ICAR -KVK KRISHNAGIRI
ANNUAL PROGRESS REPORT

(1st January 2022 to 31st December 2022)

1. GENERAL INFORMATION ABOUT THE KVK

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

Name of the KVK as per official records (MoU)	:	ICAR – Krishi Vigyan Kendra
Address	:	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.24, Second floor, Cresent Park Street, T. Nagar, Chennai – 600 017
Phone	:	044- 24360234
Fax No.	:	044- 24361319
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 Number.

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

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

1.5. Month and year of establishment: September and 1994

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

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

1.6.Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq. m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq. m)	Status of construction
1	Administrative Building	ICAR	November 2012	550	53,00,000	-	-	-
2	Farmers Hostel	ICAR	November 2012	300	35,00,000	-	-	-
3	Staff Quarters (No.)	-	-	-	-	-	-	-
4	Demonstration Units:							
	i. Poultry unit for desi bird	ICAR	March 2019	40.13	1,04,250	-	-	-
	ii. Slatted floor goat unit	ICAR	December 2014	71	62,000	-	-	-
	iii. Vermi compost	ICAR	March 2019	13.4	30,800	-	-	-
	iv. Azolla unit	ICAR	March 2019	9.29	15,000	-	-	-
	v. Nutritional garden	ICAR	December 2020	323.71	13,880	-	-	-
	vi. Honey Bee Rearing	ICAR	October 2019	-	16,116	-	-	-
	vii. Shade net nursery unit	ICAR	December 2019	83.61	69,609	-	-	-
	viii. Medicinal plants demonstration unit	ICAR	March 2020	404.64	11,250	-	-	-
	ix. Banana macro propagation unit	ICAR	December 2021	50	39,998	-	-	-
	x. Sheep rearing unit	ICAR	November 2021	53.51	1,25,148	-	-	-

	xi. Ultra high density plantation in mango	ICAR	October 2013	607.03	11,100	-	-	-
	xii. High density plantation in amla	ICAR	September 2014	607.03	9,000	-	-	-
	xiii. High density planting in custard apple	ICAR	September 2014	404.6	5,000	-	-	-
	xiv. Future fruit crops	ICAR	August 2021	404.64	7,130	-	-	-
	xv. Mother plant in citrus	ICAR	January 2017	404.6	3,000	-	-	-
	xvi. Agro-forestry germination bed	ICAR	December 2022	28	30,000			
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 31.12.2022	Present status
Two wheeler Hero Honda – CD Dawn	2006	39,890	1,27,517	Good
Two wheeler Hero Honda Passion	2009	50,000	1,19,742	Good
Jeep – Mahindra Bolero plus	2009	6,00,000	2,63,745	Good
Tractor – MF 5245 DI	2011	5,00,000	1307.1 (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	Working
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

S. No.	Date	No of Participants	Salient Recommendations
1	10.02.2022	37	SAC Details given below

PROCEEDINGS OF SCIENTIFIC ADVISORY COMMITTEE MEETING

VENUE : **ICAR - KVK, Krishnagiri** DATE: **10.02.2022**

No. of participants : **37 Nos.**

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

Member from ATARI - X : **Dr. A. Bhaskaran,**
Principal Scientist, ATARI, Zone – X Hyderabad

Member from TNAU : **Dr. M. Vijayakumar,**
Programme Coordinator,
ICAR - KVK, Dharmapuri.

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

Members Participated:

S. No	Name and Designation	Department
1	Mr. S. Ramesh, President	Tamil Nadu Board of Rural Development, Chennai.
2	Dr. A. Bhaskaran, Principal Scientist	ATARI, Zone –X, Hyderabad.
3	Dr. P. Parasuraman, Professor and Head	Regional Research Station (TNAU), Paiyur.
4	Mr. M. Rajendran, Joint Director of Agriculture	Department of Agriculture, Krishnagiri.
5	Dr. L. Rajendran, Regional Joint Director of Animal Husbandry	Department of Animal Husbandry, Krishnagiri.
6	Mr. C. Ram Prasadh, Deputy Director of Horticulture	Department of Horticulture, Krishnagiri.
7	Mr. S. Jeyaprakash, DDM – Krishnagiri	NABARD, Krishnagiri.
8	Dr. S. T. Selvam, Dean	College of Poultry Production Management, (TANUVAS), Mathigiri, Hosur.
9	Mr. M. Baskaran, Executive Engineer	Agricultural Engineering Department, Krishnagiri.
10	Mr. R. Mahendran, LDM, Krishnagiri	Lead Bank Manager, Indian Bank, Krishnagiri.
11	Dr. L. Jeeva Jothi, Professor and Subject Expert (Horticulture)	Regional Research Station (TNAU), Paiyur.
12	Dr. M. Vijayakumar, Programme Co-Ordinator	ICAR - KVK, Dharmapuri.
13	Mr. P. Chinnasamy, Programme Head	All India Radio, Dharmapuri.

S. No	Name and Designation	Department
14	Dr. S. Tamil Maran, District Executive Officer	Tamil Nadu Rural Transformation Project, Krishnagiri.
15	Dr. N. Muniappan, Assistant Professor, VUTRC, Krishnagiri	Veterinary University Training and Research Centre, TANUVAS, Krishnagiri.
16	Dr. R. Thangadurai, Assistant Professor (VAS)	ICAR - KVK, Dharmapuri.
17	Mr. V. Suresh, Senior Scientist and Head (i/c)	ICAR - KVK, Thiruvannamalai.
18	Mr. N. Arulmurugan, Assistant Director of Horticulture	Department of Horticulture, Bargur Block, Krishnagiri.
19	Mrs. E. Shanmugapriya, Assistant Director of Sericulture	Department of Sericulture, Krishnagiri.
20	Mr. T. Munirathinam, Forest Range Officer	Social Forestry and Extension Division, Krishnagiri.
21	Mr. C. Panneerselvam, Agriculture Officer (FTC)	Department of Agriculture, Krishnagiri.
22	Mr. S. Gopala Krishnan, Transmission Executive	All India Radio, Dharmapuri.
23	Mr. C. Senthil Nathan, Forester, SF & Extension Division	Social Forestry and Extension Division, Krishnagiri.
24	Dr. R. Kailai Mannan, Agriculture Officer (Agri Business)	Department of Agricultural Marketing and Agri Business, Krishnagiri.
25	Mr. B. Subbiah Pandian, Assistant Engineer	District Industries Centre, Krishnagiri.
26	Mr. N. Govindasamy, Organic Farmer & Yoga Master	Farmer Representative, Kalvehalli Village, Krishnagiri District.
27	Mr. A. Kalaimani, Farmer & Ex-Army	Farmer Representative, Belavarthi Post, Krishnagiri District.
28	Mr. P. Narayana Reddy, Organic Farmer	Farmer Representative, Alasapalli Village, Hosur Block, Krishnagiri District.
29	Mr. K. Ramesh Babu, Organic Farmer	Farmer Representative, Kelamangalam, Denkanikotta Taluk, Krishnagiri District.
30	Mrs. M. Vijaya, Farmer	Farmer Representative, Kottaiyoor Village, Kammampalli Post, Krishnagiri District.
31	Mr. P. Munirathinam, Farmer	Farmer Representative, Santhampatti Village, Kullampatti Post, Bargur Block, Krishnagiri District.
32	Mrs. M. Deepa Entrepreneur	Farmer Representative, Jakappan Nagar, Krishnagiri District.
33	Mrs. L. Gayathri, Entrepreneur	Farmer Representative, Majith Golla Halli Village, Krishnagiri District.

S. No	Name and Designation	Department
34	Mr. M. Manivasan, Managing Director	Special Invitee, Vfarm Organic Foundation, Perambalur.
35	Mr. S. Ganesan TSRO - Tamil Nadu	Special Invitee Tamilnadu Social Rights Organization, Coimbatore.
36	Mr. V. Shanmugam TSRO - Tamil Nadu	Special Invitee Tamilnadu Social Rights Organization, Ramanathapuram.
37	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 initially 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	✓ Motivate farmers to cultivate Organic Farming & Natural Farming. ✓ Create awareness on agro forestry schemes. ✓ Promote Muccuna Seed production through PPP Mode.
Dr. A. Bhaskaran, Principal Scientist, ICAR, ATARI, Hyderabad	✓ Revolving Fund should be increased. ✓ Increase the farmers database from all blocks of Krishnagiri District. ✓ Promote NEWSONAIR Mobile Application to Farmers. ✓ Small voice clippings on technologies related to agriculture and allied sectors may be sent to AIR Dharmapuri.
Dr. P. Parasuraman, Professor and Head, Regional Research Station (TNAU), Paiyur	✓ New Varieties introduced by TNAU may be popularized and awareness to be created. ✓ Create awareness and facilitate to promote the TNAU crop boosters.
Dr. M. Vijayakumar, Programme Coordinator, ICAR - KVK, Dharmapuri	✓ Popularize CO 5 fodder slips. ✓ Popularize fastest growing agro-forestry seedling - Melia Dubia (Mettupalayam Forest College). ✓ Give more technical audio clips to AIR Dharmapuri.

Dr. L. Jeeva Jothi, Professor (Horticulture), Regional Research Station (TNAU), Paiyur	✓ KVK may give training to Nursery men, FPOs about Brinjal Grafting Techniques.
Dr. L. Rajendran, Regional Joint Director of Animal Husbandry	✓ Ranikhet disease awareness should be done.
Mr. S. Jeyaprakash, DDM NABARD - Krishnagiri	✓ Create awareness on schemes of line departments to FPOs through convergence.
Mr. M. Rajendran, Joint Director of Agriculture	✓ Promote Pulses in Paddy cultivating areas.
Mr. M. Baskaran, Executive Engineer, AED Krishnagiri	✓ KVK may organize training programme for custom hiring / value addition centers. ✓ More Mechanization trainings may be conducted.
Dr. S. Tamil Maran, District Executive Officer, TNRTP Krishnagiri	✓ KVK may work together with TNRTP Farm School.
Mr. C. Ram Prasadh, Deputy Director of Horticulture	✓ Give more training on IPDM in Mango. ✓ KVK may disseminate latest technologies under poly house and green house cultivation for Floriculture farmers.
Dr. N. Muniappan, Assistant Professor, VUTRC, Krishnagiri	✓ KVK may organize buyer and seller meet for Native Chicken.
Dr. C. Karpagam, Principal Scientist (Agrl. Extension), ICAR-NRCB, Trichy (Recommendations by Mail)	✓ Banana sakthi for micro nutrient in banana cultivation (FLD/OFT). ✓ Popularization of Macro propagation technology by model unit at KVK. ✓ One day training programme for the farmers about banana cultivation at ICAR NRCB.
Dr. S. T. Selvam, Dean, College of Poultry Production Management, (TANUVAS), Mathigiri, Hosur	✓ Specialized Training and Value-Addition may be given for Dairy and Poultry Farmers. ✓ KVK may Promote Quail Rearing. ✓ KVK may create awareness about the paid training of CPPM on "Hatchery Supervisor and Quail Farming".
Dr. R. Thangadurai, Assistant Professor (VAS), ICAR – KVK, Dharmapuri	✓ Awareness on FMD Vaccine and Ranikhat Vaccine may be done. ✓ Make awareness about Quail rearing and Pig farming.

	✓ KVK may promote Mineral Mixture and Salt licks may sold under RF.
Mrs. E. Shanmugapriya, Assistant Director of Sericulture	✓ Sericulture officials may be invited during KVK training programmes to promote the sericulture schemes.
Dr. R. Kailai Mannan, Agriculture Officer (Agri Business)	✓ Create awareness on Pradhan Mantri Formalisation of Micro Food Processing Enterprises Scheme (PMFME). ✓ KVK may scale up millet production in Krishnagiri District.
Mr. T. Munirathinam, Forest Range Officer	✓ KVK may give the list of most wanted seedlings by the farmers for seedling production by forestry department through agro-forestry scheme.
Mr. P. Chinnasamy, Programme Head, AIR Dharmapuri	✓ KVK may give technical message to AIR Dharmapuri. ✓ Successful farmers mobile number in Krishnagiri district may be provided to AIR Dharmapuri.
Mr. M. Manivasan, Managing Director Vfarm Organic Foundation, Perambalur.	✓ More number of trainings on organic farming to be conducted. ✓ Various technologies to be disseminated through SMS. ✓ Trainings to be conducted on waste management and composting methods.
Mr. S. Ganesan, Tamilnadu Social Rights Organization, Coimbatore	✓ Awareness creation and trainings on medicinal plants cultivation may be done. ✓ Millet based foods are to be promoted.
Mr. N. Govindasamy, Farmer Representative	✓ KVK may facilitate marketing of Organic Products.
Mrs. L. Gayathiri, Farmer Representative	✓ Create awareness among people usage of Bio-degradable materials instead of plastics.
Mr. P. Munirathinam, Farmer Representative	✓ Training on Bee-keeping may be conducted. ✓ KVK may sell Honey Bee Box with affordable price for the benefit of Farming Community.
Mr. P. Narayana Reddy, Farmer Representative	✓ KVK may create a platform for organic market.

