

# ICAR - KVK KRISHNAGIRI

## ANNUAL PROGRESS REPORT

(1<sup>st</sup> January 2024 to 31<sup>st</sup> December 2024)

### **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 : +91 80982 80123, 4343 291944

Fax No. : –

E-mail : drperumalkvk@gmail.com,  
kvk.Krishnagiri@icar.gov.in

#### **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 : 41822 91024

Fax No. : -

E-mail : tnbrd1978@gmail.com

Name of the Chairperson : Mr. S. Ramesh

Mobile No : +91 94440 21523

Email : tnbrd1978@gmail.com

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

Name of the Programme Coordinator / SS&H : Dr. T. Sundarraaj

Residential Address : Mullai Nagar, 3rd Cross, Krishnagiri

Phone No. : –

Mobile No. : +91 94438 88644

Email : drsundarraaj@yahoo.com

**1.4. Year of sanction of the KVK (as per Official Order) : 1994**

**1.5. Month and year of establishment : September, 1994**

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

<b>S. No.</b>	<b>Item</b>	<b>Area (ha)</b>
1	Under Buildings	0.80
2	Under Demonstration Units	2.00
3	Under Crops	14.3
4	Orchard/Agro-forestry	1.3
5	Others	1.90
<b>Total</b>		<b>20.3</b>

## 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	-	-	-
	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	-	-	-

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
	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 31.12.2024	Present status
Two-wheeler Hero Honda – CD Dawn (TN09AD4663)	2006	39,890	8,155	Good
Two-wheeler Hero Honda Passion (TN24E7592)	2009	50,000	28,424	Good
Scooter – Suzuki Access 125 Standard Edition (TN24BD1317)	2024	69,124	2,924	Good
Jeep – Mahindra Bolero B6 BS-VI (TN24BD0497)	2024	9,10,294	17,814	Good
Tractor – MF 5245 DI (TN24J9922)	2011	5,00,000	1660 (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: 2024**

S. No.	Date	No of Participants	Salient Recommendations
1.	15.02.2024	27	SAC Details given below

**PROCEEDINGS OF SCIENTIFIC ADVISORY COMMITTEE MEETING**

VENUE : ICAR - KVK, Krishnagiri DATE : 15.02.2024  
 No. of participants : 27

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

Member from TNAU : **Dr. A. Thirumurugan**  
 Programme Coordinator, KVK Vellore,  
 Tamil Nadu Agricultural University.

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

**Members Participated:**

Sl. No	Name and Designation	Department
1	Mr. S. Ramesh President	Tamil Nadu Board of Rural Development, Chennai.
2	Dr. A. Thirumurugan Programme Coordinator	ICAR-KVK, Vellore.
3	Mr. S. Ramesh DDM	NABARD Cluster Office, Salem.
4	Mr. C. Pachaiyappan Joint Director of Agriculture	Department of Agriculture, Krishnagiri.
5	Mr. K. Kalimuthu Deputy Director of Marketing	Department of Agricultural Marketing, Krishnagiri.
6	Mr. S. Goplakrishnanan Transmission Executive	All India Radio, Dharmapuri.
7	Dr. N. Tamilselvan Professor (Agronomy)	Regional Research Station (TNAU), Paiyur.
8	Dr. B. Senthamizh Selvi Associate Professor of Horticulture	Horticultural College & Research Institute, Paiyur.
9	Mr. S. Sivakumar Assistant Director of Horticulture	Department of Horticulture, Krishnagiri.
10	Mr. K. Arivazhagan Asst Director of Agriculture (QC)	Department of Agriculture, Krishnagiri.
11	Mr. V. Suresh Senior Scientist and Head (i/c)	ICAR- KVK, Thiruvannamalai.
12	Dr. S. Elangovan Regional Joint Director of Animal Husbandry	Department of Animal Husbandry, Krishnagiri.
13	Mrs. K. Vijayalakshmi District Social Welfare Officer	District Social Welfare Office, Collectorate.

14	Mr. V. Sathivelu Forest Range Officer	Social Forestry and Extension Division, Krishnagiri.
15	Mr. T. Jaganath Director	INDRSETI, Krishnagiri.
16	Mr. R. Madhu Executive Engineer	Agricultural Engineering Department, Krishnagiri.
17	Dr. N. Muniappan Assistant Professor	Veterinary University Training and Research Centre, TANUVAS, Krishnagiri.
18	Mr. P. Chinnasamy Programme officer	All India Radio, Dharmapuri.
19	Mrs. V. Veeralakshmi Assistant Inspector of Sericulture	Department of Sericulture, Krishnagiri.
20	Mr. A. Kalaimani Farmer member	Farmer Representative, Belavarthi, Krishnagiri.
21	Thiru. P. Narayana Reddy Farmer member	Farmer Representative, Alasanatham, Krishnagiri.
22	Mrs. M. Deepa Farmer member	Farmer Representative Jakkapan Nagar, Krishnagiri.
23	Mrs. M. Vijaya Farmer member	Farmer Representative, Kottaiyoor Krishnagiri.
24	Mrs. L. Gayathiri SHG Member	Farmer Representative, Ikundamkothapalli, Krishnagiri.
25	Mrs. Sujatha Entrepreneur	Manam Oils and Flavours, Periyakottapalli, Krishnagiri.
26	Mrs. Ranjani Murugan Entrepreneur	MRS Millet snacks and Pickles, Sembadamuthur, Krishnagiri.
27	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, Chennai. 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 FOLLOW:**

Mr.S.Ramesh The President, TNBRD, Chennai.	<ul style="list-style-type: none"> <li>✓ KVK may display the schemes available with line departments for awareness of farmers.</li> <li>✓ More number of Soil samples may be analysed.</li> </ul>
Dr. A. Thirumurugan Programme Coordinator	<ul style="list-style-type: none"> <li>✓ Awareness to be created to reduce the indiscriminate usage of pesticides on agricultural and horticultural crops.</li> <li>✓ Awareness on Mastitis management to be done.</li> <li>✓ TNAU repellent for wild boar management may be popularised.</li> </ul>
Dr. N.Tamilselvan Professor Regional Research Station (TNAU), Paiyur	<ul style="list-style-type: none"> <li>✓ Awareness on Azolla Cultivation to be done.</li> <li>✓ Short duration varieties in Ragi may be popularized</li> <li>✓ Popularization of Traditional varieties to be done.</li> </ul>
Mr. C. Pachaiyappan Joint Director of Agriculture	<ul style="list-style-type: none"> <li>✓ Create awareness on KCC, Uzhavan application</li> <li>✓ Popularization of mechanization in Agriculture to be done.</li> </ul>
Mr. S. Ramesh DDM NABARD	<ul style="list-style-type: none"> <li>✓ Create awareness on Drone technology, Natural/organic farming, KCC, Precision farming, Government schemes and subsidies available to farmers.</li> </ul>
Mr. V. Sathivelu Forest Range Officer	<ul style="list-style-type: none"> <li>✓ Training for Nursery management and Bio-products usage may be done.</li> <li>✓ Forest Schemes may be explained in training programmes.</li> </ul>
Mr. T. Jaganath, Director	<ul style="list-style-type: none"> <li>✓ KVK may sensitize farmers on Agriculture related loans, NLM, MSME, KCC during the trainings.</li> </ul>
Mr. S. Sivakumar Asst. Director of Horticulture	<ul style="list-style-type: none"> <li>✓ Awareness on organic farming in mango to be done.</li> </ul>
Mrs. V. Veeralakshmi Assistant Inspector of Sericulture	<ul style="list-style-type: none"> <li>✓ Training on pest and disease management in mulberry to be done.</li> </ul>
Dr. N. Muniappan Asst. Professor. VUTRC	<ul style="list-style-type: none"> <li>✓ Training on Mastitis management may be done.</li> </ul>
Mr. P. Chinnasamy Programme officer All India Radio	<ul style="list-style-type: none"> <li>✓ More programmes on season wise problems in Agri and Horti crops may be given to AIR.</li> <li>✓ Successful farmers may be identified and given to AIR.</li> <li>✓ Small voice clippings on technologies related to agriculture and allied sectors may be sent to AIR Dharmapuri.</li> </ul>
Mrs. K. Vijayalakshmi District Social Welfare Officer	<ul style="list-style-type: none"> <li>✓ Trainings on Millet value addition / organic farming / poultry may be given to TGs.</li> </ul>
Mrs. V. Veeralakshmi Assistant Inspector of Sericulture	<ul style="list-style-type: none"> <li>✓ KVK may give awareness to farmers to promote sericulture.</li> </ul>

Mr. R. Madhu Executive Engineer	✓ Small machines like seedling planter, weeding machines may be popularized.
Dr. B. Senthamizh Selvi Associate Professor of Horticulture	✓ Training and demonstration on powder making from Greens, Curry leaf and Moringa may be done.
Mr. A. Kalaimani Farmer member	✓ Training required for Disease management, Nutrient management in Banana. ✓ Awareness on Mastitis management in cow.
Thiru. P. Narayana Reddy Farmer member	✓ Awareness on organic farming, Wild boar management required to be done.
Mrs. M. Deepa Farmer member	✓ Training on packaging for value added products needed.
Mr. K. Kalimuthu Deputy Director of Marketing	✓ Awareness on E nom to be created during the trainings.

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## **2. DETAILS OF DISTRICT (2024)**

### 2.0. Operational jurisdiction of KVK

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

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

<b>S. No</b>	<b>Farming system/enterprise</b>
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)

<b>S. No</b>	<b>Agro-climatic Zone</b>	<b>Characteristics</b>
1	North western zone	<ul style="list-style-type: none"> <li>• 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 &amp; 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.</li> <li>• 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</li> <li>• The climate in the zone ranges from semi-arid to sub-humid with frequent occurrence of drought</li> <li>• 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 &amp; 34.6 % respectively.</li> <li>• 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.</li> <li>• The major soil types occurring in the zone are               <ol style="list-style-type: none"> <li>1) Red non-calcareous,</li> <li>2) Red- calcareous</li> <li>3) Alluvial</li> </ol> </li> </ul>

S. No	Agro-climatic Zone	Characteristics
		<p>4) Black soil 5) Hill soil 6) Forest soil 7) Saline/alkali soil.</p> <p>Of this major area comes under red non-calcareous and red calcareous soils. In the above major soil types, saline &amp; 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</p> <ul style="list-style-type: none"> <li>• Paddy (1.29 lakh ha), sorghum (1.43 lakh ha), finger millet (1 lakh ha), little millet (0.45 lakh ha) horsegram, blackgram, redgram &amp; greengram</li> <li>• Among the oilseeds, groundnut (2.11 lakh ha), sesame (0.21 lakh ha), sunflower (0.06 lakh ha) and castor (0.25 lakh ha)</li> <li>• Cotton (0.33 lakh ha), sugarcane (0.45 lakh ha)</li> <li>• The spices and condiments such as coriander, chillies, turmeric are being cultivated in small portions throughout the zone</li> <li>• 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).</li> </ul>
2	<p><b>AES – I</b> (Krishnagiri, Veppanapalli, Bargur, Uthangarai and Mathur blocks)</p> <p><b>AES – II</b> (Kaveripattinam block)</p> <p><b>AES – III</b> (Hosur, Shoolagiri, Thally and Kelamangalam blocks)</p>	<p>Red soil, altitude 1000 – 2000 ft, well irrigated and rainfed</p> <p>Red soil, altitude 1000 – 2000 ft, canal irrigated</p> <p>Red soil, altitude 2000 – 3000 ft, well irrigated and rainfed</p>

### 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 2024

##### *Kharif:*

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	Paddy	23,186	10,34,096	44.6
2	Sorghum	2,846	41,552	14.6
3	Finger millet	31,407	10,41,142	33.15
4	Little millet	213	2,066	9.7
5	Pearl millet	359	10,501	29.25
6	Maize	1,683	65,216	38.75
7	Red gram	14,461	1,53,287	10.6
8	Green gram	633	4,703	7.43
9	Black gram	3,079	29,435	9.56
10	Groundnut	15,072	3,74,389	24.84
11	Sesame	718	6,677	9.3
12	Cotton	478	3,227	6.75
13	Banana	719	3,58,601	498.75
14	Mango	42,380	3,23,359	7.63
15	Chilies	660	3,082	4.67
16	Brinjal	2,753	5,06,552	184
17	Tomato	12,765	25,33,853	198.5
18	Cabbage	2,898	17,35,033	598.7
19	Sugarcane	478	3,09,266	647
20	Turmeric	1,945	46,097	23.7

##### *Rabi:*

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	Paddy	23,186	10,34,096	44.6
2	Finger millet	2,846	41,552	14.6
3	Maize	31,407	10,41,142	33.15
4	Horse gram	213	2066	9.7
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	633	4,703	7.43
9	Chilies	3,079	29,435	9.56
10	Brinjal	15,072	3,74,389	24.84
11	Tomato	718	6,677	9.3
12	Cabbage	478	3,227	6.75

## 2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)
		Maximum	Minimum	
January 2024	3.5	28.3	18.9	67.00
February 2024	3.5	30.5	20.0	52.45
March 2024	3.5	34.4	22.2	51.75
April 2024	3.5	35.5	23.0	67.00
May 2024	167.2	36.7	23.6	67.55
June 2024	378.9	32.7	23.8	62.26
July 2024	343.6	31.7	22.8	68.65
August 2024	586.4	31.1	22.9	74.76
September 2024	633.3	31.2	22.8	65.60
October 2024	912.3	30.2	22.2	71.50
November 2024	932.1	28.3	21.1	69.50
December 2024	1140.1	28.4	18.8	71.30

## 2.6. Production and productivity of livestock, Poultry, Fisheries etc. in the district (2024)

Category	Population	Production	Productivity
<b>Cattle</b>			
Crossbred	262829	225.168 tons	1600 lit/annum
Indigenous	100434	123.377 tons	600 lit/annum
<b>Buffalo</b>	18051	120.157 tons	1200 lit/annum
<b>Sheep</b>			
Crossbred	29993	371.952 tons	20 kg b.wt
Indigenous	341887	456.258 tons	14 kg b.wt
<b>Goats</b>	154809	220.122 tons	14 kg b.wt
<b>Pigs</b>	4064	580.167 tons	60 – 70 kg b.wt
Crossbred	-	-	-
Indigenous	-	-	-
<b>Rabbits</b>	-	-	-
<b>Poultry</b>			
Hens	309034	-	-
Desi	2181895	458.39 lakh eggs	160 – 180 eggs
Improved	58769	863.90 lakh eggs	300 – 310 eggs
Ducks	190	28891.5 eggs	215 eggs
Turkey and others	768 & 3970	42084 & 133859 eggs	80 eggs & 45 eggs

## 2.7. Details of Adopted Villages (2024)

S. No.	Taluk/ Mandal	Name of the block	Name of the village	Year of adoption	Major crops & enterprises	Major problem identified	Identified Thrust Areas
<b>KVK adopted villages</b>							
1	Krishnagiri	Krishnagiri	Kattinayanapalli, Kalliyur, Kothikuttalapalli	2023	Groundnut, Finger Millet, Horsegram	Low yield due to improper crop management; Yield loss due to imbalanced nutrient management;	ICM, INM
2	Krishnagiri	Kaveripattinam	Kaveripattinam, Arasmapatti, Jagadap, Pannanthur, Papparapatti	2021	Paddy, Cowpea, Value Addition	Low yield due to improper nutrient management; Low yield due to improper crop management; Injudicious usage of chemical fertilizers and pesticides with improper nutrient & pest management; Poor shelf-life, low market potential during sales, low price during glut	INM, ICM, IPM, Value Addition
3	Krishnagiri	Bargur	Bargur, Sakilnatham, Sigaralapalli	2022	Little Millet	Low yield due to repeated cultivation of existing variety;	Varietal Evaluation
<b>DFI villages</b>							
1	Krishnagiri	Krishnagiri	Maharajakadai, Periyakottapalli	2022	Tomato, Decomposition, Dairy Cattle, Dairy Cows, Banana, Groundnut, Value Addition	Low yield due to improper nutrient management; More time taken to decomposition of farm waste; Low yield due to disease incidence; Disease management; Feed management; Tick infestation cause loss of appetite and prone to vector borne disease;	INM, Waste Decomposer, Disease Management, Value Addition
2	Krishnagiri	Bargur	Varatanapalli, Bellavarthi, Ikuntham	2023	Mango, Banana, Tomato, Ribbed gourd, Marigold, Groundnut, Sheep and Goats	Weed infestation; Low yield due to improper nutrient management; Low yield in the existing varieties; Unavailability of skilled labour and huge wages; Farmers are suffering huge losses of groundnut crop due to attacks of Wild Boars; Yield loss due to Sucking pests and borers; Lack of Knowledge on feeding of Mineral mixture and less aware of Mineral deficiency	INM, Varietal Evaluation, Wildboar menace, IPM

## 2.8. Priority/thrust areas

Crop/Enterprise	Thrust area
Horsegram, Groundnut, Blackgram, Paddy, Jasmine, Banana, Little Millet	Varietal Evaluation
Mango, Tomato, Turmeric	Integrated Disease Management
Paddy, Horsegram, Tomato, Cassava, Coconut, Banana, Cotton	Integrated Nutrient Management
Paddy, Finger Millet, Cowpea, Cotton, Cluster Bean, Coriander, Mango,	Integrated Crop Management
Mango, Tomato, Coconut, Jasmine, Groundnut	Integrated Pest Management
Dairy Cattle, Dairy Cow	Disease Management
Goat, Desi-bird, Dairy Cow	Production and Management
Goat, Dairy Cow, Desi-chicken	Nutrition Management
Agriculture Drone, Seed Drill, Tree Climber	Farm mechanization

## 3. Salient Achievements

Achievements of Mandated activities (1<sup>st</sup> January 2024 to 31<sup>st</sup> December 2024)

S. No	Activity	Target	Achievement
1	Technologies Assessed and refined (No.)	42	42
2	On-farm trials conducted (No.)	21	21
3	Frontline demonstrations conducted (No.)	25	25
4	Farmers trained (in Lakh)	0.01851	0.08151
5	Extension Personnel trained (No.)	144	144
6	Participants in extension activities (in Lakh)	0.45625	0.45625
7	Production and distribution of Seed (in Quintal)	27.2695	27.2695
8	Planting material produced and distributed (in Lakh)	2.41606	2.41606
9	Live-stock strains and finger lings produced and distributed (in Lakh)	0.00533	0.00533
10	Soil samples tested by Mini Soil Testing Kit (No)	354	354
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.)	410708	410708
14	No. of Soil Health Cards issued by Mini Soil Testing Kits (No.)	354	354
15	No. of Soil Health Cards issued by Traditional Laboratory (No.)	0	0

**Salient Achievements by KVK during January – December 2024:**

- To enhance mango quality and productivity by 30–40%, KVK promoted foliar nutrition. A total of 470 kg of IIHR Mango Special (micronutrient formulation) was produced and distributed to farmers. During the reporting period, this intervention covered 127 hectares in the district.
- To control mango fruit fly infestation, KVK produced and distributed 1,179 mango fruit fly traps to farmers. This initiative covered 122 hectares during the reporting period.
- High-quality fodder seeds, including Hedge Lucerne, Subabul, COFS 31, Fodder Cowpea, and Stylo, were supplied to farmers, amounting to 8.985 quintals. These improved varieties have been cultivated across 3,726 hectares in the district.
- A total of 2,41,606 seedlings, including fruit trees, coconut, forest species, and vegetables, were produced and supplied to farmers and other agencies.
- KVK promoted millet cultivation techniques to 400 Scheduled Caste farmers through training, benefiting 80 farmers through Entrepreneurship Development Program (EDP) training. Additionally, 200 farmers received Ragi ATL1 seeds, and 8 battery-operated sprayers were distributed to 8 groups. Furthermore, 2 millet processing units were given to 2 groups under the Indian Institute of Millets Research (IIMR) project.

