

First spray of an insecticide like spinetoram (1.25 ml) followed by Second spray with IIHR Neem Soap @ 10 g L-1 after two weeks effectively manage the pest and Spraying commence when fruits are lemon size was very effective for the management of the pest.

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

Further research is needed for organically management of the pest.

OFT-14: Assessment on different herbal preparations to Control Subclinical Mastitis in dairy cows

1. Thematic area **:** Nutrition Management

2. Title **:** Assessment on different herbal preparations to Control Subclinical Mastitis in dairy cows

3. Scientists involved **:** SMS (Animal Science)

4. Details of farming situation :

The OFT trial was conducted at Valluvarpuram village of Krishnagiri block in Krishnagiri district. Three farmers were selected to assess the different polyherbal combinations to control subclinical mastitis. The trial comprises three treatment groups: Farmer's Practice (FP), where the farmers use potassium permanganate solution, Topical application of Mastirak gel with oral supplementation of Pre-mast powder – 60gm twice daily for 5 days (TO1) and Topical application of Mastiheal gel with oral supplementation of Masti-next powder - 50 gm twice daily for 5 days (TO2). During the trial, production parameters and Somatic Cell count (SCC) in Milk were measured to evaluate the effectiveness and benefit of the different polyherbal combinations in crossbred dairy cows.

5. Problem definition / description :

In Krishnagiri district, Bovine Mastitis is the one of the economically important disease of dairy cattle which affects the milk production in crossbred dairy cows. But Subclinical mastitis is a major problem responsible for reduced milk production and economic loss. In subclinical mastitis, there won't be any visible changes in milk quality which makes it difficult to detect which contributes to reduction in milk quantity significantly and there are every chance for the animals with subclinical mastitis to become clinical mastitis. Also, farmers unaware of SCM and their impact on milk production and Udder health. By diagnosing subclinical mastitis, it would become easier for the farmers to adopt prophylactic and treatment measures at the earliest to prevent subsequent losses.

The present trial was conducted to evaluate the efficacy of different polyherbal formulations in the management of subclinical mastitis to reduce somatic cell count and improve udder health, milk quality and quantity.

6. Technology Assessed :

Technology Option 1	**Mastrirak herbal gel with Premast powder** *(NIF- DST,2021)* Mastirak herbal gel, Poly herbal gel contains Nirgudi, Tulsi, Agnimantha, Jivanti, Sharpunkha and Neem and Pre-mast oral Powder - Innovative Herbo-Mineral Formulation for prevention and Control of mastitis for 3-5 days
Technology Option 2	**Mastiheal gel with MastiNext oral powder** *(TANUVAS-VIF, 2021)* Mastiheal gel, Nanopolymer herbal based gel Clean and Apply 10 gm gel in udder twice a day after milking, Masti Next Oral powder: Vitamin A&C, Sodium Citrate and Lactobacillus
Farmers practice	Use of Potassium permanganate solution

7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Mastirak herbal gel and Premast oral powder	2	648	10	3,240
Mastiheal gel and Masti Next oral powder	2	2,756	10	13,780
TANUCHEK SCC kit	2	112	10	560
Total				**17,580**

8. Results : Performance of the technology

Technology Option	No. of trials	Avg. Milk Yield (in Lit)	Net Returns (Rs. /ha)	B:C ratio	Avg Somatic Cell Count		
					Before	5th day	14th day
Farmers Practice	5	8.12	25,160	1: 1.98	3.0	2.8	2.8
Technology 1 **Mastrak gel with Premast oral powder**		8.92	36,760	1: 2.66	3.0	2.0	1.8
Technology 2 **Mastiheal gel with Mastinext oral powder**		8.58	34,276	1: 2.48	3.0	2.2	2.0

Somatic Cell Count (SCC) – Lakhs cells/ml

Description of the results: Based on the assessment of different polyherbal combinations for dairy cattle, Average milk yield/day was higher in TO1 (8.92 litre) and TO2 (8.58 litre) compared to the farmer's practice (8.12 litre). The average Somatic Cell count (SCC- lakhs cells/ml) in TO1 and TO2 was significantly lower than that of Farmers practice. Both TO1 and TO 2 showed decrease in somatic Cell count and improved udder health.

9. Constraints : Nil

10. Feedback of the farmers involved :

The farmers expressed that topical application of gel and oral supplementation marginally increased the milk yield and income. We came to know about the method for diagnosis of mastitis using kit, about the products for mastitis prevention and control.

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

The technology reduced udder inflammation and mammary gland infection which increased Milk yield and improved the udder health of the animal. The technology products for prevention and control of mastitis in dairy cattle can made available to the farmers through KVK for further adoption by dairy farmers.

OFT-15: Assessment of Prepartum dietary anionic supplement for management of hypocalcaemia in pluriparous dairy cows

1. Thematic area : Nutrition Management

2. Title : Assessment of prepartum dietary anionic supplement for management of hypocalcaemia in pluriparous dairy cows

3. Scientists involved : SMS (Animal Science)

4. Details of farming situation :

The OFT trial was conducted at Kammampalli/ Parur village of Krishnagiri block in Krishnagiri district. Five farmers were selected to assess the different dietary anionic supplement to control hypocalcaemia in dairy cows. The trial comprises three treatment groups: Farmer's Practice (FP), where the farmers do not use any supplement, Supplement TANUVAS PAM 21 anionic salts (salt 1- 20g and Salt 2 - 10 g) with concentrate feed once daily during morning hours for 21 days (16 days prior to calving and 5 days after calving) (TO1) and Supplement Anionic Mishran 100gm once a day / 50gm twice a day for 3-4 weeks before calving along with concentrate feed (TO2). During the trial, Incidence of Hypocalcaemia/ Milk Fever and production parameters were measured to evaluate the effectiveness of different dietary anionic supplement in crossbred dairy cows.

5. Problem definition / description :

Milk fever (hypocalcaemia) is a metabolic disorder commonly observed in high-yielding pluriparous dairy cows, especially within a few days after calving. It leads to reduction in milk yield (30–50%), Poor reproductive performance, increased economic losses, risk of progression to downer syndrome or death if untreated.To mitigate this condition, pre-partum dietary anionic supplementation is considered an effective preventive strategy. This trail aimed to assess the efficacy of such supplements during the transition period.

6. Technology Assessed :

Technology Option 1	**TANUVAS PAM 21 Anionic salts** *(TANUVAS, 2021)* Pack of Salt 1 and Salt 2, Supplement Anionic Salt 1- 20g and Salt 2- 10g with concentrate feed once daily during morning hours for 21 days (16 days before calving and 5 days after calving)
Technology Option 2	**Anionic Mishran** *(ICAR- NDRI, 2016)* 1 pack contains 10x100gm pouches, Supplement 100gm once a day for 3-4 weeks with concentrate feed
Farmers practice	Only concentrate feed

7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
TANUVAS PAM 21 anionic Salts	5	950	25	4,750
Anionic Mishran	5	600	20	3,000
Total				**7,750**

8. Results : Performance of the technology

Technology Option	No. of trials	Avg. Milk Yield/ Day (in Lit)	Net Returns (Rs. /ha)	B:C ratio	Incidence of Milk Fever
Farmers Practice	5	8.20	35,972.40	1:2.135	0/5 (No Incidence)
Technology 1 **TANUVAS PAM 21 Anionic Salts**		8.80	46,896.00	1:2.518	1/ 5 (20% incidence)
Technology 2 **Anionic Mishran**		8.42	41,794.00	1:2.330	2/5 (40% incidence)

Description of the results:

- **Milk Yield:** Highest in TO1 (8.80 lit /day), followed by TO2 (8.42 lit/day) and Farmers' Practice (8.20 lit /day).
- **Economic Returns:** TO1 recorded the highest net returns and B:C ratio.
- **Incidence of Hypocalcaemia/Milk Fever:** TO1 showed 0% incidence of milk fever, TO2 showed 20% incidence and Farmers' practice showed 40% incidence.

Overall, TANUVAS PAM 21 (TO1) proved superior in improving productivity and preventing hypocalcaemia.

9. Constraints : Nil

10. Feedback of the farmers involved :

The farmers expressed that no symptoms was observed after calving and saved the cost of treatment. The farmers also satisfied on feeding TANUVAS PAM 21 salts as both dam and calf was found healthy. The farmer suggested that it would be convenient if the salts in pack I and II was provided in pre-measured daily dose pack for ease of use. It was found that TANVAS PAM 21anionic salts supplementation was cost effective than Anionic Mishran.

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

TANUVAS PAM 21 anionic salts were found to be highly effective and economically viable for managing hypocalcaemia in high-yielding dairy cows. The technology is suitable for large-scale adoption among dairy farmers.Recommendation to supply user-friendly daily dose packaging and Promote the technology through KVKs. Pre-partum supplementation with TANUVAS PAM 21 anionic salts significantly improved milk yield, reduced incidence of hypocalcaemia, and enhanced economic returns. The technology is recommended for widespread adoption in dairy farming systems to ensure better health and productivity of transition cows.

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	Groundnut	Farm Mechanization	Groundnut seed drill (ANGRAU model)	NIL	The demonstration helped to increase yield by performing necessary operations at the right time. The machines were user- and gender-friendly, saving time, cost, and labor.	20	75	70
2	Poultry/ Desi Chicken	Breed Evaluation	FLD Conducted during 2024-25	NIL	TANUVAS STAR chicken had better body weight gain when compared to native breed and also adoptable under backyard condition. This improved breed can be reared due to its marketability with increased income.	10	165	–
3	Fodder Crop	Livestock Nutrition management	–	NIL	Mixed fodder cultivation had higher fodder yield. Leguminous fodder velimassal acts as protein source for cattle which enhances milk yield. In 10 cent we can cultivate different fodder varieties to feed balanced fodder for dairy cattle. We came to know about multicut fodder Sorghum CO31 and Velimassal.	84	942	50

b. Details of FLDs implemented during the reporting period

S. No	Crop	Thematic area	Technology Demonstrated	Season and year	Farming Situation	Source of funds	No of locations (Villages)	No. of farmers/ demonstration			Area		Justification for shortfall if any
								SC/ ST	Others	Total	Area proposed (ha)	Actual area (ha)	
1	Paddy	ICM	Demonstration on INM in Paddy	Kharif, 2024-25	Irrigated	ICAR	1	10	0	10	4	4	–
2	Groundnut	Farm Mechanization	Demonstration of refined TNAU Groundnut stripper	Kharif, 2024-25	Irrigated	ICAR	1	10	0	10	4	4	–
3	Millets	Value Addition	Demonstration on fibre dense millet mix, RTE/RTU from millets	Kharif, 2024-25	–	ICAR	1	20	0	20	0	0	–
4	Paddy	ICM	Demonstration on super fine Paddy variety VGD 1 under Organic Farming	Rabi, 2024-25	Irrigated	ICAR	1	0	5	5	2	2	–
5	Cowpea	ICM	Demonstration on high yielding Cowpea variety (VBN 3)	Rabi, 2024-25	Irrigated	ICAR	1	5	0	5	2	2	–
6	Redgram	ICM	Demonstration on high yielding Redgram variety (LRG 52 - Amaravathi)	Kharif, 2024-25	Rainfed	ICAR	1	0	10	10	4	4	–
7	Tube rose	Varietal Demonstration	Demonstration of ICM in Tuberose variety Arka Prajwal	Kharif, 2024-25	Irrigated	ICAR	1	0	5	5	1	1	–
8	Ribbed gourd	Varietal Demonstration	Demonstration of Ribbed gourd hybrid Arka Vikram	Kharif, 2024-25	Irrigated	ICAR	1	0	5	5	1	1	–
9	Marigold	Varietal Demonstration	Demonstration on Marigold Hybrid Arka Abhi for yield & income potential	Rabi, 2024-25	Irrigated	ICAR	1	5	0	5	1	1	–
10	Mango	ICM	Demonstration on Integrated Crop Management in Mango	Kharif, 2024-25	Rainfed	ICAR	1	10	0	10	4	4	–
11	Banana	INM	Demonstration on Micronutrient Management in Banana	Rabi, 2024-25	Irrigated	ICAR	1	0	10	10	4	4	–