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2. DETAILS OF DISTRICT (2022)

2.0.Operational jurisdiction of KVKs

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

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

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

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

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

S. No	Agro-climatic Zone	Characteristics
		• The maximum temperature ranges from 20°C to 47°C and minimum from 10°C to 31°C; the evapotranspiration is very high. The driest months are January and February. • The major soil types occurring in the zone are 1) Red non-calcareous, 2) Red- calcareous 3) Alluvial 4) Black soil 5) Hill soil 6) Forest soil 7) Saline/alkali soil. Of this major area comes under red non-calcareous and red calcareous soils. In the above major soil types, saline & alkali soil also occur in sizable proportion in the zone. Totally 1.7 lakh ha of area is affected by high salinity and alkalinity. Out of this 0.2 lakh ha is under Non-calcareous type and 1.5 lakh ha under calcareous type • Paddy (1.29 lakh ha), sorghum (1.43 lakh ha),finger millet (1 lakh ha), little millet (0.45 lakh ha) horsegram, blackgram, redgram & greengram • Among the oilseeds, groundnut (2.11 lakh ha), sesame (0.21 lakh ha), sunflower (0.06 lakh ha) and castor (0.25 lakh ha) • Cotton (0.33 lakh ha), sugarcane (0.45 lakh ha) • The spices and condiments such as coriander, chillies, turmeric are being cultivated in small portions throughout the zone • Vegetables (0.24 lakh ha), tapioca (0.59 lakh ha), mango (39,680 ha). The other crops are: potato (0.25 lakh ha), banana (0.28 lakh ha) and onion (0.08 lakh ha).
2	**AES – I** (Krishnagiri, Veppanapalli, Bargur, Uthangarai and Mathur blocks)	Red soil, altitude 1000 – 2000 ft, well irrigated and rainfed
	AES – II (Kaveripattinam block)	Red soil, altitude 1000 – 2000 ft, canal irrigated
	AES – III (Hosur, Shoolagiri, Thally and Kelamangalam blocks)	Red soil, altitude 2000 – 3000 ft, well irrigated and rainfed

2.3. Soil types

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

2.4. Area, Production and Productivity of major crops cultivated in the district for 2022

Kharif:

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	Paddy	20,824	9,10,009	43.7
2	Sorghum	4,224	68,429	16.2
3	Finger millet	32,468	10,43,846	32.15
4	Little millet	306	3,305	10.8
5	Pearl millet	709	21,873	30.85
6	Maize	1,088	42,160	38.75
7	Red gram	10,285	1,09,021	10.6
8	Green gram	750	5,505	7.34
9	Black gram	2,125	20,251	9.53
10	Groundnut	12,550	3,20,653	25.55
11	Sesame	436	4,085	9.37
12	Cotton	1,708	11,768	6.89
13	Banana	675	3,35,151	496.52
14	Mango	42,375	3,23,321	7.63
15	Chillies	620	2,988	4.82
16	Brinjal	2,513	4,57,366	182
17	Tomato	11,112	21,96,842	197.7
18	Cabbage	14,369	87,14,799	606.5
19	Sugarcane	455	2,93,475	645
20	Turmeric	1,699	39,927	23.5

Rabi:

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	Paddy	9,659	3,68,684	38.17
2	Finger millet	4,509	2,20,761	48.96
3	Maize	105	7,270	69.24
4	Horse gram	6,623	60,932	9.2
5	Green gram	78	508	6.51
6	Black gram	709	4,906	6.92
7	Groundnut	870	23,003	26.44
8	Banana	450	2,19,344	487.43
9	Chillies	125	591	4.73
10	Brinjal	630	1,14,030	181
11	Tomato	3,175	6,23,888	196.5
12	Cabbage	235	1,41,294	601.25

2.5. Weather data:

Month	Rainfall (Mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
January 22	10	29.68	23.26	68.20
February 22	0	31.46	26.07	40.01
March 22	15.2	33.89	28.61	51.92
April 22	14.8	35.39	30.14	61.17
May 22	146.1	34.34	27.94	63.61
June 22	123.8	35.29	29.50	65.91
July 22	83.6	32.34	26.94	69.28
August 22	180.8	31.75	26.28	71.32
September 22	328.2	31.98	25.61	68.65
October 22	175.8	30.43	27.28	70.45
November 22	90.2	29.78	25.76	73.79
December 22	55.6	27.47	24.65	73.42

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

Category	Population	Production	Productivity
Cattle			
Crossbred	262829	225.168 tons	1600 lit/annum
Indigenous	100434	123.377 tons	600 lit/annum
Buffalo	18051	120.157 tons	1200 lit/annum
Sheep			
Crossbred	29993	371.952 tons	20 kg b.wt
Indigenous	341887	456.258 tons	14 kg b.wt
Goats	154809	220.122 tons	14 kg b.wt
Pigs	4064	580.167 tons	60 – 70 kg b.wt
Crossbred	-	-	-
Indigenous	-	-	-
Rabbits	-	-	-
Poultry			
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 (2022)

S. No	Taluk/ Mandal	Name of the block	Name of the village	Year of adoption	Major crops & enterprises	Major problem identified	Identified Thrust Areas
KVK adopted villages							
1	Krishnagiri	Shoolagiri	Shoolagiri, Uthanapalli, Keeranapalli	2020	French beans, Chilli	Improper crop management in French beans, Low yield due to lack of awareness on latest hybrids resistant to pest and diseases	ICM, IPDM, IPM
2	Krishnagiri	Uthangarai	Uthangarai, Valathanur, Karapattu	2020	Tapioca, Maize, Chickpea	Improper crop management, Improper Nutrient Management, Low yield due to cultivation of existing local varieties, Yield loss due to incidence of pest and disease	ICM, IPDM
3	Krishnagiri	Mathur	Salamarathupatti, Athipallam, Olapatti, Sulakarai, Kallavi	2019	Mango, Cotton, Turmeric	Improper Crop Management, Improper Nutrient Management, Low yield due to cultivation of existing local varieties, Unavailability of skilled labour in season & unaware of mechanical source	ICM, INM, Farm Mechanization
4	Krishnagiri	Kaveripattinam	Kaveripatinam, Jagatap, Sappanipatti, Pannanthur, Arasampatti	2017	Paddy, Fodder	Low yield due to repeated cultivation of existing variety	Varietal evaluation, ICT
6	Krishnagiri	Krishnagiri	Maharajakadai, Krishnagiri, Dhaseripalli, Kalliyur, Valluvarpuram,	2017	Tomato, Goat, Farm Mechanization	Improper Crop Management, Improper Nutrient Management, Low yield due to cultivation of existing local varieties, lack of awareness on newly released poultry breeds, lack of awareness of farm mechanization, Lack of awareness on social media for dissemination of information	ICM, INM, ICT, Farm Mechanization, Poultry

DFI villages							
1	Krishnagiri	Bargur	Bargur, Belavarthi, Varatanapalli, Keelpoonguruthi, Thinnur, Sakkilnatham	2018	Mango, Ragi, Horse gram, Onion	Improper Crop Management, lack of awareness of farm mechanization, Yield loss due to incidence of pest and disease	ICM, INM, Gummosis, Wild Menace
2	Krishnagiri	Krishnagiri	Krishnagiri, Sokkadi, Valluvarpuram, Maharajakadai, Dhaseripalli, Kalliyur	2017	Tomato, Sheep, Vegetable planter, Aseel, Desi-chicken, ICT, Seed drill	Lack of awareness in Poultry varieties, Lack of awareness on social media for dissemination of information	ICM, INM, ICT, Farm Mechanization

2.8. Priority/thrust areas

Crop/Enterprise	Thrust area
Paddy, Ragi, Horsegram, Tapioca, Onion, French Beans, Mango	Integrated crop management
Chickpea	Varietal evaluation
Maize, Paddy, Mango, Groundnut, Tomato	Integrated pest and disease management
Turmeric, Tomato, Cotton, Maize	Integrated Nutrient Management
Aseel Chick	Poultry Management, Nutrition Management
Sheep	Sheep Management
Fodder	Feeding management
Dairy Cow	Disease Management
Groundnut, Cotton, Multi Seed Drill	Drudgery reduction, Farm mechanization
Paddy, Banana	Information Communication Technology
Nutrigarden	Value addition

3. Salient Achievements

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

S. No	Activity	Target	Achievement
1	Technologies Assessed and refined (No.)	20	20
2	On-farm trials conducted (No.)	10	10
3	Frontline demonstrations conducted (No.)	25	25
4	Farmers trained (in Lakh)	0.0215	0.0215
5	Extension Personnel trained (No.)	222	222
6	Participants in extension activities (in Lakh)	0.51173	0.51173
7	Production and distribution of Seed (in Quintal)	51.649	51.649
8	Planting material produced and distributed (in Lakh)	57317	57317
9	Live-stock strains and finger lings produced and distributed (in Lakh)	1089	1089
10	Soil samples tested by Mini Soil Testing Kit (No)	982	982
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.)	231262	231262
14	No. of Soil Health Cards issued by Mini Soil Testing Kits (No.)	982	982
15	No. of Soil Health Cards issued by Traditional Laboratory (No.)	0	0

Salient Achievements by KVK during January – December 2022:

- To increase the quality and productivity of the mango by 30 - 40 %, foliar nutrition have been promoted by KVK. Total quantity of 5,948 kg of IIHR Mango special (Micronutrient formulation) produced and distributed to farmers. At present the technology has spread over an area of 22000 ha in the district.
- To reduce the Mango fruit fly incidence, KVK produced 3767 Mango fruit fly traps and distributed to farmers. Presently this technology spread over to 296 ha.
- Quality fodder seeds like Hedge Lucerne, Subabul, COFS 31, Fodder Cowpea, Stylo etc., (8.435 qtl.) were supplied to the farmers and the varieties have spread over an area of 3000 ha in the district.

4. TECHNICAL ACHIEVEMENTS

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

OFT (Technology Assessment)

No. of OFTs		Number of technologies		Number of locations (Villages)		Total no. of Trials / Replications / Beneficiaries	
Targets	**Achievement**	**Targets**	**Achievement**	**Targets**	**Achievement**	**Targets**	**Achievement**
10	10	80	80	10	10	80	80

FLD (crop/enterprise/CFLDs)

No of Demonstrations		Area in ha		Number of Farmers / Beneficiaries / Replications	
Targets	**Achievement**	**Targets**	**Achievement**	**Targets**	**Achievement**
25	25	57.8	57.8	291	291

Training

Number of Courses			Number of Participants	
Clientele	**Targets**	**Achievement**	**Targets**	**Achievement**
Farmers and Farm Women	91	91	1806	1806
Rural youth	7	7	153	153
Extn. Functionaries	10	10	222	222
Sponsored Training	3	3	98	98
Vocational Training	5	5	93	93

Extension Activities

Number of activities		Number of participants	
Targets	**Achievement**	**Targets**	**Achievement**
1077	1077	51173	51173

Seed Production (q)

Target	Achievement	Distributed to no. of farmers
51.649	51.649	388

Planting material (Nos)

Target	Achievement	Distributed to no. of farmers
57317	57317	382

Technology Assessments (OFTs) in Detail

OFT-1: Assessment of Chickpea varieties for higher productivity

1. **Thematic area** **:** Varietal Assessment
2. **Title** **:** Assessment of Chickpea varieties for higher productivity.
3. **Scientists involved** **:** SMS (Agronomy, Soil Science)
4. **Details of farming situation** **:**

Chickpea is cultivated in Krishnagiri district in an area about 100 ha. Among the pulse crop, Chickpea cultivate donly in few places. Due to its short duration nature, Chickpea cultivated both in Kharif and Rabi season. The soil type was black clay loam and it suits for Chickpea 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 in most of the field crops and horticultural crops.

5. **Problem definition / description:**

Most of the farmers repeatedly cultivating old variety CO 4which was highly susceptible to dry root and wilt because farmers are not generally practicing seed treatment and during maturity stage pod borer infestation also directly affects the yield and reduces. This OFT was conducted and assessed to check the performance of suitable Chickpea variety for Krishnagiri district.

6. **Technology Assessed:**

Technology Option 1	Cultivation of Super Annigeri 1
Technology Option 2	Cultivation of Nandyal Gram 49
Farmers practice	Cultivation of CO 4

7. **Critical inputs given:**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Super Annigeri 1 Seeds	15 Kg	1410	75 Kg	7,050
Nandyal Gram 49 Seeds	15 Kg	1370	75 Kg	6,850
Rhizobium	0.4 Kg	24	2 Kg	120
Phosphobacteria	0.4 kg	24	2 Kg	120
Field board	1 No.	200	5 Nos.	1,000
TOTAL				15,140

8. Results:

Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Average Number of Pods/plant
Farmers Practice Cultivation of CO 4	5	9.76	9682	1.31	18.5
Technology 1 Cultivation of Super Annigeri 1		12.33	25608	1.76	24
Technology 2 Cultivation of Nandyal Gram 49		10.67	18546	1.57	20.2

Description of the results:

The yield achieved from Super Annigeri 1 was found to be higher (12.33 qtl/ha) than Nandyal Gram 49 (10.67 qtl/ha) and the farmers check CO 4 variety (9.76 qtl/ha) in On Farm Trial result. The average number of pods per plant was found to be higher in Super Annigeri 1 (24), Nandyal Gram 49 (20.2), and farmers check CO 4 (18.5).Farmers obtained an average net return of (Rs. 25,608/-) per hectare in whereas it was (Rs. 18,546/-) in Nandyal Gram 49 and (Rs. 9,682/-) in the farmers check CO4 variety. The B:C ratio was higher in Super Annigeri 1 (1.76) than in Nandyal Gram 49 (1.57) and in the farmers' check CO 4 variety (1.31).

