

ICAR -KVK KRISHNAGIRI

ANNUAL PROGRESS REPORT

(1st January 2021 to 31st December 2021)

1. GENERAL INFORMATION ABOUT THE KVK

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

a) Name of the KVK	:	ICAR – Krishi Vigyan Kendra
b) Address	:	Elumichangiri, Mallinayanapalli Post, Krishnagiri, Tamil Nadu – 635 120
c) Landline Phone No.	:	+91 4343 291944
d) Fax No.	:	-
e) Official Mobile No.	:	+91 8098280123
f) E-mail ID	:	drperumalkvk@gmail.com , kvk.Krishnagiri@icar.gov.in

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

a) Name of the Host Organization	:	Tamil Nadu Board of Rural Development (TNBRD)
b) Address	:	No.24, Second floor, Crescent Park Street, T. Nagar, Chennai – 600017
c) Landline Phone No.	:	044- 24360234
d) Fax No.	:	044- 24361319
e) E-mail ID	:	tnbrd1978@gmail.com
f) Name of the Chairperson	:	Mr. S. Ramesh
g) Mobile No	:	+91 9444021523
h) Email	:	tnbrd1978@gmail.com

1.3 Name of the Programme Coordinator with phone & mobile Number.

a) Name of the Programme Coordinator / SS&H	:	Dr. T. Sundarraj
b) Residential Address	:	Mullai Nagar, 3rd Cross, Krishnagiri
c) Phone - residence	:	-
d) Mobile	:	+91 9443888644
e) 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:	ICAR	March 2019	40.13	1,04,250	-	-	-						
	i. Poultry Shed Unit													
	ii. Azolla Production Unit								March 2019	9.29	15,000	-	-	-
	iii. Vermicompost Unit								March 2019	13.4	30,800	-	-	-
	iv. Shade Net Nursery Production Unit								December 2019	83.61	69,609	-	-	-
	v. Nutri Garden								December 2020	323.71	13,880	-	-	-
	vi. Honey Bee Rearing								October 2019	-	16,116	-	-	-
	vii. Medicinal Planting Unit								March 2020	404.64	11,250	-	-	-
viii. Banana Propagation Unit	ICAR	December 2021	50	39,998	-	-	-							

	ix. Sheep Unit	ICAR	November 2021	53.51	1,25,148	-	-	-
	x. Future Fruit Crops	ICAR	August 2021	404.64	7,130	-	-	-
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 31.12.2021	Present status
Two wheeler Hero Honda – CD Dawn	2006	39,890	1,23,122	Good
Two wheeler Hero Honda Passion	2009	50,000	1,11,858	Good
Jeep – Mahindra Bolero plus	2009	6,00,000	2,38,692	Good
Tractor – MF 5245 DI	2011	5,00,000	1050.7 (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	12.02.2021	27	SAC Details given below

PROCEEDINGS OF SCIENTIFIC ADVISORY COMMITTEE MEETING

VENUE : **ICAR -KVK, Krishnagiri** DATE: **12.02.2021**

No. of participants : **27 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. Jawaharlal**,
Director of Extension Education,
Tamil Nadu Agricultural University, Coimbatore.

Members from ICAR Institute : **Dr. K. J. Jayabaskaran**,
Principal Scientist (Soil Science),
ICAR - NRCB, Trichy

Dr. C. Karpagam

Senior Scientist, ICAR - NRCB, Trichy

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. M. Jawaharlal, Director of Extension Education	TNAU, Coimbatore.
4	Dr. M. Senthil Kumar, Nodal Officer, KVK's, DoEE, TNAU	TNAU, Coimbatore.
5	Dr. K. J. Jayabaskaran, Principal Scientist (Soil Science)	ICAR-NRCB, Trichy
6	Dr. C. Karpagam, Senior Scientist	ICAR-NRCB, Trichy
7	Dr. P. Parasuraman, Professor and Head	Regional Research Station (TNAU), Paiyur
5	Dr. S. Sri Vidhya, Assistant Professor of Horticulture	ICAR - KVK, Dharmapuri.
9	Mrs. Umarani Joint Director of Horticulture	Department of Horticulture, Krishnagiri
10	Mr. Shanmugam, Deputy Director of Agriculture	Department of Agriculture, Krishnagiri
11	Mr. C. Murugan Assistant Director of Agriculture,	Department of Agriculture, Krishnagiri