#### **4. TECHNICAL ACHIEVEMENTS**

Details of target and achievements of mandatory activities by KVK during 2024

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
21	21	42	42	21	21	91	91

FLD (crop/enterprise/CFLDs)

No of Demonstrations		Area in ha		Number of Farmers / Beneficiaries / Replications	
Targets	Achievement	Targets	Achievement	Targets	Achievement
25	25	66	66	215	215

No of CFLD		Area in ha		Number of Farmers / Beneficiaries / Replications	
Targets	Achievement	Targets	Achievement	Targets	Achievement
2	2	90	90	225	225

Training

Number of Courses			Number of Participants	
Clientele	Targets	Achievement	Targets	Achievement
Farmers and Farm Women	67	67	1194	1194
Rural youth	4	4	66	66
Extn. Functionaries	3	3	144	144
Vocational Training	2	2	35	35
Sponsored Training	4	4	556	556

Extension Activities

Number of activities		Number of participants	
Targets	Achievement	Targets	Achievement
400	400	45625	45625

Seed Production (q)

Target	Achievement	Distributed to no. of farmers
27.2695	27.2695	1944

Planting material (Nos.)

Target	Achievement	Distributed to no. of farmers
241606	241606	808

## Technology Assessments (OFTs) in Detail

### OFT-1: Assessment on suitable Groundnut varieties (TCGS 1694 and TMV 14) for higher productivity in Rainfed condition

1. **Thematic area** : Varietal evaluation
2. **Title** : Assessment on suitable Groundnut varieties (TCGS 1694 and TMV 14) for higher productivity in Rainfed condition
3. **Scientists involved** : SMS (Agronomy), SMS (Agrl. Extension)
4. **Details of farming situation** :

Groundnut (*Arachis hypogea*) popularly known as ‘king of oilseeds. They are excellent plant-based source of protein and high in various vitamins, minerals. Groundnut is cultivated around 15,500 ha in Krishnagiri district. Due to its short duration nature, groundnut is cultivated both Kharif and Rabi season. The soil type of this location was red sandy loam and it best for groundnut cultivation. The soil nutrient status is low in nitrogen, medium in phosphorus and medium in potassium. The micronutrient status is also poor in general especially zinc, copper and boron deficiencies are widely seen in most of the field crops.

5. **Problem definition / description** :

Most of the farmers repeatedly cultivating Dharani (TCGS 1043) variety during Kharif season in this region which was susceptible to Early Leaf spot (*Cercospora arachidicola*) (early leaf spot) and Late leaf spot (*Phaeoisariopsis personata*) significantly impacts groundnut production by inducing premature defoliation and hindering photosynthesis, which leads to substantial yield reductions and diminished pod quality.

This OFT was conducted and assessed to check the performance of suitable groundnut variety for Krishnagiri district during rainfed condition.

6. **Technology Assessed** :

Technology Option 1	Cultivation of Groundnut – TCGS 1694 ( <i>ANGRAU, 2022</i> )
Technology Option 2	Cultivation of Groundnut – TMV 14 ( <i>TNAU, 2019</i> )
Farmers practice	Dharani (TCGS 1043)

7. **Critical inputs given** :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
TCGS 1694 Seeds	30 kgs	3900	90 kgs	11700
TMV 14 Seeds	30 kgs	3050	90 kgs	9150
VAM Biofertilizer	5 kgs	500	15 kgs	1500
Field board	1 no	200	3 nos	600

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

Technology Option	No. of trials	Pod Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Average Number of filled Pods per plant
Farmers Practice	3	17.4	45150	1.89	14.40

Technology Option	No. of trials	Pod Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Average Number of filled Pods per plant
Technology 1 <b>Cultivation of Groundnut – TCGS 1694</b>		19.8	68634	2.37	32.10
Technology 2 <b>Cultivation of Groundnut – TMV 14</b>		18.3	60373	2.22	26.40

**Description of the results:** Based on the On-Farm Trial study results, the highest pod yield achieved from TCGS 1694 was found to be (19.80 qtl/ha) followed by TMV 14 (18.28 qtl/ha) and the lowest pod yield in TCGS 1043 variety (17.40 qtl/ha). The average number of filled pods per plant was recorded higher in TCGS 1694 (32.10), TMV 14 (26.40), and farmers check TCGS 1043 (17.40). Farmers obtained an average net return of (Rs. 68633.33/ha) in TCGS 1694 whereas it was (Rs. 60373/ha) in TMV 14 and (Rs. 45,150/ha) in the farmers check TCGS 1043 variety. The B:C ratio was higher in TCGS 1694 (2.37) than in TMV 14 (2.22) and in the farmers' check TCGS 1043 variety (1.89).

**9. Constraints :** Nil

**10. Feedback of the farmers involved :**

The TCGS 1694 groundnut variety is valued for its high pod and kernel yields, strong performance under rainfed conditions, and improved economic returns for farmers. It also displays a high number of filled pods, shelling percentage and plant height.

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

In field evaluations comparing groundnut cultivars, TCGS 1694 and TMV 14 consistently outperformed the traditional variety, TCGS 1043. Notably, TCGS 1694 demonstrated superior growth and yield characteristics across all assessed parameters. Consequently, TCGS 1694 is recommended as the optimal choice for cultivation in the Krishnagiri district during the Kharif season.

**OFT-2: Assessment on suitable Little Millet varieties (CLMV 1 and ATL 1) for higher productivity**

- 1. Thematic area :** Varietal evaluation
- 2. Title :** Assessment on suitable Little Millet varieties (CLMV 1 and ATL 1) for higher productivity
- 3. Scientists involved :** SMS (Agronomy), SMS (Agrl. Extension)
- 4. Details of farming situation :**

Little millet, or Indian millet (*Panicum sumatrense*), is a resilient crop grown on approximately 500 hectares in the Krishnagiri district. Its ability to thrive in dry, arid conditions with minimal input makes it a sustainable choice for this water-limited region. Requiring less nutrient management and water than other cereals, it can also flourish in soils with poor nutrient status, contributing to sustainable farming. Predominantly cultivated during the Kharif season due to its short duration and drought tolerance, it performs well in the sandy loam soils prevalent in the area. However, the soil analysis reveals low levels of nitrogen and potassium, medium levels of phosphorus, and poor micronutrient availability, highlighting the need for targeted soil management strategies.

**5. Problem definition / description :**

Most of the farmers repeatedly cultivating traditional variety (non-descriptive type) which gives low grain yield and income. This OFT was conducted and assessed to check the performance of suitable Little millet variety for Krishnagiri district.

**6. Technology Assessed :**

Technology Option 1	Cultivation of Little Millet – CLMV 1 ( <i>IIMR, 2020</i> )
Technology Option 2	Cultivation of Little Millet – ATL 1 ( <i>TNAU, 2019</i> )
Farmers practice	Traditional variety

**7. Critical inputs given :**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
CLMV 1 seeds	4 kgs	433.33	12 kgs	1300
ATL 1 seeds	4 kgs	348	12 kgs	1044
Azospirillum	2 kgs	60	6 kgs	360
Phosphobacteria	2 kgs	60	6 kgs	360
VAM Fungi	5 kgs	100	15 kgs	1500
Field board	1 no	200	3 nos	600

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

Technology Option	No. of trials	Grain Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Average number of grains count per plant
Farmers Practice	3	6.81	6859.8	1.33	82.00
Technology 1 Cultivation of Little Millet – CLMV 1		10.98	24393.7	2.13	185.65
Technology 2 Cultivation of Little Millet – ATL 1		11.03	25881.3	2.24	224.5

**Description of the results:** The higher grain yield was recorded in ATL 1 (11.03 qtl/ha) next to that CLMV 1 (10.98 qtl/ha) and the lowest grain yield was recorded in traditional variety (non-descriptive type) variety (6.81 qtl/ha) in On Farm Trial result. The average number of grains counts per plant was found to be higher in ATL 1 (224.5), CLMV 1 (185.65), and farmers (non-descriptive type) (82.00). Farmers obtained an average net return of (Rs. 25881.33/-) per hectare in ATL 1 whereas it was (Rs. 24394/-) in CLMV 1 and (Rs. 6859.78/-) in the farmers check (non-descriptive type). The B:C ratio was higher in ATL 1 (2.24) than in CLMV 1 (2.13) and in the farmers' check non-descriptive type traditional variety (1.33).

**9. Constraints : Nil****10. Feedback of the farmers involved :**

Farmers have observed that the ATL 1 variety exhibits superior performance due to its desirable traits: it resists lodging, offers high yield potential, tolerates drought, matures uniformly, and produces high-quality grains, all of which contribute to its strong market value.

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

In evaluations comparing the improved cultivars ATL 1 and CLMV 1 against the locally grown, non-descript traditional variety, ATL 1 demonstrated superior performance across all assessed parameters. Therefore, ATL 1 is recommended for cultivation in the rainfed conditions of the Krishnagiri district.

### OFT-3: Assessment of Early Blight disease management technologies in Tomato

1. **Thematic area** : Integrated Pest Management
2. **Title** : Assessment of Early Blight disease management technologies in Tomato
3. **Scientists involved** : Senior Scientist & Head
4. **Details of farming situation** :

Tomato is the most widely cultivated crop in India. Tomato is a very important vegetable crop regarding both income and nutrition. Tomatoes are predominantly summer crops, but it can be cultivated throughout the year. In its fruit contain vitamins like 'A' and 'C' and antioxidant in abundance quantity. Due to the unique properties contained in its fruit, tomato demand remains almost the same throughout the year. The tomato is warm season crop. The temperature of 20-25 °C is considered to be ideal for tomato cultivation, and the excellent quality red color is developed in tomatoes at 21-24 °C temperature. Due to intense heat (temperature above 43 °C), the plants get burnt, and flowers and small fruits also fall, whereas less than 13°C and greater than 35 °C decreases the fruits & the red color production ratio.

### 5. Problem definition / description :

Early blight (EB) is one of the dreadful diseases of tomato caused by several species of *Alternaria* including *Alternaria linariae* (which includes *A. solani* and *A. tomatophila*), as well as *A. alternata*. In some instances, annual economic yield losses due to EB have been estimated at 79%. Early blight (*Alternaria solani*) is one of foliar diseases of tomato is the most destructive and widespread in temperate, tropical and subtropical regions of the world, which causes reduction in tomato yield [6]. *Alternaria solani* can infect each part of the plant like leaf, fruit and stem and can damage during all stages of plant development. It causing foliage blight, fruit lesions and stem collar rot.

### 6. Technology Assessed :

Technology Option 1	Spray azoxystrobin 18.2% + difenconazole 11.4% SC @ 1 ml per l of water as soon as the disease is observed and the second spray at an interval of 15 days reduces the disease incidence ( <i>UAHS Bangalore, 2022</i> )
Technology Option 2	Spray Hexaconazole 5% SC @ 1ml/one litre of water at 30 and 50 days after planting ( <i>TNAU, 2020</i> )
Farmers practice	More Spraying of combination of fungicides during flowering to harvest

### 7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Hexaconazole	100 ml	60	500 ml	300
Azoxystrobin+Difenacozole	100 ml	525	500 ml	2625

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

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Percent Disease Index
Farmers Practice	5	564	295740	2.90	39.8
Technology 1 <b>Spray azoxystrobin 18.2% + difenconazole 11.4% SC @ 1 ml per l of water as soon as the disease is observed and the second spray at an interval of 15 days reduces the disease incidence</b>		680	400420	3.79	12.8
Technology 2 <b>Spray Hexaconazole 5% SC @ 1ml/one litre of water at 30 and 50 days after planting</b>		662	376580	3.46	33

**9. Constraints : Nil**

**10. Feedback of the farmers involved :**

Spraying of azoxystrobin 18.2% + difenconazole 11.4% SC @ 1 ml per l of water as soon as the disease is observed and the second spray at an interval of 15 days reduces the disease incidence effectively control the disease.

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

Suitable biocontrol agents may be developed for the management of the disease.

**OFT-4: Assessment on high yielding Horsegram varieties (ATPHG 11 and Paiyur 2)**

- 1. Thematic area :** Varietal Evaluation
- 2. Title :** Assessment on high yielding Horsegram varieties (ATPHG 11 and Paiyur 2)
- 3. Scientists involved :** SMS (Agronomy)
- 4. Details of farming situation :**

Horsegram (*Macrotyloma uniflorum* L. Verdc.) is predominant legume crop cultivated in Krishnagiri district in an area about 45,000 ha. Horsegram requires short-day conditions (longer nights) to initiate flowering and pod development. So, it is cultivated during Rabi season. The soil condition was Sandy loam in nature. The soil nutrient status in that locations is low in nitrogen, medium in phosphorus and low in potassium. The micronutrient status is also poor in general especially zinc, iron, copper boron nutrients.

**5. Problem definition / description :**

Most of the farmers, practicing Paiyur 2 and non-descriptive Horsegram variety in Krishnagiri District. Since Paiyur 2 variety released on 1998 it was outdated, pod yield was drastically reduced, also susceptible to powdery mildew and mosaic virus disease.

**6. Technology Assessed :**

Technology Option 1	Cultivation of Horsegram – ATPHG 11 (ANGRAU, 2021)
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Technology Option 2	Cultivation of Horsegram – Paiyur 2 (TNAU, 1998)
Farmers practice	Non-descriptive type

**7. Critical inputs given :**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
ATPHG 11	2 kgs	130	10 kgs	650
Paiyur 2	5 kgs	350	25 kgs	1750
Field board	1 no	200	5 nos	1000

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

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Average Number of filled Pods per Plant
Farmers Practice	5	3.91	8833.04	1.36	8.2
Technology 1 Cultivation of Horsegram – ATPHG 11		5.23	18097.15	1.69	28.6
Technology 2 Cultivation of Horsegram – Paiyur 2		4.38	9649.94	1.35	12.40

**Description of the results:** The yield achieved from ATPHG 11 was found to be higher (5.23 qtl/ha) than Paiyur 2 (4.38 qtl/ha) and the farmers check non-descriptive type variety (3.91 qtl/ha) in On Farm Trial result. The average number of pods per plant was found to be higher in ATPHG 11(28.6), Paiyur 2 (12.40), and farmers check non-descriptive type (8.2). Farmers obtained an average net return of (Rs. 18097.5/-) per hectare in ATPHG 11 whereas it was (Rs. 9649.5/-) in Paiyur 2 and (Rs. 8833.04/-) in the farmers check non-descriptive type variety. The B:C ratio was higher in ATPHG 11 (1.69) than in Nandyal Gram 49 (1.34) and in the farmers' check non-descriptive type (1.36).

**9. Constraints : Nil**

**10. Feedback of the farmers involved :**

Farmers reported that the ATPHG 11 performs well, has a high yield potential, and fetches a good market price due to its uniform seed size and quality.

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

ATPHG 11 performed well than Paiyur 2 farmers check non-descriptive type. From these evaluations, by comparing all the parameters, ATPHG 11 has a better cultivar and suits to cultivate in Krishnagiri tract during Rabi season.

**OFT-5: Assessment on Groundnut varieties (TCGS 1694 and VRI 10) for higher productivity in Krishnagiri district**

1. **Thematic area** : Varietal Evaluation
2. **Title** : Assessment on Groundnut varieties (TCGS 1694 and VRI 10) for higher productivity in Krishnagiri district
3. **Scientists involved** : SMS (Agronomy), SMS (Agrl. Extension)
4. **Details of farming situation** :

Groundnut is cultivated around 13,500 ha in Krishnagiri district. Due to its short duration nature, it is cultivated both in Kharif and Rabi season in this area. The soil type was red sandy loam, suits for groundnut cultivation. The soil nutrient status in that locations is low in nitrogen, medium in phosphorus and medium in potassium. The micronutrient status is also poor in general especially zinc and boron deficiencies are widely seen.

5. **Problem definition / description** :

Most of the farmers repeatedly cultivating old cultivar var. VRI 6 which was susceptible to Early and Late Tikka leaf spots along with rust incidence diseases directly affects the pod yield. This OFT was conducted and assessed to check the performance of suitable high yielding groundnut variety for Krishnagiri district.

6. **Technology Assessed** :

Technology Option 1	Cultivation of Groundnut – TCGS 1694 (ANGRAU, 2022)
Technology Option 2	Cultivation of Groundnut – VRI 10 (TNAU, 2022)
Farmers practice	Local variety VRI 6

7. **Critical inputs given** :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
TCGS 1694 Seeds	30 kgs	3600	90 kgs	10800
VRI 10 Seeds	30 kgs	1370	90 kgs	9000
Field board	1 no	200	3 nos	600

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

Technology Option	No. of trials	Pod Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Average Number of filled Pods per Plant
Farmers Practice	3	17.87	36017	1.58	19.40
Technology 1 <b>Cultivation of Groundnut – TCGS 1694</b>		24.43	95850	2.52	36.20
Technology 2 <b>Cultivation of Groundnut – VRI 10</b>		21.85	72690	2.24	28.50

**Description of the results:** From this On Farm Trial test, the pod yield achieved from TCGS 1694 was found to be higher (24.43 qtl/ha) than VRI 10 (21.90 qtl/ha) and the farmers practice VRI 6 ariety (17.90 qtl/ha) in On Farm Trial result. The average number of filled pods per plant was found to be higher in

TCGS 1694 (36.20), VRI 10 (28.50), and farmers VRI 6 (19.40). Farmers obtained an average net return of (Rs. 95,850/-) per hectare in TCGS 1694 whereas it was (Rs. 72,690/-) in VRI 10 and (Rs. 36,016.67/-) in the farmers check CO4 variety. The B:C ratio was higher in TCGS 1694 (2.52) than in VRI 10 (2.24) and in the farmers' check VRI 6 variety (1.58).

**9. Constraints :** Nil

**10. Feedback of the farmers involved :**

Farmers reported that the TCGS 1694 performs well, recorded higher yield, and fetches a good market price due to its uniform pod size, shape, and kernel quality influenced good market value.

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

Both cultivars, TCGS 1694 and VRI 10, performed well than farmers check old variety VRI 6. From these evaluations, by comparing all these parameters, TCGS 1694 has found to be a better variety. So, it suits to cultivate in Krishnagiri district during rabi season.

**OFT-6: Assessment on suitable MYMV resistant Blackgram varieties (VBN 11 and LBG 884) for higher productivity in Krishnagiri district**

**1. Thematic area :** Varietal Evaluation  
**2. Title :** Assessment on suitable MYMV resistant Blackgram varieties (VBN 11 and LBG 884) for higher productivity in Krishnagiri district

**3. Scientists involved :** SMS (Agronomy), SMS (Agrl. Extension)

**4. Details of farming situation :**

Blackgram (*Vigna mungo L. Hepper*) is most important legume crop cultivated around 500 ha in Krishnagiri district during rabi season. The soil type was clay loam type which is an ideal soil type for blackgram cultivation. The soil nutrient status in that locations is low in nitrogen, medium in phosphorus and medium in potassium. In this region, the irrigation source was open well and canal irrigation.

**5. Problem definition / description :**

Most of the farmers repeatedly cultivating VBN 6 which was susceptible to Mung Bean Yellow Mosaic Virus (MYMV) causes yield losses ranging from 30% to 100%, depending on the severity of the incidence and the stage of crop.

Early infection during the vegetative stage can be particularly devastating, potentially leading to complete crop failure. This OFT was conducted and assessed to check the performance of suitable MYMV resistant Blackgram variety for Krishnagiri district.