9. Constraints: Nil

10. Feedback of the farmers involved:

Farmers reported that the Super Annigeri 1 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:

Both cultivars, Super Annigeri 1 and Nandyal Gramme 49, performed well than farmers check old variety CO 4. From these evaluations, by comparing all the parameters, Super Annigeri 1 has a better cultivar and suit to cultivate in Krishnagiri tract.

OFT-2: Assessment of technology modules against mango gummosis

1. **Thematic area** **:** Integrated Disease Management
2. **Title** **:** Assessment of technology modules against mango gummosis.
3. **Scientists involved** **:** Senior Scientist and Head
4. **Details of farming situation** **:**

Mango considered as 'King of fruits', is the most important commercially grown fruit of India due to its wide range of adaptability, high nutritive value, richness in variety, delicious taste and excellent flavour. It is a rich source of vitamin A and C. The fruit, utilized raw or ripe, is well-liked by the people and has great export potential. Mango is well adapted to tropical and sub-tropical climates. It may not be desirable to grow mango commercially in areas above 600 m above MSL in subtropics Mango thrives well in places with annual rainfall in the range of 75 to 375 cm. It can also do well in areas having average annual rainfall of as low as 25 cm with irrigation during peak requirement of plant establishment and fruit development. Heavy rainfall prior to flowering induces excessive vegetative growth at the expense of flowering. Frequent rains and high humidity (about 80%) during flowering and fruit set are conducive to the incidence of pests and diseases and impair pollination and fruit set. In general, places with well distributed rainfall and dry summer are ideal for mango cultivation. Light rains during fruit development are good but heavy rains and hail cause damage to the fruits. It is better to avoid areas with heavy winds and cyclones, which may cause flower and fruit shedding and also breaking of branches.

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

5. **Problem definition / description:**

The disease symptoms of dieback on mango are commonly associated with drying and withering of twigs from top downwards, followed by discoloration, drying and eventual dropping of leaves. Other symptoms can also be observed on other parts of the tree, including reproductive structures. Advanced stages of the disease, branches dry one after another, resulting in the appearance of bare twigs and the decline of trees. Typically, a complete wilting and death of the affected mango trees may occur within weeks or few months after infestation with L. theobromae. Regrettably, once the symptoms of dieback are present, it is very hard to save the mango orchard or reverse the disease development. In the field, poor

orchard management and unfavourable environmental stresses such as drought, heat, sun scorch, water stress, salinity and nutritional deficiency, can also provoke the progress of disease. Studies have shown that most common varieties of mango are highly susceptible to dieback disease caused by L. theobromae. In general, dieback is a serious disease of mango, which causes damage to tree health and considerable loss of fruit yield. Thus, there is an urgent need to find innovative and safe solutions for this destructive disease. Hence this oft is proposed.

6. Technology Assessed:

Technology Option 1	Removal of infected twigs & branches Three sprays of Tebuconazole @ 0.1% at 15 days interval
Technology Option 2	Removal of infected twigs Two sprays of Chlorothalonil 2g/lt @ 15days interval
Farmers practice	Spraying of combination of fungicides during flowering to harvest

7. Critical inputs given:

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Tebuconazole	500 ml	620.00	2. 5 lits.	3100.00
Chlorothalonil	400 grams	860.00	2 kg.	4300.00
Field board	1 no.	200	5 no.	1000.00
Total				**8400.00**

8. Results:

Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Other performance indicators – Disease incidences
Farmers Practice	5	48.30	34110	1.89	32
Technology Option 1		53.35	50725	2.73	12
Technology Option 2		52.60	49560	2.69	24

9. Constraints: Nil

10. Feedback of the farmers involved:

Pruning of trees after harvest followed by Spraying of Tebuconazole @ 0.1 percent at 15 days interval was very effective for the management of the disease.

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

Further research is needed on management of the disease through bio agents.

OFT-3: Assessment of Technology modules against Tomato pinworm

1. **Thematic area** : Integrated Pest Management
2. **Title** : Assessment of Technology modules against Tomato pinworm.
3. **Scientists involved** : Senior Scientist and 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. 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	➢ Pheromone traps @ 8/acre, light traps @ 5/acre, Release of egg parasitoid, *Trichogramma pretiosum* @ 75,000/ha five times at weekly intervals starting from first notice of adults in the field and Alternating sprays of *Metarhizhium anisopliae* @ 2 mL/L and *Bacillus thuringiensis* @ 1 mL/L. When the incidence of Tuta is high, a need-based spray with spinosad 45 SC @ 0.25 mL/L or flubendiamide 5 SC @ 0.2 mL/L
Technology Option 2	➢ Use healthy seedlings for transplanting, pheromone traps @ 16 nos./ac, ➢ spray Chlorantraniliprole 18.5% SC @ 60 ml or Cyantraniliprole 10% OD @ 60 ml or Flubendiamide 20% WG @ 60 ml
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.)
Metariziumanisoliae	1 lit	364	5 lit	1820
Bacillus thuringensis	1 lit	558	5 lit	2790

Lure	30 nos.	29.50	885	885
Yellow sticky trap	30 nos.	29.50	885	885
Field board	1 no.	200	5	1000
Total				**7380.00**

8. Results:

Performance of the technology

Technology Option	**No. of trials**	**Yield (q/ha)**	**Net Returns (Rs. /ha)**	**B:C ratio**	**Other performance indicators – Disease incidences in fruiting stage**
Farmer Practice	5	614	274340	2.77	14.6
Technology Option 1		725	364080	3.54	5.2
Technology Option 2		704	340130	3.22	7.3

9. Constraints: Nil

10. Feedback of the farmers involved:

Integrated management of pinworm using lures, yellow sticky traps and chemical spray drastically reduced the pinworm incidences.

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

Further research is needed on increase the efficiency of lures with low cost.

OFT-4: Assessment on Efficiency of Foliar nutrition modules in increasing the yield of Turmeric

1. **Thematic area** : Nutrient Management
2. **Title** : Assessment on Efficiency of Foliar nutrition modules in increasing the yield of Turmeric.
3. **Scientists involved** : SMS (Soil Science) & SMS (Horticulture)
4. **Details of farming situation** : Irrigated, red sandy loam soil
5. **Problem definition / description:**

Improper nutrient management in turmeric results in yield loss upto 30 to 35% in farmers' fields. Though the primary nutrients have been addressed by most of the farmers, the micronutrients are generally ignored or neglected by them usually. Proper micronutrient management should be emphasized to obtain the potential yield in turmeric. 40-55 per cent of soils are moderately deficient in micronutrients like Zinc, while 25-30 per cent is deficient in Boron. Deficiency of other micronutrients occurs in 15 per cent of soils. Application of individual micronutrients after assessing the deficiency levels in soils and resolving it through individual fertilizers is a tedious process by the farmers. Hence to ease the process Indian Institute of Spices Research, Kozhikode has developed a composite micronutrient mixture for the benefit of turmeric farmers which is assessed in this OFT.

6. **Technology Assessed:**

Technology Option 1	FYM – 25 t/ha + Soil test based NPK application + Foliar application of IISR turmeric micronutrient mixture @ 5 g/litre on 60 and 90 DAS.
Technology Option 2	FYM – 25 t/ha + Soil test based NPK application + Foliar application of 375 g each of Borax, Ferrous sulphate, Zinc sulphate and Urea in 250 litres of Superphosphate solution/ha (15 kg Superphosphate dissolved in 25 lit.of water, stored overnight and the supernatant solution is made upto 250 lit.) – sprayed twice at 25 days interval during rhizome development stage.
Farmers practice	Injudicious soil application of NPK fertilizers and no proper micronutrient management.

7. **Critical inputs given:**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
IISR turmeric mixture	1 kg	334.00	5 kg	1,670.00
Borax	150 g	11.40	750 g	57.00
Ferrous sulphate	150 g	3.00	750 g	15.00
Zinc sulphate	150 g	10.50	750 g	52.50
Urea	150 g	0.90	750 g	4.50

Super phosphate	6 kg	57.00	30 kg	285.00
Field board	1 No.	200	5 No.s	1000.00
TOTAL				3,084.00

8. Results:

Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Average Rhizome weight / plant (g)
Farmers Practice	5	140.80	1,60,740	2.08	529.6
Technology 1 Soil test based NPK application + IISR turmeric mixture		172.82	2,44,704	2.73	650.3
Technology 2 Soil test based NPK application + Borax, Ferrous sulphate, Zinc sulphate dissolved in superphosphate solution with urea		167.75	2,34,050	2.81	631.2

9. Constraints: Nil

10. Feedback of the farmers involved:

IISR turmeric mixture as foliar spraying to turmeric gave a good quality rhizomes with increased yield. Also, the ease of using it was found to be good compared to the preparation of individual nutrient mixtures.

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

The average yield increase in IISR turmeric sprayed fields was 22.8 percent over the farmers practice. Awareness and availability of IISR turmeric mixture may be popularized as its efficacy is well perceived by the farmers.

OFT-5: Assessment on Efficiency of Zinc solubilising bacterial cultures for the optimization of yield in Tomato

1. **Thematic area** : Nutrient Management
2. **Title** : Assessment on Efficiency of Zinc solubilising bacterial cultures for the optimization of yield in Tomato.
3. **Scientists involved** : SMS (Soil Science) & SMS (Horticulture)
4. **Details of farming situation** : Irrigated, red sandy loam soil
5. **Problem definition / description:**

In Krishnagiri district 40-55 per cent of soils are moderately deficient in micronutrient zinc. The improper micronutrient management in tomato significantly affects the yield of the crop up to 25-35%. Though the availability of the soil nutrients is greatly influenced by many factors, they can be made available by the microbial consortia that can solubilize them in the soil. Hence here in this OFT, the Zinc solubilizing bacteria identified by TNAU is assessed with the Arka microbial consortia of IIHR to get the optimized yield in tomato.

6. **Technology Assessed:**

Technology Option 1	Seed treatment with Zn solubilizing bacteria @ 600 g/ha of seed + Soil application of Zn solubilizing bacteria @ 2 kg/ha mixed with FYM basally.
Technology Option 2	Soil drenching of Arka Microbial Consortia @ 10 g/lit of water and applied near to root zone on 10th day after transplanting + Soil application of AMC @ 12.5 kg mixed with 1.25 t FYM/ha and applied near to the root zone of the standing crop.
Farmers practice	Straight fertilizer application without any zinc solubilizing bacterial cultures usage.

7. **Critical inputs given:**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Zinc solubilizing bacteria	1 lit.	350.00	5 lit.	1,750.00
Arka microbial consortia	8 kg	1,216.00	40 kg	6,080.00
Field board	1 No.	200.00	5 No.s	1,000.00
TOTAL				8,830.00

8. **Results:**

Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Avg. No. of Fruits/Plant
Farmers Practice	5	590.00	2,63,960	2.77	34.52

Technology 1 Zinc solubilizing bacteria		712.50	3,51,410	3.39	38.64
Technology 2 Arka Microbial Consortia		655.00	3,10,160	3.20	41.80

9. **Constraints:** Nil

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

Cost of cultivation is considerably got reduced and the yield also got increased.

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

The yield increase over the farmers practice was 20.7 percent in the fields received the zinc solubilizing bacterial culture and 14.86 percent in the fields received the Arka microbial culture.

OFT-6: Assessment on Chilli Hybrids (Arka Saanvi and COCH1) for higher productivity

1. **Thematic area** **:** Varietal Assessment
2. **Title** **:** Assessment on Chilli Hybrids (Arka Saanvi and COCH1) for higher productivity.
3. **Scientists involved** **:** SMS (Horticulture)
4. **Details of farming situation** **:** Irrigated
5. **Problem definition / description:**

Chilli is cultivated in about 500 ha in the district under irrigated condition. This is cultivated as for green chilli for vegetable purpose. Mostly private hybrids are cultivated. These hybrids are susceptible to water stress, thrips, helicoverpa, powdery mildew and viral diseases; low yield (8.0 t/ha). Newly released chilli Hybrids are high yielding and tolerant to major pest and diseases.

6. **Technology Assessed:**

Technology Option 1	Chilli Hybrid – Arka Saanvi
Technology Option 2	Chilli Hybrid – CO 1
Farmers practice	Mahyco – Sierra, East west ulka

7. **Critical inputs given:**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Arka saanvi seedlings	6000 nos	2,100	30,000 nos	10,500
CO 1 seedling	6000 nos	2,100	30,000 nos	10,500
Field board	1 nos	200	5 nos	1,000
TOTAL				22,000

8. Results:

Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	% Powdery Mildew	Fruit Weight
Farmers Practice Mahyco – Sierra, East west ulka	5	160.36	97305	1.99	4.26	4.36
Technology 1 Chilli Hybrid – Arka Saanvi		198.17	147875	2.57	1.68	4.79
Technology 2 Chilli Hybrid – CO 1		181.18	126647	2.34	2.85	5.06

Description of the results:

Arka Saanvi recorded the highest yield of 198.17 ql/ha while the COCH 1 recorded 181.18ql/ha. The yield increase of 23.56 percentages was recorded inArka Saanvi Hybrid over the farmers practice. The net return of Rs.1,47,876 was obtained in T01 and Rs.1,27,158 in T02. The net return of Rs. 97305 was obtained in farmers practice. The B:C ratio of 2.57 was obtained in T01 followed by 2.35 in TO2.