S. No	Name and Designation	Department
12	Dr. L. Rajendran Regional Joint Director of Animal Husbandry	Department of Animal Husbandry, Krishnagiri
13	Dr. A. Maria Sundar, Deputy Director of Animal Husbandry	Department of Animal Husbandry, Krishnagiri
14	Mr. T. Munirathinam, Forest Range Officer,	Social Forestry and Extension Division, Krishnagiri.
15	Mr. K. S. Soma Sekar Forest Range Officer,	Social Forestry and Extension Division, Krishnagiri.
16	Dr. J. Ramesh Professor & Head	College of Poultry Production Management, (TANUVAS), Mathigiri, Hosur.
17	Dr. R. Annal Villi Professor and Head, VUTRC, Krishnagiri.	Vet. University Training and Research centre, TANUVAS, Krishnagiri.
18	Dr. K. Balathandayutham Assistant Engineer	Agricultural Engineering Department, Krishnagiri
19	Mrs. D. Gokilamani Sub-Inspector of Fisheries	Department of Fisheries, Krishnagiri
20	Mrs. V. Veeralakshmi Assistant Inspector of Sericulture	Department of Sericulture, Krishnagiri
21	Mr. P. Kumar, Assistant Engineer (Industries)	District Industries Centre, Krishnagiri.
22	Thiru. M. Murugan Farmer member	Farmer Representative, Maharajakadai, Krishnagiri Dist.
23	Thiru. N. Murugan, Farmer member	Farmer Representative, Kalliyur, Krishnagiri Dist.
24	Mrs. S. Ramya, Farmer member	Farmer Representative, Periyakottapalli, Krishnagiri Dist
25	Capt. T. Munirathinam, Farmer member	Farmer Representative, MCI Agro Industries, Kuruparapalli, Krishnagiri Dist.
26	Mrs. N. Gomathi, SHG Member	Farmer Representative, Krishnagiri
27	Dr. T. Sundarraaj, Member Secretary, Senior Scientist and Head	ICAR- KVK, Krishnagiri

The programme was started with invocation song. Dr.T.Sundarraaj, Senior Scientist and Head gave a welcome address. The meeting was presided over by Mr.S.Ramesh, President, TNBRD, Chennai. Dr.T.Sundarraaj Senior Scientist and Head 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:

<p>Mr.S.Ramesh, The President, TNBRD, Chennai</p>	<ul style="list-style-type: none"> ✓ KVK may coordinate with all departments, NSS students and volunteers to plant more seedlings and maintain them. ✓ Trainings may be given to all farmers in coordination with the line departments.
<p>Dr.A.Bhaskaran, Principal Scientist, ICAR, ATARI, Hyderabad.</p>	<ul style="list-style-type: none"> ✓ Revolving Fund should be increased. ✓ IFS demo unit and other demo units may be established in the upcoming 5 year plan. ✓ Document the farmers feedback of FLD/OFT technologies and share it with ICAR – ATARI, DEE and concern departments. ✓ 15 parameters of farmers database (university format) is to be updated in the KVK database. Target for this year is 10,000. ✓ Government Programmes are to be listed in the KVK Notice Board during the year.
<p>Dr.M.Jawaharlal, Director of Extension Education, TNAU, Coimbatore.</p>	<ul style="list-style-type: none"> ✓ Increase awareness and training programmes on flowers crops cultivation. ✓ Trainers training may be done. ✓ Awareness on good agricultural practices for perennial crops is to be given to farmers especially for Mango. ✓ Motivate the dryland farmers to cultivate Semi arid fruits plants such as wood apple, jambu naval, manila tamarind, anona, etc. ✓ Send Success stories from KVK, Krishnagiri to Uzhavarin valarum velanmai with good photograph. ✓ Awareness may be created on TNAU TV in youtube channel and may send some good quality technology videos from KVK, Krishnagiri to upload the same on TNAU TV.
<p>Dr. P.Parasuraman, Professor and Head Regional Research Station (TNAU), Paiyur</p>	<ul style="list-style-type: none"> ✓ TNAU varieties in millets (Ragi, Horsegram) may be popularized by KVK. ✓ Grafted brinjal is to be popularized.
<p>Mrs. Umarani Joint Director of Horticulture, Krishnagiri</p>	<ul style="list-style-type: none"> ✓ Technological Workshops may be conducted for technology sharing in horticulture. ✓ Integrated Pest and Disease Management for horticulture & floriculture crops are to be disseminated. ✓ New technologies, varieties should be