**6. Technology Assessed :**

Technology Option 1	Cultivation of Blackgram – VBN 11 (TNAU, 2020)
Technology Option 2	Cultivation of Blackgram – LBG 884 (ANGRAU, 2022)
Farmers practice	VBN 6

**7. Critical inputs given :**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
VBN 11 Seeds	3 kgs	300	9 kgs	900

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
LBG 884 Seeds	3.33 kgs	399.6	10 kgs	1200
Field board	1 no	200	3 nos	600

### 8. Results : Performance of the technology

Technology Option	No. of trials	Pod Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Average Number of filled Pods per Plant
Farmers Practice	3	5.01	8767	1.21	21.00
Technology 1 Cultivation of Blackgram – VBN 11		6.82	28766.67	1.73	32.20
Technology 2 Cultivation of Blackgram – LBG 884		6.12	21700	1.55	28.40

**Description of the results:** From the On Farm Trial study, the yield obtained from VBN 11 was found to be higher (6.82 qtl/ha) than LBG 884 (6.12 qtl/ha) and the farmers practice VBN 6 variety (5.01 qtl/ha). The average number of filled pods per plant was found to be higher in VBN 11 (32.20), LBG 884 (28.40), and farmers VBN 6 (21.00). Higher net returns obtained from VBN 11 is (Rs. 28166.67/ha), whereas it was (Rs. 21,700/ha) in LBG 884 and the lowest net return was (Rs. 8766.66/ha) in the farmers check VBN 6 variety. The B:C ratio was higher in VBN 11 (1.73) than in LBG 774 (1.55) and in the farmers' check VBN 6 variety (1.21).

### 9. Constraints : Nil

### 10. Feedback of the farmers involved :

Farmers noted that the VBN 11 performs well, has a high potential yield, matures in 70-75 days, is moderately resistant to MYMV disease, and commands a good market price due to its uniform seed size, shape, and quality.

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

Both cultivars, VBN 11 and LBG 884, performed well than farmers check old variety VBN 6. From these evaluations, by comparing yield parameter, VBN 11 was revealed to be a superior and good variety. So, it is suitable for cultivation in the Krishnagiri district.

### OFT-7: Assessment of suitable Blast resistant paddy varieties (ADT 54 and RNR 15048) for higher productivity in Krishnagiri

1. **Thematic area** : Varietal Evaluation
2. **Title** : Assessment of suitable Blast resistant paddy varieties (ADT 54 and RNR 15048) for higher productivity in Krishnagiri
3. **Scientists involved** : SMS (Agronomy), SMS (Agrl. Extension)
4. **Details of farming situation** :

Paddy (*Oryza sativa*) is the second most important cereal crops and serves as the primary source of staple food, widely cultivated around 25,000 ha in Krishnagiri district. Paddy is cultivated all the season throughout the year. The soil type was clay loam in nature. Based on the soil nutrient status in that

locations shows low in nitrogen, medium in phosphorus and low in potassium. The irrigation facility was mainly depends on canal irrigation and open well.

#### 5. Problem definition / description :

Majority of the farmers were cultivating private variety like Aman which is susceptible to leaf and nodal blast in navarai season. This OFT was conducted and assessed to check the performance of suitable blast resistant paddy variety.

#### 6. Technology Assessed :

Technology Option 1	Cultivation of Paddy – ADT 54 ( <i>TNAU, 2020</i> )
Technology Option 2	Cultivation of Paddy – RNR 15048 (Telangana Sona) ( <i>PJTSAU, 2021</i> )
Farmers practice	Amman

#### 7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Cultivation of ADT 54	8 kgs	296	40 kgs	900
Cultivation of RNR 15048	6 kgs	234	30 kgs	1200
Field Board	1 no	200	5 nos	1000

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

Technology Option	No. of trials	Grain Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	No. of productive tillers / plant
Farmers Practice	5	48.89	45836	1.55	32.22
Technology 1 Cultivation of Paddy – ADT 54		56.58	66326	1.79	38.50
Technology 2 Cultivation of Paddy – RNR 15048 (Telangana Sona)		59.13	77119	1.96	44.60

**Description of the results:** The performance of these varieties regarding on grain yield was achieved higher in RNR 15048 variety (59.13 qtl/ha) than ADT 54 (56.58 qtl/ha) and the farmers practice Aman (48.89 qtl/ha) recorded lowest grain yield in this trial. The average number of productive tillers per plant was found to be higher in RNR 15048 (44.60), followed by ADT 54 (38.50), and farmers check Aman variety (32.22). Farmers obtained an highest average net return of (Rs. 77,119/ha) in RNR 15048, whereas it was (Rs. 66,326/ha) in ADT 54 and (Rs. 45,836/ha) in the farmers check Aman variety. The B:C ratio was high in RNR 15048 (1.96), ADT 54 (1.79) and low in Aman variety (1.55).

#### 9. Constraints : Nil

#### 10. Feedback of the farmers involved :

Farmers are highly satisfied with the RNR 15048 paddy variety ("Telangana Sona") due to its strong performance, high yields, and excellent market value. Its desirable traits, including non-shattering grains, superior cooking quality resulting in fluffy, soft, and non-sticky rice, and its medium slender

grain type, make it particularly suitable for popular dishes like Pulav and Biryani, further driving its demand and profitability.

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

Evaluations of paddy cultivars "RNR 15048" and "ADT 54" showed both outperformed the farmers check "Aman" variety. Among the two, RNR 15048 was deemed superior across all assessed growth and yield parameters and is highly preferred by farmers.

#### OFT-8: Assessment of Jasmine species for yield and market preference

1. **Thematic area** : Varietal Evaluation
2. **Title** : Assessment of Jasmine species for yield and market preference
3. **Scientists involved** : SMS (Horticulture), SMS (Soil Science)
4. **Details of farming situation** :

Jasmine is grown in an area of about 2500 ha in Krishnagiri district. The area under jasmine is increasing every year due to various reasons. Due to the proximity of metropolitan city of Bangalore the demand is more and marketing is easy for the farmers compared to other crops. Since jasmine is perennial and flowering is available in most part of the year the liquidity of finance is more for the farmers.

The income from paddy is dwindling over the years and farmers are converting wet lands into garden lands with jasmine cultivation. In the village of Maharajakadai cluster jasmine is grown in an area of 250 ha. mostly *Jasminum sambac* is cultivated. The soil is moderate in nutrition. Low in Nitrogen, Phosphorus and moderate in Potash. PH is around 7.5 and organic carbon is 0.54%. Production is under irrigated condition and source of irrigation is tubewell.

#### 5. Problem definition / description :

*Jasminum sambac* is mostly cultivated in this area apart from kakada (*Jasminum multiflorum*). The problem with *Jasminum sambac* is that the flowering is very low and the size of flower buds is also very small during the winter season during November, December. Unfortunately, the price of the jasmine is high during this season because of marriages and religious function during this period. Also, this type of jasmine attracts many pest and diseases thereby increase the cost of cultivation. Hence the cultivars *Jasminum multiflorum* (Winter jasmine/or pink kakada) and *Jasminum nitidum* (Star jasmine) were assessed for the flowering during the winter season and consumer performance and to assess the economics of the cultivation

#### 6. Technology Assessed :

Technology Option 1	Winter Jasmine – CO 1 (TNAU, 2023)
Technology Option 2	Star Jasmine – CO 1 ( <i>Jasminum nitidum</i> ) (TNAU, 2020)
Farmers practice	<i>Jasminum sambac</i>

#### 7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Winter Jasmine CO1 Plants	100 nos	3000	300 nos	9000
Star Jasmine CO1 Plants	100 nos	2000	300 nos	6000

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Field Board	1 nos	200	3 nos	600

### 8. Results : Performance of the technology

Technology Option	No. of trials	Flower Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Indicators		
					Flower bud Length (cm)	Hundred Flower Weight (g)	% Pest Incidence
Farmers Practice	3	30.67	131728	1.77	1.99	17.15	27.33
Technology 1 Winter Jasmine – CO 1		12.67	90798	2.16	3.03	12.63	11.13
Technology 2 Star Jasmine – CO 1		14.5	100404	2.23	4.00	15.76	1.07

**Data on performance indicators:** The OFT results showed that the yield obtained in Star Jasmine was found to be lower (1.45 t/ha) than the yield of the local check (J. sambac-3.067 t/ha). This was found to be 59% less than the farmer's practice. The yield obtained in Winter Jasmine (1.268 t/ha) was found to be 53 % less than the yield of the local check J. sambac. The farmers received a net return of Rs 1,00,404, per hectare in Star Jasmine while it was Rs 1,31,728 in check. The net profit in Winter Jasmine was Rs.90,798. However, the cost of cultivation of J. sambac was very high (Rs. 1,02,600). and the price obtained was also less Hence, The B:C ratio obtained was more in Star Jasmine (2.23) compared to local check i.e., J. sambac (1.78).

### 9. Constraints :

The initial growth of Star Jasmine was more than that of the Winter Jasmine and hence the yield during the first year was high. Hence the assessment needs to be continued for one more year to get more precise results.

### 10. Feedback of the farmers involved :

*Jasminum sambac* gave higher yield than the Star Jasmine and Winter Jasmine. The harvesting window of Star jasmine is more than that of the Winter Jasmine and hence the net profit was high in Star Jasmine. The consumer preference of *Jasminum multiflorum* is better compared to *Jasminum nitidum* as the aroma is very less in *J. nitidum*.

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

The cost of cultivation of *J. sambac* was very high (Rs. 1,02,600). and the price obtained was also less Hence, The B:C ratio obtained was more in Star Jasmine (2.23) compared to local check i.e., *J. sambac* (1.78) and Winter Jasmine (2.16).

### OFT-9: Assessment of Banana Cultivars for higher yield

1. **Thematic area** : Varietal Evaluation
2. **Title** : Assessment of Banana Cultivars for higher yield
3. **Scientists involved** : SMS (Horticulture), SMS (Soil Science)

#### 4. Details of farming situation :

Banana is one of the important crops cultivated in Krishnagiri district with an area of 3500 ha. In this district Banana is cultivated in all blocks under irrigated condition. Borewell is the source of Irrigation. The cultivar Karpooravalli is grown in an area of about 1000 ha. Area under this cultivar is second next to Elakki. This cultivar is golden yellow with pale green tinge and sweetest among all banana cultivars. The advantage of this cultivar is being suitable for ratoon for leaf production. Since the leaves are bigger in size. This variety is suitable for soil with higher clayey nature. It is grown in red loamy soil under garden lands condition.

The OFT was conducted in Periyakottapalli village cluster of Krishnagiri block during 2023-24 block where the soils are with marginal fertility low in nitrogen, phosphorus and medium in potash. The average PH is 7.2, clayey loam with the organic carbon content of 0.52%.

#### 5. Problem definition / description :

The yield of Karpooravalli cultivars grown in Krishnagiri District is less due to various disease such as bacteria blight, sigatoka leaf spot and pseudostem weevil.

Karpooravalli is susceptible to bacterial wilt caused by *Xanthomonas vasicola* pv *musacearum* leading to yellowing, wilting and eventual death of banana, with potential for complete crop loss. The bacterial spreads through insects, and uncleaned tools and through infected planting material. The economic loss is even up to 100%. While no banana genome is with bacterial wilt resistance, the improved cultivars show some tolerance.

Karpooravalli with the triploid genome of ABB, have a robust growth. So, it is not suitable for area with high wind velocity. While there is bunch during the windy months of July, August cultivars with short nature are sought. Hence cultivars Kaveri kalki, released from ICAR - NRCB and CO-3 from TNAU were selected for assessment.

#### 6. Technology Assessed :

Technology Option 1	Cultivation of Banana – Banana Cultivar – CO 3 ( <i>TNAU, 2022</i> )
Technology Option 2	Cultivation of Banana – Banana Cultivar – Kavery Kalki ( <i>ICAR – NRCB Trichy, 2019</i> )
Farmers practice	Karpooravalli

#### 7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Banana Suckers CO3	66 nos	666	200 nos	2000
Banana Suckers Kaveri Kalki	150 nos	3000	450 nos	9000
Field Board	1 nos	200	3 nos	600

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

Technology Option	No. of trials	Fruit Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Bacterial wilt	Sigatoka Leaf Spot
Farmers Practice	3	334.55	407803	2.63	1.639	2.064

Technology Option	No. of trials	Fruit Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Bacterial wilt	Sigatoka Leaf Spot
Technology 1 <b>Banana Cultivar – CO 3</b>		374.1	505784	2.98	0.9258	1.764
Technology 2 <b>Banana Cultivar – Kavery Kalki</b>		399.27	563937	3.28	0.6867	1.653

**Data on performance indicators:** The OFT results showed that the yield obtained in Kavery Kalki was found to be higher (39.93 t/ha) than the yield of the local check (Karpooravalli-33.46 t/ha). This was found to be 19 % more than the farmer's practice the yield obtained in CO3(37.41 t/ha) was found to be 11 % higher than the yield of the local check. The percentage of plants affected by Bacterial wilt in Kavery Kalki was low (0.6867%) compared to CO3 (0.92586) and Check (1.639) The farmers received a net return of Rs 5,63,937 per hectare in Kavery Kalki while it was Rs 4,07,803 in check. The net profit in CO3 was Rs. 5,05,784 The B:C ratio obtained was more in Kavery Kalki (2.13) compared to local check (1.78)

**9. Constraints : Nil**

**10. Feedback of the farmers involved :**

Kavery Kalki gave higher yield than the cultivar CO3 and Karpooravalli since the major diseases of leaf spot, and wilt was less.

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

Kavery Kalki gave 19 % higher yield than the check (Karpooravalli). The major diseases of leaf spot, and wilt was less than in check. BC ratio was 3.28 compared to 2.63 in farmer's practice. BC ratio in CO3 cultivar was 2.98.

#### **OFT-10: Assessment of Suitability of Cover crop in Mango Orchards of Krishnagiri District**

- 1. Thematic area : Crop Management**
- 2. Title : Assessment of Suitability of Cover crop in Mango Orchards of Krishnagiri District**
- 3. Scientists involved : SMS (Horticulture), Senior Scientist and Head**
- 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 percent of total production is used for processing into mango pulp. Bangalora and Alphonso are the major varieties used for the production of pulp. Above Seventy percentage 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 200 C to 400 C during April to May and the lowest temperature 150 C to 280 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.

## 6. Technology Assessed :

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

## 7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Mucuna Seeds	10 kgs	1200	50 kgs	6000
Horse Gram Seeds	10 kgs	700	50 kgs	3500
Field board	1 nos	200	5 nos	1000

## 8. Results : Performance of the technology

Technology Option	No. of trials	Fruit Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Indicators	
					Land Equivalent Ratio LER	Soil Organic Carbon Content
Farmers Practice	5	131.57	60982	2.08	1.0	0.506
Technology 1 Cover cropping with Mucuna Arka Subhra sown in May		141.63	79078	2.67	1.37	0.524
Technology 2 Cover Cropping with Horse gram, Paiyur 2 sown in October		135.77	66180	2.35	1.29	0.51

**Description of the Results:** The OFT results showed that the yield obtained in Cover cropping with Mucuna was found to give higher (14.16 t/ha) than the yield of the local check (No cover crop 13.15 t/ha). This was found to be 11% more than the farmer's practice. The yield obtained in Horsegram (13.56 t/ha) was found to be 9 % more than the yield of the local check The farmers received a net return of Rs 79,078, per hectare in Cover cropping with Mucuna while it was Rs 60,982 in check. The net profit in Horsegram was Rs.66180, The B:C ratio obtained was more in Cover cropping with Mucuna (2.67) compared to local check (2.08).

**9. Constraints :**

Farmers are hesitant to grow Mucuna fearing the reptiles like snakes.

**10. Feedback of the farmers involved :**

The growth of the Mucuna was high that it grew over the smaller trees.

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

Mucuna varieties with less hairy and increased palatability as fodder would be more advantageous.

**OFT-11: Assessment of TNAU Rice Reap for higher yield in Paddy**

- 1. Thematic area :** Crop Production and Management
- 2. Title :** Assessment of TNAU Rice Reap for higher yield in Paddy
- 3. Scientists involved :** SMS (Soil Science)
- 4. Details of farming situation :**

In Krishnagiri district, paddy is cultivated in approximately 24,800 hectares with a production of 1.32 lakh metric tonnes. The farming situation is irrigated. The soils are slightly alkaline with a pH of 7.69, non-saline and low in organic carbon. The soil texture is mostly sandy loam and the nutrient status is low in nitrogen, medium in phosphorus and low potassium.

**5. Problem definition / description :**

Nutrient management in paddy cultivation is crucial for achieving optimal growth, development, and yield. While soil-applied fertilizers form the primary source of nutrition, their efficiency is often limited due to factors like nutrient leaching, volatilization, and fixation in the soil. Foliar nutrition is an effective complementary approach that ensures direct nutrient uptake through leaves, enhancing plant metabolism and yield potential. TNAU Rice Reap, a foliar nutrient formulation, developed by Tamil Nadu Agricultural University to address nutrient deficiencies, improve photosynthesis, and increase grain filling in paddy crops. The performance of TNAU Rice Reap in enhancing the yield and nutrient use efficiency, was assessed in comparison with the foliar application of Potassium nitrate (PAU, Ludhiana).

**6. Technology Assessed :**

Technology Option 1	TNAU Rice Reap (TNAU, 2022) Foliar spray of TNAU Rice Reap @ 6 kg/acre at Booting stage (3 kg) and 10 days after first spray (3 kg) with RDF: 150:50:50 kg NPK/ha
Technology Option 2	Foliar application of Potassium nitrate (PAU Ludhiana, 2022) Foliar spray of Potassium Nitrate @ 1.5% at Booting stage with RDF: 150:50:50 kg NPK/ha
Farmers practice	No foliar spraying of nutrients

**7. Critical inputs given :**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
TNAU Rice Reap	3 kgs	351.00	15 kgs	1755.00
Potassium nitrate	2 kgs	352.80	10 kgs	1764.00
Soil testing	1 no	50.00	5 nos	250.00
Field board	1 no	200.00	5 nos	1000.00

**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	47.15	46330	1.59	28.90
Technology 1 <b>TNAU Rice Reap</b>		58.9	69318	1.80	38.50
Technology 2 <b>Foliar application of Potassium nitrate</b>		56.23	63736	1.75	35.60

**9. Constraints : Nil****10. Feedback of the farmers involved :**

Farmers observed improved crop vigour, better panicle development and increased grain yield with the foliar application of TNAU Rice Reap. Foliar nutrition resulted in better nutrient uptake and uniform crop growth. They appreciated its ease of application and cost-effectiveness in enhancing paddy productivity.

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

The foliar application of TNAU Rice Reap significantly improved nutrient uptake, crop vigor, and yield in paddy. Farmers appreciated its ease of use and cost-effectiveness.

**OFT-12: Assessment on Performance of Zinc solubilizing bacterial cultures in Paddy**

- 1. Thematic area** : Crop Production and Management
- 2. Title** : Assessment on Performance of Zinc solubilizing bacterial cultures in Paddy
- 3. Scientists involved** : SMS (Soil Science)
- 4. Details of farming situation** :

In Krishnagiri district, paddy is cultivated in approximately 24,800 hectares with a production of 1.32 lakh metric tonnes. The farming situation is irrigated. The soils are slightly alkaline with a pH of 7.69, non-saline and low in organic carbon. The soil texture is mostly sandy loam and the nutrient status is low in nitrogen, medium in phosphorus and low potassium.

**5. Problem definition / description :**

Zinc deficiency is a major micronutrient constraint in paddy cultivation, affecting plant growth, grain yield, and quality. Traditional zinc fertilization methods often suffer from low efficiency due to Zn fixation in the soil, necessitating alternative approaches for better Zn availability. Zinc-solubilizing bacterial (ZSB) cultures have emerged as a promising solution, enhancing Zn bioavailability through microbial activity. In this On Farm Trial the performance of TNAU and IIHR zinc-solubilizing bacterial cultures in improving Zn uptake, plant growth, and grain yield in paddy under field conditions are assessed.