It was concluded that Arka Saanvi recorded the highest yield and net returns when compared to COCH1. The pest and disease incidence in Arka Saanvi was less which contributed to higher income and yield. Hence it is recommended that farmers can cultivate Arka Saanvi for higher yield and net return

9. Constraints: Nil

10. Feedback of the farmers involved:

The farmers really realized the performance of Arka Saanvi and were convinced of the ICM practices

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

. From the above trial it is concluded that cultivation of Arka Saanvi recorded the higher yield, gross return, net return and B:C ratio compared to COCH1. The incidence of powdery mildew, CMV and Thrips was less in Arka Saanvi

OFT-7: Assessment of Modules for the enhancement of shelf life of Mango

1. **Thematic area** : Varietal Assessment
2. **Title** : Assessment of Modules for the enhancement of shelf life of Mango.
3. **Scientists involved** : SMS (Horticulture)
4. **Details of farming situation** : Irrigated
5. **Problem definition / description:**

Mango is cultivated in an area of around 40,000 ha in Krishnagiri district and average productivity of 4.5 t/ha which is low compared to the National average. The price of the mango drops down to even Rs.5 per kg during the peak season. The farmers incur heavy loss during the glut. The delayed ripening / increasing the shelf life of mango fetch better price and income to the farmers. Hence this OFT is proposed to compare two modules for delaying the ripening and increasing the shelf life of mango.

6. **Technology Assessed:**

Technology Option 1	Application of Nanotechnology with the chemical Hexanal
Technology Option 2	Application of 1 - Methyl Cyclo Propene (1 MCP)
Farmers practice	Washing, fungicide treatment

7. **Critical inputs given:**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Hexanol 1	1 Liter	-	5 Liter	-
1 MCP	1 Sachet	-	5 Sachet	-
TOTAL				-

8. **Results:**

Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. /ha)	B:C ratio	Delay in days
Farmers Practice Washing, fungicide treatment	5	45.92	58419	2.29	0
Technology 1 Application of Nanotechnology with the chemical Hexanal		45.92	68001	2.51	10
Technology 2 Application of 1 - Methyl Cyclo Propene (1 MCP)		45.92	62047	2.37	5

Description of the results:

TO1 is the application of Hexanol the Nanotechnology helped in delaying the harvest of Mango for 10 days compared to the farmers practice. Because of the delay in harvest the farmers were able to get a better price (on an average of Rs.5 per kg more than the market price).

The application of 1 MCP did not have a significant effect on delaying the harvest and in increasing the shelf life compared to the Hexanol.

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

The procedure of application of 1 MCP is cumbersome. Since it required closed atmosphere small farmers donot have pack house. The application of Hexanol is easier at the field level.

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

The effect of 1 MCP on the health aspects need to be studied and farmer friendly application methods need to be developed.

OFT-8: Assessment of Small Ruminant Mineral Mixture on growth performance in sheep

1. **Thematic area** **:** Livestock Nutrition Management
2. **Title** **:** Assessment of Small Ruminant Mineral Mixture on growth performance in sheep.
3. **Scientists involved** **:** SMS (Animal Science)
4. **Details of farming situation** **:** Semi Intensive system

On farm Trial was conducted in Moranmadugu/ Sokkadi Village of Krishnagiri block in Krishnagiri District.

5. **Problem definition / description:**

Sheep and goat are not supplemented with concentrate feed and mineral deficiency is common, causing decreased growth rate. Also there was lack of knowledge on Mineral deficiency among sheep and goat rearers. Commercial mineral mixtures comprising the essential minerals are available only for large ruminants like cattle and buffalo. Although, small ruminants have specific mineral requirements which are quite different from the large ruminants, are commercially not available to farmers. Hence the new technology of small ruminant's mineral mixture have been assessed on the growth performance of small ruminants.

6. **Technology Assessed:**

Technology Option 1	**TANUVAS Small ruminant Mineral mixture *(TANUVAS, 2019)*** Specific mineral requirement of sheep and goats which Contains Calcium, phosphorus, sulphur, Zinc, iron, copper, Manganese, Cobalt and Selenium. 15 gm per day / animal
Technology Option 2	**NIANP Small ruminants mineral mixture *(ICAR- NIANP, 2018)*** Formulated based on the specific mineral requirement of sheep and goat to meet 100% requirement of most deficient trace minerals and partially meet the requirement of other minerals . 15 gm per day / animal
Farmers practice	No mineral mixture feeding, Maintaining the flock normally with grazing, tree leaves, shrubs feeding.

7. **Critical inputs given:**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
TANUVAS Sheep and goat mineral mixture	25 kg	1500	125 kg	7500
NIANP Small ruminant Mineral Mixture (Sheep min)	25 kg	2000	125 kg	10000
TOTAL				17500

8. Results:

Performance of the technology

Technology Option	No. of trials	Average Body Weight gain (in Kgs)	Net Returns (Rs.)	B:C ratio	Data on Other performance indicators*
Farmers Practice	5	2.11	2386	1: 1.21	Avg. Daily Weight gain : 23.44 gm
Technology 1: TANUVAS Sheep and Goat Mineral Mixture		3.27	7943	1: 1.49	Avg. Daily Weight gain : 36.36 gm
Technology 2: NIANP Small ruminant Mineral Mixture (Sheep min)		2.69	4979	1: 1.35	Avg. Daily Weight gain : 29.93 gm

Description of the results:

Based on the assessment on different mineral mixture for sheep, Significant weight gain was observed in the TO 1 (3.37 kg) and TO2 (2.69 kg) when compared to farmer's practice (2.11 kgs). The average daily weight gain in sheep on supplementing TANUVAS Mineral mixture and Sheep min was 36.36 gm and 29.93 gm respectively. The Net return of TO 1 (TANUVAS Sheep and goat mineral mixture) was comparatively higher than the net return of TO 2 (NIANP Small ruminant mineral mixture)

9. Constraints: Nil

10. Feedback of the farmers involved:

TANUVAS Small Ruminant mineral mixture was reported to have better palatability in sheep when compared to NIANP mineral mixture . Both mineral mixture had improved growth in sheep and we came to know that there was Mineral mixture exclusively for sheep and goats.

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

TANUVAS Small ruminant mineral mixture supplementation recorded marginal increase in average body weight and improved average daily body weight gain in sheep flocks when compared to NIANP Small ruminant mineral mixture.

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OFT-9: Assessment of TANUVAS - TRPVB Tick Shield to mitigate the acaricidal resistance of ectoparasites in dairy cattle

1. **Thematic area** **:** Livestock Health Management
2. **Title** **:** Assessment of TANUVAS –TRPVB Tick Shield to Mitigate the acaricidal resistance of ectoparasites in dairy cattle.
3. **Scientists involved** **:** SMS (Animal Science)
4. **Details of farming situation** **:** Semi Intensive system

On farm Trial was conducted in Thinoor/Belavarthi Village of Bargur block in Krishnagiri District.

5. **Problem definition / description:**

Ectoparastic infestation transmitting diseases to livestock (like ticks acts as reservoir for infectious agents) like LSD , Tick fever etc., also causing loss of body condition, reduction in productivity of animals which in turn causes economic loss to dairy farmers. On an average 10% of clinical cases are Ticks and tick-borne diseases (TTBDs).The control of ticks is mainly based on the use of acaricides / chemicals. But the increased frequency of using acaricides causes resistance in dairy cows. Hence the new technology "Tick shield " have been assessed on the efficiency and mitigation of acaricidal resistance of ectoparasites in dairy cattle.

6. **Technology Assessed:**

Technology Option 1	**Tick Shield (***TRPVB -TANUVAS,2021*) Ivermection based Spot on for the treatment of tick infestation in animals
Technology Option 2	**Herbal Acaricidal Spray – Megatex** *(ICAR- CIRG, 2018)* Herbal Acaricidal Liquid/spray to mitigate ectoparasites in Livestock
Farmers practice	Use of Deltamethrin (2%).

7. **Critical inputs given:**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Tick Shield	5 nos	73.50	50 nos	3675
Megatax Spray	5 nos	105	50 nos	5250
TOTAL				8925

8. Results:

Performance of the technology

Technology Option	No. of trials	Efficiency – E% (14th day after application)	Net Returns (Rs.)	B:C ratio	Data on Other performance indicators*
Farmers Practice	5	93.44	436	1: 1.87	Avg.reduction in Tick Count:3rd day - 25.6 and 14th day – 4.8
Technology 1: Tick Shied		100	693	1: 2.78	Avg. reduction in Tick Count: 3rd day - 18.8 and 14th day – 0
Technology 2: Megatex Spray		83.58	307	1: 1.58	Avg. reduction in Tick Count: 3rd day – 34.1 and 14th day – 14.2

Description of the results:

Based on the assessment on different acaricidial treatment for tick infestation in dairy cows, it was observed that the efficiency (E%) of TO 1 (100%) was comparatively higher than Farmers practice (93.44%) and TO2 (83.58%).

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 was18.8 and 0 and in TO2 was 34.1 and 14.2 respectively.In farmers practices due to application of Deltamethrin, the average reduction in Tick count on 3rd and 14th day was 25.6 and 4.8. The Netreturn was comparatively higher on TO1 and tick count was reduced in TO1 on application of Tick Shield

9. Constraints: Nil

10. Feedback of the farmers involved:

Application method of tick shield is easy to handle when compared to other treatments and also effective for control of tick infestation in dairy cows. Herbal Spray is a alternate method for chemicals even though less effective compared to Tick Shield.

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

Tick Shield Spot on application method was proved to be user friendly technology for farmers and effective for control of external parasitic infestions and protect cattle from reinfection upto 28 days.

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OFT-10: Assessing the Effectiveness of e-Extension Methods in terms of Knowledge Gain and Skill acquirement and Symbolic Adoption Behavior among the Rural Youth

1. **Thematic area** : Information Communication Technology
2. **Title** : Assessing the Effectiveness of e-Extension Methods in terms of Knowledge Gain and Skill acquirement and Symbolic Adoption Behaviour among the Rural Youth
3. **Scientists involved** : SMS (Agrl. Extension)
4. **Details of farming situation** : NIL
5. **Problem definition / description:**

Paddy is cultivated in about 28000 ha in the district. Major variety cultivated is BPT 5204 and hybrid varieties. Farmers get low yield due to pest (leaf folder, stem borer & hopper) and disease (blast & gall midge) incidence in paddy. Technology transfer mechanism need to be improved to reach the individual farmers' farm holding in time. Adoption level of different technologies are also leading to low productivity in paddy, It is necessary to assess the Effectiveness of e-Extension Methods for Transfer of Technology to improve the knowledge level and adoption rate of the rural youth farmers.

6. **Technology Assessed:**

Technology Option 1	Transfer of Paddy technologies through Paddy Expert System
Technology Option 2	Transfer of Paddy technologies through Agri-tech portal (http://agritech.tnau.ac.in)
Farmers practice	Contact with local Extension workers for getting advisory service on paddy cultivation

7. **Critical inputs given:** Net connectivity Charges for 30 farmers
8. **Results:**

Technology Option	No. of trials	Knowledge level (%)		Adoption level (%)	
		Pre Evaluation	Post Evaluation	Pre Evaluation	Post Evaluation
Farmers Practice Contact with local Extension workers for getting advisory service on paddy cultivation	30	32	40	16	60
Technology 1 Transfer of Paddy technologies through Paddy Expert System		56	88	57	91
Technology 2 Transfer of Paddy technologies through Agri-tech portal (http://agritech.tnau.ac.in)		40	64	40	75

Description of the results:

Compared to two modes of technology transfer to the farmers, Transfer of Paddy technologies through Paddy Expert System mode could impact 88 percentage of knowledge and 91 percentage of adoption level followed by Transfer of Paddy technologies through Agri-tech portal mode (64 percentage of knowledge and 75 percentage) and Contact with local Extension workers for getting advisory service on paddy cultivation (40 percentage of knowledge and 60 percentage).

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

The rural youth farmer preferred TNAU Paddy technologies through Paddy Expert System as a user-friendly mode for farm advisory services and transfer of technology in Paddy.