S. No	Crop	Thematic area	Technology Demonstrated	Season and year	Farming Situation	Source of funds	No of locations (Villages)	No. of farmers/ demonstration			Area		Justification for shortfall if any
								SC/ ST	Others	Total	Area proposed (ha)	Actual area (ha)	
12	Horsegram	INM	Demonstration on TNAU Horsegram Wonder	Kharif, 2024-25	Rainfed	ICAR	1	10	0	10	4	4	–
13	Cassava	Farm Mechanization	Demonstration on ICAR- CIAE tractor Operated Cassava harvester cum lifter	Rabi, 2024-25	Irrigated	ICAR	1	0	10	10	4	4	–
14	Mango	Farm Mechanization	Demonstration of IIHR - Improved Mango Harvester	Rabi, 2024-25	Rainfed	ICAR	1	10	0	10	4	4	–
15	Redgram	IPDM	Demonstration on IPDM technologies in Redgram	Kharif 2024-25	Rainfed	ICAR	1	0	10	10	4	4	–
16	Tomato	IPM	Demonstration on IPM in Tomato	Kharif, 2024-25	Irrigated	-	1	0	10	10	2	2	–
17	Poultry	Evaluation of Breeds	Demonstration of TANUVAS STAR Chicken for backyard poultry rearing	2025	–	ICAR	1	10	0	10	0	0	–
18	Cattle	Animal Health management	Demonstration of Nano Methicone ectoparasiticide Spray for cattle	2025	–	ICAR	1	10	0	10	0	0	–
19	Cattle	Nutrition Management	Demonstration of TANUVAS GRAND Supplement to increase the milk yield in crossbred dairy cattle	2025	–	ICAR	1	10	0	10	0	0	–
20	Sheep	Nutrition Management	Demonstration of TANUVAS Small Ruminant Mineral Mixture for increasing production performance	2025	–	ICAR	1	0	10	10	0	0	–
21	Moringa	Value Addition	Export oriented moringa products for Entrepreneurship Development	2025	–	ICAR	1	20	0	20	0	0	–
22	Fruits	Value Addition	Niche and Nutraceutical fruit products for rural youth entrepreneurial development	2025	–	ICAR	1	20	0	20	0	0	–

Feedback from farmers:

S. No	Feed Back
1	Farmers reported that the use of FYM and biofertilizers improved soil condition and reduction in chemical fertilizer usage helped in lowering input costs without affecting yield. They expressed that the crop was more tolerant to lodging and showed better resistance to pests and disease incidence
2	Farmers appreciated the machine for saving time, labour, and improving work efficiency.
3	Gained awareness on millet-based food products.
4	The paddy variety VGD 1 gave 13.65 % yield increase over farmers check (Improved White Ponni). Farmers prefers VGD 1 due to super fine grain type, erect, high tillering type, non-lodging plant habit due to its semi-dwarf nature than Improved White Ponni rice.
5	Cowpea variety VBN 3 records 27.78 % yield increases than old variety CO (CP) 7 and also found synchronized maturity at the time of harvest time.
6	The Redgram LRG 52 variety recorded 25.06 % yield increase over than farmers practice LRG 41 and found to be moderately resistant to Sterility Mosaic Disease.
7	Early spike emergence and higher number of spikes per unit area. Longer spikes with more florets. Initial cost of planting material relatively high. Suitable for both loose flower and cut flower market.
8	Farmers expressed good satisfaction with the Hybrid Arka Vikram ridge Gourd. Noted for early yield, uniform fruits, and better market preference. Many farmers showed interest in continuing cultivation in next season.
9	Farmers observed uniform and vigorous plant growth compared to local varieties. Good branching and compact plant structure made crop management easier. Better tolerance to minor stress conditions (heat/dry spells). armers received better price (₹2–5/kg higher) in local markets.
10	Farmers reported significant improvement in flowering and fruit retention due to the adoption of Integrated Crop Management practices. They observed reduced pest and disease incidence of fruit flies, mango hoppers and powdery mildew, due to timely plant protection measures. The use of Mango special resulted in uniform and good quality fruits
11	Farmers observed improved plant growth, greener leaves, and better bunch development due to micronutrient application. They reported reduction in deficiency symptoms such as leaf chlorosis and improved uniformity in fruit size and shape. The treated plants produced heavier bunches with better market acceptance. Farmers appreciated the quick response of foliar micronutrient application and found it easy to adopt
12	Farmers reported noticeable improvement in crop vigour and greenness after foliar application of TNAU Horsegram Wonder. They observed enhanced flowering and increased pod setting and better filling of pods due to the Horsegram wonder. The spray helped the crop withstand moisture stress conditions better, especially under rainfed situations
13	Farmers expressed satisfaction with easy operation and reduced harvesting effort.
14	Farmers showed positive response due to safer harvesting and better fruit quality retention.

S. No	Feed Back
15	Adoption of the IPM technologies effectively controls the pod borer complex and wilt incidences in redgram. The no of spray also reduced due to the IPM technologies.
16	Limited availability of Biocontrol agents (Trichoderma, Pseudomonas, NPV) Pheromone traps and lures. Reduction in pesticide cost (20–30%). Better quality produce fetched improved market price. Higher net returns and B:C ratio.
17	TANUVAS STAR chicken had better body weight gain when compared to native breed and also adoptable under backyard condition. This improved breed can be reared due to its marketability with increased income.
18	Nano Methicone Spray is a safe and innovative solution for controlling ticks in dairy cattle. This chemical-free technology is new to us and does not require washing the cattle immediately after application.
19	TANUVAS GRAND Supplement increased the milk yield with additional income and also improved the body condition with well formed dung
20	Supplementation of TANUVAS Small Ruminant Mineral Mixture to sheep and goats improved body weight and health of animals. Mineral mixture exclusively for sheep and goats is a new practice for farmers.
21	The post-harvest losses were reduced reducing glut,enriched their knowledge on value addition on post-harvest technologies like production of soup mix.Moringa leaf powder,moringa rice powder,moringa spice powder.
22	Farmers got satisfied for fetching good income.

Feedback of the Scientist:

S. No	Feed Back
1	The Integrated Nutrient Management (INM) practice demonstrated clear advantages over conventional fertilizer application by improving nutrient use efficiency, crop growth and yield in paddy. The yield increase was 17.3 % with a BCR of 1.98 over the farmers' practice. The combined use of organic manures, inorganic fertilizers, and biofertilizers contributed to better soil health, enhanced microbial activity, and sustained nutrient availability throughout the crop growth period. The technology is practical, economically viable, and suitable for large-scale adoption in paddy-growing areas of Krishnagiri district.
2	Efficiently reduced labour requirement and improved speed of groundnut stripping with minimum pod damage.
3	Traditional based foods for health consciousness.
4	The paddy variety VGD 1 recorded 54.04 qtl / ha than farmers check (Improved White Ponni) 47.56 qtl/ha. VGD 1 was moderately resistant to leaf folder, blast and brown spot, 1000 grain weight of only 8.80 grams, high milling (65 %) and head rice recovery (62.0 %), also good aroma and best cooking quality.
5	Cowpea variety VBN 3 records 9.77 qtl ha-1 of pod yield increases over old variety CO (CP) 7 – 7.65 qtl ha -1 and shows moderately resistance to Bean Common Mosaic Virus and rust disease.

S. No	Feed Back
6	An average pod yield of Redgram variety LRG 52 recorded 14.18 q/ha but the farmers practice LRG 41 recorded 11.34 q/ha. LRG 52 pods look bold and good quality (100 seed weight 12.80 g), moderately resistant to sterility Mosaic disease.
7	Uniformity in spike length and flowering improved market acceptability. Suitable for round-the-year cultivation with proper scheduling. Need to develop Varieties with enhanced pest resistance (thrips, mites) and Improved tolerance to abiotic stress (heat/drought).
8	Areas for Improvement is to enhance resistance to Fruit fly, Powdery mildew and viral diseases and to Improve tolerance to drought and high temperature conditions.
9	Arka Abhi Marigold is well accepted and promising, with strong potential for scaling. Farmers are willing to expand cultivation, provided Input availability, technical guidance, and market support are ensured.
10	Integrated Crop Management in mango proved effective in improving productivity, fruit quality, and overall orchard health. The combination of nutrient management, canopy management, and plant protection ensured better resource use efficiency. The foliar nutrition with mango special and the fruit fly management with methyl eugenol trap in mango resulted in 21.3 % yield increase and a BCR of 2.8 in the demonstration fields over the farmers' practice. The technology is farmer-friendly and suitable for wider adoption.
11	The foliar nutrition with banana special proved effective in correcting micronutrient deficiencies and enhancing nutrient uptake. The technology helped to get 22.38 % yield increase with a BCR of 4.51 in the demonstration fields over the farmers' practice.
12	Foliar application of TNAU Horsegram Wonder proved effective in enhancing crop growth, flowering and yield under rainfed conditions with an improved nutrient uptake and stress tolerance during critical stages of the crop. The yield increase was 21.9 % with a BCR of 2.71 over the farmers' practice.
13	Demonstrated effective harvesting with reduced drudgery and lower tuber damage compared to manual harvesting.
14	Enabled safe and efficient harvesting of mango fruits from tall trees with minimum fruit damage.
15	Suitable resistant variety for needed Pod borer complex and resistant variety should be developed for sterile mosaic virus particularly for TamilNadu.
16	Development of Heat-tolerant and long-lasting biocontrol formulation, Improved pheromone lures with longer field life. IPM module proved effective, economical, and eco-friendly.
17	The TANUVAS STAR chicken exhibited superior body weight gain compared to native breeds and is well-suited for backyard rearing. The average body weight at 12th week was 1.25 kg and Livability of 95% under rural field condition. Rearing TANUVAS STAR chicken can be promising small scale backyard enterprise to improve subsidiary income and nutritional security.
18	Nano Methicone Spray developed by TRPVB –TANUVAS, is a non-toxic, residue-free acaricide that provides 90–95% efficacy in controlling tick infestations in cattle.
19	TANUVAS GRAND Supplement improved the animal productivity with marginal increase in average milk yield by 630 ml per day per cow, provided additional income to farmer and also prevents acidosis in medium yielding dairy cattle

S. No	Feed Back
20	TANUVAS Small ruminant mineral Mixture is an effective nutritional intervention for enhanced growth rate and health of sheep and goats, also improved economic benefits.
21	The moringa leaf powder can be incorporated in the weaning foods, anaemic based vulnerable groups.
22	BCR increased with enterprise development and opportunities.