**6. Technology Assessed :**

Technology Option 1	TNAU Zinc Solubilizing Bacterial culture ( <i>Pseudomonas chloropisis</i> ) (TNAU, 2019)
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	Zinc Solubilizing Bacteria ( <i>Pseudomonas chloropisis</i> ) - Soil Application - 2 lit / ha + Zinc Sulphate @ 25 kg /ha with RDF: 150:50:50 kg NPK/ha
Technology Option 2	IIHR Zinc Solubilizing Bacterial culture ( <i>Bacillus aryabhatal</i> ) (IIHR, 2018) Zinc Solubilizing Bacteria ( <i>Bacillus aryabhatal</i> ) - Soil Application - 2 lit / ha + Zinc Sulphate @ 25 kg /ha with RDF: 150:50:50 kg NPK/ha
Farmers practice	No zinc solubilizing cultures used

**7. Critical inputs given :**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
TNAU ZSB liquid	1 liter	350.00	5 liters	1750.00
IIHR ZSB liquid	1 liter	313.00	5 liters	1,565.00
Soil testing	1 no	50.00	5 nos	250.00
Field board	1 no	200.00	5 nos	1000.00

**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	49.85	53158	1.67	29.40
Technology 1 TNAU Zinc Solubilizing Bacterial culture ( <i>Pseudomonas chloropisis</i> )		60.95	75485	1.88	36.80
Technology 2 IIHR Zinc Solubilizing Bacterial culture ( <i>Bacillus aryabhatal</i> )		60.10	73755	1.86	35.30

**9. Constraints : Nil**

**10. Feedback of the farmers involved :**

Farmers noted improved plant health, enhanced tillering, and better grain filling with the use of TNAU and IIHR zinc-solubilizing bacterial cultures. Compared to conventional Zn fertilizers, the microbial inoculants showed better crop response and sustained soil fertility. They expressed interest in adopting this eco-friendly approach for long-term zinc management.

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

The use of TNAU and IIHR zinc-solubilizing bacterial cultures improved tillering, panicle formation, and grain filling, offering a sustainable alternative to chemical Zn fertilizers. Farmers found it beneficial for long-term soil health.

**OFT-13: Assessment on Performance of Foliar nutrition to enhance the yield in Horsegram**

1. **Thematic area** : Crop Production and Management
2. **Title** : Assessment on Performance of Foliar nutrition to enhance the yield in Horsegram

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

**4. Details of farming situation** :

Horsegram cultivation in Krishnagiri district contributes significantly to the state's horsegram production, with approximately 30,358 hectares under cultivation, accounting for 34.21% of the district's cropped area. Soil in Krishnagiri district is quite loose with colours ranging from red to dark brown with a pH of slightly alkaline in nature. The soil is non-saline and low in organic carbon status. The farming situation is rainfed for the horsegram cultivation. The soil exhibits low in Nitrogen, medium in phosphorus and medium to high in potassium content.

**5. Problem definition / description** :

Horsegram is an important pulse crop grown in rainfed condition in Krishnagiri district, often facing nutrient deficiencies that limit its growth, flowering, and pod formation. Micronutrients like zinc and magnesium play a crucial role in enhancing enzyme activity, chlorophyll synthesis, and seed development which directly influencing the yield. However, due to poor soil fertility and limited external nutrient inputs, nutrient uptake is often inadequate, leading to lower productivity. Foliar nutrition is an effective strategy to overcome soil-related constraints by ensuring direct and rapid nutrient absorption through leaves. On Farm Trial is conducted to assess the effectiveness of TNAU Horsegram Wonder in comparison with foliar application of zinc sulphate and magnesium chloride in improving plant growth, flowering, and seed yield in horsegram. This OFT contribute to the better nutrient management strategies, ensuring higher yields and profitability, particularly for farmers cultivating horsegram under nutrient-deficient or rainfed conditions.

**6. Technology Assessed** :

Technology Option 1	TNAU Horsegram Wonder ( <i>TNAU, 2022</i> ) TNAU Horsegram Wonder – Foliar spraying @ 2 kg/acre at Flowering stage
Technology Option 2	Foliar spraying of Zinc Sulphate and Magnesium chloride ( <i>CPG, 2020</i> ) Foliar spraying of ZnSO <sub>4</sub> @ 0.5 % at 50 % flowering stage and Spraying of Magnesium chloride against any chlorotic symptom @ 0.6 % for 2 - 3 times at 5 days interval
Farmers practice	No zinc solubilizing cultures used

**7. Critical inputs given** :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
TNAU Horsegram wonder	1.2 kgs	270.00	6 kgs	1350.00
Zinc sulphate	1.0 kg	75.00	5 kgs	375.00
Magnesium chloride	2.0 kgs	100.00	10 kgs	500.00
Field board	1 no	200.00	5 nos	1000.00

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

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Average No. of Pods/plant
Farmers Practice	5	4.56	6688	1.21	26.8

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Average No. of Pods/plant
Technology 1 <b>TNAU Horsegram Wonder</b>		5.77	16380	1.50	34.6
Technology 2 <b>Foliar spraying of Zinc Sulphate and Magnesium chloride</b>		5.46	13543	1.41	30.4

9. Constraints : Nil

**10. Feedback of the farmers involved :**

Farmers observed better crop growth, early flowering, and improved pod setting with foliar application of TNAU Horsegram Wonder compared to zinc sulphate and magnesium chloride sprays. The yield increase was notable even under rainfed conditions, making it a viable option for resource-poor farmers. They were willing to adopt foliar nutrition for better productivity.

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

The foliar application of TNAU Horsegram Wonder effectively improved flowering, pod setting, and yield, even under rainfed conditions. Farmers appreciated its role in enhancing pulse productivity with minimal input costs. Further validation on nutrient interaction and application timing will optimize its efficacy for widespread adoption in pulse-growing regions.

**OFT-14: 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 ( <i>TNAU, 2022</i> ) Foliar spraying of TNAU Multi MN @ 1 % at Vegetative and Flowering stage
Technology Option 2	Foliar spraying of IIHR Vegetable special ( <i>IIHR, 2016</i> ) 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	–
IIHR Vegetable special	1 kg	220.00	5 kgs	1,100.00
Field board	1 no	200.00	5 nos	1,000.00

**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	591	314800	2.99	34.2
Technology 1 Foliar spraying of TNAU Multi Micronutrients		682	393560	3.59	39.6
Technology 2 Foliar spraying of IIHR Vegetable special		725	428360	3.82	42.5

**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-15: Assessment of Fruit Fly Trapping Technology in Mango growing areas in Krishnagiri District**

1. **Thematic area** : Integrated Pest Management
2. **Title** : Assessment of Fruit Fly Trapping Technology in Mango growing areas in Krishnagiri District
3. **Scientists involved** : SMS (Horticulture), Senior Scientist and Head

#### 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 percent of total production is used for processing into mango pulp. Bangalora and Alphonso are the major varieties used for the production of pulp. Above Seventy percentage 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 200 C to 400 C during April to May and the lowest temperature 150 C to 280 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 :

Among the various pests of Mango, Mango Fruit fly is the most serious and widespread pest in this district. *Bactrocera dorsalis*, previously known as *Dacus dorsalis* and is commonly referred to as the oriental fruit fly The *B. dorsalis* species has distinctive yellow and black markings on its thorax and abdomen, which may vary between flies. Two vertical yellow markings on the thorax and the dark T-shaped marking on the abdomen differentiate this species of fly from its close relatives. The wings are clear with a continuous costal band. The adult body is around 8.0 mm in length, with wings approximately 7.3 mm in length. The female adult has a tapered ovipositor for depositing eggs in host fruits, while in male adults this ovipositor is notably absent. Pupariation occurs in the soil under the host plant and is normally completed within 10–12 days, but can be delayed up to 90 days. Flies typically live from 1–3 months, but this can be extended to up to 12 months. Mated female *B. dorsalis* puncture the skin of mature fruit and deposit eggs in a few batches of 3-30 eggs underneath a fruit's skin via ovipositor, depending on the quality and ripeness of the fruit. Eggs usually hatch within a day. Females are capable of laying about 1,200 to 1,500 eggs during their lifetime under. Polyandry has been observed in *B. dorsalis*.

The larval stage of the life cycle is the most damaging to fruits because of larval feeding on the soft flesh of fruits. After ovipositing occurs by a female fly, the larvae develop under the skin of the fruit or soft tissues of the plant and begin to feed on the fruit or plant's flesh. Once feeding occurs, other microorganisms can invade the site of larval feeding and cause the fruit to decay faster. Although ripe fruits are believed to be preferred for ovipositing, unripe fruits have served as hosts for eggs as well.

Male *B. dorsalis* respond strongly to methyl eugenol, which is used to monitor and estimate populations, as well as to annihilate males as a form of pest control.

#### 6. Technology Assessed :

Technology Option 1	Mass trapping of fruit flies @ 25 traps/acre during March - June (Main season) and August - November (Off Season) (TNAU, 2019)
Technology Option 2	Male annihilation technology (IIHR, 2016)
Farmers practice	Spraying pesticide. Spraying of insecticide (malathion 50EC 2 ml/l or dimethoate 30 EC 1 ml/l or carbaryl 50 WP 4 g/l) two rounds at 2 weeks interval before ripening of fruits

**7. Critical inputs given :**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Methyl Eugenol Trap	30 nos	2400	150 nos	12000
Field board	1 no	50	5 nos	1000
<b>Total</b>				<b>13000</b>

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

Technology Option	No. of trials	Fruit Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	% of damaged fruits
Farmers Practice	5	164.75	84933	2.59	15.6
Technology 1 <b>Mass trapping of fruit flies @ 25 traps/acre during March - June (Main season) and August - November (Off Season)</b>		183.95	100317	2.86	3.2
Technology 2 <b>Male annihilation technology</b>		172.33	92550	2.72	5.5

**Description of the Results:** The OFT results showed that the yield obtained in TO1 with traps throughout the season was found to give higher (18.39 t/ha) than the yield of the local check (16.47 t/ha). This was found to be 19% more than the farmer's practice. The yield obtained in Male Anhelation technology was (17.23 t/ha) was found to be 9 % more than the yield of the local check. The farmers received a net return of Rs 100317 per hectare in TO1 while it was Rs 84933 in check. The net profit in Horsegram was Rs.92549, the B:C obtained was more in TO1 (2.86) compared to local check (2.59).

**9. Constraints : Nil**

**10. Feedback of the farmers involved :**

The cost of plant protection chemicals was high and there is a risk of pest resurgence. Even after spraying chemicals the flies migrated to nearby orchards and came back after the poison effects ends. The pesticides free fruits fetched high cost of marketing.

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

Because of offseason mango production and due to the availability of host plants throughout the year, the flies are found throughout the year, so traps effective for longer period needs to be used.

**OFT-16: Assessment of IPM modules against Tomato pinworm**

1. **Thematic area** : Integrated Pest Management
2. **Title** : Assessment of IPM modules against Tomato pinworm
3. **Scientists involved** : Senior Scientist & Head
4. **Details of farming situation** :

Tomato is one of the important vegetables cultivated in an area of Nine thousand ha in Krishnagiri district. Mostly the farmers cultivating private F1 hybrids in drip cum fertigation method. The farmers

have harvested more than potential yields. Normally staking is done all the plants and the farmers are using mulching for weed control. Tomato seedlings planted on ridges and furrows.

#### 5. Problem definition / description :

The tomato pinworm, *Tuta absoluta* (Meyrick) (Lepidoptera: Gelechiidae) is one of the global major destructive invasive pests was found to be occurring in India in the year 2014. The pest has spread from South America to several parts of Europe, entire Africa and has now spread to India. In India, for the first time it was reported on tomato from the south Indian state, Karnataka. Plants are damaged by direct feeding on leaves, stems, buds, calyces, young fruit, or ripe fruit and by the invasion of secondary pathogens which enter through the wounds made by the pest. It can cause up to 90% loss of yield and fruit quality under greenhouses and field conditions.

#### 6. Technology Assessed :

Technology Option 1	Collect and destroy the pinworm affected fruits and plant parts; Keep pheromone traps @ 5 nos./ac to attract and kill the adults; Trichogramma chilonis @ 20,000/ac/per release coincide with flowering stage; Spray with chorrantraniliprole 18.5% SC@60 ml or flubendamide 20% WG or Indoxcarb 14.5% SC@ 100ml or Neem formulation (Azadiractin 1% or 5%) @ 400-600 ml/ac; (TNAU, 2022)
Technology Option 2	Seed treatment with imidacloprid 48 % FS @ 7g/kg of seeds, seedling dip with imidacloprid 17.8 SC @ 0.5ml/l; Collection and destruction of infested leaves; Installation of sticky trap sat 30/ac, installation of sex pheromone traps 20/ac; Spraying of chlorantraniliprole 18.5 SC @ 0.3 ml/l, spinoteram 12 SC @1.25ml/l followed by flubendamide 480 SC @ 0.3ml/ liter of water; (UAHS Shivamogga, 2022)
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.)
Tuta lure	25	21.19	125	2648.75
A4 YST Trap	25	21.19	125	2648.75
A4YST Trap	30	21.19	150	8476.00

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

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Pinworm incidences (%)	
					Leaf	Fruit
Farmers Practice	5	607.50	329640	3.11	18	22.2
Technology 1		710.00	424820	3.97	6.60	6.6
Technology 2		680.50	390460	3.54	13	15

#### 9. Constraints : Nil

**10. Feedback of the farmers involved :**

Using of Pheromone traps and biocontrol agents followed by the chemicals effectively control the pests. Being the tomato cultivation is throughout the year, the pest severity more. To manage the pests easily available biocontrol agents is needed.

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

Efficient lure may be developed in low cost.

**OFT-17: Assessment of bio inoculants against Mango Anthracnose**

1. **Thematic area** : Integrated Disease management
2. **Title** : Assessment of bio inoculants against Mango Anthracnose
3. **Scientists involved** : Senior Scientist & Head
4. **Details of farming situation** :

The Mango (*Mangifera indica L.*; Family: Anacardiaceae) is a perennial woody plant native to south and southeast Asia, it is being cultivated in southern Asia for nearly six thousand years. In India it is grown for more than 400 years. Mango Cultivation is the leading fruit crop of India and considered to be the king of fruits. India occupies first place in mango production of the world and accounts for almost half of the global production and area. Mango occupies 22 per cent of the total area under fruits cultivation comprising of 1.2 million hectares, with a total production of 11 million tonnes. Uttar Pradesh ranks first in Mango production & productivity with share of 23.47% followed by Andhra Pradesh, Karnataka, Telangana, Bihar, Gujarat, Tamil Nadu, West Bengal, Maharashtra and Madhya Pradesh. Mango is grown under both tropical and sub-tropical climate from sea level to 1400 m altitude. Places with good rainfall and dry summer are ideal for mango cultivation. It thrives well under humid and dry conditions. High humidity and cloudy weather at the time of flowering are not favourable as it affects pollination and fruit set and encourage diseases. Ideal temperature for mango cultivation is between 24 to 27°C and higher temperature during fruit development and maturity gives better quality fruits.

**5. Problem definition / description :**

Mango anthracnose disease (MAD) is a destructive disease of mangoes, with estimated yield losses of up to 100% in unmanaged plantations. Several strains that constitute *Colletotrichum* complexes are implicated in MAD worldwide. All mangoes grown for commercial purposes are susceptible, and a resistant cultivar for all strains is not presently available on the market. The infection can widely spread before being detected since the disease is invincible until after a protracted latent period. The detection of multiple strains of the pathogen in Mexico, Brazil, and China has prompted a significant increase in research on the disease. Synthetic pesticide application is the primary management technique used to manage the disease. In recent years biocontrol agents plays a vital role in managing the disease in eco-friendly manner.

**6. Technology Assessed :**

Technology Option 1	Spraying of <i>Bacillus subtilis</i> Bbv57 @5ml / lit. after flowering for five times at 21 days interval ( <i>TNAU, 2020</i> )
Technology Option 2	Spraying of <i>Pseudomonas fluorescens</i> @ 5ml/lit after flowering for five times with 21 days interval ( <i>IIHR, 2020</i> )

Farmers practice	Spraying of combination of pesticides
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**7. Critical inputs given :**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
<i>Bacillus subtilis</i>	2.5 liters	448	12.5 liters	5601
<i>Pseudomonas fluorescens</i>	2.5 liters	403	12.5 liters	10080

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

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	PDI
Farmers Practice	5	79.25	69075	2.39	14.2
Technology 1 <b>Spraying of Bacillus subtilis Bbv57 @5ml / lit. after flowering for five times at 21 days interval</b>		97.00	102760	3.40	5.4
Technology 2 <b>Spraying of Pseudomonas fluorescens @ 5ml/lit after flowering for five times with 21 days interval</b>		90.60	87900	2.83	11

**9. Constraints : Nil**

**10. Feedback of the farmers involved :**

Biocontrol agents like *Bacillus subtilis* effectively control the disease. Mango is cultivated in larger area the labour cost is more for spraying.

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

The bio-formulations of these bio-control agents had the potential to replace chemical fungicides and also protect the natural environment, thus playing a significant role in integrated disease management.

**OFT-18: Assessment of Nano Methicone Spray for control of Ectoparasite infestation in Dairy Cattle**

- 1. Thematic area :** Livestock Disease Management
- 2. Title :** Assessment of Nano Methicone Spray for control of Ectoparasite infestation in Dairy Cattle
- 3. Scientists involved :** SMS (Animal Science)
- 4. Details of farming situation :** Semi Intensive System

On-farm trial was conducted in the Belavarthi Village of the Bargur block in Krishnagiri District. The majority of farmers in the region maintain crossbred dairy cattle and primarily rely on chemical acaricides to control external parasites. However, frequent use of these chemicals has led to the development of acaricide resistance. The trial aimed to evaluate the effectiveness of the Nano Methicone Spray, developed by the Translational Research Platform for Veterinary Biologicals (TRPVB) at TANUVAS, in comparison with the Megatex Spray, a technology developed by ICAR-CIRG.

**5. Problem definition / description :**

Ectoparasitic infestations, such as ticks, serve as reservoirs for infectious agents and transmit diseases like Lumpy Skin Disease (LSD) and Tick Fever to livestock. These infestations not only lead to a decline

in body condition and reduced productivity but also result in significant economic losses for dairy farmers. On average, approximately 10% of clinical cases in livestock are attributed to ticks and tick-borne diseases (TTBDs). Tick control primarily relies on the use of acaricides and chemicals; however, the frequent use of these treatments has led to the development of resistance in dairy cows. To address this issue, the new technology "Nano Methicone Spray" has been assessed for its effectiveness in managing tick infestations and mitigating acaricidal resistance in dairy cattle.

#### 6. Technology Assessed :

Technology Option 1	Nano Methicone Spray ( <i>TRPVB – TANUVAS, 2022</i> ) Nano Methicone spray developed by TRPVB- TANUVAS. Nano Dimethicone 10% (Dimethicon oil & polyherbals are encapsulated in nanoform) Useful for treatment and prevention of ticks, lice, fleas in Cattle
Technology Option 2	Megatex Spray ( <i>ICAR – CIRG, 2018</i> ) Megatex - Herbal Ectoparasite liquid spray, each 100ml contains <i>Annona squamosa</i> – 2 gm, <i>Adhatoda vasica</i> – 3gm and <i>Anacylus pyrethrum</i> – 3gm, Sodium Benzoate - qs
Farmers practice	Use of Deltamethrin (2%) / Flumethirin (1%)

#### 7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Nano Methicone Spray	5 nos	840	25 nos	4200
Megatex Spray	5 nos	550	25 nos	2750

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

Technology Option	No. of trials	Efficiency –E% (14th day after application)	Net Returns (Rs.)	B:C ratio	Avg. reduction in Tick Count
Farmers Practice	5	91.04	351	1: 1.97	3rd day – 26.4 & 14th day – 6.2
Technology 1 Nano Methicone Spray		98.03	616	1: 2.46	3rd day – 12.4 & 14th day – 1.2
Technology 2 Megatex Spray		84.74	303	1: 1.77	3rd day – 26.8 & 14th day – 8.4

**Description of the results:** Based on the assessment on different acaricidal treatment for tick infestation in dairy cows, it was observed that the efficiency (E%) of TO 1 (98%) was comparatively higher than Farmers practice (91.40 %) and TO2 (84.74%). Tick count was taken before the treatment for tick infestation in selected dairy cows. The tick count was done on 3rd day, 7th day, 14th day and 28th day after application. It was observed that the average reduction in tick count on 3rd day and 14th day in TO1 was 12.4 and 1.2 and in TO2 was 26.8 and 8.4 respectively. In farmer practice due to application of Deltamethrin, the average reduction in Tick count on 3rd and 14th day was 26.4 and 6.2. The Net return was comparatively higher on TO1 and tick count was reduced in TO1 on application of Nano Methicone Spray.