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

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 71.30 t/ha where as in check 60.30 t/ha. The percentage of yield increase over check was 18.28 percent	6	27	32
2	French Bean	Varietal Evaluation	Demonstration of variety Arka Arjun	NIL	Arka Arjun gave increased yield of 17% compared to the variety grown	3	15	30
3	Poultry/Desi chicken	Breed Evaluation	OFT Conducted during 2018-19	NIL	Popularization of TANUVAS Aseel under backyard condition	-	8	75
4	Fodder Crop	Livestock Nutrition management	-	NIL	Demonstration of 10 cent Multicrop Fodder production model	-	45	320
5	Dairy cows	Disease management	-	NIL	Demonstration of Mastiguard for Clean milk production	-	10	120

b. Details of FLDs implemented during the reporting period

S. No	Crop	Thematic area	Technology Demonstrated	Season and year	Farming Situation	Source of funds	No of locations (Villages)	No. of farmers/ demonstration			Area		Justification for shortfall if any
								SC/ ST	Others	Total	Area proposed (ha)	Actual area (ha)	
1	Paddy	ICM	Demonstration on Paddy variety VGD 1 under Organic Farming	Kharif 2022	Irrigated	ICAR	1	10	0	10	4	4	-
2	Groundnut	Farm mechanization	Demonstration on Groundnut seed drill (ANGRAU model)	Kharif 2022	Rainfed	ICAR	1	0	10	10	4	4	-
3	Groundnut	Farm mechanization	Demonstration on Rotary dibbler (Multi crop seed drill)	Kharif 2022	Rainfed	ICAR	1	0	10	10	4	4	-
4	Paddy	Farm mechanization	Demonstration on Direct paddy drum seeder & Cono weeder	Kharif 2022	Irrigated	ICAR	1	0	6	6	2.4	2.4	-
5	Paddy	IPDM	Demonstration on IPDM in Paddy	Kharif 2022	Irrigated	ICAR	1	10	0	10	4	4	-
6	Groundnut	Wild menace	Demonstration on management of wild boar menace using herbal repellent	Kharif 2022	Irrigated	ICAR	1	0	10	10	4	4	-
7	ICT	ICT	Demonstration On android based “News on AIR app”	-	-	ICAR	1	0	50	50	0	0	-
8	Ragi	ICM	Demonstration on Ragi variety CO 15	Rabi 2022	Irrigated	ICAR	1	10	0	10	4	4	-
9	Horsegram	ICM	Demonstration on Horse gram variety CRIDA 18R for higher productivity	Rabi 2022	Irrigated	ICAR	1	10	0	10	4	4	-
10	Tapioca	ICM	Demonstration on YTP 2 Tapioca	Rabi 2022	Irrigated	ICAR	1	0	5	5	1	1	-
11	Onion	ICM	Demonstration on CO 6 Onion	Rabi 2022	Irrigated	ICAR	1	0	5	5	1	1	-

12	French Beans	ICM	Demonstration on Arka Arjun French Beans	Rabi 2022	Irrigated	ICAR	1	0	5	5	1	1	-
13	Mango	ICM	Integrated Crop Management in Mango	Rabi 2022	Irrigated	ICAR	1	10	0	10	4	4	-
14	Cotton	INM	Demonstration on Micronutrient Management in Cotton	Rabi 2022	Irrigated	ICAR	1	2	8	10	4	4	-
15	Maize	INM	Demonstration on Micronutrient Management in Maize	Rabi 2022	Irrigated	ICAR	1	2	8	10	4	4	-
16	Cotton	Farm mechanization	Demonstration on Cotton plucker	Rabi 2022	Irrigated	ICAR	1	0	10	10	4	4	-
17	Tomato	Farm mechanization	Demonstration on Vegetable planter (Manual Operated)	Rabi 2022	Irrigated	ICAR	1	0	5	5	2	2	-
18	Maize	IPM	Demonstration on IPM on Maize Fall Army Worm	Rabi 2022	Irrigated	ICAR	1	0	10	10	4	4	-
19	Poultry/ Desi chicken	Breed	Popularization of TANUVAS Aseel under backyard condition	-	Semi intensive	ICAR	1	10	0	10	0	0	-
20	Fodder Crop	Livestock Nutrition Management	Demonstration of 10 cent Multicrop fodder production model	-	Irrigated	ICAR	1	0	10	10	0.4	0.4	-
21	Poultry/ Desi chicken	Nutrition Management	Demonstration of ProBeads-EC on growth performance of Desi-chicken	-	Semi intensive	ICAR	1	10	0	10	0	0	-
22	Fodder Crop	Livestock Nutrition management	Demonstration of multicut fodder sorghum CO (FS) 31	-	Irrigated	ICAR	1	10	0	10	2	2	-
23	Vegetables and greens	Nutritional security	Demonstration on Nutri garden	2022	Rainfed	ICAR	1	5	0	5	0	0	-

24	Cattle	ICT	Demonstration of TNAU Mobile Apps among Farmers Mobile User Group(FMG)	-	-	ICAR	1	25	0	25	0	0	-
25	Banana	ICT	Demonstration of Banana Expert System as android based mobile application	-	-	ICAR	1	0	25	25	0	0	-

Feedback from farmers:

S. No	Feed Back
1	The paddy variety VGD 1 gave 22.40 % 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 due to seemi-dwarf nature than private variety.
2	Reduces the requirement of skilled labour and can complete the farm activities like sowing, weeding and stripping within the stipulated period.
3	Easy to use and this manual operated portable seeder machine can use to sow small and large size of seeds. Gender friendly and reduce the sowing cost.
4	Reduce the cost and requirement of labour for nursery preparation, pulling up seedlings and transplanting. Weeds growth is very faster than crop. It can be controlled by irrigation water management and applying of conoweeder in appropriate period.
5	Integration of Biological and Chemical methods on pest and diseases management of Paddy gave increased yield over the local check and the blast incidence and BPH hopper incidences were low demonstration plots.
6	Spraying of Herbolive + 4 times effectively manage the wildboar throughout the crop period.
7	Android based "News on AIR app was useful to hear the latest agriculture and allied enterprises timely
8	Ragi variety CO 15 gave 19.10 % yield increase over than farmers practice ML 365 and also moderately resistant against blast disease.
9	The Horsegram variety CRIDA 18 R gave 17.01 % yield increase over than farmers practice Paiyur 2 and it was tolerant to yellow vein mosaic and Powdery Mildew disease.
10	The tuber length is more compared to the check (Thailand). Because of this nature the infestation of mealybug is less and the wastage during harvest is reduced
11	The Bulb size and weight of CO6 is more which improved the consumer preference
12	Highest yield was obtained in Arka Arjun (134.27q/ha).The incidence of mosaic was low. The market preference was more for Arka Arjun because of the tender nature
13	Foliar nutrition in mango for the micronutrients gave a good quality fruits besides the increase in yield. Also the fruitfly management using traps is very effective in controlling the fruitflies.
14	Usage of cotton plus as foliar spraying reduced the flower dropping and square shedding.
15	The quality of maize cobs got improved due to the maize maxim spraying.

16	Farmers are interested to use this machine, Easy handling, Gender friendly and reduce the labour requirement and picking cost upto 80%. Farmers can collect contamination free cotton and suitable for all types of cotton.
17	Farmers no need to bend down. Gender friendly and reduce the drudgery for women.
18	Timely application of Biological and chemical control methods leads to effective management of the Fall army worm.
19	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	Mixed fodder cultivation had higher fodder yield and growth in grass type and also added leguminous fodder as protein source for cattle which enhances milk yield. In 10 cent we can able to cultivate different fodder varieties and provide fodder to cattle. We came to know about multicut fodder varieties in Sorghum and Velimassal
21	Probeads EC supplementation is a new technology for native chicken and improved the growth performance under backyard condition. Supplementation had improved bodyweight and also reduced the mortality in chicks.
22	Fodder Sorghum Co31 is a multicut variety but we used to cultivate single cut sorghum. The cost of cultivation was reduced in multicut sorghum cultivation and also had improved green fodder Yield for feeding our dairy cows
23	Low incidence of pests due to organic method of cultivation and good returns by sale of vegetables and greens.
24	TNAU Cattle expert system mobile-based application was useful, comfortable to make the right decisions at right time
25	TNAU Mobile Application System support them to make the right decisions at right time for Banana Cultivation

Feedback of the Scientist:

S. No	Feed Back
1	The paddy variety VGD 1 recorded 56 qtl / ha than farmers check (Amman - private variety) 47.63 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 (62.1 %), also cooking quality.
2	Farm operations can be done in time and reduce the seed rate. Saving the wages of labour and time upto 80%. Reduction of drudgery upto 30%.
3	Maintain the plant to plant spacing, number of seeds per hill and depth of sowing, which help the seed to germinate faster and healthy. Suitable for all kind of seeds which sown in row. We can sow the seeds in any kind of topography like plain, mountainous land and hill etc., Timely operations can be done. This seeder is very light weight and easy to operate.

4	Reduction in seed rate and thinning cost. Labour cost for nursery preparation, transplanting are reduced drastically. Maintain the plant population. Light weight in operation and easy to handle. Crop mature 7 to 10 days earlier than traditional transplanted paddy seedlings. Conoweeder is easy to operate and low cost weed control machine. No chemical residue, it facilitates good aeration and ensure better development of root system.
5	Bio-based IPM is one of the important components for controlling insect-pests and disease inpaddy, as it is environmentally friendly, effective, and economically viable.
6	Cost effective bio product is needed for management of wild boar.
7	Agriculture technologies broadcasting period and timings should be increased for the benefit of farming community.
8	An average yield of Ragi variety CO 15 recorded 30.31 q/ha but the farmers practice ML 365 recorded 25.46 q/ha. CO 15 grains looks bold (1000 grain weight 3.15g), non lodging during rainy days, moderately resistant against blast than ML 365.
9	The Horsegram variety CRIDA 18 R recorded 9.96 q/ha but the farmers check Paiyur 2 was 8.51 q/ha. During maturity stage, the pods are not shattered, resistant to yellow vein mosaic and Powdery Mildew disease was significant characters in CRIDA 18 R variety.
10	The whitefly incidence is on par compared to the Check. The performance of YTP2 is more in fertile soil and is more fertilizer responsive than Thailand
11	The major disease like Twister disease and thrips incidence were on par with that of the check
12	Highest yield was obtained in Arka Arjun was attributed to the higher number of fruits per plant. Less infestation by pest and disease. The market preference was more for Arka Arjun because of the tender nature
13	The foliar nutrition with mango special resulted in 22.6 % yield increase and a BCR of 2.56 in the demonstration fields over the farmer’s practice
14	The foliar nutrition with cotton plus resulted in 21.5 % yield increase and a BCR of 1.46 in the demonstration fields over the farmer’s practice
15	The foliar nutrition with maize maxim resulted in 21.9 % yield increase and a BCR of 3.53 in the demonstration fields over the farmer’s practice
16	The machine can pick 60 to 80 kg of kapas a day against manual picking of 12 to 20 kg/day. Manual picking cost alone would account for one-third of the total cost of cultivation for the farmer. By using this plucker, the farmer would be able to bring down the labour cost by 20 per cent
17	Vegetable seedling transplanter is suitable for transplanting of vegetable seedlings like tomato, chili, cabbage, cauliflower, brinjal and flower crops like marigold, chrysanthemum etc. Using this Transplanter one person can plant 6000 seedlings per day. Bottom cone opens both sides so less soil displacement and ensure the growth of healthy roots.
18	Seed treatment followed by Integration of bio and chemical methods on management of fall army worm is very effective.

19	The average body weight of TANUVAS Aseel chicken at 12th week was 1.097 kg. Since the marketability and income was better , this improved strain was recommended to farmers to rear for better income and nutritional security.
20	Fodder Biomass Yield was increased by 21.40% on adoption of TANUVAS 10 cent multi crop fodder production model. Mixed fodder of legume, non-legume with tree fodder provided balanced nutrition to dairy cows with increased milk yield.
21	Supplementation of Probeads EC had improved the Average body weight at 10th week and 12th week by 819.5 gm and 1.097 kg and the average body weight gain at 10th week was 207.5 gm with livability Percentage was 96.67 %
22	Fodder Sorghum CO 31 cultivation recorded fodder biomass yield of 171.4 t/ha with ratooning ability rendering 6 harvests per year. Multicut fodder is more advantageous in many ways such as higher yield in short period, saving in terms of land preparation.
23	Promotion of terrace garden in households for proper utilization of the terrace space for their livelihood support.
24	TNAU Cattle expert system stated that the assistance of veterinary experts and Scientist are not available at all time, in that condition this mobile based-application would be very useful to make timely decisions.
25	TNAU Banana Expert System mobile application has proved again that ICT had the potential to satisfy the knowledge and information needs of the farmers, and support them to make the right decisions at right time, which ultimately leads to attaining significant livelihood growth.

Extension activities on the FLD:

S. No.	Activity	No. of activities organized	Date	Number of participants	Remarks
1	Field days	16	18-May-22, 05-Jul-22, 13-Sep-22, 12-Oct-22, 13-Oct-22, 16-Nov-22, 22-Nov-22, 02-Feb-22, 03-Feb-22, 04-Feb-22, 15-Feb-22, 22-Feb-22, 22-Mar-22, 23-Mar-22, 28-Mar-22, 28-Mar-22	461	-
2	Farmers Training	10	16-Nov-22, 01-Feb-22, 01-Sep-22, 16-Apr-22, 22-Jul-22, 05-Aug-22, 10-Aug-22, 17-Jan-22, 21-Mar-22, 20-Jan-22, 19-Jan-22, 08-Jun-22	223	-
3	Media coverage	16	18-May-22, 05-Jul-22, 13-Sep-22, 12-Oct-22, 13-Oct-22, 16-Nov-22, 22-Nov-22, 02-Feb-22, 03-Feb-22, 04-Feb-22, 15-Feb-22, 22-Feb-22, 22-Mar-22, 23-Mar-22, 28-Mar-22, 28-Mar-22	-	-
4	Training for extension functionaries	3	05-May-22, 24-Jun-23, 10-Aug-22	60	-

Extension Studies

1. Impact study of Cluster FLD farmers Knowledge and adoption level in Redgram cultivation

Preamble:

Redgram is of dietary importance with a seed protein content more than that of other important grain legumes. In addition to being an important source of human food and animal feed, Redgram also plays an important role in sustaining soil fertility by improving physical properties of soil and fixing atmospheric nitrogen. Being a drought resistant crop, it is suitable for dryland farming and predominantly used as an intercrop with other crops. Krishnagiri District of Tamil Nadu occupies 10285 hectares of land with average productivity of 1200 kg per ha of pigeon pea. The productivity can be increased with the increase of the level of knowledge and adoption of recommended technology. Krishi Vigyan Kendra, Krishnagiri conducted Cluster Front Line Demonstration on pulse crop in redgram at farmer field in the villages of Krishnagiri district from 2017 to 2022. Totally 250 front line demonstrations were conducted in 120 hectare area. In order to ascertain the extent of recommended technology in Redgram cultivation, the present study was done in Krishnagiri district of Tamil Nadu with the following objectives.