Extension activities on the FLD:

S. No.	Activity	No. of activities organized	Date	Number of participants	Remarks
1	Field days	8	02-Jan-25, 21-Jan-25, 23-Jan-25, 28-Jan-25, 20-Feb-25, 12-Nov-25, 17-Dec-25, 18-Dec-25	181	–
2	Farmers Training	21	05-Jul-25,11-Jul-25, 16-Jul-25,17-Jul-25,05-Aug-25,08-Aug-25,11-Aug-25, 14-Aug-25,19-Aug-25, 25-Aug-25,06-Sep-25, 12-Sep-25, 04-Oct-25, 06-Oct-25, 14-Oct-25, 16-Oct-25, 23-Oct-25,14-Nov-25, 01-Dec-25, 02-Dec-25, 15-Dec-25	364	–
3	Media coverage	7	22-May-25, 24-Nov-25, 25-Nov-25, 27-Nov-25, 30-Nov-25, 01-Dec-25, 08-Dec-25	**	–
4	Training for extension functionaries	5	02-Jul-25, 19-Aug-25, 29-Aug-25, 18-Nov-25, 16-Dec-25	118	–

**** -** *Infinite participants*

Extension Studies

I. Sponsored Skill Development Training on Organic Cultivator at Krishnagiri District

1. Introduction:

Agriculture plays a vital role in the livelihood of rural communities in Krishnagiri District, Tamil Nadu. A large proportion of the population depends directly or indirectly on agriculture for income and employment. However, in recent years, several challenges such as soil degradation, declining fertility, environmental pollution, and health hazards caused by excessive use of chemical fertilizers and pesticides have affected agricultural sustainability. These issues have increased the need for eco-friendly and sustainable agricultural practices.

Organic cultivation has emerged as an effective and sustainable alternative to conventional farming. It promotes the use of natural inputs, enhances soil fertility, improves biodiversity, reduces environmental pollution, and produces safer food products. Organic farming also offers economic benefits by reducing production costs and providing premium market prices for organic produce.

Skill development programs play an essential role in empowering rural youth by equipping them with technical knowledge and practical skills that support employment and entrepreneurship. The Agricultural Skill Council of India (ASCI), functioning under the National Skill Development Corporation (NSDC), has been actively promoting skill-based agricultural training programs throughout India to enhance employability and strengthen rural livelihoods.

In this context, Krishi Vigyan Kendra (KVK), Krishnagiri, conducted a sponsored skill development training program titled Organic Cultivator in collaboration with NSDC and ASCI. The program aimed to promote organic farming practices among rural youth and improve their livelihood opportunities.

The training program was conducted for 50 participants in two batches, covering 210 hours over a 25-day period. The training included both theoretical and practical sessions focusing on compost preparation, vermicomposting, biofertilizer production, organic pest management, crop rotation, mulching techniques, and organic certification procedures.

After the completion of the training program, an impact assessment study was conducted to evaluate its effectiveness in improving livelihood opportunities, enhancing the adoption of organic farming practices, and increasing income levels among participants over a two-year period.

2. Objectives of the Study:

- To evaluate the adoption level of organic cultivation practices among trainees.
- To assess changes in income levels before and after training.
- To study the employment status of trainees after completion of training.
- To analyze the socio-economic impact of the training program on participants.
- To identify constraints faced by trainees in practicing organic farming.
- To collect suggestions from trainees for improving future training programs.

3. Methodology:

3.1. Study Area:

The study was conducted in Krishnagiri District of Tamil Nadu, where the Organic Cultivator training program was implemented through Krishi Vigyan Kendra (KVK). The district is known for its agricultural activities, particularly horticulture and crop cultivation.

3.2. Assessment Period:

The impact assessment covered a period of two years, including

- 2023–2024
- 2024–2025

This period allowed sufficient time to observe changes in adoption behavior, employment status, and income levels among trainees.

3.3. Training Details:

Training Title	:	Organic Cultivator
Sponsored by	:	Agricultural Skill Council of India (ASCI)
Implemented by	:	Krishi Vigyan Kendra (KVK), Krishnagiri
Collaborating Agencies	:	NSDC and ASCI
Total Participants	:	50
Number of Batches	:	2
Training Duration	:	210 hrs
Training Period	:	25 days

The training consisted of both theoretical lectures and practical demonstrations, enabling trainees to gain hands-on experience in organic farming techniques.

3.4. Data Collection Tools:

Data were collected using a structured interview schedule, which included the following components:

- Personal profile of trainees
- Adoption of organic farming practices
- Income levels before and after training
- Employment status
- Farm productivity
- Socio-economic changes

Field visits and direct interactions with trainees were also conducted to verify the collected information.

4. Results and Discussion:

4.1. Profile Characteristics of Respondents:

The analysis of personal characteristics revealed that the majority of respondents belonged to the middle-age group (31–45 years), accounting for 58 %, while 42 % belonged to the young age group (18–30 years).

Male participants constituted 68 % of the total sample, whereas female participants represented 32 %, indicating moderate female participation in the training program.

Regarding education level:

- 46 % had secondary education
- 24 % had primary education
- 22 % completed higher secondary education
- 8 % were graduates

In terms of occupation, farming was the primary occupation for 72 % of respondents, followed by agricultural labour (18 %) and other occupations (10 %).

4.2. Adoption of Organic Cultivation Practices:

The training program significantly improved the adoption of organic farming practices among trainees.

The major practices adopted included.

Biofertilizer usage – 82 %
Vermicomposting – 78 %
Organic pest control – 76 %
Crop rotation – 70 %
Mulching practices – 64 %

The overall adoption level of organic cultivation practices among trainees was recorded at 74 %, indicating a strong positive behavioral change.

4.3. Self-Employment Generation:

The training program played a crucial role in promoting self-employment among participants.

- Before training: 12 trainees were self-employed
- After training : 31 trainees became self-employed

Wage employment decreased from 28 participants before training to 12 participants after training, indicating a shift toward independent livelihood activities.

The number of unemployed trainees also decreased from 10 to 7, demonstrating improved employment opportunities.

4.4. Income Changes Among Participants:

A significant improvement in income levels was observed after the training program.

Mean Monthly Income Before Training : ₹7,850
Mean Monthly Income After Training : ₹12,950
Average Income Increase : ₹5,100 per month

This increase indicates the economic benefits gained by trainees through the adoption of organic cultivation practices.

4.5. Socio-Economic Impact of Training:

The Organic Cultivator training program produced several positive socio-economic outcomes, including

- Increased income levels
- Improved employment opportunities
- Enhanced technical knowledge
- Reduced dependency on chemical inputs
- Improved soil health awareness
- Better market opportunities

Overall, the standard of living of trainees improved due to increased earnings and better livelihood options.

4.5. Constraints Faced by Trainees:

Despite positive outcomes, trainees reported several constraints, including:

Lack of availability of organic inputs	– 52 %
Certification difficulties	– 46 %
Limited market access	– 38 %
Pest management challenges	– 34 %

These constraints highlight the need for institutional support and improved infrastructure.

5. Conclusion and Recommendations:

The Organic Cultivator training program conducted by KVK Krishnagiri in collaboration with ASCI and NSDC proved to be highly effective in improving the livelihood status of rural youth. The training significantly enhanced the adoption of organic farming practices, increased self-employment opportunities, and improved income levels among participants.

Statistical analysis confirmed the significant positive impact of training on income generation and adoption behavior. The program also contributed to environmental sustainability by promoting eco-friendly farming methods.Skill development initiatives such as this play an essential role in promoting sustainable agriculture, rural entrepreneurship, and socio-economic development. Organic cultivation training not only improves farm productivity but also strengthens long-term livelihood security.

II. Impact of Cluster Frontline Demonstrations (CFLD) on Redgram Productivity and Area Expansion in Krishnagiri District

1. Introduction:

Pulses play an essential role in ensuring nutritional security and improving soil fertility through biological nitrogen fixation. Among pulse crops, redgram *(Cajanus cajan*) is an important crop widely cultivated in the rainfed regions of Tamil Nadu, particularly in Krishnagiri District. Despite its importance, the productivity of redgram has remained relatively low due to the use of local varieties, poor adoption of improved technologies, and inadequate crop management practices.

To overcome these challenges, Cluster Frontline Demonstrations (CFLDs) have been implemented under the National Food Security Mission (NFSM). These demonstrations are conducted on farmers' fields to showcase improved varieties, scientific crop management practices, and integrated pest management techniques. The Krishi Vigyan Kendra, Krishnagiri conducted CFLDs on redgram continuously over the last three years. Therefore, assessing the impact of CFLDs on productivity, profitability, technology adoption, and area expansion is necessary to evaluate the effectiveness of this programme.

2. Objectives of the Study

- To assess productivity changes in redgram due to CFLD implementation.
- To analyse expansion of redgram cultivation area.
- To measure technology adoption and spread among farmers.
- To statistically evaluate programme impact using the Difference-in-Difference (DiD) method.

3. Methodology:

3.1. Study Area: The study was conducted in Krishnagiri District of Tamil Nadu, where Cluster Frontline Demonstrations on redgram were implemented by Krishi Vigyan Kendra, Krishnagiri.

3.2. Study Period: The study covered three consecutive agricultural years: 2021–2022, 2022–2023

3.3. Research Design: An impact assessment research design using the Difference-in-Difference (DiD) method was adopted. Two groups of farmers were considered.

– Treatment Group : Farmers who participated in CFLD.
– Control Group : Farmers who did not participate in CFLD

3.4. Sample Size and Sampling Method: A total sample of 150 farmers was selected for the study using a random sampling method.