#### 9. Constraints : Nil

**10. Feedback of the farmers involved :**

Nano Methicone Spray is user friendly when compared to other treatments and also effective for control of tick infestation in dairy cow. Also, nontoxic and no need for wash immediately after spray. Herbal Spray is also an alternate method for chemicals even though less effective compared to Nano Methicone Spray.

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

Nano Methicone Spray technology by TRPVB- TANUVAS was proved to be user friendly technology for farmers and effective for control of external parasitic infestation and protect cattle from recurrence.

**OFT-19: Assessment on the effectiveness of different herbal anthelmintics in Small Ruminants**

1. **Thematic area** : Disease Management
2. **Title** : Assessment on the effectiveness of different herbal anthelmintics in Small Ruminants
3. **Scientists involved** : SMS (Animal Science)
4. **Details of farming situation** : Semi Intensive System

The OFT (On-Farm Trial) was conducted in Thinnor village, located in the Bargur block of Krishnagiri district, with the aim of assessing the anthelmintic effects of various herbal powders on small ruminants. Among the treatments tested was Wormivet, an herbal dewormer for livestock developed by the National Innovation Foundation (NIF) under the Department of Science and Technology. Wormivet has superior efficacy against a broad range of worms, and it is free from drug resistance, residues, and any adverse side effects. This makes it a promising alternative to traditional chemical dewormers. Additionally, Helomkil (also known as Wormolex-HS), a herbal dewormer developed by ICAR-CIRG for managing gastrointestinal parasitic infestations in animals. Throughout the trial, both Faecal Egg Count (EPG) and body weight gain were monitored to assess the effectiveness of these different anthelmintic treatments in small ruminants.

**5. Problem definition / description :**

In Krishnagiri district, the majority of small ruminants are raised in a semi-intensive system. Worm infections are a major factor contributing to slow growth, reduced reproductive efficiency, and high mortality rates in sheep and goats. These gastrointestinal helminths are often associated with anemia, gastroenteritis, weight loss, stunted growth, diarrhea, and other symptoms that severely affect the health and productivity of goats. Although synthetic drugs are commonly used in clinical practice, there is growing scientific interest in exploring the medicinal properties of plants and herbal or Ayurvedic combinations for their anthelmintic potential. This approach could play a crucial role in preventing the development of anthelmintic resistance in livestock. To address these challenges, a trial was conducted to evaluate and compare the efficacy of various herbal anthelmintics in controlling gastrointestinal helminths in small ruminants raised under a semi-intensive system.

**6. Technology Assessed :**

Technology Option 1	Wormivet powder – herbal Broad spectrum anthelmintic ( <i>NIF – DST, 2020</i> )
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	Wormivet – Indigeneous Herbal dewormer for livestock, have better efficiency against all type of worms. It Doesn't have any type of drug resistance and residue, doesn't have any side effect. It is alternate for chemical dewormer developed by National Innovation foundation, Department of Science and Technology. Sheep and Goat – 10gm twice a day for two days
Technology Option 2	Helmokil Anthelmintic bolus /liquid (ICAR – CIRG, 2018) Herbal dewormer developed by ICAR- CIRG for control of gastrointestinal parasitic infestation in animals. It contains active ingredients of three medicinal plants. Herbal formulation tested invitro against adult, larva and egg and additive effect. Helmikil was commercialized under the name “WORMOLEX-HS”
Farmers practice	Use of Albendazole suspension

### 7. Critical inputs given :

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Wormivet powder *	6 Packs	Free	30 Packs	Free
Wormolex-HS	6 Packs	180	30 Packs	900

\* Wormivet powder was provided free of cost by the supplier for trial purpose

### 8. Results : Performance of the technology

Technology Option	No. of trials	Average Body Weight (in Kgs)	Net Returns (Rs. /ha)	B:C ratio	EPG
Farmers Practice	5	14.1	5172	1: 1.65	0th day: 790 14th day: 0
Technology 1 <b>Wormivet powder – herbal Broad spectrum anthelmintic</b>		15.7	8303	1: 1.96	0th day:760 14th day: 95
Technology 2 <b>Helmokil Anthelmintic bolus /liquid</b>		14.6	6194	1: 1.81	0th day: 710 14th day: 195

\*EPG (Egg Per Gram) by Faecal Egg count

**Description of the results:** The assessment of various herbal anthelmintics revealed that body weight gain was higher in groups TO1 (15.7 kg) and TO2 (14.6 kg) compared to the farmer's practice (14.1 kg). In terms of faecal egg count (EPG), both TO1 and TO2 showed significant reductions—EPG dropped from 760 to 95 in TO1 and from 710 to 195 in TO2 by day 14. For comparison, the use of albendazole dewormer led to a complete reduction in EPG to zero by day 14. While the chemical dewormer was highly effective, the herbal dewormers Wormivet and Wormolex-HS also demonstrated considerable efficacy, with marked reductions in egg count and improved body weight gain. These results suggest that herbal dewormers can be a valuable component of an integrated worm management strategy, offering an effective alternative to conventional treatments while improving overall livestock health.

### 9. Constraints : Nil

**10. Feedback of the farmers involved :**

The farmers expressed that use of herbal dewormer will reduce the regular use of chemical dewormer in sheep and goat. Also, it can be an alternative to chemical dewormer. It will be better if it was given as liquid form to drench instead of powder form.

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

Even though effectiveness of albendazole is widely known, the herbal dewormer wormivet powder and Wormolex- HS powder was also effective and exhibited anthelmintic properties. It can be used an alternate to chemical dewormer in regular anthelmintic therapy to reduce anthelmintic resistance. Farmers prefer herbal dewormer in liquid form than powder form for drenching.

**OFT-20: Assessment on the performance of Milk replacer for enhancing growth in Goat Kids**

1. **Thematic area** : Nutrition Management
2. **Title** : Assessment on the performance of Milk replacer for enhancing growth in Goat Kids
3. **Scientists involved** : SMS (Animal Science)
4. **Details of farming situation** : Semi Intensive System

The OFT trial was conducted at Gettur village of Krishnagiri block in Krishnagiri district. Three farmers were selected to assess the productivity of milk replacers for feeding kids. Kids were divided into three treatment groups: Farmer's Practice (FP), where cow milk substituted the replacer; ICAR-NIANP milk replacer at a dose rate of 50g/day (TO 1); and ICAR-CSWRI milk replacer at a dose rate of 100-250 ml (TO 2). The kids in these treatment groups were supplemented with milk replacer for a duration of three months. During the experiment, both production and economic parameters were measured to evaluate the effectiveness of the different milk replacers.

**5. Problem definition / description :**

In Krishnagiri district, the majority of small ruminants are raised in a semi-intensive system. A significant challenge in this system is the insufficient nutrition during the early growth phase of kids, which weakens their immunity and increases their vulnerability to diseases. This leads to reduced weight gains and higher mortality rates. One of the primary concerns is the suboptimal weight gain in kids during the pre-weaning phase. To address this, supplementary feeding with milk replacers containing highly digestible ingredients can significantly improve growth. These milk replacers are specifically formulated to support the growth and development of kids /lambs Hence, NIANP milk replacer and CSWRI milk replacer technologies were assessed to compare the growth performance of kids.

**6. Technology Assessed :**

Technology Option 1	ICAR – NIANP Milk replacer for kids ( <i>ICAR – NIANP, 2021</i> ) Supplemental feeding of ICAR – NIANP Milk replacer for Kids during pre-weaning period first 60-80 days. It is a special feed contains quality ingredients and designed for supporting the nutritional needs of nursing lams/kid to achieve optimal growth and health. Supplemental feeding: 50g /day (1st week - 30 to 60 ml twice /day, 2ndweek onwards – 200 to 300 ml /day, 100 g powder mixed in 500 ml of water)
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Technology Option 2	ICAR – CSWRI Milk replacer ( <i>ICAR – CSWRI, 2018</i> ) Milk replacer contains Skim Milk powder, Soya powder, peanut meal with different flour, minerals and vitamins. It contains Crude protein of 24-28%. Supplemental feeding during preweaning period: 24g/day - 100 ml for 1st 10-15 days and up-to 250 ml afterwards. This Constituted starter diet steps up rumen development and thus provides higher weaning weight in lambs/ kids. Memnaprash, the trade name acquired for Liquid Milk formula (LMF) developed by CSWRI which contain 24-28% protein and 10-12 % fat
Farmers practice	Use of cow milk

**7. Critical inputs given :**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
ICAR – NIANP Milk replacer	8 kgs	2320	24 kgs	6960
ICAR – CSWRI Milk replacer	8.3 kgs	2334	25 kgs	7000

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

Technology Option	No. of trials	Average Body Weight (in Kgs)	Net Returns (Rs. /ha)	B:C ratio	Mortality
Farmers Practice	3	6.4	2270	1: 1.62	5%
Technology 1 ICAR – NIANP Milk replacer for kids		8.1	5260	1: 2.08	2%
Technology 2 ICAR – CSWRI Milk replacer		7.0	3560	1: 1.77	3%

**Description of the results:** Based on the assessment of different milk replacers for kids, body weight gain was higher in TO1 (8.1 kg) and TO2 (7.0 kg) compared to the farmer's practice (6.4 kg). The average daily weight gain in kids supplemented with milk replacer, along with the net return from TO1 (ICAR-NIANP milk replacer), was significantly higher than that of TO2. Additionally, mortality rates during the pre-weaning phase were notably lower in TO1 compared to TO2 and TO3, leading to an increase in net income for farmers.

**9. Constraints : Nil**

**10. Feedback of the farmers involved :**

The farmers expressed that supplementation of milk replacer in goats get increased body weight at marketed age.

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

The availability of milk replacer can made available to the farmers through KVK and VUTRCs, Veterinary hospital/Dispensary for further adoption by Goat farmers.

**OFT-21: Assessment of Phyto-supplement 'OmeB' for Milk fat modulation in crossbred Dairy Cows**

1. **Thematic area** : Nutrition Management
2. **Title** : Assessment of Phyto-supplement 'OmeB' for Milk fat modulation in crossbred Dairy Cows
3. **Scientists involved** : SMS (Animal Science)
4. **Details of farming situation** : Semi Intensive system

In dairy farming, milk quality is determined not only by overall yield but also by its composition, which includes factors like milk fat and solids-not-fat (SNF). Low milk fat and SNF levels are common challenges faced by dairy farmers, often leading to significant economic losses. To address this issue, a study was conducted to assess the effectiveness of different fat supplements in improving milk composition and increasing farmers' income.

The On-farm trial (OFT) was carried out at Poosaripatti village, located in the Krishnagiri block of Krishnagiri district. Five dairy farmers participated in the trial, where two fat supplements were tested: OmeB Phyto-supplement, developed by ICAR-NIANP, and the Samvridhhi supplement. The OmeB supplement is designed for dairy cows and buffaloes and can be fed at a rate of 100 grams per day, divided into two equal dosages mixed with the concentrate ingredients. This concentrate mixture, containing OmeB, is fed in the form of slurry before morning and evening milking. On the other hand, the Samvridhhi supplement, developed by the National Dairy Development Board (NDDB), is specifically formulated to improve milk fat and SNF levels. The recommended dosage of Samvridhhi is 250 grams per animal per day to enhance milk yield, milk fat percentage, and SNF content. Both supplements have the potential to improve the quality of milk produced by dairy to address the challenges associated with low milk fat and SNF.

**5. Problem definition / description :**

Low Milk fat/ SNF is a common problem among dairy farmers and lead to economic loss. Low fat / SNF can be caused by low protein/ energy in diet, negative energy balance or improper rumen function. For dairy farmers, achieving higher milk fat and SNF content is an important goal to improve both productivity and profitability. Fat supplements are designed to enhance the cow's diet with specific fatty acids that can help increase the milk fat percentage and improve the SNF content. The composition of milk fat is influenced by various factors including genetics, diet, and management practices, and the inclusion of appropriate fat supplements can help achieve targeted results. By providing the cows with the right type and amount of fat, farmers can achieve targeted outcomes in milk composition, cow health, and overall farm efficiency. However, it is crucial to integrate fat supplements into a well-balanced diet and monitor the cow's response to ensure optimal results.

**6. Technology Assessed :**

Technology Option 1	Phyto-Supplement "OmeB" ( <i>ICAR – NIANP, 2022</i> ) ICAR- NIANP has developed a product 'OmeB', which was formulated using phyto based agricultural waste. The phyto-supplement can be fed to the dairy cows & buffaloes at the rate of 100 g per day in two equal dosages mixed with the concentrate ingredients. The concentrate mixture containing
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	OmeB can be fed in the form of slurry before morning and evening milking. Feeding of the phyto-supplement OmeB leads to significant changes in the milk composition with a concurrent increase in overall milk fat content
Technology Option 2	Samvridhhi Supplement (NDDDB, 2020) NDDDB Developed feed supplement “Samvridhhi” to improve Milk fat and SNF of dairy animals. Supplemental feeding of Samvridhhi - 250g/animal/day leads to improvement of Milk yield, Milk fat and SNF
Farmers practice	Feeding of concentrates/ oil cakes

**7. Critical inputs given :**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
OmeB Supplement*	5 kgs	Free	25 kgs	Free
Samvridhhi feed supplement	5 kgs	140	25 kgs	3500
<b>Total</b>				<b>3500</b>

*\*OmeB supplement was provided free of cost by the supplier for trial purpose*

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

Technology Option	No. of trials	Average Milk Yield (in Litres)	Net Returns (Rs. /ha)	B:C ratio	Other performance indicators
Farmers Practice	5	9.70	5298	1:2.01	Milk Fat: 3.8% SNF: 7.72
Technology 1 Phyto-Supplement “OmeB”		11.02	7550	1:2.21	Milk Fat: 4.36%, SNF: 8.24
Technology 2 Samvridhhi Supplement		10.24	6640	1:2.12	Milk Fat: 4.02%, SNF: 8.02

**Description of the results:** Based on the assessment of different fat supplement for dairy cows, Milk yield was higher in TO1 (11.02 lit) and TO2 (10.24) compared to the farmer's practice (9.70 kg). The average Milk Yield, Milk Fat % and SNF in TO1 was 7.61%, 8.4% and 2.75% which was higher than that of in TO2. The average Milk Yield, Milk Fat % and SNF in TO2 was 5.56%, 5.57% and 2.03% which was higher than that of Farmers practice. The Net return was comparatively higher in TO1 and TO2 than that of farmer practice which increases net income of the dairy farmer.

**9. Constraints : Nil**

**10. Feedback of the farmers involved :**

The farmers expressed that supplementation of feed supplement for dairy cows increases milk yield and also Milk fat percentage which increases the income.

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

The increase in Milk yield and fat yielded increased income for farmers. The technology adoption will be possible based on the availability of the product and cost effectiveness.

## 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	Tomato	IPM	Integrated Pest Management In tomato	Cost effective tomato pinworm lure pheromone may be developed	The demonstrated technology recorded 72.2 t/ha where as in check 61 t/ha. The percentage of yield increase over check was 18 percent	10	47	50
2	Poultry/Desi chicken	Breed Evaluation	FLD Conducted during 2019-20	NIL	TANUVAS Aseel had better body weight gain when compared to native breed and also adoptable for backyard condition. This improved breed can be reared as it was acceptable in market with increased income.	20	158	–
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.	78	826	42

**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	Varietal Demonstration	Demonstration on medium slender paddy variety CO 55 under Organic Farming	Kharif, 2024	Irrigated	ICAR	1	5	0	5	2	2	–
2	Paddy	ICM	Demonstration on TNAU Rice Reap in Paddy	Kharif, 2024	Irrigated	ICAR	1	10	0	10	4	4	–
3	Paddy	Farm Mechanization	Demonstration of Agricultural Drone	Kharif, 2024	Irrigated	ICAR	1	10	0	10	4	4	–
4	Groundnut	Farm Mechanization	Demonstration on Groundnut seed drill (ANGRAU model)	Kharif, 2024	Rainfed	ICAR	1	0	10	10	4	4	–
5	Palm	Farm Mechanization	Demonstration on Multi Tree Climber (Palm)	Rabi, 2024	Irrigated	ICAR	1	10	0	10	4	4	–
6	Groundnut	IPM	Demonstration of herbal repellent for the management of Wild Boar	Kharif, 2024	Rainfed	ICAR	1	10	0	10	4	4	–
7	Paddy	Varietal Demonstration	Demonstration on super fine Paddy variety VGD 1 under Organic Farming	Kharif, 2024	Irrigated	ICAR	1	0	10	10	4	4	–
8	Finger Millet	Varietal Demonstration	Demonstration on Finger millet variety ATL 1	Rabi, 2024	Irrigated	ICAR	1	0	10	10	4	4	–
9	Cowpea	Varietal Demonstration	Demonstration on High yielding Cowpea variety VBN 3	Rabi, 2024	Irrigated	ICAR	1	0	5	5	2	2	–
10	Cotton	Varietal Demonstration	Demonstration on Cotton CO 17 variety with high density planting system	Rabi, 2024	Irrigated	ICAR	1	0	5	5	2	2	–

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)	
11	Cluster Beans	Varietal Demonstration	Demonstration of Cluster bean Variety MDU-1	Rabi, 2024	Irrigated	ICAR	1	0	5	5	1	1	–
12	Coriander	Varietal Demonstration	Demonstration on Coriander CO5	Rabi, 2024	Irrigated	ICAR	1	5	0	5	1	1	–
13	Mango	ICM	Integrated Crop Management in Mango	Kharif, 2024	Rainfed	ICAR	1	10	0	10	4	4	–
14	Coconut	INM	Integrated Nutrient Management in Coconut	Kharif, 2024	Rainfed	ICAR	1	0	10	10	4	4	–
15	Banana	INM	Micronutrient Management in Banana	Rabi, 2024	Irrigated	ICAR	1	0	10	10	4	4	–
16	Cotton	INM	Micronutrient Management in Cotton	Rabi, 2024	Irrigated	ICAR	1	0	10	10	4	4	–
17	Coconut	IPM	Demonstration of management against Coconut Rugose Spiraling Whitefly	Kharif, 2024	Rainfed	ICAR	1	0	5	5	1	1	–
18	Jasmine	IPM	Integrated Pest Management for Blossom midge and Bud worms in Jasmine	Kharif, 2024	Irrigated	ICAR	1	0	5	5	1	1	–
19	Groundnut	IPM	Demonstration of herbal repellent for the management of wild boar	Kharif, 2024	Rainfed	ICAR	1	0	10	10	4	4	–
20	Turmeric	IDM	Demonstration on Rhizomerot management practices in Turmeric	Rabi, 2024	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)	
21	Poultry	Production Management	Demonstration of TANUVAS STAR Chicken for small farmers in Krishnagiri district	–	–	ICAR	1	10	0	10	0	0	–
22	Poultry	Nutrition Management	Demonstration of ProBeads-EC on growth performance of Desi-chicken	–	–	ICAR	1	10	0	10	0	0	–
23	Dairy	Disease Management	Demonstration of Tick Shield for control of tick infestation in dairy cows	–	–	ICAR	1	0	10	10	0	0	–
24	Dairy	Production and Management	Demonstration of Ketoquant for diagnosis of subclinical ketosis in dairy cows	–	–	ICAR	1	0	10	10	0	0	–
25	Cassava	ICM	Demonstration on Foliar nutrition in Cassava	Rabi, 2024	Irrigated	ICAR	1	0	10	10	4	4	–