1. To study the knowledge and adoption levels of the farmers on recommended Redgram production technology
2. To elicit the production constraints in Redgram cultivation

Methodology

Krishi Vigyan Kendra, Krishnagiri conducted Cluster Front Line Demonstration on pulse crop in redgram at farmer field in the villages of Krishnagiri district from 2017 to 2022. Totally 250 front line demonstrations were conducted in 120 hectare area with involvement of farmers and scientific staff of KVK .This study was conducted in four blocks namely Krishangiri, Shoolagiri, Uthangarai and Mathur of krishnagiri District. From the selected Basanthi, Athipallam, Kollahalli, Palaiyavoor villages. Fifty Cluster FLD farmers were selected as represents. Whereas Fifty non Cluster FLD farmers of the village also selected randomly for the sample for the study. The data will be collected through a well structure interview schedule.

RESULTS AND DISCUSSION:

Table .1 Distribution of farmers according to personal characteristics:

Age	(i) Young (below 30 years)	18
	(ii) Middle (30-49 years)	65
	(iii) Old (above 49 years)	17
Education Level	i) Low educated (upto primary)	22
	ii) Medium educated (Middle to High School)	62
	(iii) High educated (above High School)	16

Family Size	(i) Small family – up to five members	19
	(ii) Large family – above five members	81
Family Type	i) Nuclear	19
	(ii) Joint	81
Social Participation	i) No membership in any organization	27
	(ii) Membership in some organization	73
Occupation	(i) Only Agriculture	60
	(ii) Agriculture + Business	34
	(iii) Agriculture + Service	6
Size of Land Holding	(i) Marginal (Less than 1 ha.)	59
	(ii) Small (1 to 2 ha.)	26
	(iii) Big (Above 2 ha.)	15
Information Source Used	(i) Low	30
	(ii) Medium	61
	(iii) High	19

Age: Table 1 shows that majority of farmers belonged to middle age group i.e. between 30-49 years of age. This age group alone constituted 65.00 per cent of the total sample. Further, 18.00 and 17.00 percent farmers were from young and old age groups, respectively

Education Level: The data presented in Table 1 shows that 62.00 per cent of the total farmers were medium educated i.e. from middle to high school standard, 22.00 per cent farmers were low educated i.e. upto primary and only 16.00 per cent of them were highly educated i.e. above high school

Family Size: Observation of Table-1 shows that majority of the farmers belonged to large family size. This group constituted 81.00 per cent of the total sample and rest 19.00 per cent farmers were from small families.

Family Type: Table-1 shows that majority of farmers belonged to joint family. This family type constituted 81.00 per cent of the total sample and rest 19.00 per cent were from nuclear family.

Social Participation: The data reported in Table-1 shows that majority of farmers (73.00%) were having membership in any social organization.

Occupation: Table-1 shows that majority (60.00%) of the farmers were engaged in agriculture only. hereas, 34.00 and 6.00 per cent farmers were engaged in agriculture along with business and agriculture along with services, respectively for their livelihood

Size of Land Holding: The data presented in Table-1 shows that 59.00 per cent of the total farmers were marginal , whereas 26.00 per cent farmers were small and rest 15.00 per cent of them were big farmers.

Information Source Used: The data presented in Table-1 shows that 61.00 per cent of the total farmers were using information sources upto medium level. Only 30.00 per cent farmers were under low level of information source used and rest 19.00 per cent of them were using information source to a high extent

Table 2. Practice wise level of Knowledge of farmers regarding Red gram production technology:

S. No	Technologies	Correct Knowledge		Incorrect Knowledge	
		Frequency	Percentage	Frequency	Percentage
1	varieties	76	76	24	24
2	Sowing time	100	100	0	0
3	Seed rate and spacing	55	55	45	45
4	Seed treatment	50	50	50	50
5	Use of manures	72	72	28	28
6	Fertilizer management				
I.	Dose as per the recommendation	57	57	43	43
II.	Time of application	53	53	47	47
7	Weed management Inter cultivation				
III.	Herbicides	52	52	48	48
8	Nipping techniques	63	63	37	37
9	Inter cropping	100	100	0	0
10	Need based pest management and disease management	65	65	35	35

Knowledge level of Redgram farmers on recommended production practices Item analysis of knowledge of individual recommended practice by the Redgram farmers was presented in Table 2. Almost cent percentage (100%) of the Redgram farmers had correct knowledge with respect to sowing time and inter cropping . Majority of the farmers had correct knowledge about suitable varietie (76%), using manures(72%), Need based pest management and disease management (65%), Nipping techniques (63%) seed rate and spacing (55%). This might be due to more contact of the farmers with extension officials, their participation in training programmes and mass media use. Whereas almost eighty seven percent of the farmers had incorrect knowledge on seed treatment followed by, herbicides , , time of fertilizer application (47.00%), recommended fertilizer dose (43%) , Nipping techniques(37%)and need based pest management (35%). The reasons for incorrect knowledge on seed treatment was due to farmers had a belief that they were getting treated seed from Department of Agriculture and other agencies.

Table 3. Practice wise level of Adoption of farmers regarding Red gram production technology

S. No	Technologies	Fully Adopted		Partially Adopted		Not adopted	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1	varieties	76	76	0	0	24	24
2	Sowing time	100	100	0	0	0	0
3	Seed rate and spacing	25	25	35	35	50	50
4	Seed treatment	18	18	32	32	50	50
5	Use of manures	72	72	0	0	28	28
6	Fertilizer management						
i	Dose as per the recommendation	25	25	32	32	43	43
ii	Time of application	15	15	38	38	45	45
7	Weed management Inter cultivation						

iii	Herbicides	12	12	40	40	48	48
8	Nipping techniques	63	63			37	37
9	Inter cropping	100	100	0	0	0	0
10	Need based pest management and disease management	46	46	19	19	35	35

Adoption level of Redgram farmers on recommended production practices From table 3 it could be inferred that cent percent of the Redgram farmers were fully adopting and sowing time and inter cropping followed by varieties (76%) Use of manures (72%), Nipping techniques (63%). This is mainly because of their correct knowledge on these aspects. Majority of the Redgram farmers were partially adopting recommended Weed management Inter cultivation(40%) time of fertilizer application (38%), eed based pest management (19%) recommended dose of fertilizers (70.83%) and manure use (65.83%).The reason for partial adoption of recommended dose of chemical fertilizer were mostly attributed by the farmers to the lack of knowledge and high risk involved in Redgram crop cultivation under rainfed situation. Similar results were reported to adoption of need based pest management. Majority of the farmers were not adopting seed treatment (50%) in Redgram cultivation due to lack of knowledge about advantage of seed treatment and non availability of bio-fungicides and Rhizobium culture followed by usage of herbicides (48%). It is because of lack of knowledge about losses in productivity due to weed problem in Redgram crop.

Production Constraints encountered by Redgram Farmers

1. The flower drop due continuous dry spells
2. poor seed quality
3. severe incidence of Pest and Disease incidence
4. increased cost of fertilizers and pesticides
5. low yields due to continuous dry spells
6. non availability of drought tolerant varieties
7. wilt incidence

Thus, the cultivation of Redgram mainly depends upon the management of pests, diseases, timely availability of inputs particularly quality seed material and introduction of improved package of practices which are the major factors for successful production of this crop otherwise they are referred to as main constraints in increasing the productivity .Therefore, for enhancing the production and productivity of Redgram crop, strategy should be made for getting the more and more recommended technology adopted by the farmers.

2. Impact study on Micro Nutrient Management in Mango

Mango (*Mangifera indica*) is a major fruit crop of India and is considered to be the king of fruits. Besides delicious taste, excellent flavour and attractive fragrance, it is rich in vitamin A&C. The tree is hardy in nature, can be grown in a variety of soil and requires comparatively low maintenance costs. India ranks first among world's mango producing countries accounting for about 50%of the world's mango production. 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.

The Mango 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, nutrient management, pest and diseases.

Mango productivity decreasing drastically due to one of the major reason was nutrient management. Nutrient management plays an important role in productivity of crops and directly influences the yield of the crops. The major nutrients and micro nutrients along with organic inputs are the main contributors to the proper nutrient management. Usually the farmers apply the primary nutrients to the crop as basal and top dressing through fertilizers. But they often neglect or mostly does not have awareness on the micronutrients and their importance in the crop productivity. Most of our soils in our country are deficit in one or other micronutrients like zinc, boron, iron and also one or other macronutrients like nitrogen, phosphorus and potassium. Yield loss due to deficiency of these nutrients is often more than 50% in worst cases. Hence KVK conducted Front Line Demonstrations on Nutrient Management in Mango was conducted continuously from 2006-2014.

ICAR KVK Krishnagiri brought out the technology from IIHR, Bangaluru during the year 2014-15 for rectifying micro nutrient deficiencies in crops especially in Mango. In this context, the study has been carried out in mango growers in 4 blocks like Krishnagiri, Kaveripatinam, Mathur and Bargur in Krishnagiri district with the following objectives

1. To assess the impact on knowledge level of farmers in adoption of mango special in mango
2. To assess the impact on increase the yield in mango by adoption of mango special

About the Technology:

Mango special is crop specific micronutrient formulation technology through foliar application exclusive for higher yield in Mango crop up to 15-20% and improved taste, colour and texture of the fruit. 12-16 kg of Mango Special recommended for an acre as a foliar application recommended by IIHR. Mix 75 grams of mango special along with 2 lemon juice and 1 shampoo pocket in 15 liters of water are added and mix

thoroughly and spray on both the sides of leaves and on fruits. This mango special spray may be started in the month of July -August and may be followed once in two months interval of time i.e., second spray in the month of September-October, Third spray in the month of November- December, final and fourth spray in the month of January-February. About four sprays are required during one crop season. For better results it should be applied during dull sunshine hours (morning or evening) and bright sun light should be avoided.

Methodology:

Krishnagiri district of Tamil Nadu was purposively selected since the mango special production and promotion work was carried out by KVK in the district in order to enhance the production potential of mango. Out of 10 blocks in Krishnagiri district, 4 blocks namely, Krishnagiri, Kaveripattinam, Mathur and Bargur were selected to conduct this study. A total of 100 farmers from these blocks were selected randomly for this study purpose.

For this study exposed facto research design was followed. Collect data on Impact of Mango Special on productivity with special reference to Participatory Impact Monitoring Assessment (PIMA) approach.

Step-By-Step approach adopted in the Impact Study through PIMA approaches:

Step 1: Development of indicators

Step 2: Measurement

Step 3: Analysis

Step 1: Development of Indicators:

KVK decided to work on "Mango Special" promotion since this is one the important program for supplying quality inputs to farmers in time. In a participatory manner KVK involved all stakeholders for drafting Indicators & selecting the most appropriate Indicators.

Contributors for the development of Indicators:

In order to study the objective of this programme the following indicators were drafted.

Indicator – 1: Experience in Mango cultivation

Indicator – 2: Knowledge in adoption of technologies

Indicator – 3: Soil application of micro nutrient

Indicator – 4: Knowledge about Mango special produced by KVK

Indicator – 5: Application of Mango special

Indicator – 6: Adoption and time of mango special

Indicator – 7: Spread of technology

Indicator – 8: Cost of cultivation with yield

Indicator – 9: Satisfaction level of farmer

Indicator – 10: Constraints in adoption of technology

Step- 2: Measurement:

The data collected from the farmers are consolidated and furnished as below;

1. Experience in Mango cultivation:

0-5 years	5 – 10	More than 10 years
26	59	15

2. Knowledge in adoption of technologies:

60%	60-80%	80-100%
47	43	10

3. Soil application of micro nutrient:

yes	No
26	74

4. Knowledge about Mango special produced by KVK:

Yes	No	If, yes brief details
66	36	Training, Mass media, Print media

5. Application of Mango special:

Yes	No	If yes (kg/ha)
53	13	10

6. Adoption of mango special:

1 spray	2 spray	4 spray
7	27	19

7. Time of mango special application:

6-8 AM	10-12 AM	4-6 PM
12	38	3

8.Spread of technology:

KVK	Farmer -Farmer	Mass media
18	28	7

9. Cost of cultivation with yield:

Yield/ha	Cost of cultivation	Gross return
4.49	25,000	46,000

10. Satisfaction level of farmer:

60%	60-80%	80-100%
6	32	15

11. Constraints in adoption of technology:

Yes	No	Ifyes (kg/ha)
45	8	Labour charge, Spraying cost

Step 3: Analysis:

Indicator – 1 & 2: Experience and knowledge in Mango cultivation:

It was noticed that 59% of the farmers practicing mango cultivation with 5 to 10 years' experience, but the study indicated that 26% of the farmers enrolled in mango cultivation with below 5 years' experience especially the youths found attracted towards agriculture. 47% of the farmers are adopted less than 60% of the recommended technologies.