	<p>implemented in farmer's field as demonstrations.</p> <ul style="list-style-type: none"> ✓ Specialized training for Mango value added products – Jam, Jelly may be organized. ✓ Production technology for Brinjal grafting may be given. ✓ KVK staff may participate in joint inspection for NHM scheme.
Mr. Shanmugam, Deputy Director of Agriculture	<ul style="list-style-type: none"> ✓ Brinjal grafted technology training may be given to farmers and popularized. ✓ Latest varieties in Ragi and Horsegram may be popularized. ✓ Athiyanthal varieties may be popularized.
Dr. L. Rajendran Regional Joint Director of Animal Husbandry	<ul style="list-style-type: none"> ✓ Increase fodder seeds cultivation through identified farmers in PPP mode.
Dr. R. Annal Villi Professor and Head, VUTRC, Krishnagiri.	<ul style="list-style-type: none"> ✓ Encourage farmers to cultivate fodder crops.
Dr.K.J.Jayabaskaran, Principal Scientist (Soil Science), ICAR-NRCB, Trichy	<ul style="list-style-type: none"> ✓ Banana new varieties – Kaveri Sabha, Kaveri Kalki may be promoted. ✓ Banana Shakthi micro nutrients formulation to be popularized.
Dr.C.Karpagam, Senior Scientist, ICAR-NRCB, Trichy	<ul style="list-style-type: none"> ✓ Make entrepreneurs database and give good success story. ✓ Banana Shakthi incubation facility available in NRCB. KVK may utilize it if needed.
Dr. J. Ramesh Professor & Head, College of Poultry Production Management, (TANUVAS), Mathigiri, Hosur.	<ul style="list-style-type: none"> ✓ Backyard poultry farming demo model may be created in KVK. ✓ Create awareness on agro forestry schemes, tree plantation and silage production to farmers.
Dr.S.Sri Vidhya, Assistant Professor of Horticulture, ICAR – KVK, Dharmapuri.	<ul style="list-style-type: none"> ✓ Training on management in Mango Nematode is to be given to the nursery farmers. ✓ Promote top working demo in Mango. ✓ Small voice clippings on technologies related to agriculture and allied sectors may be sent to AIR Dharmapuri.
Mrs. D. Gokilamani Sub-Inspector of Fisheries	<ul style="list-style-type: none"> ✓ Popularise the introduction of Gift Tilapia in NHM pond. ✓ KVK to organize training and awareness programmes for fish culture in water harvesting structures promoted by horticulture department.

Mrs. V. Veeralakshmi Assistant Inspector of Sericulture	✓ KVK may give awareness to farmers to promote sericulture.
Mr.P.Kumar, Assistant Engineer (Industries), District Industries Centre, Krishnagiri.	<ul style="list-style-type: none"> ✓ Small scale industries benefit 25% subsidy from government. KVK may create awareness about this to the entrepreneurs. ✓ KVK may organize training programme to small scale industries owners and request deputation of assistant engineer from district industries centre.
Dr.K.Balathandayutham Assistant Engineer, Agricultural Engineering Department, Krishnagiri	<ul style="list-style-type: none"> ✓ Awareness may be given to farmers on the subsidies of farm mechanization given from AED department. ✓ Solar drier and solar pump set 70% subsidy given to the farmers. KVK may popularize it. ✓ KVK may organize ToT training for solar drier to farmers.
Thiru. M. Murugan Farmer member, Maharajakadai, Krishnagiri Dist.	✓ Marigold seed production may be started in KVK.
Thiru. N. Murugan, Farmer member, Kalliyur, Krishnagiri Dist.	✓ KVK may sell animal feed to the farmers at affordable prize if possible.

2. DETAILS OF DISTRICT (2021)

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	<ul style="list-style-type: none"> • 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
		<ul style="list-style-type: none"> • 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 (or the Jurisdiction as the case may be) for 2021

Kharif:

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	Paddy	15,785	7,00,854	44.4
2	Sorghum	4,123	65,968	16
3	Finger millet	35,284	10,79,322	30.59
4	Little millet	354	3,667	10.36
5	Pearl millet	705	21,791	30.91
6	Maize	1024	40,683	39.73
7	Red gram	11,740	1,26,792	10.8
8	Green gram	1,196	8,635.12	7.22
9	Black gram	2,073	19,755	9.53
10	Groundnut	14,450	3,69,197	25.55
11	Sesame	615	5,762	9.37
12	Cotton	1,317	9,350	7.1
13	Banana	675	3,35,151	496.52
14	Mango	42,375	3,23,321	7.63
15	Chillies	348	1,677	4.82
16	Brinjal	580	1,05,560	182
17	Tomato	6,125	12,10,912	197.7
18	Cabbage	320	1,94,080	606.5
19	Sugarcane	455	2,93,475	645
20	Turmeric	950	22,325	23.5

Rabi:

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	Paddy	8,523	3,25,322	38.17
2	Finger millet	4,479	2,19,291	48.96
3	Maize	76	5,262	69.24
4	Horse gram	6,623	60,931	9.2
5	Green gram	119	774	6.51
6	Black gram	431	2,982	6.92
7	Groundnut	897	23,716	26.44
8	Banana	585	2,72,960	487.43
9	Chillies	174	756	4.73