**Feedback from farmers:**

S. No	Feed Back
1	The Paddy variety CO 55 gives higher yield (28.00 %) increase over than farmers practice Aman. It found to be moderately resistant to bacterial leaf blight. Due to medium slender type farmers prefers this variety.
2	The foliar spraying of Rice Reap increased the yield in a cost-effective manner in paddy.
3	The drone spray demonstration for paddy crop ensured timely and uniform application of inputs, reduced labor dependency, saved time and cost, and minimized farmers' exposure to chemicals.
4	The demonstration helped to increase yield by performing necessary operations at the right time. Farmers were able to sow seeds before soil moisture evaporated. The machines were user- and gender-friendly, saving time, cost, and labor.
5	The multi-tree climber is highly useful as it easily fits various trees like palm and coconut. Its adjustable design, ease of operation, and gender-friendly features make climbing safe and effortless, reducing drudgery and saving time.
6	Using of Herbolive effectively manage the wild boar but the duration for the effect may be increased.
7	The paddy variety VGD 1 gave 38 % yield increase over farmers check (Amman - private variety). Farmers highly prefers VGD 1 due to super fine grain type, erect, high tillering, non-lodging plant habit.
8	Ragi ATL 1 variety gives higher yield (27 %) than ML 365, ATL 1 variety was synchronized maturity, sturdy culm, non-lodging type also less incidence of leaf blast diseases.
9	Compared to CO(CP) 7, the cowpea variety VBN 3 yielded more (8.2 q/ha) than CO(CP) 7. Medium-bold type VBN 3 seeds have good cooking quality. Consumers and farmers prefer this kind, which also guarantees a high market value.
10	The Cotton variety CO 17 is a short duration type with synchronized boll maturity suitable for farmers single time harvest.
11	Cluster beans MDU1 gave higher yield. The pods are more tender and got more market acceptance.
12	Coriander CO5 gave higher yield. The freshness was more in CO5 Coriander.
13	The yield was increased noticeably and the quality of the fruits got improved in mango. The fruit fly infestation was substantially reduced that helped to get higher yield and income.
14	In coconut the button shedding was reduced to a greater extent and the yield improvement was great with the using of coconut tonic.
15	The bunch weight was uniform in banana and the improved yield and quality helped to fetch higher price in the market.
16	The cotton crop developed more bolls with a better distribution across the field and fiber quality got improved.
17	Rugose spiraling Whitefly in coconut was effectively managed by following the IPM practices. The sooty mould was less in the demo.
18	Blossom midge and Bud worm was effectively controlled by following the IPM practices.

S. No	Feed Back
19	If the rain occurs during the spraying of Herbolive the effectiveness is very less. Generally, the wild boar menace problem is after shower only.
20	The biocontrol agents is effective when it is applied through soil and rhizome treatment.
21	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.
22	Probeads EC supplementation for native chicken helps to improve bodyweight and also reduced mortality. It is a new technology to improve performance of native chicken under backyard condition.
23	The farmers felt that using Tick shield spot on was user friendly, effective in control of tick and it can be used alternatively for deltamethrin which was widely used by dairy farmers.
24	The farmers felt that by using Ketoquant rapid detection kit it was easy to monitor the condition during early lactation period and can avoid ketosis, which helps to correct feeding management in dairy cows and inturn improved Milk yield, income.
25	The cassava booster helped to enhance the tuber size and improved the disease resistance.

#### Feedback of the Scientist:

S. No	Feed Back
1	Based on the Frontline Demonstration Paddy CO 55 variety performs well in all the aspects like grain yield, straw yield and minor resistance to pest and disease incidence
2	The foliar spraying of Rice Reap in paddy increased the yield up to 19.32 % and the BCR of 1.91 in the demonstration fields over the farmers' practice.
3	Based on the successful demonstration, drone spraying technology can be promoted for cereals, vegetables and jasmine cultivation through the custom hiring center at KVK to enhance efficiency, reduce labor dependency, and ensure precise input application.
4	Power-operated decorticators and groundnut harvesters can be added to the custom hiring center at KVK to enhance farmer accessibility and efficiency.
5	The multi-tree climber, being adjustable, easy to fit, and gender-friendly, can be promoted through the custom hiring center at KVK. It enables safe and efficient climbing of various trees like palm and coconut with minimal drudgery and easy maintenance.
6	The Herboliv is effective for 15 days only. A lure may be developed for effective management of the wild boar.
7	The paddy variety VGD 1 recorded 44.65 qtl / ha than farmers check (Aman - private variety) 32.35 qtl/ha. VGD 1 was moderately resistant to leaf folder, blast and brown spot, 1000 grain weight of only 8.86 grams, high milling (66 %) and head rice recovery (62 %), also good cooking quality.
8	Ragi variety ATL 1 recorded more number of tillers (5-6 per plant) also, it has good grain quality.

S. No	Feed Back
9	The Cowpea VBN 3 variety has synchronized maturity, shows resistance to bean common mosaic virus, anthracnose diseases. It has minimum resistance to pod borer and pod bug.
10	The Cotton CO 17 variety possesses zero monopodia, produced more number of sympodial branches in nature, short sympodial length and is highly suited for high density planting system.
11	Cluster beans MDU1 gave 12% higher yield, 10% more number of fruits per plant and 65% less incidence of Powdery Mildew disease. The marketability was better for MDU 1 and the net profit was 30% higher
12	Coriander CO5 gave 65% higher yield, and 45% less incidence of white rust disease. The marketability was better for CO 5 and the net profit was 85% higher.
13	The foliar nutrition with mango special and the fruit fly management with methyl eugenol trap in mango resulted in 22.10 % yield increase and a BCR of 3.10 in the demonstration fields over the farmers' practice
14	The root feeding of coconut tonic increased the yield up to 21.43 % and the BCR of 4.39 in the demonstration fields over the farmers' practice.
15	The foliar nutrition with banana special helped to get 24.94 % yield increase and a BCR of 4.45 in the demonstration fields over the farmers' practice.
16	The foliar nutrition with cotton plus increased the yield up to 24.66 % and the BCR of 1.54 in the demonstration fields over the farmers' practice.
17	The demonstration on IPM for Rugose Spiraling Whitefly in Coconut gave 17.21% higher yield, and 32.9% less incidence of Rugose Whitefly and the net profit was 37.10% higher.
18	The demonstration on IPM for Blossom midge and Budworm in Jasmine gave 12.55% higher yield, and 19.4% less incidence of Blossom midge and 13% less incidence of Bud Worm and the net profit was 27.70% higher.
19	The Herboliv is effective for 15 days only. A lure may be developed for effective management of the wild boar
20	The Bio control agents is very effective but it may have long self-life period.
21	The average body weight of TANUVAS STAR chicken at 12th week was 1.20 kg and Livability of 98% under rural field condition with better marketability and income. Rearing TANUVAS STAR chicken can be promising small scale backyard enterprise to improve subsidiary income and nutritional security.
22	Supplementation of Probeads EC had improved the Average body weight at 12th week by 1.13 kg with livability Percentage 93.5 %. Probeads Supplemental feeding improves digestibility and decrease mortality in native chicken under rural backyard condition.
23	Ectoparasite infestation transmitting diseases to livestock namely LSD, Tick fever etc., also causing loss of body condition, reduction in productivity of animals which in turn causes economic loss to dairy farmers. Tick shield spot on (Ivermectin) was effective in control of ticks in dairy animals and increased productivity by 11.26%. It can be used as alternate cost-effective control measures for ectoparasite infestation especially ticks and to mitigate acaricidal resistance in field condition.

<b>S. No</b>	<b>Feed Back</b>
24	Ketosis is a common metabolic disorder in adult dairy cattle during early lactation which occurs due to negative energy balance. Ketoquant rapid detection kit was a user-friendly technology for early detection of ketosis by 80% under field condition, thereby manage negative energy balance in early lactation by proper feeding management.
25	The foliar nutrition with cassava booster helped to get 19.63 % yield increase and a BCR of 2.35 in the demonstration fields over the farmers' practice.

**Extension activities on the FLD:**

<b>S. No.</b>	<b>Activity</b>	<b>No. of activities organized</b>	<b>Date</b>	<b>Number of participants</b>	<b>Remarks</b>
1	Field days	5	11-Jan-24, 18-Sep-24, 23-Nov-24, 23-Nov-24, 06-Dec-24	121	–
2	Farmers Training	21	On campus (15-May-24, 23-Jul-24, 09-Aug-24, 16-Aug-24, 20-Aug-24, 09-Sep-24, 18-Sep-24, 18-Oct-24, 23-Nov-24, 25-Nov-24, 07-Dec-24) Off Campus (23-Jan-24, 05-Feb-24, 06-Feb-24, 02-Jul-24, 29-Jul-24, 27-Jul-24, 13-Aug-24, 04-Oct-24, 26-Oct-24, 13-Nov-24)	395	–
3	Media coverage	2	20-Sep-24, 25-Nov-24	–	–
4	Training for extension functionaries	–	–	–	–

## Extension Studies

### I. Analyzing Factors Influencing Spread and Adoption of Organic/Natural Farming in Krishnagiri District

Krishnagiri district, located in the northwestern part of Tamil Nadu, is predominantly an agricultural region, with a significant portion of its population engaged in farming and allied activities. Over the past few years, the district has increasingly promoted organic and natural farming practices as a way to enhance soil health, reduce chemical inputs, and improve the livelihoods of farmers. This shift towards sustainable agriculture is being driven by growing concerns over environmental conservation, public health, and rural development.

The promotion of organic farming practices in Krishnagiri aligns with the Tamil Nadu State Government's policy initiatives, which support sustainable agricultural practices across the state. The district administration, in collaboration with various stakeholders — including farmers, extension workers, and non-governmental organizations (NGOs) — has implemented numerous programs aimed at encouraging organic/natural farming methods.

However, despite these efforts, the adoption of organic/natural farming in Krishnagiri remains limited. This study seeks to address this knowledge gap by examining the factors that influence the spread and adoption of organic/natural farming practices in the district. The findings from this extension study are expected to provide useful insights for policymakers, extension workers, and other stakeholders engaged in promoting sustainable agriculture in Krishnagiri.

#### Objectives:

1. To identify the factors influencing the adoption of organic/natural farming practices among farmers in Krishnagiri district.
2. To analyze the impact of extension services on the adoption of organic/natural farming practices.
3. To develop strategies for promoting organic/natural farming practices in Krishnagiri district.

#### Methodology:

The Krishi Vigyan Kendra (KVK), Krishnagiri, conducted organic/natural farming training and demonstrations at farmer fields in the villages of Krishnagiri district from 2022 to 2024. A total of 50 training sessions and 20 demonstrations were held, involving farmers and scientific staff from KVK. This study was conducted in five blocks of Krishnagiri district: Krishnagiri, Kaveripattinam, Bargur, Mathur and Uthangarai. A sample of 100 farmers, including 50 non-organic farmers selected randomly, was chosen for the study. Data were collected through a well-structured interview schedule.

The survey covered the following aspects:

- **Socio-economic characteristics of farmers:** age, education level, family size, landholding size, and annual income.
- **Experiences with organic/natural farming:** years of experience, types of crops grown, sources of information, perceived benefits, and challenges.
- **Factors influencing adoption of organic/natural farming practices:** motivations for adopting organic/natural farming, sources of support, and perceived barriers to adoption.

**Results:****a. Socio-economic Characteristics of Farmers:**

- **Age:** Adoption of organic/natural farming is widespread across different age groups. Forty percent of adopters are in the 45-55 years age group, followed by 30% in the 35-44 age group. Younger farmers (25-34 years) account for 20% of adopters, while 10% are in the 55-64 years group.
- **Education Level:** Forty percent of farmers who adopted organic farming have completed secondary education, while 30% have completed higher secondary education. Twenty percent of adopters hold a graduate or higher degree, while 10% have only completed primary education.
- **Family Size:** A significant 50% of farmers practicing organic farming come from families with 4-6 members. Thirty percent belong to smaller families with 2-3 members, while 15% come from larger families (7-10 members). Only 5% of farmers with a single household member are involved in organic farming.
- **Landholding Size:** Forty percent of farmers with landholdings between 1-2 acres adopt organic farming, followed by 30% with 2-4 acres, 20% with 4-6 acres, and 10% with more than 6 acres. This suggests that smaller and medium-sized landholdings are more conducive to organic farming.
- **Annual Income:** Forty percent of farmers in the ₹50,000-₹1,00,000 income bracket adopt organic farming. Thirty percent earn between ₹1,00,000-₹2,00,000, while 20% earn between ₹2,00,000-₹5,00,000. Ten percent of farmers earning less than ₹50,000 also practice organic farming.

**b. Experiences with Organic/Natural Farming:**

- **Years of Experience:** Forty percent of farmers practicing organic farming have 2-5 years of experience, 30% have 5-10 years of experience, and 20% have less than 2 years of experience. Ten percent have been practicing organic farming for over 10 years.
- **Types of Crops Grown:** Fifty percent of farmers focus on growing vegetables, while 30% grow fruits. Fifteen percent of farmers cultivate cereals, and 5% grow pulses using organic/natural farming methods.
- **Sources of Information:** Forty percent of farmers rely on government agencies for information on organic farming, followed by 30% who seek guidance from NGOs. Twenty percent turn to farmers' organizations, while 10% consult private companies.

**c. Perceived Benefits of Organic/Natural Farming:**

- **Improved Soil Health:** Eighty percent of farmers identify improved soil health as a major benefit of organic farming.
- **Increased Crop Yields:** Sixty percent of farmers believe that organic farming leads to increased crop yields.
- **Reduced Chemical Usage:** Fifty percent of farmers value the reduction in chemical inputs as a key benefit.
- **Improved Livelihoods:** Forty percent of farmers report improved livelihoods as a result of adopting organic farming practices.

**d. Perceived Challenges of Organic/Natural Farming:**

- **Higher Labor Costs:** Sixty percent of farmers identify higher labor costs as a significant challenge in adopting organic farming.

- **Limited Market Access:** Fifty percent of farmers face difficulties in accessing markets for their organic produce.
  - **Lack of Technical Knowledge:** Forty percent of farmers feel that insufficient knowledge and expertise in organic farming hinder their adoption of sustainable practices.
  - **Limited Availability of Organic Inputs:** Thirty percent of farmers struggle with the limited availability and high cost of organic inputs like seeds and fertilizers.
- e. Motivations for Adoption:**
- **Environmental Concerns:** Sixty percent of farmers are motivated by environmental concerns to adopt organic/natural farming.
  - **Economic Benefits:** Fifty percent of farmers adopt organic farming for its potential economic benefits.
  - **Social Benefits:** Thirty percent of farmers are motivated by the social benefits, such as contributing to community health.
  - **Personal Health Concerns:** Twenty percent of farmers adopt organic farming due to health concerns, both for themselves and their families.
- f. Sources of Support for Adoption:**
- **Government Agencies:** Fifty percent of farmers rely on government agencies for support.
  - **NGOs:** Thirty percent turn to NGOs for resources and assistance.
  - **Farmers' Organizations:** Twenty percent rely on farmers' organizations for peer support.
  - **Private Companies:** Ten percent consult private companies for support.
- g. Perceived Barriers to Adoption:**
- **Lack of Technical Knowledge:** Fifty percent of farmers cite a lack of technical knowledge as a barrier to adopting organic farming.
  - **Limited Market Access:** Forty percent of farmers struggle with accessing markets for organic produce.
  - **Higher Labor Costs:** Thirty percent of farmers are deterred by the high labor costs associated with organic farming.
  - **Limited Availability of Organic Inputs:** Twenty percent of farmers face challenges in sourcing organic inputs.

**Conclusion:**

The study identifies several key factors influencing the adoption of organic and natural farming in Krishnagiri district, including socio-economic characteristics, perceived benefits, challenges, and motivations. The findings suggest that organic farming is most prevalent among middle-aged farmers with moderate income levels, smaller landholdings, and secondary education. However, significant barriers such as lack of technical knowledge, limited market access, and higher labor costs remain. The study emphasizes the need for targeted extension services, improved access to organic inputs, and enhanced market linkages to facilitate the wider adoption of organic farming practices in the district.

**Technology Week Celebrations : Nil**

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

<b>Name of the staff</b>	<b>Title</b>	<b>Dates</b>	<b>Duration</b>	<b>Organized by</b>
<b>Mr. K. Gunasekar</b> SMS (Soil Science)	Organic farming and the preparation of various organic inputs	12-Mar-24	1 Day	Dept. of Agriculture, Tirupathur district
<b>Mr. T. I. Ramesh Babu</b> SMS (Horticulture)	Regional Consultation on Science of Natural Farming	14-Jun-24	1 Day	Natural Resource Management, Ministry of Agriculture and Farmer's welfare and MANAGE, Hyderabad
<b>Dr. S. Ramesh</b> SMS (Animal Science)	Dissemination of TANUVAS technologies to KVK Scientists of Tamil Nadu and Puducherry to augment Livestock and Poultry Production for the benefit of farming Community	27 & 28-Sep-24	2 Days	DEE-TANUVAS and ATARI-Hyderabad
<b>Mr. T. I. Ramesh Babu</b> SMS (Horticulture)	Sustainable Lifestyle Workshop for National Green Corps and ECO Teachers of Krishnagiri district	07-Nov-24	1 Day	Department of Education, Tamil Nadu
<b>Dr. T. Sundarraj</b> Senior Scientist & Head	IPM in Tomato	02-Dec-24	1 Day	TNAU and Plant Health Initiative, World Vegetable Center, Taiwan

**Details of collaborative / externally funded / sponsored projects / programmes implemented by KVK. (2024)**

S. No	Title of the programme / project	Sponsoring / collaborating agency	Objectives	Duration	Amount (Rs)
1	Organic Farming	SAMETI	To promote Organic Farming	6 Days	42,000
2	Promotion of Millets under SCSP fund of ICAR-IIMR	IIMR	To promote Millet Cultivations	–	6,00,000
3	Organic Cultivator (Small Unit)	ASCI	To promote Small Organic Cultivator	27 Days	2,40,500
4	Scientific Dairy Management Practices and Distribution of Fodder Slips & Fodder Seeds to Adi-Dravidar Milk Producers	Krishnagiri District Coop. Milk producers Union Ltd., Krishnagiri	<ul style="list-style-type: none"> <li>✓ Provide technical knowledge and skills on scientific dairy management practices to Adi-Dravidar dairy farmers.</li> <li>✓ Train farmers in cost-effective technologies, such as the TANUVAS 10-cent fodder production model and nutritional feed supplementation.</li> <li>✓ Enhance the socioeconomic status of milk producers through training and the distribution of fodder slips, fodder seeds, and nutritional supplements.</li> </ul>	1 Day	2,50,000

## 1. ORGANIC FARMING

Department of Agriculture, Krishnagiri and ICAR - Krishi Vigyan Kendra, Krishnagiri jointly conducted 6 days (19.02.2024 to 24.02.2024) Organic Farming training programme to Organic growers under Skill Training on Rural Youth - SAMET1 and MANAGE at ICAR-KVK, Krishnagiri. The Joint Director of Agriculture, Krishnagiri inaugurated the Organic Farming Training Programme on 19.02.2024 and explained the importance and need of Organic Farming Training to farmers. The Senior Scientist and Head, KVK Krishnagiri given special address on role of KVK in Organic Farming by providing technical guidance to organic farmer.