- CFLD Beneficiaries: 75 farmers, Non-beneficiaries: 75 farmers

3.5. Data Collection Tools: Primary data were collected using a structured interview schedule that included:

- Socio-economic profile of farmers
- Area under redgram cultivation
- Yield performance, Cost of cultivation
- Gross and net returns
- Technology adoption level, Farmers' perceptions regarding CFLD

3.6. Data Analysis Techniques: The collected data were analysed using the following statistical tools:

- %age analysis
- Mean comparison
- Cost–benefit analysis
- Difference-in-Difference (DiD) analysis

4. Profile Characteristics of Respondents:

The socio-economic characteristics of the respondents revealed that most farmers belonged to the middle-age category (44%), followed by young farmers (36%) and older farmers (20%). Regarding education, the majority had secondary education (42%), followed by primary education (28%), higher secondary education (22%), and graduate-level education (8%).

In terms of landholding size, small farmers constituted the largest group (48%), followed by medium farmers (34%) and large farmers (18%). These characteristics indicate that the majority of respondents were small and medium farmers with moderate educational backgrounds.

5. Impact on Redgram Productivity: The yield performance of redgram showed a noticeable improvement among CFLD farmers compared to non-CFLD farmers.

CFLD Farmers **:** Yield increased from 9.8 q/ha before CFLD to 14.6 q/ha after CFLD.
Non-CFLD Farmers **:** Yield increased from 9.5 q/ha to 10.8 q/ha

The increase of **4.8 quintals per hectare** among CFLD farmers indicates the effectiveness of improved varieties, seed treatment, balanced fertilization, and integrated pest management practices demonstrated under the CFLD programme.

6. Economic Analysis: The economic analysis revealed higher profitability among CFLD farmers compared to non-beneficiaries.

- **Cost of Cultivation:** ₹28,500/ha (CFLD) and ₹26,800/ha (Non-CFLD).
- **Gross Return:** ₹65,700/ha (CFLD) and ₹45,600/ha (Non-CFLD).
- **Net Return:** ₹37,200/ha (CFLD) and ₹18,800/ha (Non-CFLD).
- **Benefit–Cost Ratio:** 2.30 (CFLD) and 1.70 (Non-CFLD).

These results indicate that although the cost of cultivation was slightly higher for CFLD farmers, the returns were significantly greater, leading to improved profitability.

7. Technology Adoption Among Farmers:

The study revealed a high level of adoption of improved technologies among CFLD farmers.

- Improved variety adoption: 84%,Seed treatment: 78%, Line sowing: 72%
- Integrated pest management: 68%,Balanced fertilization: 74%

The overall technology adoption level was approximately 75%, demonstrating the effectiveness of CFLDs in promoting modern agricultural practices.

8. Area Expansion: Area expansion under redgram cultivation showed a notable improvement after the implementation of CFLD. Among CFLD farmers, the average cultivated area increased substantially from 1.2 hectares before CFLD to 2.1 hectares after CFLD, indicating a strong adoption response and increased confidence in redgram cultivation practices.

9. Difference-in-Difference (DiD) Analysis: The Difference-in-Difference (DiD) method was used to estimate the true impact of CFLD interventions by comparing yield differences between treatment and control groups before and after the programme.

Calculation:

- ✓ Yield increase in CFLD farmers = 14.6 − 9.8 = 4.8 q/ha
- ✓ Yield increase in Non-CFLD farmers = 10.8 − 9.5 = 1.3 q/ha
- ✓ **DiD Value = 4.8 − 1.3 = 3.5 q/ha**

Interpretation:

The DiD value of 3.5 q/ha indicates that CFLD interventions contributed an additional increase of 3.5 quintals per hectare in redgram yield. This confirms that the improvement in productivity was primarily due to the adoption of recommended technologies demonstrated under CFLD. This indicates that CFLDs played a significant role in spreading improved technologies within the farming community.

– Limited irrigation facilities (38%), Labour shortage (36%)

These constraints highlight the need for improved support services and timely input supply.

10. Conclusion:

Cluster Frontline Demonstrations conducted under the National Food Security Mission (NFSM) had a significant positive impact on redgram productivity, profitability, and area expansion in Krishnagiri District. The study demonstrates that CFLDs are effective tools for promoting improved agricultural technologies and increasing farmer income.

The Difference-in-Difference analysis further confirmed that the programme contributed substantially to yield improvement and technology dissemination among farmers. Therefore, expanding CFLD coverage and strengthening extension support services will help enhance pulse production and improve the livelihood of farmers in the region.

Technology Week Celebrations : Nil

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

Name of the staff	Title	Dates	Duration	Organized by
Mr. T. I. Ramesh Babu SMS (Horticulture)	Natural Farming	25 to 28 February 2025	4 Days	Nammazhvar Organic Farming Research Centre, TNAU, Coimbatore
Mr. N. Dinesh Kumar Prog. Asst. (Comp. Prog.)	Refresher Training Programme	06& 07 March, 2025	2 Days	TNAU, Coimbatore
Mrs. S. Poomathi SMS (Home Science)	Evaluation of Nutri Sensitive Agriculture Research Innovation (NARI)	22 to 25 April, 2025	4 Days	Agricultural Extension Division, ICAR and International Food Policy Research Institute (IFPRI), New Delhi
Dr. T. Sundarraj Senior Scientist & Head	Developing Climate Resilient Farming	15& 16 May, 2025	2 Days	DST-Centre of Excellence on Climate and Disaster Resilient Agriculture
Dr. T. Sundarraj Senior Scientist & Head	Annual Zonal Workshop 2025	02 to 04 September, 2025	3 Days	ICAR-ATARI, Zone X, Hyderabad and TNAU, Coimbatore at ICAR KVK, Vellore
Dr. S. Ramesh SMS (Animal Science)	Veterinary Science: Techniques and Best Practices to Improve the Livestock Productivity in Field Level	30 & 31 October, 2025	2 Days	Directorate of Extension Education, TANUVAS; ICAR – Agricultural Technology Application Research Institute (ATARI), Hyderabad and ICAR – Krishi Vigyan Kendra, Kattupakkam
Dr. T. Sundarraj Senior Scientist & Head and **Mr. S. Senthilkumar** SMS (Agrl. Extension)	Content Creation and Use of Digital Tools for Farmer Advisories	01 December, 2025	1 Day	TNAU, Coimbatore and CABI, New Delhi

Details of collaborative / externally funded / sponsored projects/ programmes implemented by KVK (2025)

S.No	Title of the programme/ project	Sponsoring / collaborating agency	Objectives	Duration	Amount (Rs)
1	Promotion of Millets under SCSP sponsored by IIMR	IIMR	To promote Millet cultivation techniques	2025	10,00,000
2	Empowerment of Tribal Farmers on Bio-Intensive Production Technologies	NBAIR	To Empowerment of Tribal Farmers on Bio-Intensive Production Technologies	2025	7,50,000
3	Skill Training on Scientific Management Practices in Dairy Farming under STRY	ATMA	To promote Scientific Management Practices in Dairy Farming	6 Days	42,000
4	Organic Input Producer and Cultivator	Vetri Nichayam under NMFS (TNSDC)	To promote Organic input production and its usages in field condition	25 Days	85,050

1. PROMOTION OF MILLETS UNDER SCSP SPONSORED BY IIMR

The ICAR-Krishi Vigyan Kendra, Krishnagiri, in collaboration with the Indian Institute of Millet Research (IIMR), organized a series of activities to promote millet cultivation under the Special Component Plan (SCSP) of Indian Council of Agricultural Research (ICAR). The primary objective of this initiative was to create awareness about improved millet cultivation technologies and to enhance the livelihood opportunities of farmers, particularly those belonging to Scheduled Castes (SC).

Objectives of project:

To provide training and education to Scheduled Caste women farmers and rural youth in Krishnagiri District, Tamil Nadu, focusing on the production and processing technologies of different millets, empowering them with the knowledge to improve their livelihoods.

To foster entrepreneurship among Scheduled Caste members by offering support, resources, and guidance for engaging in millet-based technologies, enabling them to establish sustainable businesses and improve their economic prospects.

Training & Capacity Buildings for Promotion of Millets

S. No	Topic	No. of Beneficiaries	Amount (in lakhs)
1	Millet Cultivation Techniques	200	4.60

S. No	Activities	No of Beneficiaries/ Units/ Qty	Amount (in lakhs)
1	Seeds – Millet : 5 Kg (Rs. 100/ kg)	200	1.0
2	Small equipment's (up to Rs. 2000) – Handhoe: 2 Nos (Rs. 150/ Nos) – Sickle : 2 Nos (Rs. 200/ Nos) – Spade :1 Nos (Rs. 500/ Nos)	200	2.4
3	Medium Equipment's/machinery(up to Rs. 25000) – Sprayer : 20 Nos (2 Nos per group @ Rs. 5000/ Nos)	20	1.0
4	Distribution of Bio-inputs – VAM : 5 Kg (Rs. 100/ kg)	200	1.0
Total			**5.40**

Training Programs Conducted: As part of the programme, a total of five training sessions were conducted different villages, benefiting 200 farmers from Mathur, and Veppanapalli blocks. These training programmes focused on:

- Improved and climate-resilient millet varieties
- Scientific crop management practices
- Soil health management
- Integrated Nutrient Management (INM)
- Integrated Pest and Disease Management (IPDM)
- Water management practices
- Harvesting and post-harvest handling techniques

The trainings were designed to provide both theoretical knowledge and practical exposure to modern millet cultivation techniques.

Block-wise Training Details:

Mathur block			Veppanapalli block		
Village	**Date**	**No. of Participants**	**Village**	**Date**	**No. of Participants**
Mekkalampatti	11.3.25	40	Avaganapalli	17.3.25	40
Kollakottai	13.3.25	40	Ettipall	19.3.25	40
Malaiyandahalli	15.3.25	40			

Farm Inputs Distribution to Beneficiaries:

S. No	Activities	No of Beneficiaries/ Units/ Qty	Amount (in lakhs)
1	Seeds – Millet : 5 Kg (Rs. 100/ kg)	200	1.0
2	Small equipment's (up to Rs. 2000) – Handhoe: 2 Nos (Rs. 150/ Nos) – Sickle : 2 Nos (Rs. 200/ Nos) – Spade :1 Nos (Rs. 500/ Nos)	200	2.4
3	Medium Equipment's/ machinery (up to Rs. 25000) – Sprayer : 20 Nos (2 Nos per group @ Rs. 5000/ Nos)	20	1.0
4	Distribution of Bio-inputs – VAM : 5 Kg (Rs. 100/ kg)	200	1.0
Total			**5.4**

Distribution of Inputs and Support Materials: To reinforce the knowledge shared during the training sessions, all participants were provided with comprehensive millet cultivation literature. This material contained updated production technologies, best management practices, pest and disease control measures, and value-addition opportunities.