Indicator – 3: Soil application of Micro Nutrient:

The study revealed that, 66% of the farmers are not applying micro nutrients since they are not exposed on the importance of micro nutrients in enhancing in mango productivity. In the recent past, many development departments are inculcating the farmers for adoption of micro nutrient application to enhance quality production which induces 34% of the farmers practicing micro nutrient application.

Indicator – 4 & 5: Knowledge about mango Special and Application of mango special technology produced by KVK, Krishnagiri.

Regarding the knowledge on Mango special, 66% of the farmers aware about the technology and 53% of the respondents were using this technology in their farm for enhancing the productivity.

Indicator – 6: Adoption and time of Mango special application:

Though the technology was helpful for increasing the productivity, the study shows that, only 19% of the farmers are adopting the recommended dose of Mango special for their entire cropping season and 27% are using 60 – 80% of the recommended dose for their Mango cultivation.

The study indicated that, 15%of the farmers applied in the right time. 35% of the farmers applied the mango special during the mid-day due to the scarcity of the labour which results in reduced the efficiency of the micro nutrient uptake of the crop.

Indicator – 7: Spread of technology:

The interesting fact noted in the study was 28% of the technology was spread among the farmers through the farmers who reaped the maximum benefit by adoption of this technology. 18% of the technology was spread through the KVK extension programme like conducting capacity building, exhibits and demonstrations. 7% of the technology was spread among the farmers with the support of mass media like newspaper, magazines, mobile advisory services etc.

Indicator – 8: Cost of cultivation with yield:

The study shows that, the cost of cultivation was increased in mango special applied field in terms of Rs.7, 800/ha. When compared to the existing farming practices. By adopting this technology 29.4% yield increased was recorded. The average incremental benefit reaped from the mango special was recorded Rs.24,392/ha.

Indicator - 9: Satisfaction level of farmer:

The study indicated that though the farmers are adopting 80% of the recommended dose of mango special, 32% respondent's satisfaction level was observed up to 80%; and 15% farmers satisfaction level reached 80% to 100% adoption. The respondents expressed that the soil application of micro nutrient especially in mango special helps in increase the fertility level of soil.

Indicator – 10: Constraints in adoption of the technology:

45% of the respondents felt that, application of mango special in application time could not be followed in the specified time due to the labour shortage and spraying cost.

IMPACT REPORT:

Input	Output	Outcome	Intended	Unintended	
Production and supply of mango Special	✓ Conducted 13 Front Line Demonstration Conducted 21 methods demonstration ✓ Conducted 25 trainings for Extension Officials ✓ Provided 16 mobile advisory service to farmers ✓ Spread of this technology through medias (TV/ Newspapers)	✓ KVK produced 5,948 kg of mango special on need based and 1825 farmers used this technology	✓ 66% of the farmers acquired knowledge on Mango special ✓ 29% yield increase was noticed by adopting this technology ✓ By adoption of this technology, the farmers get an incremental income of Rs. 21,000/ha	✓ Horizontal spread of the technology was noticed encouragingly ✓ Line department officials recommended the Mango special to the farmers based on its performance ✓ Other district farmers like Salem, Dharmapuri, are regularly availing the Mango special technology from KVK	Increased the market price due to the shining appearance of mango

Technology Week Celebrations: NIL

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

Name of the staff	Title	Dates	Duration	Organized by
Dr. T. Sundarraj	Recent technologies in agriculture with special focus on Natural Farming	08.11.22 to 10.11.22	3 Days	Tamilnadu Agricultural University, Coimbatore and ATARI, Hyderabad
Mr. T. I. Ramesh Babu	Recent technologies in agriculture with special focus on Natural Farming	21.11.22 to 23.11.22	3 Days	Tamilnadu Agricultural University, Coimbatore and ATARI, Hyderabad
Mr. S. Senthilkumar, SMS (Agrl. Exten)	Training on Extension NEXT	12.12.2022 to 16.12.2022	5 Days	MANAGE
Dr. S. Ramesh, SMS (Animal Science)	Management of Metabolic and production disorders in Cattle	June to July 2022	6 Weeks (Online Course)	agMOOCs, CCE, IIT, COL and TANUVAS
Mr. S. Udhayan, SMS (Agronomy)	Recent technologies in agriculture with special focus on Natural Farming	14.11.22 to 16.11.22	3 Days	Tamilnadu Agricultural University, Coimbatore and ATARI, Hyderabad

Details of sponsored projects/programmes implemented by KVK

S. No	Title of the programme / project	Sponsoring agency	Objectives	Duration	Amount (Rs)
1	IPM in Field Crops	SAMETI	To enhance knowledge on IPM in Field Crops	6 Days	42,000
2	Dairy Farming	Vazhndhu Kattuvom Project (TNRTP)	To enhance knowledge on Dairy Farming	3 Days	30,250
3	Mango Cultivation	Vazhndhu Kattuvom Project (TNRTP)	To enhance knowledge on Mango Cultivation	3 Days	30,250

1. IPM in Field Crops:

. Department of Agriculture, Krishnagiri and ICAR-Krishi Vigyan Kendra, Krishnagiri jointly conducted 6 days (21.02.2022 to 26.02.2022) IPM in Field crops training programme to Field crops growers under Skill Training on Rural Youth –SAMETI, at ICAR- KVK, Krishnagiri. The Joint Director of Agriculture, Krishnagiri ,inaugurated the IPM in Field crops training programme on 21.02.2022 and explained the importance and need IPM training to farmers.

During the training period from 21.02.2022 to 26.02.2022, farmers were trained in the following topics on Use of Pheromone traps& Sticky traps in pest management, Herbal Repellants preparation and application, use of Light traps in pest management, Bio-Pesticide s in pest and disease management and IPM in Coconut, Mechanical Methods for Integrated Pest Management, Preparation of NSKE for pest management by KVK Scientists.

Final day (26.02.2022) on IPM in Field crops, trainees given their feedback on the training programme and IPM in Field crops booklet and Certificate to distributed the trainees by Joint Director of Agriculture, Krishnagiri,. Twenty Eight farmers were benefitted in the training programme.

Budget for Residential Training

S. No	Particulars		Amount (Rs)
1	Food & refreshment @ Rs. 100/ farmer X 28 farmers X 6 days	:	16,800
2	Hall rent @ Rs. 1000/day X 6 days	:	6,000
3	Accommodation Charges	:	NIL
4	Honorarium to resource person @ Rs. 250/ class X 24 class	:	6,000
5	Travel plan expenditure @ Rs. 50/ day X 28 farmers X 6 days	:	8,400
6	Miscellaneous expenses (Booklet & training material)	:	4,800
Total		:	**42,000**

IPM IN FIELD CROPS - PHOTOGRAPHS

IPM in Field Crop Inauguration

Use of pheromone traps &sticky traps in pest management

Bio-pesticides in pest Management

Use of Light traps in pest management

Use of pheromone traps &sticky traps in pest management

Integrated Pest Management in Paddy

Integrated Pest and Disease Management in Cotton

Integrated Pest Management in Sugarcane

Certificate and Book distribution by Joint Director of Agriculture

2. DAIRY FARMING

ICAR – Krishi Vigyan Kendra organized and conducted Three days training to 35 community Farm School SPARK Trainers on “DAIRY FARMING” Sponsored by Valnthu Kattuvom Project (TNRTP). The programme was conducted at ICAR – Krishi Vigyan Kendra, Krishnagiri from 03.11.2022 to 05.11.2022.

The technical session was conducted on Feeding management, Breeding, Disease management. Also delivered lecture on vaccination programme implemented by Department of Animal Husbandry and explained about the importance of preventive measures like deworming from calf to adult dairy animals. As part of training SPARK trainers visited Dairy farm at Adhiyaman College of Agricultural Research(ACAR), Shoolagiri . The farmers were informed about the clean milk production practices, visited fodder production fields and explained on calf care and management.

Budget

S. No	Particulars		Amount (Rs)
1	Food & refreshment @ Rs. 150/ farmer X 35 farmers X 3 days	:	15,750
2	Hall rent with Projector @ Rs. 1500/day X 3 days	:	4,500
3	Honorarium to resource person @ Rs. 500/ class X 15 class	:	7,500
4	Demonstration Material	:	2,500
Total		:	**30,250**

Photographs

Training session

Exposure Visit

3. MANGO CULTIVATION TRAINING

Vaazhundhu Kattuvom Project (TNRTP), Krishnagiri and ICAR – Krishi Vigyan Kendra, Krishnagiri jointly conducted 3 days (28.12.2022 to 30.12.2022) Mango cultivation training programme to SPARK trainer at ICAR-KVK, Krishnagiri. Thirty five trainers were participate and benefitted in the training. The District Executive Officer, Krishnagiri, inaugurated the Mango cultivation training programme on 28.12.2022 and explained to importance and need of Mango cultivation training to SPARK trainers. The Senior Scientist and Head, KVK, Krishnagiri and Subject Matter Specialists also participated in the inauguration session.

During the training period from 28.12.2022 to 30.12.2022, farmers were trained in the following topics on Types of mango varieties, Nursery and main field preparation techniques, Selection of good quality seedlings, Weed management, Inter croppings, High density planting methods, Integrated Nutrient Management, Integrated Pest management, Integrated Disease management and value in mango by KVK , Scientists .

Final day (30.12.2022) on Mango cultivation training , trainees given their feedback on the training programme and Mango cultivation booklet and Certificate to distributed the trainees by District Executive Officer, Krishnagiri and Senior Scientist and Head, ICAR, KVK, Krishnagiri.

Budget

S. No	Particulars		Amount (Rs)
1	Food & refreshment @ Rs. 150/ farmer X 35 farmers X 3 days	:	15,750
2	Hall rent with Projector @ Rs. 1500/day X 3 days	:	4,500
3	Honorarium to resource person @ Rs. 500/ class X 15 class	:	7,500
4	Demonstration Material	:	2,500
Total		:	**30,250**

Photographs

Training session

Field visit

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Success stories

A. HIGH INCOME FROM FINGER MILLET VARIETY CO 15

1. Situation analysis/Problem statement

Finger millet is an important millet food crop in most part of the Krishnagiri district. It is cultivated in an area of 10,000 ha as irrigated condition only. Due to the repeated cultivation of existing varieties the yield was low. So, the farmers need some high yielding duration type for higher production. Also, the new long duration variety CO 15 of finger millet should be resistant to blast disease. Hence, it could be sown as irrigated conditions. So, a FLD was conducted during 2021-22 on demonstration of Finger Millet variety CO 15 suitable for Krishnagiri district.

2. Plan, Implement and Support

During 2021-22, Front line demonstrations were conducted in velagalahalli village of Krishnagiri block and district. In this FLD , farmers were supplied with the required seeds, bio-fertilizers and supported with the technical guidance. On campus and off campus training programmes were conducted to impart knowledge and skills on ICM among the farmers. During the training programmes and field visits emphasis was given on ICM technologies.

3. Output

The Frontline demonstrations results showed that the highest yield was recorded in adoption of finger millet CO 15 variety (30.31 Qtl/ha) followed by farmer's practice ML 365 (25.46 qtl/ha). The net return was highest in finger millet CO 15 variety in demonstrated field was (Rs. 67,272/-) than compared to the farmers practice (Rs. 31, 847/-). Yield increase percentage was 19.10 % in of finger millet CO 15 variety compare to ML 365.

4. Outcome

From the FLD conducted during the 2021-22 it was found that of finger millet CO 15 variety was best suited for the Krishnagiri district. The finger millet CO 15 variety is long duration, bold grain, non shattering, non lodging, blast resistant with preferable grain quality with nutritious fodder characteristics. So, it comes well up in irrigated condition.

5. Impact

The finger millet CO 15 variety was well received by the farmers due its non lodging and high yielding in nature. The farmers from the other blocks of Krishnagiri has also been made aware of the suitability and performance of the variety through various extension means viz., trainings, front line demonstrations and mass media coverage. The Monthly Zonal workshop meetings conducted by the department of agriculture was also used for the spread of the technology. Around 100 ha of area extended under the cultivation of The finger millet CO 15 variety in Krishnagiri district.

B. Seed production in Ragi and Horsegram under SCSP

1. Situation analysis/Problem statement:

In Krishnagiri district, Schedule caste and Scheduled Tribes population spread in Krishnagiri, Bargur, Veppanapalli, Kelamangalam and Thally blocks. Out of total population, there are 14.22 % Scheduled Caste and 1.19 % Scheduled Tribe living in Krishnagiri district. The social economic condition of Scheduled Tribes is poor and majority of the population depends only on forest resources for their livelihood. They are lacking of awareness on the availability of high yielding varieties in Agriculture, Horticulture crops. Also the unavailability of high yielding varietal seeds force them to go for the available traditional local low yielding varieties in agriculture crops like Finger millets and Horsegram. As the existing low yielding traditional varieties are repeated over the years, the yield obtained from them gets reduced year after year that results in lower profitability. Hence to make sure for the seed availability, KVK has planned to promote the seed production in the villages where the economically weaker section resides under SCSP.