During the training period from 19.02.2024 to 24.02.2024, farmers were trained in the following topics on Soil Wealth Management, use of bio fertilizer in Organic Farming, Panchakavya preparation & Application - Practical, Pest management in Organic farming, Different types of mulches & their use in organic farming, Use of Bio control agents in the field, Application method and demonstration and Organic farming - Method of certification by KVK Scientist.

Final day (24.02.2024) on Organic farming training, trainees given their feedback on the training programme and Organic farming booklet and Certificate to distributed the trainees by Join Director of Agriculture, Krishnagiri and Senior Scientist and Head, KVK Krishnagiri. Twenty Eight farmers were benefitted in the training programme.

## 2. PROMOTION OF MILLETS UNDER SCSP FUND OF ICAR-IIMR

The ICAR-Krishi Vigyan Kendra (KVK) in Krishnagiri, in collaboration with the Indian Institute of Millet Research (IIMR) based in Hyderabad, organized a series of activities aimed at promoting millets under the Special Component Plan (SCSP) fund of ICAR-IIMR. The main goal of this initiative was to raise awareness about the latest millet cultivation techniques and to help improve the livelihoods of farmers, particularly those from Scheduled Castes (SC).

As part of this program, a total of **8 training** sessions were conducted in different locations, benefitting **400 farmers** from various villages in the Krishnagiri, Bargur, and Kaveripattinam block areas. These sessions focused on providing knowledge and hands-on training in modern and effective millet cultivation techniques. The locations and dates for these trainings were as follows:

- **Krishnagiri block:** Valluvarpuram (11.3.24), Dasiripalli (4.3.24), Pasipatti (5.3.24), and Velakalahalli (6.3.24).
- **Bargur block:** Sakkilnatham (29.2.24) and Guttur (11.3.24).
- **Kaveripatinam block:** Arasampatti (1.3.24) and Pannanthur (2.3.24)

In addition to the training, participants were provided with millet cultivation literature that included detailed techniques and guidelines to support them in improving their farming practices. This literature was given to all training participants to ensure they had access to the most up-to-date and useful information.

Moreover, as part of this initiative, **ragi seeds** and bio-inputs like **VAM (Vesicular Arbuscular Mycorrhiza)** were distributed to **200 farmers** to enhance soil health and improve crop yields. Additionally, **battery-operated sprayers** were provided to **8 farmers on 21.8.24**, enabling them to efficiently manage pest and disease control on their crops.

To further support the farmers' entrepreneurial development, the program also included **two Entrepreneurial Development Program (EDP)** training sessions on millets, each attended by 40 participants. This training aimed at enhancing the business acumen of farmers and helping them understand the value-added opportunities in millet cultivation and processing. A total of **80 farmers** participated in these EDP sessions. Additionally, two **millet processing units** were set up with the aim of helping farmers increase their income through value addition. These units were specifically designed to benefit two SC farmers' groups, providing them with the tools and knowledge to process their millet harvests into value-added products. This initiative sought to improve the economic potential of millet farming by offering farmers the opportunity to process and market their products at a higher value.

Through this comprehensive program, ICAR-KVK and IIMR made significant efforts to promote millet cultivation, improve farming practices, and create income-generating opportunities for farmers, particularly those from marginalized communities.

### **3. ORGANIC CULTIVATOR (SMALL UNIT)**

Under the scheme of Agricultural Skill Council of India (ASCI), training for Organic Cultivator (Small Unit) was planned to be conducted from 10-Jun-24 to 11-Jul-24. Its inaugural function was held at the Krishi Vigyan Kendra, Krishnagiri on 10-Jun-24.

Dr. T. Sundarraj, Senior Scientist and Head presided over the inaugural function and said that due to indiscriminate use fertilizers and pesticides by the farmers the environment is affected. He instructed the farmers to know more about the organic agricultural techniques. Dr.V.Balasubramanian, Deputy Director of Agriculture, Farmers Training Centre (FTC) Krishnagiri, while inaugurating the training, spoke clearly about the techniques of soil conservation through organic farming and the uses of pest repellents and panchakavya.

The Subject Matter Specialist Mr. K. Gunasekar (Soil Science), highlighted the importance and objectives of Organic Cultivation Techniques. Mr. S. Senthil Kumar SMS (Agricultural Extension) and Mr. S. Udhayan, SMS (Agronomy) participated in this inauguration programme 25 farmers from Parur and Palayur villages, Krishnagiri are attending the training.

### **4. SCIENTIFIC DAIRY MANAGEMENT PRACTICES AND DISTRIBUTION OF FODDER SLIPS & FODDER SEEDS TO ADI-DRAVIDAR MILK PRODUCERS**

#### **Introduction:**

ICAR – Krishi Vigyan Kendra organized a training program on "Scientific Management Practices in Dairy Farming" and the "Distribution of Fodder Slips and Fodder Seeds." This initiative was funded by the Krishnagiri District Cooperative Milk Producers Union Ltd. (KDCMPU) under the Tamil Nadu Adi-Dravidar Housing Development Corporation Ltd. (TAHDCO) 2022-23 scheme.

The one-day training, held on July 31, 2024, was designed for 23 selected Adi-Dravidar milk producers from Krishnagiri district

#### **Objectives:**

The program aimed to:

- a. Provide technical knowledge and skills on scientific dairy management practices to Adi-Dravidar dairy farmers.

- b. Train farmers in cost-effective technologies, such as the TANUVAS 10-cent fodder production model and nutritional feed supplementation.
- c. Enhance the socioeconomic status of milk producers through training and the distribution of fodder slips, fodder seeds, and nutritional supplements.

**Beneficiaries:**

**Farmers:** 23 Adi-Dravidar Milk Producers.

**Blocks Covered:** Uthangarai and Pochampalli Taluks, Krishnagiri District.

**SCHEDULE OF THE PROGRAMME CONDUCTED:**

Training / field visit – 31.07.2024

Session	Course
<b>Inauguration of Training programme</b>	
I	Fodder crops –Classification and cultivation practices, TANUVAS 10 cent fodder cultivation model
II	Nutrition and feeding Management of dairy animals, Calf management practices
III	Disease management in dairy cows – management of mastitis and control, Metabolic disease in dairy cattle
IV	Clean milk production, Importance of Deworming and vaccination Ethno veterinary practices in dairy cattle management

**INAUGURATION OF TRAINING PROGRAMME:**

The training program was officially inaugurated on July 31, 2024, by Dr. P. Sundaravadivelu, General Manager of Krishnagiri, and Dr. T. Sundarraj, Senior Scientist and Head of Krishi Vigyan Kendra, Krishnagiri.

In his inaugural address, Dr. Sundaravadivelu emphasized the significance of the training for Adi-Dravidar dairy farmers, which was organized by KDCMPU Ltd., Krishnagiri, and ICAR – Krishi Vigyan Kendra, Krishnagiri, with support from TAHDCO Ltd., Krishnagiri. Dr. Sundarraj encouraged the farmers to engage with subject matter specialists and technical experts to adopt scientific technologies for enhancing dairy cow productivity.

Dr. T. Sathyavani, Assistant General Manager, also participated, highlighting the benefits of the inputs provided through the scheme. Extension Officers and Aavin staff played a key role in organizing and executing the program.

**BOOKLET AND PAMPHLET FOR PARTICIPANTS:**

All participating farmers were provided with a booklet on "Dairy Farming" and "Clean Milk Production," along with a pamphlet on Fodder Production Technology. Dr. Sundaravadivelu, General Manager of Aavin, encouraged the farmers to utilize the skills and knowledge gained from the training program.

**EXHIBIT ON FODDER VARIETIES AND SUPPLEMENTS:**

An exhibit on fodder varieties and supplements was organized during the training, showcasing live specimens of fodder slips, fodder seeds, and feed supplements. The participating farmers valued the live demonstrations of different fodder varieties, and KVK experts provided detailed explanations on the supplements and their benefits for dairy cattle.

### **TRAINING PROGRAMME - TECHNICAL SESSION CONDUCTED:**

A training program was held for 23 selected Adi-Dravidar milk producers from Krishnagiri district. The technical sessions were led by subject matter specialists from ICAR – Krishi Vigyan Kendra, including experts in Animal Science and Agronomy, as well as a Veterinary Assistant Surgeon from MC Palli and an expert from Aavin, Krishnagiri. Dr. S. Ramesh, SMS in Animal Science, opened the session with an overview of the program. Mr. S. Udhayan, SMS in Agronomy, discussed fodder crops, their cultivation, various types of fodder for dairy cattle, and their nutritional value for improving milk yield. He also introduced the TANUVAS 10-cent mixed fodder production model. Dr. Srividhya, Veterinary Assistant Surgeon, delivered a technical talk on infertility and reproductive management, emphasizing the importance of mineral mixtures and their benefits for dairy cows. She also covered significant metabolic diseases affecting dairy cows, including their symptoms and preventive measures. Dr. S. Ramesh further addressed feeding management for dairy cows, highlighting the importance of preventive practices such as deworming and vaccination. Additionally, he educated the farmers on ethnoveterinary practices for managing dairy cattle diseases. Dr. T. Sathyavani, Assistant General Manager of Aavin, underscored the importance of clean milk production practices and explained mastitis control and management techniques.

### **DISTRIBUTION OF INPUTS TO MILK PRODUCERS:**

As part of the scheme, the following inputs were distributed to 23 Adi-Dravidar milk producers:

- Fodder Slips: Hybrid Cumbu Napier CO5
- Fodder Seeds: Fodder Sorghum CO31, Hedge Lucerne, Fodder Maize (African Tall), and Agathi Seeds
- Nutritional Supplements: TANUVAS Mineral Mixture, Anionic Mineral Mixture, and Mineral Lick

These inputs were distributed by the General Manager of Aavin, the Senior Scientist and Head of KVK Krishnagiri, the AGM of Aavin, and the Veterinary Assistant Surgeon from MC Palli.

Both the Senior Scientist and the AGM, Aavin highlighted the significance and benefits of the fodder seeds and nutritional supplements provided to the participants.

### **FEEDBACK FROM PARTICIPANTS ABOUT THE TRAINING:**

The farmers provided the following feedback on the training program:

1. Prior to the training, farmers were unfamiliar with mastitis causes and control methods, including udder health care, hand hygiene, and the use of potassium permanganate solution before milking, as well as proper feeding techniques post-milking.
2. They now have knowledge of the latest fodder varieties and their cultivation.
3. They learned about Velimassal seed (Hedge Lucerne), which is high in protein and beneficial for improving milk fat percentage in dairy cows and other livestock.
4. They gained insights into important ethno veterinary medicines for dairy cattle.
5. They learned about alternative methods for controlling ticks in dairy cattle.

#### **Annexure 1: List of Participant farmers**

<b>S. No</b>	<b>Name and address of the farmer</b>	<b>Village</b>	<b>Member</b>
1	Mr. Raji S/o Nellaiyan	Nambirampatti	Uthangarai
2	Mr. Murugan S/o Perumal	Nambirampatti	Uthangarai
3	Mr. Venkatesan S/o Rengasamy	Nochipatti	Uthangarai

S. No	Name and address of the farmer	Village	Member
4	Mr. Subramani S/o Mecheri	Solakkapatti	Uthangarai
5	Mr. Arumugam S/o Mottaiyan	Nambirampatti	Uthangarai
6	Mr. Elumalai S/o Raman	Annanagar Colony	Uthangarai
7	Mr. Murugan S/o Srinivasan	Ambedkar Nagar	Uthangarai
8	Mrs. Lakshmi W/o RadhaKrishnan	Nambirampatti	Uthangarai
9	Mr. Murugan S/o Manickam	Ambedkar Nagar	Uthangarai
10	Mrs. Poongodi W/o Palani	Solakkapatti	Uthangarai
11	Mr. Natesan S/O Chellapan	Nadupatti	Uthangarai
12	Mr. Annamalai S/o Ponnann	Veerappampatti	Thadampatti
13	Mr. Madhu S/o Raman	Nochipatti	Thadampatti
14	Mr. Muniraj S/o Umaiyan	Thadampatti	Thadampatti
15	Mr. Chinnu S/o Thimmarayan	Veerappampatti	Thadampatti
16	Mr. Murugesan S/o Muiyan	Veerappampatti	Thadampatti
17	Mr. Manoharan S/o Annamalai	Thadampatti	Thadampatti
18	Mr. Nagarajan S/o Muniyan/ Ottaiyan	Thadampatti	Thadampatti
19	Mr. Dharuman S/o Muniyan	Thadampatti	Thadampatti
20	Mrs. Allimuthu W/o Muniyan	Thadampatti	Thadampatti
21	Mrs. Neela W/o Chinnavan	Veerappampatti	Thadampatti
22	Mr. Sampath S/o Annamalai	Thadampatti	Thadampatti
23	Mr. Chandiran S/o Perumal	Puliyanoor	Puliyanoor


#### ANNEXURE II: ABSTRACT OF EXPENSES

S. No	Training Component	Details	Amount (Rs.)
1	Hall Rent	1 day @ Rs.1500	1500
2	Honorarium for Resource persons	Rs. 2000 Per session - 4 sessions	8000
3	Training kit	Stationary kit and Book, Pamphlet	3675
4	Food and Refreshments	Food and refreshments to participants	6900
5	DA to participants	200 per day for 23 participants	4600
6	Miscellaneous/ contingency	Transport charges, Banner and documentation	6708
<b>TOTAL (Training Component)</b>			<b>31383</b>
S. No	Input component	Details	Amount (Rs.)
1	Fodder Slips and Fodder Seed	Fodder slips - Hybrid Cumbu Napier Fodder slips, Fodder Sorghum Seed, Hedge Lucerne Seed, Fodder Maize Seed, Agathi Seed	195155
2	Nutritional /Feed Supplements	TANUVAS Mineral Mixture, Anionic Mineral Mixture and Mineral Lick to calf	23575
<b>TOTAL (Input Component)</b>			<b>218730</b>
<b>Grand Total (Rs.)</b>			<b>250113</b>

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## Success stories

### A. HIGH INCOME FROM FINGER MILLET VARIETY ATL 1:

1. **Situation analysis/Problem statement:** Finger millet, commonly known as "ragi", is a vital food crop widely grown in the Krishnagiri district, particularly in areas with irrigated conditions. In Krishnagiri, finger millet is cultivated over approximately 10,000 hectares, making it a significant crop in the region. Mr. Ravikumar, son of Settu, from Kompalli village, Sempadamuthur post, Krishnagiri - 635122, is a local farmer who has been growing finger millet on his one-acre land for the past five years. Despite his consistent efforts, he has noticed a decline in yields over the years. This reduction in productivity is primarily due to the repeated cultivation of the same finger millet varieties, which leads to soil fatigue and diminished effectiveness of the seeds. Consequently, the yields have fallen below expected levels. To address this issue, the ATL 1 variety of finger millet seeds was introduced by Krishi Vigyan Kendra under the IIMR (Indian Institute of Millet Research) programme. Finger millet variety ATL 1 is known for its high yield potential and shorter cultivation duration, making it an ideal choice to improve productivity on Mr. Ravikumar's land. The introduction of finger millet variety ATL 1 is expected to lead to better crop yields, increased income, and more sustainable farming practices in the future.
2. **Plan, Implement and Support:** During the 2023-24 farming season, Mr. Ravikumar actively participated in a millet cultivation programme designed to promote the growth of millets under the Scheduled Caste Sub Plan (SCSP) initiative, organized by Indian Council of Agricultural Research - Indian Institute of Millet Research (ICAR-IIMR). As part of this program, Mr. Ravikumar received essential resources such as high-quality millet seeds and valuable technical support which included the training sessions, field visits, and Integrated Crop Management (ICM) technology. This support was aimed at enhancing the cultivation of millets throughout the farming process.
3. **Output:** The adoption of the finger millet ATL 1 variety resulted in the highest yield recorded by Mr. Ravikumar. He achieved a yield of 21.37 quintals per hectare, compared to 12.45 quintals per hectare in the previous year. Additionally, the net return from finger millet variety ATL 1 was the highest, with an amount of Rs. 45,500/- compared to Rs. 19,750/- in the previous year. These impressive outcomes highlight the significant improvements in both yield and profitability from adopting the finger millet variety ATL 1 variety.
4. **Outcome:** The finger millet variety ATL 1 has proven to be highly successful among farmers, particularly due to its non-lodging nature and high yield potential which makes ATL 1 more reliable variety that has emerged as a favored choice for farmers looking for stable and high-yielding crops.
 
5. **Impact:** Farmers in the Krishnagiri area, initially introduced to the finger millet variety ATL 1 variety, have been particularly pleased with its performance. They observed significant improvements in both the ease of cultivation and the harvest yield, which has encouraged them to continue growing it year after year. The success of finger millet variety ATL 1 quickly spread, and other farmers from neighbouring villages and blocks became interested in adopting this variety after learning about its positive outcomes, particularly the increased yields and more stable crop growth. As a result of this positive reception, approximately 60 hectares of land in

adjacent villages have been converted to the cultivation of finger millet variety ATL 1. This expansion reflects the growing popularity of this high-yielding variety, with more farmers recognizing the value of switching to ATL 1 for better productivity. The widespread adoption of finger millet ATL1 is not only helping improve the economic prospects of individual farmers but is also contributing to the overall agricultural development of the region.

## **B. ENTREPRENEURSHIP DEVELOPMENT THROUGH VALUE ADDITION IN MILLETS**

1. **Introduction:** Krishnagiri district comes under North Western Zone of Tamil Nadu State and endowed with great variation in agro-climatic conditions. Eastern part of the district experiences hot climate and Western part has a contrasting cold climate. This district is most suitable for cultivation of millets with a area of 45,000 ha. Due to lack of job opportunities and being landless, women utilize the local resources for micro-entrepreneurial activities. The products prepared by them have low shelf life due to lack of scientific preservation technique. Krishi Vigyan Kendra offers training programmes on post-harvest technology, value addition in millets, baking techniques and protein rich snack foods for nutritional security. KVK also provide utilization of the machineries for production, packaging and marketing of value-added products. The technologies were disseminated through various extension methodologies that included method demonstrations and trainings on packaging techniques, branding and marketing avenues. There is a great demand of millet-based products and offers good scope in the domestic market of the rural and urban sector. KVK has made efforts to empower women through various training programmes and extension activities and trained them in value added products and instant-ready-to-eat food mixes. A group consisting of 10 women SC beneficiaries opened a shop named Giri Traditional Organic Outlet in Mathur block which has been encouraged by KVK that involved to undertake small-scale processing activities. KVK organized trainings on instant food mixes, millet snack mixes, dehydrated powders, weaning foods which involved skill training on nutritional significance of millets, processing of various millet products.
2. **Challenge:** Mrs. Girija, a farm woman of Giri Traditional Organic Outlet in Mathur, interested in initiating a self-employment activity in Millet Processing. She was educated up to 9th std aged 49 years is having five family members in a rented house. Her husband income was not sufficient to look after the family, finds difficult to cater to the needs of the family. KVK trained her on value addition and post-harvest technologies on millets and instant food mixes. With the skills learnt she started an enterprise with an investment of Rs. 50,000. She produced millet-based products, dhal powders and green leafy vegetable powders and KVK provided the guidance to market the products through outlet at Mathur and gained consumer feedback.