Further, to support practical implementation:

- Ragi (finger millet) seeds and bio-inputs such as VAM (Vesicular Arbuscular Mycorrhiza) were distributed to 200 farmers. These inputs aim to enhance soil fertility, improve nutrient uptake, strengthen root systems, and ultimately increase crop productivity.
- Eight battery-operated sprayers were distributed on 21.08.2024 to selected farmers. These sprayers enable efficient and uniform application of bio-inputs and plant protection chemicals, reducing labor costs and improving pest and disease management efficiency.

Entrepreneurial Development Programme (EDP): To promote agripreneurship and value addition, two Entrepreneurial Development Programme (EDP) training sessions on millets were conducted. Each session was attended by 40 participants, totaling 80 farmers.

The EDP sessions focused on:

- Millet-based value-added products
- Processing techniques and quality standards
- Packaging and branding

- Marketing strategies
- Business planning and financial management

These sessions aimed to enhance farmers' entrepreneurial skills and encourage them to explore income-generating opportunities beyond primary production.

Establishment of Millet Processing Units: As a major outcome of the programme, two millet processing units were established to support value addition at the village level. These units were set up specifically to benefit two Scheduled Caste farmers' groups.

The processing units enable farmers to:

- Clean, grade, and process millets
- Produce value-added products such as flour and ready-to-cook items
- Increase market value and profitability
- Reduce dependence on middlemen

By facilitating local processing, the initiative enhances income generation, promotes collective entrepreneurship, and strengthens the economic sustainability of millet farming among marginalized communities.

Impact: Through this comprehensive intervention, ICAR-KVK, Krishnagiri, and IIMR have made significant strides in

- Promoting scientific millet cultivation practices
- Strengthening soil health and crop productivity
- Encouraging adoption of improved technologies
- Supporting agripreneurship and value addition
- Enhancing income and livelihood security of SC farmers

This integrated approach—combining training, input distribution, entrepreneurial development, and infrastructure support—has contributed meaningfully to the promotion of millets and the socio-economic upliftment of farmers in the district.

If you would like, I can also format this into a **formal annual report format, project report format, or impact assessment summary** suitable for submission to ICAR.

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2. EMPOWERMENT OF TRIBAL FARMERS ON BIO-INTENSIVE PRODUCTION TECHNOLOGIES

Sponsored by: ICAR-National Bureau of Agricultural Insect Resources, Hebbal Bengaluru - 560024.

Objectives:

Nutritional Literacy: Sensitize tribal farmers on the health significance of millets.

Technology Demonstration: Showcase bio-control technologies and distribute critical inputs (seeds, bio-agents, and sprayers).

Capacity Building: Train farmers in the on-farm production of various bio-agents.

Executive Summary of Training & Demonstrations: Two comprehensive training and demonstration programmes were conducted, reaching 200 selected tribal farmers (100 per district). The sessions focused on sustainable yield enhancement through advanced bio-intensive pest and disease management. By prioritizing eco-friendly interventions, the initiative aims to reduce chemical dependency, improve crop quality, and boost overall farm income.

Programme 1	**:**	Tirupathur District
Location	**:**	Pudur Nadu Village
Date	**:**	21.03.2025
Crops	**:**	Primarily a paddy, vegetable, coconut, and minor millet hub.
Highlights	**:**	Inaugurated by the General Manager, District Industrial Centre (Tirupathur), the session focused on modernizing traditional cultivation with sustainable bio-agent protocols.
Programme 2	**:**	Krishnagiri District
Location	**:**	Thalli Village (Bettamugilalam cluster)
Date	**:**	26.03.2025
Context	**:**	Rainfed cultivation of Ragi, Horsegram, and Field Beans.
Highlights		As these farmers already practice pesticide-free farming, the training provided practical skills for local production and application of bio-agents to strengthen their existing organic base.

Technical Session Breakdown:

Session	Topic	Key Learning Outcomes
I	**Bio-Control Awareness**	Benefits of natural ecological balance and reducing chemical residues.
II	**Production Technologies**	Practical methods for mass-producing Trichoderma, Pseudomonas, and Bacillus.
III	**Application Protocols**	Field-level demonstrations on the effective usage of bio-agents in various crops.
IV	**Coconut Management**	Scientific nursery management, spacing, and integrated pest control.
V	**Feedback & Discussion**	Interactive Q&A to address site-specific farming challenges.

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Critical Input Distribution: To ensure immediate implementation of the training, the following inputs were distributed to the 200 participants.

S.No.	Input Category	Specific Item	Total Quantity
1	Pheromone Lures	Rhinoceros beetle, Red palm Weevil, Fruit fly	700 Units
2	Bio-Control Solids	*Trichoderma asperellum, Pseudomonas flurescems*	200 kg
3	Bio-Control Liquids	*Metarhizium, Bacillus spp., Beauveria, Lecanicillium*	650 Litres
4	Planting Material	High-quality Coconut seedlings	7,000 Nos.

Impact: The programme combined theoretical lectures with hands-on field demonstrations. By providing "The Kit and The Knowledge" simultaneously, the project ensures that tribal farmers can immediately transition to bio-intensive practices, safeguarding both their soil health and their long-term economic sustainability.

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3. SKILL TRAINING ON SCIENTIFIC MANAGEMENT PRACTICES IN DAIRY FARMNG UNDER STRY 2025-26

ICAR – Krishi Vigyan Kendra organized and conducted Six days Skill training programme on Scientific Management practices in "Dairy farming". The training project Skill Training for Rural Youth (STRY) 2025-26 was supported by State Agricultural Management and extension Training Institute (SAMETI) and National Institute of Agricultural Extension Management (MANAGE). The programme was conducted at ICAR– Krishi Vigyan Kendra, Krishnagiri on from 17.07.2025 to 23.07.2025 which benefitted 28 selected dairy farmers in Krishnagiri district.

Objectives: The training programme was organized and conducted with the following objectives

To impart technical knowledge to adopt scientific dairy management practices among dairy farmers.

To improve socioeconomic status of selected dairy farmers.

Beneficiaries of the project

No of dairy farmers	**:**	28 small holder dairy farmers (Men: 21, Women: 7)
Blocks covered	**:**	Krishnagiri, Bargur and Kaveripatinam block of Krishnagiri
Day		**Course**
		Inauguration of Skill training Programme
Day 1 (17.07.25)	**:**	Selection of dairy animals, Cattle breeds
		Housing Management for dairy cows
Day 2 (18.07.25)	**:**	Fodder types for dairy cows and its Cultivation techniques
		Azolla production for livestock
Day 3 (19.07.25)	**:**	Breeding management
		Calf Management practices
Day 4 (21.07.25)	**:**	Disease management in dairy cows,Metabolic disease in dairy cattle
		Clean milk production, Importance of Deworming and vaccination, Importance of Mineral mixture
Day 5 (22.07.25)	**:**	Ethno veterinary practices in dairy cattle management, Latest TANUVAS Technologies
		Manure Management - Compost
Day 6 (23.07.25)	**:**	Value addition in Milk
		Mobile apps for Dairy farm management
		Valedictory and Feedback, Certificate distribution

INAUGURATION OF TRAINING PROGRAMME: The training programme was inaugurated by Mr K Kalimuthu, Joint Director Department of Agriculture, Krishnagiri and Dr Sundarraj, Senior Scientist and Head, Krishi Vigyan Kendra, Krishnagiri on 17.07.2025. During his inaugural address Joint Director, Dept of Agriculture, stressed about the importance of the skill training for dairy farmers supported by ATMA, Department of Agriculture, SAMETI and MANAGE.

Dr Sundarraj, Senior Scientist and Head motivated them to learn from the technical expertise of the subject matter specialist and experts in order to adopt the scientific interventions and to augment the productivity of dairy cows. During the Inaugural session Assistant Director (Agriculture), Krishnagiri, Agriculture Officer (AO) from Farmers Training Centre, BTM/ATM have participated during the programme.

TECHNICAL SESSION CONDUCTED: Technical sessions were handled by ICAR – Krishi Vigyan Kendra - Subject Matter Specialist - Animal Science, Agronomy, Agricultural Extension, Soil Science and Home Science as per the programme schedule from 17.07.25 to 23.07.25. The Experts imparted technical skills to participant farmers on Good management practices in dairy farming, Manure management, latest TANUVAS Technologies and mobile apps for dairy farmers and Value addition in Milk.

VALEDICTORY SESSION: The Valedictory session was presided over by Mr K Kalimuthu, Joint Director, Department of Agriculture, Krishnagiri District and Dr T. Sundarraj, Senior Scientist and Head KVK – Krishnagiri. The Joint Director interacted with the participant farmers about the training sessions given by KVK and emphasized them to adopt the practices learnt in the training and Senior Scientist & Head, KVK advised the farmers to make use of the technological knowledge provided by experts.

During Valedictory Session Participation Certificate and book on "Dairy Farming" were distributed to all the 28 participant farmers by Joint Director of Department of Agriculture and Dr Sundarraj, Senior Scientist and Head, ICAR- Krishi Vigyan Kendra, Krishnagiri District. The Subject Matter Specialists of KVK, Krishnagiri were present during the valedictory Session of the training programme.

OUTCOME AND FEEBACK FROM PARTICIPANTS: The farmers expressed their feedback about the training programme and are as follows.

- We were unaware of mastitis cause and control methods before, now we are informed about mastitis prevention and control in dairy cattle. Also, we know about latest technologies available for control like spray after milking and care to be taken by farmers for udder health, hand hygiene and use of potassium permanganate solution before milking.
- We are now well aware of latest fodder varieties and its cultivation. Now we aware of mixed fodder varieties and its benefits to reduce the feed cost and improve balanced nutrition to dairy cows. Also, we came to know about Azolla cultivation and its benefits to livestock.
- We came to know about the major diseases and their symptoms and about the important Ethno veterinary medicines for dairy cattle. Also, about mobile apps for reference and to acquire knowledge.
- We came to know about the compost techniques, value addition in milk.
- We came to know about alternatives for tick control and about deworming to calves.

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4. ORGANIC INPUT PRODUCER AND CULTIVATOR

The Naan Mudhalvan Finishing School (NMFS) is a Tamil Nadu government initiative under the "Naan Mudhalvan" scheme, aimed at upskilling unemployed youth for better job opportunities. It focuses on providing training to graduates, ITI and diploma holders, and even school dropouts, equipping them with industry-relevant skills. The program is implemented by the Tamil Nadu Skill Development Corporation (TNSDC), and training is conducted by leading industry partners. Krishi Vigyan Kendra, Krishnagiri, proposes a 26-day skill training program on organic input production and cultivation for unemployed youth in Tamil Nadu. This initiative, under the Vetri Nichayam Scheme (NMFS), aims to equip young individuals with practical skills in organic farming, enhancing their employability and potential for self-employment.