2. Plan, Implement and Support:

During 2022-23, Twenty Scheduled tribes farmers were selected and distributed with 100 kgs of Paiyur2 Ragi seeds in Poomalai Nagar of Bargur block and another 20 farmers were distributed with 100 kgs of Horse gram seeds in Annanagar village of Kelamangalam block. They were supported with technical guidance. Training programmes were also conducted to impart the knowledge and skills on seed production. The training programmes were emphasised with ICM technologies in Horse gram and Ragi.

3. Outcome:

Finger millets Seed production results showed that the average yield recorded from the farmers fields was 15 Qtl/ha with Paiyur2 variety. The net return obtained was Rs.35,000/ha. The total finger millet produced under seed production was 12 tons in 8 hectares.

Horse gram Seed production results showed that the average yield recorded from the farmers fields was 5 Qtl/ha with Paiyur2 variety. The net return obtained was Rs.18,000/ha. The total horse gram produced under seed production was 2 tons in 4 hectares.

4. Impact

Initially the finger millet seeds distributed to 20 farmers in an area of 8 ha and Horse gram seeds were distributed to 20 farmers in an area of 4 ha only. The farmers used the seeds produced for their own consumption and the excess quantity were sold and distributed to around 250 farmers which spreads to an area of 100 ha. Similarly the horse gram seeds were also sold and distributed to around 100 farmers which spreads to an area of 40 ha in various blocks of

Krishnagiri district. This is supposed to grow up and further spread is expected in future under seed production.

Photographs:

	
Horsegram seeds - Activities under SCSP	**Ragi seeds - Activities under SCSP**

C. IPM FOR PIN WORM MANAGEMENT IN TOMATO

1. Situation analysis/Problem statement

Tomato is cultivated in Krishnagiri district throughout the year in an area of 11,000 hectares. The climatic conditions in Krishnagiri district are favourable for higher yield and quality. All private hybrids and improved varieties were cultivated in this district. The tomato grows on practically all soils from light sandy to heavy clay. Light soils are good for an early crop, while clay loam and silt-loam soils are well suited for heavy yields. Tomatoes do best in a soil that has a soil reaction from pH 6.0 to 7.0. If the soil is acidic liming is required. A wide range of insects attack tomato and forms major limiting factor in its successful cultivation and in improvement of yield.

The Tomato pinworm, *Tuta absoluta* (Meyrick) (Lepidoptera: Gelechiidae) is one of the global major destructive invasive pests 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. The 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. *Tuta absoluta* has a very high reproduction capability. There are up to 10-12 generations in year in favourable conditions. Damage done to fruits caused direct economic loss. It can cause up to 50% loss of yield and deteriorate the fruit quality under field conditions. In view of growing concern among the people for pesticide contamination along with gaining popularity of organic farming, adoption of Integrated and eco friendly methods of pest management in vegetable crop like tomato has become very important. This would also enable less or no insecticide residue in farm produce above detectable level. Keeping this in consideration, role of Integrated Pest Management (IPM) becomes more relevant particularly in Tomato.

2. Plan, Implement and Support

Krishi Vigyan Kendra, Krishnagiri in collaboration with NBAIR conducted awareness programme in shoolagiri village of Krishnagiri district. A model demonstration was conducted in the year of 2015 -16 and work shop was conducted in shoolagiri village. About 200 farmers participated in this programme. Director of NBAIR was attended as Chief Guest Krishi Vigyan Kendra, Krishnagiri conducted FLD programme on Demonstration on Management of Tomato pin worm at Thottakanavu village of Veppanapalli block and also KVK disseminated IPM technology through various extension activities in various villages of Krishnagiri district. we have proposed one OFT in the year of 2021 -2012, on Different technology modules against pinworm management. Two different technologies modules released from IIHR 2019 and another from TNAU 2018. We have also conducted FLD in 2022-23 in 10 locations and training programmes for the management of pinworm in IPM mode.

On campus and off campus training programmes were conducted to impart knowledge and skills on IPM among the farmers. During training programmes and field visits emphasis was given on IPM technologies. KVK demonstrated at each selected farmer's field on IPM technologies viz., cultural practices, botanical pesticides, yellow sticky traps and pheromone traps with lures. Method demonstration was also done on above technologies. Constant follow up visits, meetings, and other extension activities were organized. The advice about need based pesticides usage was also given during the field visits.

3. Output

The male adults of *T.absoluta* trapped by using pheromone trap in demonstrated Thootakanavu village of Veppanapalli block with farmers participation. The Front line demonstrations results showed that the highest yield was recorded in adoption of IPM technologies (75.7 qtl/ha) followed by farmers practice. The net return was highest in IPM demonstrated field (Rs. 1,46,338)than compared to the farmers practice (Rs. 1,05,517). Average of 56.58 adult moths was collected per trap. There was 58.02 percent reduction of Tuta absoluta incidence in fruits over the farmer's practice. Demonstration conducted in the year of 2022-23 also gave more reduction in incidences and high yield.

4. Outcome

From the Front-Line Demonstrations conducted during the 2018-19and 2022- 23 it was found that adoption of IPM technologies significantly reduced the incidence of Tuta absoluta when compared to the farmers practice and also the quality and marketability of the fruits got increased. The pheromone technology was well received by the farmers due its effective nature. The farmer from the other blocks of Krishnagiri has also been made aware of the performance of

IPM technology particularly the pheromone traps. Prior to this technology, the only option available with the farmer was to spray chemical insecticides. Mr. Manickam of Moongilpudur village progressive farmers resorted to six rounds of spray of insecticides. When he started to use the pheromone traps for mass trapping the population load was down and this enable his bring down the application of insecticides to two rounds which could save his resources.

5. Impact

Due to the continuous effort taken by KVK this technology reached to wider areas. Different extension activities like Method demonstration, Field demonstration, field visits, and publishing extension literatures were done. KVK was able to create the awareness about the symptoms in the leaves which earlier was lacking. Because of this the farmers were able to identify the symptoms much earlier and are able to take up corrective measures. Through trainings to input dealers on the management of this pest wider publicity was given. The adoption percentage is about 60 percentages now from a meager value of 5 percentages.

	
Scientist visit to farmers field	**Harvested tomato**

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

(a) Fruitful utilization of social media networks for the transfer of technology

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 group called "KVK Krishnagiri" on 13.11.2017 with a member of 850 progressive (4 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://youtu.be/lk9pE0sBINc" 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://twitter.com/IcarKendra" post sharing events and Trending Hash Tag to popularize the activity or programme.

(e) A Website for KVK Krishnagiri "www.krishnagirikvk.org" for our KVK Profile and more details.

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	3860	45	12,000	20,000
Foliar nutrition supplementing of micro nutrient	438	70	10,000	18,000
Preparation of value addition	210	25	-	10,000/Month
Fodder production techniques	385	30	2,000	7,000

12. 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	23,917	16,500	22,495	37,11,67,500	✓ 15 Front Line Demonstration conducted covering 58 ha and 150 Farmers. ✓ Organized 40 Training were covering 730 Farmers	State Department of Horticulture, NABARD - Krishnagiri	Yield increased 43.18%
2	Micronutrient Management in Mango	IIHR	10,307	8,325	46,225	38,48,23,125	✓ Conducted 13 Front Line Demonstration Conducted 22 methods demonstration ✓ Conducted 25 trainings for Extension Officials ✓ Provided 18 mobile advisory service to farmers ✓ Spread of this technology through Newspapers	State Department of Horticulture - Krishnagiri	Yield increased 29.4%
3	Integrated Crop Management in Finger Millet	UAS	17,280	9,260	21,668	20,06,45,680	✓ Conducted Front Line Demonstration and Trainings	State Department of Agriculture - Krishnagiri	Yield increased 16.44%
4	Farm Mechanization in Paddy	TNAU	6,150	8,960	40,425	36,22,08,000	✓ Training and Demonstration	State Department of Agriculture - Krishnagiri	Yield increase 22.86%
5	Farm Mechanization in Groundnut Cultivation	TNAU	11,300	8,580	28,340	24,31,57,200	✓ Training and Demonstration	State Department of Agriculture - Krishnagiri	Yield increase 6.74%

Cases of large-scale adoption/impact of specific technologies

MANAGEMENT OF MANGO FRUITFLY

Introduction

Krishnagiri district situated in the North Western zone of Tamil Nadu is bestowed with varied agro climate, which is highly favorable for the cultivation of large number of horticultural crops. This district ranks first in the cultivation and production of Mango in Tamil Nadu. Of the total area 1,20,000 hectares under mango in Tamil Nadu, 40,000 hectares (35%) is in Krishnagiri district. The annual production is about 3.8 lakh tones. Above 70 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 20^0 C to 40^0 C during April to May and the lowest temperature 15^0 C to 28^0 C observed during December and January. The low night temperature during the flowering season helps in better fruit set. The low rainfall and low humidity (60% to 70%) helps in low spread of diseases.

Only 20 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 reasons is the main alternate host which helps in perpetuating the occurrence throughout the year. The female fruit fly lays eggs under the skin of the fruit. The egg hatches into whitish maggots that feed on the fruits which causes rotting resulting in great loss to the farmers. Use of chemicals for the control of fruit fly

creates problem of the residual effects on fruits. Hence sex pheromones are the cheapest alternative for the management of the fruit fly in mangoes.

Technology

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

Intervention

More than 70 % of the farmers do not sell the produce directly and give their orchards on lease. So, these farmers do not take any specific measures in controlling this pest resulting in increasing the population year after another. Hence an OFT was conducted during 2005-06 and efficacy different types of pheromone traps for the management of fruit fly was assessed. From the results of the OFT, IIHR designed fruit fly trap was found to be more effective. Based on this OFT, Front Line Demonstrations was conducted continuously from 2006-2007 to 2020-2021. 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

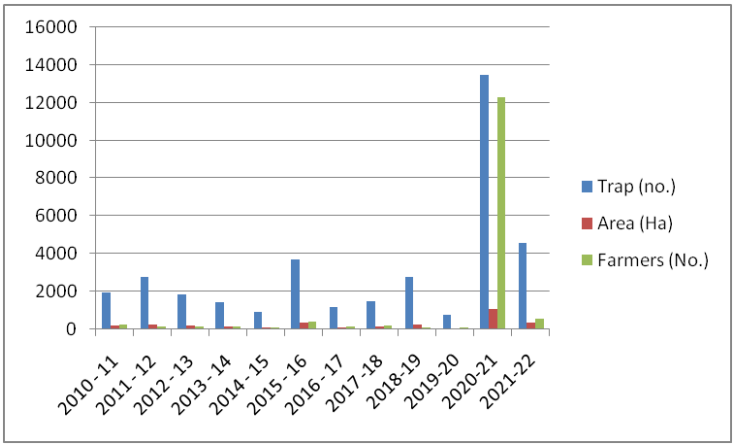
2012-2013 in all blocks of the district. Because of the large-scale demonstration farmers could realize the importance of cheaper, ecofriendly technology and adopted it. While owing to the growing demand of the fruit fly traps by the mango growers, pesticide dealers started selling the same and thus 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
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
2020-21	13503	1080	12287
2021-22	4567	336	590



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 organization	Nature of linkage
Tamil Nadu Agricultural University	Technical guidance for FLDs and OFTs and other researchable issues
Indian Institute of Horticultural Research, Bengaluru.	Technical guidance for FLDs and 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
NABARD, Salem	Collaboration in conducting skill development initiative programme, Farmers Technology transfer fund programmes (FTTF), MEDP
Department of Agriculture, Krishnagiri & Tirupathur	Trainings for farmers, Trainings for extension functionaries
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	Training and Demonstration
Social Forest & Extension, Krishnagiri District.	Collaborative training on importance of tree planting, vermi composting, sponsored training programmes to the Farmers Discussion Group
Department of women and child welfare	Collaborative trainings on nutrition and value addition
NGOs	Collaborative linkage to conduct vocational trainings on Income Generation activities to their SHGs
Department of Sericulture	Field demonstration
Department of Horticulture	Training programmes, Demonstrations
National bureau of agriculture insect's resources (NBAIR)	Trials and Demo**:** Field trials and demonstration were conducted for the management of *Tutaabsoluta* in tomato and Shoot and fruit borer in brinjal.
INSETI, Krishnagiri	Resource persons for training
TNVKP (TNRTP), Krishnagiri	Resource persons for training programme and conducting extension functionaries programme
CSIR - National Botanical Research Institute, Lucknow	Floriculture area expansion
NIVEDI, Bengaluru	DAPSC Programme

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

Important Visitors to KVK Krishnagiri during 2022

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<tr><td colspan="2">Director Visit to KVK</td></tr>
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<tr><td>Director of Extension Education Visit to KVK</td><td>Joint Director of Agriculture, Tirupathur and AGM - NABARD Visit to KVK</td></tr>
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<tr><td>Regional Joint Director of Animal Husbandry Visit to KVK</td><td>Joint Director of Agriculture, Krishnagiri Visit to KVK</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Professor and Head, Regional Research Station Paiyur Visit to KVK</td><td>Joint Director of Horticulture, Krishnagiri Visit to KVK</td></tr>
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