### **3. Intervention:**

<b>Year</b>	<b>Intervention of KVK</b>	<b>Enterprise effect</b>
2021-22	Training on preparation of millet cookies, and bakery products, technical guidance for enterprise development	Participation in training program and knowledge enhancement
2022-23	Training on preparation of masala powders, dehydrated green leafy vegetables mixes, ready to eat food mixes, brand creation and utilization and food	Brand in the name of GIRI TRADITIONAL ORGANIC OUTLET with food licensing obtained and sold the products to

Year	Intervention of KVK	Enterprise effect
	licensing procedures and continued technical backup and marketing linkages.	other SHG members; Marketed the millet-based products.
2023-24	Training on moringa processing and value addition	Product development using moringa millet-based products
2024-25	Distribution of millet processing machineries to women farmer group (ICAR-IIMR) SCSP	Processing activities and empowerment

4. **Results:** Mrs. Girija marketed her products in the brand name of Giri Traditional Organic Foods with FSSAI registration No. 22424103000090.

Sl. No	Particulars	Quantity/ Month	Expenses	Income	Profit/ Month
1.	Millet Food Products - Snacks, Millet Food Mixes, Dehydrated Powders, Papad.	175 Kg	35,000	72,000	37,000

5. **Output and present position:** Mrs. Girija income was substantially low in the beginning and now increased her income with the updated knowledge on processing technologies through technical support and rapport from KVK.

Sl. No	Year	Monthly Income (Before)	Monthly Income (After)
1.	2022-23	-	5,000
2.	2023-24	10,000	15,000
3.	2024-25	25,000	55,000

Mrs. Girija, the housewife has now turned into a good entrepreneur with the improved social economic status. Her income was substantially increased due to her entrepreneurial activity to meet her needs. Initially there was some hurdle in marketing and now many women approach individually to get the products and more marketing avenues were created by her participation in mango exhibition. She started with a small endeavour with 20 kg products and now she produces 175 kg of millet-based products per month. Adoption of scientific preservation and value addition improved the quality packaging and shelf life of the products. She has been awarded by renowned institutes for her recognition in Organic Farming, Traditional rice variety, millet varieties, millet products through Department of Agriculture, Asia International Culture of Organizations Academy, Tamil Kalai illakiya Ara Kattalai, Indian Red Cross Society, Vinayaga Matriculation School, Naam Alvar Viruthu, Kamban Kalagam, Rotary Club of Hosur, District Level Mango Exhibition.

6. **Lessons learnt:** The success achieved by the enterprise has influenced around 200 women of Krishnagiri district and had motivated them to involve in processing activities. The products gave good feedback from the people from the surrounding area and preference to purchase the home-made products is gaining momentum. Marketing of products extended to local fairs, festivals, exhibitions and markets. Mrs. Girija gained self-confidence and sought financial assistance from NABARD for expanding her enterprise through marketing hub to be established in Krishnagiri town limits for easy approach to the local buyers. Thus, with continued support from KVK and guidance she has got a good opportunity to grow well socio economically and

also motivates other farm women of unemployed nature to venture into food enterprises for improved livelihood.

**7. Contact details:**

Name : Mrs. S. Girija  
 Address : W/o. Sivashankaren,  
 Traditional Women Farmer Producer Group,  
 Mathur, Krishnagiri District - 635 203



Value Addition in Millets - Mrs. Girija Women Entrepreneur

Value Addition in Millets - FPO - Giri Traditional Organic Outlet



Value Addition in Millets - Hand-on Training on Value Addition

## 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 the most of the farmers are using smart phones, our KVK initiated a step to utilizing for the effective transfer of technology for which one of the major social media networks namely “WhatsApp” has been taken as a tool to interact with the target group of farmers. We created WhatsApp Community group called “ICAR KVK Krishnagiri” on 31.12.2022 with a member of 650 progressive (5 Groups) farmers across the district. The group is very much active with the participants of almost all the farmers who share the information on latest technologies on agriculture and allied subjects including the marketing and value addition. It is very much helpful to the farmers for field diagnostic problems through which the farmers interact with the scientists and get the solutions for their field problems. Outbreak of pest and diseases information also forecasted.
- b. A YouTube channel "<https://www.youtube.com/@ICARKVKKRISHNAGIRI>" was created by KVK and Success stories and few latest technologies have been webcasted.
- c. A Facebook profile "<https://www.facebook.com/kvk.krishnagiri/>" for posting Ongoing activity, Past event, Future event and providing relevant details of marketing products of KVK Krishnagiri.
- d. A Twitter profile for "[https://x.com/kvk\\_krishnagiri](https://x.com/kvk_krishnagiri)" post sharing events and Trending Hash Tag to popularize the activity or programme.
- e. A Website for KVK Krishnagiri " <http://krishnagirikvk.org/>" for our KVK Profile and more details.
- f. We manage a Kisan Sarathi Portal with a database of 26,032 farmers, offering real-time phone call support and advisory services to assist them in 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	15,307	28	12,000	20,000
Foliar nutrition supplementing of micro nutrient	8,035	35	10,000	18,000
Fodder production techniques	1,651	30	5,000	10,000

**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	32,756	20,204	23,565	47,61,07,260	<ul style="list-style-type: none"> <li>✓ 17 Front Line Demonstration conducted covering 78 ha and 170 Farmers.</li> <li>✓ Organized 62 Training were covering 1,240 Farmers</li> </ul>	State Department of Horticulture, NABARD - Krishnagiri	Yield increased 42.27%
2	Micronutrient Management in Mango	IIHR	12,294	9,615	42,843	41,19,35,445	<ul style="list-style-type: none"> <li>✓ Conducted 14 Front Line Demonstration Conducted 25 methods demonstration</li> <li>✓ Provided 18 mobile advisory service to farmers</li> <li>✓ Spread of this technology through Newspapers</li> </ul>	State Department of Horticulture - Krishnagiri	Yield increased 28.46%
3	Integrated Crop Management in Finger Millet	UAS	21,317	12,415	22,167	27,52,03,305	<ul style="list-style-type: none"> <li>✓ Conducted Front Line Demonstration and Trainings</li> </ul>	State Department of Agriculture - Krishnagiri	Yield increased 17.14%
4	Farm Mechanization in Paddy	TNAU	8,465	10,245	40,615	41,61,00,675	<ul style="list-style-type: none"> <li>✓ Training and Demonstration</li> </ul>	State Department of Agriculture - Krishnagiri	Yield increase 21.94%
5	Farm Mechanization in Groundnut Cultivation	TNAU	13,578	9,255	27,830	25,75,66,650	<ul style="list-style-type: none"> <li>✓ Training and Demonstration</li> </ul>	State Department of Agriculture - Krishnagiri	Yield increase 7.87%

**Box item for APR 2024**

Mr. Somasundaram, a farmer from Periyakottapalli panchayat Krishnagiri District, transformed his 5-acre farm by adopting modern Integrated Crop Management (ICM) and Integrated Farming Systems (IFS) after facing challenges with traditional methods like high pest issues, degraded soil, and low profits (Rs. 75,000/year). With training from Krishi Vigyan Kendra (KVK), he reduced costs for pesticides and weed management, improved soil health, and added income through poultry and goat rearing, boosting his annual profit to Rs. 2,42,000. This shift showcases how sustainable practices can enhance yields, diversify income, and improve livelihoods.

**Mr. Somasundaram** S/o. Muniyappan,  
Periyakottapalli village, Krishnagiri District.



## **ENTREPRENEURSHIP DEVELOPMENT OF MORINGA BASED FOOD PRODUCTS:**

KVK Krishnagiri empowered the farm women on development of moringa based products under SCSP Programme. There is enormous production of moringa in our district, and farmers get low price during seasonal glut. Moreover, they lack knowledge on postharvest processing and scientific knowledge of preservation technologies.

### **BACKGROUND OF THE INTERVENTION:**

Mrs. Deepalakshmi aged 29 was a resident of Mathur educated up to 11<sup>th</sup> got married soon and having 2 sons, lives with her husband in a remote village. She is downtrodden and faces severe hurdles for her livelihood. She holds 5 cent of land and cultivates moringa in her field. Her income was not sufficient to educate her sons and thought of some entrepreneurial activity. so she approached the KVK along with her mother to attend the training programme on EDP on moringa based products. There were more than 100 moringa trees grown organically in her field, fresh leaves and the moringa goes waste and deteriorates easily fetching low price with low profit.

The progress achieved by the entrepreneur is as follows:

<b>Year</b>	<b>Intervention of KVK</b>	<b>Enterprise effect</b>
2024	Skill training, demonstration of moringa based products-RTE and RTU Aesthetic products from 3.7.24 till 7.10.24 (7 days Programme)	Participation in the training programme and knowledge enhancement.
	Branding, Licensing, Packaging and Marketing	Brand name in the name of GIRI traditional organic Outlet in Mathur with FSSAI NO: 22424103000090.

### **Impact:**

Mrs. Deepalakshmi utilized the brand name of GIRI Traditional organic outlet at Mathur in marketing the products like moringa soup mix, moringa health mix. moringa chutney mix, moringa rasam mix, spice mix, adai mix, and RTE and RTU moringa products which were appealing to the consumers due to appearance, taste, aroma, and organoleptic characteristics. She obtained an income of RS 25,000 Monthly through sale Of organic moringa food products which increased the livelihood and economic independence to meet her family needs.



## Cases of large-scale adoption/impact of specific technologies

### MANAGEMENT OF MANGO FRUITFLY

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#### 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 percent 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 percent 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<sup>0</sup>C to 40<sup>0</sup>C during April to May and the lowest temperature 15<sup>0</sup>C to 28<sup>0</sup>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 percent of the mango produced is consumed for table purpose and 15 percent 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 regions 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 2023-2024. 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.

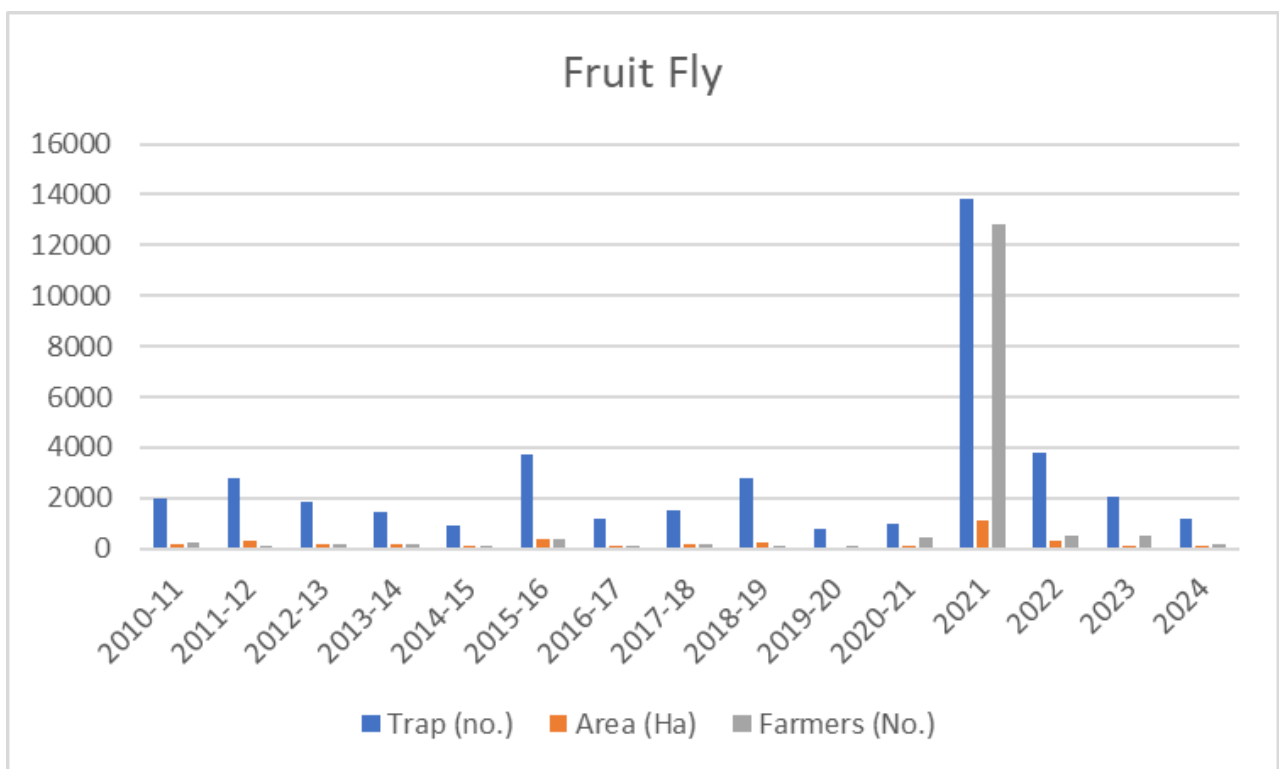
Regional Research Station, TNAU at Paiyur has supplied is free of cost to the farmers during 2014-2015 under the special scheme.

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	1962	201	256
2011-12	2801	280	140
2012-13	1837	188	180
2013-14	1421	145	150

Year	Trap (no.)	Area (Ha)	Farmers (No.)
2014-15	927	98	92
2015-16	3702	370	395
2016-17	1181	119	132
2017-18	1498	145	182
2018-19	2756	250	120
2019-20	791	65	124
2020	1000	97	420
2021	13803	1080	12803
2022	3767	336	490
2023	2062	138	482
2024	1179	122	177



### 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
NABARD, Salem	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 <i>Tuta absoluta</i> , <i>EPN</i> , 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**



NATIONAL MEDICINAL PLANTS BOARD (Ministry of AYUSH) for deliberation on "Ashwagandha" - A Health Promotor at Dharmapuri Dt



Received VEERA THAMIZHACHI Award from Tmt. B. Farida Nawab, Municipal Chairman, Krishnagiri for Magalir Sathanai Vizha 2024 at Krishnagiri on 2nd March 2024



Mr. M. Govindhasamy, an organic farmer from Kalvehalli village of Krishnagiri, received the Best Farmer Award from ICAR-NRCB, Trichy



Received appreciation certificate from District Collector for took part in the 30<sup>th</sup> All India Mango Exhibition from 13 Sep to 21-Oct-24



Best Farmer Award of MFOI 2024, Krishnagiri for Mr. Devarajan of Kalvehalli Village, Mr. Chilambarasan of Jagadap Village, Mr. Pattabi of Bannihalli Village, Mr. Ram of Karadikollapatti Village, Mr. Ravikumar of Dasaripalli Village, Mr. Muniyappan of Kandhikuppam Village, Mrs. Sujatha of Maharajakadai Village, Mrs. Deepa of Mathur Village, Mr. Chakkaravathi of Arasampatti Village, Mr. Venkatachalam of Santhur Village, Mrs. Ramya of Periyakottapalli Village, Mr. Inbarasan of K.Poosaripatti Village, Mr. Kalaimani of Thinnur Village, Mr. Ramachandiran of Murugapatti Village, Mr. Rajasekar of Bargur Village by ICAR-KVK, Krishnagiri & Krishi Jagran, Krishnagiri

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**Important Visitors to KVK during 2024**



CDB Director participated in CDB Foundation Day



Lead Bank Manager participated in Kisan Mela Programme



JDA Participated in Organic Farming Training Programme



TNBRD President and JDA Krishnagiri participated in 16<sup>th</sup> SAC



Lead Bank Manager participated in Plant4Mother Programme







Deputy Director of Horticulture distributed Coconut Seedling under SCSP Programme





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**PHOTOS**

**OFTs**

	
<p>Assessment of Early Blight disease management technologies in Tomato</p>	<p>Suitability of Cover crop in Mango orchards of Krishnagiri district</p>
	
<p>Assessment of Banana Cultivars for higher yield</p>	<p>Assessment on high yielding Horsegram varieties (ATPHG 11 and Paiyur 2)</p>

**FLDs**

	
<p>Demonstration on Rhizomerot management practices in Turmeric</p>	<p>Demonstration on super fine Paddy variety VGD 1 under Organic Farming</p>
	
<p>Demonstration of Tick Shield for control of tick infestation in dairy cows</p>	<p>Demonstration of herbal repellent for the management of Wildboar</p>

**Training**



On Campus Training - ICM in Mango



Off Campus Training - Disease Management in Sheep and Goat



Youth Training - Integrated Farming System



Sponsored Training - Organic Farming (SAMETI)



Vocational Training - Training on Coconut Tree Climbing using Tree Climber Machine



Extension Functionaries

**Extension Activities**

**Field Day**



Field Day - Demonstration on super fine Paddy variety VGD 1 under Organic Farming



Field Day - Demonstration on Groundnut seed drill (ANGRAU model)

**Scientist Visit to Farmers Field**



Diagnostic Field Visit - Banana



Diagnostic Field Visit - Tomato

**Exhibition**



Exhibition - 30th All India Mango Exhibition



Exhibition - State Level Mega Farmers Day 2024



Kisan Mela



Group Discussion with Farmers



Animal Health Campaign



Exposure Visit - Under Skill training on Organic Cultivator

	
<p>Soil Health Campaign</p>	<p>Seminar - IPM in Tomato</p>
<p style="text-align: center;"><b>Method Demonstration</b></p>	
	
<p>Waste Decomposer for Composting Farm Waste</p>	<p>Use of Nano Methicone spray and Megatex spray in Dairy Cattle</p>
	
<p>Celebration of Important Days - Parthenium Awareness Week</p>	<p>Awareness Programme - Tree Plantation under Ek Ped Maa Ke Naam' Plantation Drives</p>
	
<p>Lecture Delivered as a Resource Person - Sustainable Lifestyle Workshop for National Green Corps</p>	<p>Radio Talk - Natural Farming</p>

<b>Swachhtha Activities</b>	
	
SHS Campaign 2024 - Awareness to students	Swachhtha Pakhwada - Awareness creation
	
SHS 2024 - Join hands to raise awareness	SHS 2024 - Black spot identification and cleaning
<b>Important Events</b>	
	
Womens Day 2024	Celebration of Golden Jubilee of KVK
	
World Soil Day 2024	Kisan Diwas 2024
<b>Distributions</b>	
	
Seedling Distribution - Amla & Mango	Seedling Distribution - Coconut

SAC

 <p>ICAR - KRISHI VIGYAN KENDRA Krishnagiri District செளந்தம அறிவியல் கழகம், கிருஷ்ணகிரி</p> <p>ICAR - KRISHI VIGYAN KENDRA Krishnagiri District ICAR சௌந்தம அறிவியல் கழகம் செளந்தம கிராமம்</p> <p>SCIENTIFIC ADVISORY COMMITTEE MEETING அறிவுசார் ஆலோசனைக் குழு கூட்டம்</p> <p>15.08.2024</p>	
<p>16th SAC Meeting</p>	<p>SAC Meeting - Presentation by Senior Scientist and Head</p>
<p><b>CFLD Pulses</b></p>	<p><b>CFLD Oilseeds</b></p>
 <p>ICAR - KRISHI VIGYAN KENDRA Krishnagiri District செளந்தம அறிவியல் கழகம், கிருஷ்ணகிரி</p> <p>ICAR - KRISHI VIGYAN KENDRA Krishnagiri District செளந்தம அறிவியல் கழகம், கிருஷ்ணகிரி</p> <p>National Food Security Mission (Pulses) 2023-2024</p>	 <p>ICAR - KRISHI VIGYAN KENDRA Krishnagiri District செளந்தம அறிவியல் கழகம், கிருஷ்ணகிரி</p> <p>ICAR - KRISHI VIGYAN KENDRA Krishnagiri District செளந்தம அறிவியல் கழகம், கிருஷ்ணகிரி</p> <p>National Food Security Mission (Oilseeds) CLUSTER DEMONSTRATION ON INTEGRATED MANAGEMENT IN GROUNDNUT 2023-2024</p>
<p>CFLD Pulses - Redgram - Input Distribution</p>	<p>CFLD Oilseeds - Groundnut - Input Distribution</p>
	
<p>CFLD Pulses - Redgram - Field Visit</p>	<p>CFLD Oilseeds - Groundnut - Field Visit</p>

**One photo for Annual Zonal Award**



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