Objectives of the Training Programme: The major objectives of the training programme were as follow

To enhance farmers' knowledge on principles and importance of organic farming.

To provide hands-on training on preparation and usage of various organic inputs.

To promote sustainable agricultural practices and improve soil health.

To encourage farmers to produce organic inputs on their own farms using locally available materials.

To create awareness about organic pest and disease management practices.

Krishi Vigyan Kendra, Krishnagiri, successfully conducted a comprehensive skill training programme on Organic Input Production and Usage for farmers under the Vetri Nichayam Scheme (NMFS). The programme was organized with the objective of strengthening farmers' knowledge and practical skills in sustainable agriculture practices. The training programme was conducted from 27th October 2025 to 8th December 2025, covering both theoretical and practical aspects of organic farming.

A total of 25 farmers actively participated in the training programme. The training was designed to promote eco-friendly agricultural practices and encourage farmers to adopt organic input production methods using locally available resources. The programme also aimed to enhance soil fertility, crop productivity, and farm sustainability through organic farming techniques.

Training Content Covered: The training programme covered various important topics related to organic farming and input production. The major topics included the following.

1.	**Introduction to Organic Farming**	**:**	Farmers were introduced to the basic principles of organic farming and sustainable agriculture. The importance of reducing chemical usage and maintaining ecological balance was explained. Participants learned the differences between conventional and organic farming systems and their long-term benefits.
2.	**Blocks covered**	**:**	Special emphasis was given to soil health improvement through organic methods. Farmers learned about soil fertility management, the role of organic matter, and the importance of beneficial microorganisms in maintaining soil productivity.
3.	**Preparation of Liquid Organic Inputs**	**:**	Participants were trained in the preparation of various liquid organic inputs such as: Panchakavya, Jeevamrutham, Beejamrutham, Dasagavya & Amrit Pani.

The preparation methods, ingredients, fermentation process, and application techniques were demonstrated in detail.

4. **Preparation of Microbial Bio-inputs** : Training sessions included the preparation and application of beneficial microbial inputs such as:
   – Trichoderma viride
   – Pseudomonas fluorescens
   – Azospirillum
   – Azotobacter
   – Phosphate Solubilizing Bacteria (PSB)
   Farmers learned how these microbial agents help in pest and disease control and enhance nutrient availability to crops.
5. **Preparation of Solid Organic Inputs** : Hands-on training was provided on preparation of:
   – Vermicompost
   – Enriched Farmyard Manure (EFYM)
   – Neem cake application
   – Composting techniques
   Participants practiced vermicompost preparation and understood its role in improving soil structure and fertility.
6. **Organic Pest and Disease Management** : Farmers were trained to identify common pests and diseases affecting crops. Preparation and use of botanical extracts such as neem-based formulations were demonstrated. Integrated Pest Management (IPM) practices suitable for organic farming were also explained.
7. **Organic Crop Cultivation Practices** : The training included crop planning techniques such as crop rotation, intercropping, mixed cropping, and weed management using organic methods. Seasonal crop management practices were also discussed.

Outcomes of the Training Programme: The training programme resulted in several positive outcomes among the participating farmers.

- Farmers gained practical knowledge on preparation and application of various organic inputs.
- Participants developed skills to produce organic inputs such as Panchakavya, Jeevamrutham, and vermicompost independently.
- Farmers understood the importance of soil health management through organic practices.
- The training enhanced farmers' confidence to reduce chemical input usage in their farms.
- Participants expressed willingness to adopt organic farming practices and promote sustainable agriculture in their villages.
- The knowledge gained during the training is expected to improve crop productivity and reduce cultivation costs in the long term.
- Participants enhanced their employability and potential for self-employment

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Success stories

A. RAISING STAR CHICKEN – A PATH TO FARMER PROSPERITY

1. **Introduction:** Mr. M. Madhu from Maliayandahalli village, Mathur block of Krishnagiri district, was practicing backyard poultry farming using native chicken breeds. However, he faced several challenges such as low productivity of native birds, poor growth rate, and limited technical knowledge on scientific poultry management. The native birds produced fewer eggs and had lower body weight, resulting in reduced income from poultry farming. Due to these limitations, backyard poultry was not contributing significantly to his family income, highlighting the need for improved breeds and scientific management practices.

2. **KVK Intervention**: To improve poultry productivity and farmer income, Krishi Vigyan Kendra (KVK) introduced STAR chicken, a low-input dual-purpose breed suitable for backyard farming systems. Mr. Thavudhu was provided with STAR chicken chicks (LED birds) and trained in scientific poultry management practices, including feeding, housing, and health care. He participated in training programmes, field visits, and advisory services organized by KVK. In addition, he received support in the form of a poultry cage under the DAPSC programme, which improved bird safety, hygiene, and ease of management. Continuous technical guidance helped him adopt improved poultry rearing practices effectively.

3. **Output**: With the support of KVK, Mr. Madhu successfully adopted STAR chicken rearing in his backyard. He established improved poultry housing facilities and followed recommended management practices. His knowledge and confidence in poultry farming increased significantly. The introduction of improved breed birds and proper housing enabled better survival rate and efficient management of the flock.

4. **Outcome**: The adoption of STAR chicken resulted in significant improvement in poultry performance. The birds attained an average body weight of 1.25 kg at 12 weeks and about 2.15 kg at 5–6 months, which was 25–30% higher than native breeds. The birds also produced an average of 140 eggs per bird per year, which was considerably higher than traditional backyard birds. These improvements enhanced productivity and increased the overall profitability of poultry farming.

5. **Impact**: The improved poultry enterprise significantly enhanced Mr. Madhu's income and livelihood. He now earns approximately ₹3,25,000 per year from the sale of chicks and around ₹25,000 per year from egg sales. His success has encouraged neighbouring farmers to adopt STAR chicken rearing, leading to horizontal spread of improved poultry breeds in the village. This initiative has strengthened backyard poultry farming as a reliable source of income and contributed to the socio-economic development of rural households in the region.

B. REGENERATIVE AGRICULTURE BY RURAL YOUTH

1. **Introduction:** Mr. Silambarasan, a progressive farmer owning 10.0 acres of agricultural land, was engaged in cultivating traditional Black Kavuni rice under the Crop Brown Paddy (CBP) concept. Despite his interest in traditional crops, he faced several challenges, including high cost of cultivation, declining soil fertility, and limited knowledge on the preparation and use of bio-inputs. The lack of organized marketing channels also resulted in lower price realization for his produce. These issues affected farm profitability and discouraged the large-scale adoption of regenerative agriculture practices among neighboring farmers.

2. **KVK Intervention**: Krishi Vigyan Kendra (KVK) provided capacity-building and technical support to promote regenerative agriculture practices. Mr. Silambarasan received training on the preparation and application of bio-inputs such as Jeevamirtham and Panchagavya, which are essential for improving soil health and reducing dependency on chemical fertilizers. KVK also guided him in organizing farmers and facilitated the formation of a Farmer Producer Organization (FPO) named Srimathi Organic Paddy Producer Marketing Facilitation Centre. Regular advisory services and exposure to regenerative farming techniques enabled him to adopt sustainable agricultural practices effectively.

3. **Output**: Following the intervention, Mr. Silambarasan successfully adopted regenerative agricultural practices on his farm. He began preparing and applying bio-inputs regularly, which improved soil condition and crop growth. The formation of the FPO strengthened collective action among farmers and improved access to markets. His farm became a model demonstration unit, encouraging nearby farmers to learn and adopt similar eco-friendly practices.

4. **Outcome**: The adoption of regenerative agriculture resulted in significant reduction in cost of cultivation by ₹8,700 per acre. Improved soil fertility and crop management practices led to enhanced crop growth, better grain quality, and increased yield. Due to improved quality and collective marketing through the FPO, he was able to achieve better price realization for his produce. His success also inspired more than 20 farmers in the locality to adopt regenerative agriculture practices.

5. **Impact**: Mr. Silambarasan's efforts contributed to the promotion of sustainable and regenerative agriculture in his region. He played an important role in organizing a district-level traditional farmers' market (MabulaSanthai) to promote organic and traditional products. In recognition of his achievements, he received the Best Organic Grower Farmer Award from the Department of Agriculture, Krishnagiri. His leadership as the Board of Director of the Farmer Producer Organization (FPO) further strengthened farmer collaboration, improved market linkages, and enhanced the adoption of eco-friendly farming practices, contributing to long-term agricultural sustainability and improved farmer livelihoods.

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

Fruitful utilization of social media networks for the transfer of technology:

a. As most farmers are using smartphones, our KVK initiated steps to utilize them for effective transfer of technology. One of the major social media networks, namely WhatsApp, has been adopted as a tool to interact with the target group of farmers. We created a WhatsApp Community group called "ICAR KVK Krishnagiri" on 31.12.2022, with 760 progressive farmers across the district organized into 7 groups. The group is highly active, with participation from almost all members who regularly share information on the latest technologies in agriculture and allied sectors, including marketing and value addition. This platform is very helpful for addressing field diagnostic problems, as farmers interact directly with scientists and receive timely solutions. Information on outbreaks of pests and diseases is also shared and forecasted through the group.

b. A YouTube channel (https://www.youtube.com/@ICARKVKKRISHNAGIRI) was created by KVK, where success stories and several latest agricultural technologies have been webcast.

c. A Facebook profile (https://www.facebook.com/kvk.krishnagiri/) is maintained for posting ongoing activities, past events, and future programmes, as well as for providing relevant details regarding the marketing of KVK Krishnagiri products.

d. A Twitter (X) profile (https://x.com/kvk_krishnagiri) is used to share event updates and trending hashtags to popularize activities and programmes.

e. A website for KVK Krishnagiri (http://krishnagirikvk.org/) has been developed to provide details about the KVK profile and other institutional information.

f. We manage a Kisan Sarathi Portal with a database of 31,253 farmers, offering real-time phone call support and advisory services to assist farmers with their agricultural needs.

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

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)
Management of mango fruit fly	15,769	28	13,000	22,000
Foliar nutrition supplementing of micro nutrient	8,432	35	11,000	18,500
Fodder production techniques	1,651	30	5,000	10,000
Farm mechanization in groundnut	2,146	28	7,000	15,000
ICM in Finger Millet	3,256	25	6,500	10,800

Impact of five select technologies assessed/demonstrated/popularized by the KVK in the district

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	Management of Mango Fruit Fly	IIHR	38,762	21,356	23,565	50,32,54,140	✓ 18 Front Line Demonstration conducted covering 84 ha and 170 Farmers. ✓ Organized 70 Training were covering 1,480 Farmers	State Department of Horticulture, NABARD - Krishnagiri	Yield increased 22.27%
2	Micronutrient Management in Mango	IIHR	17,367	12,423	32,855	40,81,57,665	✓ Conducted 15 Front Line Demonstration Conducted 30 methods demonstration ✓ Provided 22 mobile advisory service to farmers ✓ Spread of this technology through Newspapers	State Department of Horticulture - Krishnagiri	Yield increased 28.46%
3	Integrated Crop Management in Finger Millet	UAS	24,653	15,642	22,167	34,67,36,214	✓ Conducted Front Line Demonstration and Trainings	State Department of Agriculture - Krishnagiri	Yield increased 17.64%
4	Farm Mechanization in Paddy	TNAU	10,574	12,767	32,632	41,66,12,744	✓ Training and Demonstration	State Department of Agriculture - Krishnagiri	Yield increase 21.54%
5	Farm Mechanization in Groundnut Cultivation	TNAU	15,759	10,356	27,830	28,82,07,480	✓ Training and Demonstration	State Department of Agriculture - Krishnagiri	Yield increase 8.87%

Box item for APR 2025

Risk to Resilience - IFS Transforms Lives

Mr. S. Vadivelu (48) of Vivek Nagar, Krishnagiri, owning 5.25 acres and educated up to 5th standard, initially experienced low farm productivity due to monocropping and lack of scientific crop and livestock management. After attending training programmes at KVK, he adopted improved cultivation practices and implemented an Integrated Farming System (IFS). He introduced fodder crops such as Hedge Lucerne and Jinjuva grass, and integrated goat rearing and desi poultry with crops and cattle. As a result, his annual income increased substantially from ₹4,03,400 to ₹8,16,500.

Mr. S. Vadivelu

Vivek Nagar, Krishnagiri.

EXPORT ORIENTED MORINGA PRODUCTS FOR ENTREPRENEURSHIP DEVELOPMENT:

KVK Krishnagiri conducted the EDP training on Export Oriented Moringa Products for SHG women of Mathur block. There is enormous production of Moringa in our district and farmers get low price during seasonal glut. Moreover, they lack knowledge on post-harvest processing and scientific knowledge on preservation techniques.

BACKGROUND OF THE INTERVENTION:

This is Mrs. Deepalakshmi, aged 39, wife of Mr. Ilavarasan residing in Mathur village, educated upto 11th standard lives in a remote village. She is downtrodden and faces severe hurdles for her livelihood. She owns 5 cent of land and cultivate moringa in her field. Her Income was not sufficient to educate the children and thought of some entrepreneur activities. So, she approaches the KVK to attend the training programme on EDP based on Moringa processing. There were more than 100 Moringa trees grown organically in her field. The moringa leaves and moringa goes waste during enormous production and fetches low price in the market.so she was empowered on the value addition technologies.

The progress achieved by the entrepreneur is as follows:

S. No	Topic	Date	Duration
1	EDP on Export Oriented Moringa Products for entrepreneurship development	03.07.24, 04.07.24, 23.08.24, 01.10.24, 03.10.24, 05.10.24, 07.10.24	7 days

The SHG women underwent the training on Moringa processing and Value addition for 7 days through EDP mode. The farmers were trained on nutritive value, blanching of moringa leaves, preparation of value-added products from moringa (moringa leaf pickle, dehydrated moringa leaf powder, moringa cookies, moringa ladoo, instant food mixes using moringa) moringa soup mix, ben oil, moringa chutney mix, moringa health mix including branding licensing, packaging, marketing.

Outcome / impact:

Year	Intervention of KVK	Enterprise effect	Outcome
2024-25	Skill training and demonstration of Moringa based products (RTE and RTU) to SHG	✓ Mrs. Deepalakshmi produces the products like moringa soup mix, moringa health mix, moringa chutney mix, moringa leaf powder,moringa rice mix, moringaadai mix, moringa rasam mix and RTE products from moringa. ✓ Brand name of Giri foods FSSAI No. 22424103000090	She earns an income of Rs.25,000 per month through sale of moringa based food products which increased the livelihood and economic status to meet her family needs and gained consumer acceptance for her products.

Cases of large-scale adoption/impact of specific technologies

MANAGEMENT OF MANGO FRUITFLY

Introduction

Krishnagiri district situated in the North Western zone of Tamil Nadu is bestowed with varied agro climate, which is highly favorable for the cultivation of large number of horticultural crops. This district ranks first in the cultivation and production of Mango in Tamil Nadu. Of the total area 1,20,000 hectares under mango in Tamil Nadu, 40,000 hectares (35%) is in Krishnagiri district. The annual production is about 3.8 lakh tones. Above 70 % of total production is used for processing into mango pulp. Bangalora and Alphonsa are the major varieties used for the production of pulp.

There are around 40 pulping units in the district. Above 2,500 containers of mango pulp is processed every year which is about 40 % of the total mango pulp production in our country. A brand "KRISHMA**"** has been formed by the District Administration for the development of quality mango production of the district. Keeping this in view, Government of Tamil Nadu has declared this region as **'**Agri Export Zone' especially for Mango.

Situation analysis

The average rain fall of the district is 830 mm. spread over an average of 71 rainy days in a year. The maximum rainfall occurs during August to October and lowest during January. The maximum temperature ranges between 20^0 C to 40^0 C during April to May and the lowest temperature 15^0 C to 28^0 C observed during December and January. The low night temperature during the flowering season helps in better fruit set. The low rainfall and low humidity (60% to 70%) helps in low spread of diseases.

Only 20 % of the mango produced is consumed for table purpose and 15 % for pickles. The productivity of this district is very low (4.2 tonnes/ha.) compared to the national productivity (5.5 tonnes/ha). Even though the area under mango increasing, the productivity is decreasing. There are several reasons that can be attributed for low productivity. The major causes are cultivation of low yielding varieties, rainfed condition, age old trees and also pest and diseases.

Among various pests affecting mango fruit fly *Bactocera dorsalis* and *B.correctus* causes yield loss even up to 80%. The population of fruit fly is found to be more during the months of April to August. Custard apple found in the hilly reasons is the main alternate host which helps in perpetuating the occurrence throughout the year. The female fruit fly lays eggs under the skin of the fruit. The egg hatches into whitish maggots that feed on the fruits which causes rotting resulting in great loss to the farmers. Use of chemicals for the control of fruit fly creates problem of the residual effects on fruits. Hence sex pheromones are the cheapest alternative for the management of the fruit fly in mangoes.

Technology

Indian Institute of Horticultural Research (IIHR), Bangalore has developed a low cost and ecofriendly technology of fruit fly trap. By keeping this traps @ 12 traps per ha during fruit development stage considerably reduces the population of fruit flies. The cost of this trap is very low considering the commercial one. Using locally available material the trap can be produced and very easy to handle.

Intervention

More than 70 % of the farmers do not sell the produce directly and give their orchards on lease. So, these farmers do not take any specific measures in controlling this pest resulting in increasing the population year after another. Hence an OFT was conducted during 2005-06 and efficacy different types of pheromone traps for the management of fruit fly was assessed. From the results of the OFT, IIHR designed fruit fly trap was found to be more effective. Based on this OFT, Front Line Demonstrations was conducted continuously from 2006-2007 to 2024-2025. The KVK also initiated different extension teaching methods such as field demonstration, training, Farmers Scientist Interaction, group discussion, diagnostic visits etc., to promote this technology. KVK also published colourful pamphlets and distributed to the farmers. A programme on fruitfly management was telecasted in 'Doordharsan' and this technology was also published through Newspaper regularly. Apart from above farmers were informed about this technology through SMS to increase the adoption rate.

The control of fruit flies is particularly difficult on the small orchards because of the constant migration of flies from nearby area. Hence community based, large scale demonstrations were conducted with sponsorship of NABARD under Farmers Technology Transfer Fund (FTTF) during 2010-11. Field demonstrations were organized in 30 hectares covering 75 farmers in two cluster villages. Field day was organized, trainings were conducted and extension literatures distributed under this programme. This led to greater impact on the management of fruit flies.

Impact

Scientist from IIHR visited the demonstration fields and collaborative demonstrations were conducted in another 60 ha. This made impact among the farmers and huge number of farmers enquires came from the farmers on pheromone trap for fruit fly management.

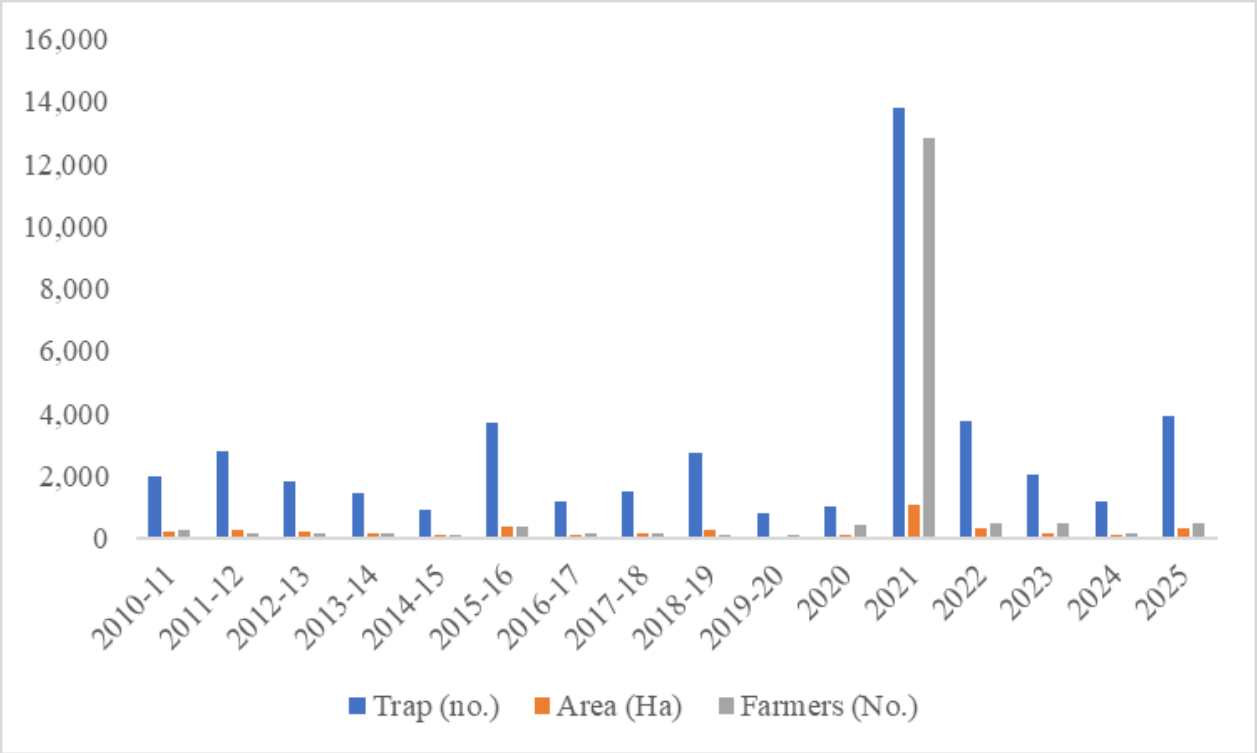
Technical presentations were done regularly during the meetings of Agricultural officials including monthly Zonal workshop. Commissioner of Agriculture allotted Rs.1,00,000 for conducting large scale demonstration of fruit fly management under ATMA programme during 2012-2013 in all blocks of the district. Because of the large-scale demonstration farmers could realize the importance of cheaper, ecofriendly technology and adopted it. While owing to the growing demand of the fruit fly traps by the mango growers, pesticide dealers started selling the same and thus it is now easily available in local market. Regional Research Station, TNAU at Paiyur has supplied is free of cost to the farmers during 2014-2015 under the special scheme.

KVK is producing and supplying fruit fly traps at the nominal cost of Rs.80/- to the farmers whereas the commercial trap costs Rs.150 to Rs.180/-. By word-of-mouth farmers from neighboring districts is also purchasing the fruit fly trap from KVK.

Production and supply of Fruit fly trap by KVK

Year	Trap (no.)	Area (Ha)	Farmers (No.)
2010-11	1,962	201	256
2011-12	2,801	280	140
2012-13	1,837	188	180

Year	Trap (no.)	Area (Ha)	Farmers (No.)
2013-14	1,421	145	150
2014-15	927	98	92
2015-16	3,702	370	395
2016-17	1,181	119	132
2017-18	1,498	145	182
2018-19	2,756	250	120
2019-20	791	65	124
2020	1,000	97	420
2021	13,803	1080	12803
2022	3,767	336	490
2023	2,062	138	482
2024	1,179	122	177
2025	3,907	312	479



Conclusion

Large scale demonstration of this technology has reduced the incidence of fruit fly and thereby increased the income of the farmers. Owing to the easiness, eco-friendly and cost effectiveness, this technology has spread over larger area. Survey conducted by KVK revealed that this technology is being adopted by about 45 % of the farmers in the selected villages. It is also estimated that 28 % of total area in the district under mango has been brought under this technology.

Linkages

Functional linkage with different organizations

Name of the organization	Nature of linkage
Tamil Nadu Agricultural University	Technical guidance for FLDs and OFTs and other researchable issues
Indian Institute of Horticultural Research, Bangalore	Technical guidance for FLDs & OFTs collaboration in conducting demonstrations of IIHR technologies
Veterinary University Training and Research Centre (VUTRC), Krishnagiri	Technical guidance for FLDs and OFTs and sponsored mass contact programmes, Animal Health camps
Horticulture College and Research Institute, Krishnagiri	Joint diagnostic visit, Zonal meeting, Field visits, Technical guidance for FLDs and OFTs
College of Poultry Production and Management, Hosur	Training, Exposure visit and supply of birds
National Bank for Agriculture and Rural Development (NABARD), Krishnagiri	Collaboration in conducting skill development initiative programme, Farmers Technology transfer fund programmes (FTTF), MEDP
Department of Agriculture and Farmers welfare, Krishnagiri	Trainings for farmers, Trainings for extension functionaries, ATMA programmes
Department of Horticulture, Krishnagiri	Trainings for farmers, Trainings for extension functionaries, ATMA programmes
Soil Testing Laboratory & Mobile Soil Testing Lab	Conducting soil sampling campaign
Department of Agricultural Engineering	Farm implements of Agricultural Engineering Department are being utilized for our demonstrations and trainings.
Department of Animal Husbandry	Sponsored and Joint veterinary camps, participating in Assistance to State Control of Animal Diseases (ASCAD) meetings, collaborative linkage for conducting "Kaalnadai Paadukappu Thittam" camps and vaccination programmes
Divisional Forest Office, Krishnagiri	Collaborative training on importance of tree planting, vermi composting, sponsored training programmes to the Farmers Discussion Group
District Industries Centre, Krishnagiri	Entrepreneurship development activity
Department of Women and Child Welfare	Collaborative trainings on nutrition and value addition.
Department of Agribusiness and Marketing	Collaborative trainings on Value Addition
National Bureau of Agriculture Insects Resources (NBAIR)	Technology guidance for the demonstration of *Tutaabsoluta, EPN, and* Rugose Spiral white fly
Valnthu Kattuvom Thittam (TNVKP)	Collaborative linkage to conduct SPARK trainings and Farm School programmes.
Department of Sericulture	Field demonstration, Joint Diagnostic Field visits.
Department of Fisheries, Krishnagiri	Farmers training and demonstration

AWARDS and RECOGNITIONS

	
Received appreciation certificate from District Collector, Krishnagiri for Outstanding Performance and Exemplary Service toward his individual contribution to District Administration by Senior Scientist & Head	Received appreciation certificate from District Collector, Krishnagiri for Outstanding Performance and Exemplary Service toward his individual contribution to District Administration by SMS (Soil Science)
	
Received appreciation certificate from District Collector, Krishnagiri for Outstanding Performance and Exemplary Service toward his individual contribution to District Administration by Programme Assistant (Agrl. Engg.)	SHG entrepreneur Mrs. Ranjini Murugan of Sempadamuthur Village trained by KVK bagged the first prize and honoured by Honorable District Collector of Krishnagiri District in the Mango Cooking Competition through Mango based value added products held at Krishnagiri during the 31st All India Mango Exhibition

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Important Visitors to KVK during 2025

	
CGM and AGM NABARAD visited to KVK-Project discussion	President, TNBRD and Principal Scientist, ATARI visited Nursery unit during SAC meeting
	
FET, ARS Scientist visited KVK farm	Joint Director of Agriculture, Krishnagiri and Nodel Officer, HC& RI, Paiyur visited to KVK
	
Assistant Director of Horticulture participated in FPO meeting at KVK	Joint Director of Agriculture,Krishnamiri,attended inauguration training on cattle farming at KVK
	
Joint Director of Agriculture, Krishnagiri and Professors and Head, Department of Agronomy participated in IIMR programme	Executive Engineer, Krishnagiri participated Farm mechanisation in Millets Cultivation Programme

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PHOTOS

OFTs	
	
IDM Practices for Groundnut Root Rot Diseases	Blast Resistant Ragi Varieties
	
Sub-clinical Mastitis in Dairy Cows	MN Mixture for Higher Productivity in Banana
FLDs	
	
IPDM Technologies in Regram	GRAND Supplement to Increase the Milk Yield
	
Improved Mango Harvester	Niche and Nutraceutical Fruit

Trainings	
	
On Campus_Niche and Nutraceutical Fruit	Off Campus_GRAND Supplement
	
Vocational_Value Addition in Fish	Rural Youth Training - Vermicompost Production Techniques
Extension Programmes	
	
Advisory Services_Banana	Diagnostic Visit_Brinjal
	
Field Day_IPDM Technologies in Redgram	Group Discussion

	
Kisan Ghosthi	Film Show_Krishi Choupal
	
Kisan Mela	South India Natural Farming Summit 2025
	
Scientists' Visit to Farmers Field_Turmeric	Soil Health Campaign
	
Seminar-Workshop_Institute Seminar	Method Demonstrations_Spraying of Tix Killer
	
Important Days_7th Poshan Pakhwada	Special Day Celebration_World Soil Day 2025

	
Exposure Visit_National Horticulture Fair 2025	FFS_Redgram
	
Awareness Programme_VKSA_Pre-kharif	Awareness Programme_on Organic Farming
	
Lecture Delivered_Goat Farming	Radio Programme_Organic Pest Management
Other Extension Activities	
	
PM Kisan 19th Instalment	PM Kisan 20th Instalment
	
PM Kisan 21th Instalment	PM Kisan 22th Instalment

PMDDKY

Constitution Day

150 Years of Vande Mataram

CFLD Oilseeds

Groundnut_Training

Groundnut_Field Day Programme

Awards and Recognitions	
	
KVK Scientist_Outstanding Performance and Exemplary Service_Senior Scientist & Head	KVK Scientist_Outstanding Performance and Exemplary Service_SMS (Soil Science)
	
KVK Scientist_Outstanding Performance and Exemplary Service_Prog. Asst. (Agrl. Engg.)	Farmer_Mango Cooking Competition through Mango based Value Added Products_Mrs. Ranjini Murugan
	
Farmer_Best Farmer in Natural Farming or Organic Farming_Mr. Murali	Farmer_Best Farmer in Natural Farming or Organic Farming_Mr. Pattaby
	
Farmer_Best Farmer in Natural Farming or Organic Farming_Mr. Ramchandiran	Farmer_Best Farmer in Natural Farming or Organic Farming_Mr. Silambarasan

Farmer_Best Farmer in Natural Farming or Organic Farming_Mrs. Nagammal


ICAR-Agricultural Technology Application Research Institute
(Indian Council of Agricultural Research)
Zone-X, Hyderabad- 500 059

Certificate of Appreciation

This Certificate is awarded to ICAR-KVK Krishnagiri for winning the Second place for No.of Farmers participation in Exhibitions. during the *Annual Zonal Workshop of KVKs of ICAR-ATARI, Zone - X* held at KVK Vellore (TNAU), Tamil Nadu during 2 - 4 September 2025.

Dr. Shaik N Meera
DIRECTOR, ICAR-ATARI
ZONE X, HYDERABAD

KVK_IInd Place_No. of Farmers Participation in Exhibitions


ICAR-Agricultural Technology Application Research Institute
(Indian Council of Agricultural Research)
Zone-X, Hyderabad- 500 059

Certificate of Appreciation

This Certificate is awarded to ICAR-KVK Krishnagiri in recognition of excellence achieved in Promotion of GAP Initiative that boosted the production of high quality mangoes during the *Annual Zonal Workshop of KVKs of ICAR-ATARI, Zone - X* held at KVK Vellore (TNAU), Tamil Nadu during 2 - 4 September 2025.

Dr. Shaik N Meera
DIRECTOR, ICAR-ATARI
ZONE X, HYDERABAD

KVK_Promotion of GAP Initiative that Boosted the Production of High Quality Mangoes

Farmer_Best Farmer Award 2025_Mr. Sivaguru

Farmer_Best Farmer Award 2025_Mrs. Amaravathi Pasavaraji

Farmer_Best Farmer Award 2025_Mrs. Girija

Farmer_Best Farmer Award 2025_Mrs. Ranjini Murugan

One photo for Annual Zonal Award

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