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
10	Brinjal	575	1,01,360	181
11	Tomato	3,325	61,462	196.5
12	Cabbage	188	1,11,231	601.25

2.5. Weather data:

Month	Rainfall (Mm)	Temperature ° C		Relative Humidity (%)
		Maximum	Minimum	
January 21	51.4	28.53	22.39	74.60
February 21	1	30.42	25.89	81.10
March 21	0	34.28	29.21	74.38
April 21	96	36.39	30.05	67.45
May 21	69.8	34.96	30.06	65.94
June 21	63.8	35.28	30.44	65.45
July 21	133.8	31.81	25.96	68.74
August 21	18.8	32.64	27.06	63.67
September 21	269	32.53	28.02	65.22
October 21	158.2	32.13	27.21	71.19
November 21	309.2	26.96	22.67	79.79
December 21	46	28.28	23.59	73.91

2.6. Production and productivity of livestock, Poultry, Fisheries etc. in the district (2021)

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 (2021)

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, Nutrition security	Improper crop management in French beans, Low yield due to lack of awareness on latest hybrids resistant to pest and diseases, Lack of awareness on use of herbal wash	ICM, IPDM, Value Addition, IPM
2	Krishnagiri	Uthangarai	Uthangarai, Valathanur, Karapattu	2020	Tapioca, Maize, Chickpea, Cotton, Redgram	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, INM, IPDM
3	Krishnagiri	Mathur	Salamarathupatti, Athipallam, Olapatti, Sulakarai, Kallavi	2019	Mango, Groundnut, 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,	2017	Paddy, fodder, Nutrigarden, Ragi	Low yield due to repeated cultivation of existing variety, Lack of awareness on social media for dissemination of information, Lack of knowledge on balanced nutrition	Varietal evaluation, ICT, Value Addition
5	Krishnagiri	Bargur	Keelpoonguruthi, Thinnur, Varatanapalli, Bargur, Sakkilnatham	2018	Little Millet, Horsegram, Mango, Onion, Banana, Groundnut - Wild boar management,	Low yield due to repeated cultivation of existing variety, Improper Nutrient Management, Wild boar infestation	ICM, INM, Wild Menace

6	Krishnagiri	Krishnagiri	Maharajakadai, Krishnagiri, Dhaseripalli, Kalliyur, Valluvarpuram,	2017	Groundnut, Tomato, Goat, Poultry, Millets Value Addition, 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	ICM, INM, Farm Mechanization, Poultry
DFI villages							
1	Krishnagiri	Bargur	Keelpoonguruthi, Thinnur, Varatanapalli, Bargur, Sakkilnatham	2018	Little Millet, Horsegram, Ragi, Mango, Onion, Banana, Groundnut - Wild boar management,	Low yield due to repeated cultivation of existing variety, Improper Nutrient Management, Wild boar infestation	ICM, INM, Wild Menace
2	Krishnagiri	Krishnagiri	Maharajakadai, Krishnagiri, Dhaseripalli, Kalliyur, Valluvarpuram,	2017	Groundnut, Tomato, Goat, Poultry, Millets Value Addition, Farm Mechanization	Improper Crop Management, Improper Nutrient Management, Low yield due to cultivation of existing local varieties, lack of awareness of farm mechanization	ICM, INM, Farm Mechanization

2.8. Priority/thrust areas

Crop/Enterprise	Thrust area
Mango, Paddy, Little Millet, Bhendi, Tomato	Integrated crop management
Greengram, Groundnut, Chilli, Ribbed Gourd, French Beans	Varietal evaluation
Maize, Paddy, Mango, Jasmine, Groundnut	Integrated pest and disease management
Paddy, Mango, Banana, Brinjal	Integrated Nutrient Management
Aseel Chick	Poultry Management
Fodder	Feeding management
Dairy Cow	Disease Management
Banana, Tomato, Groundnut	Drudgery reduction, Farm mechanization
Coconut, Paddy	Information Communication Technology
Mango, Onion, Nutrigarden, Foxtail Millet, Tamarind, Banana, Oyster Mushroom	Value addition

3. Salient Achievements

Achievements of Mandated activities (1st January 2021 to 31st December 2021)

S. No	Activity	Target	Achievement
1	Technologies Assessed and refined(No.)	36	36
2	On-farm trials conducted (No.)	18	18
3	Frontline demonstrations conducted (No.)	22	22
4	Farmers trained (in Lakh)	0.02552	0.02552
5	Extension Personnel trained (No.)	200	200
6	Participants in extension activities (in Lakh)	0.14860	0.14860
7	Production and distribution of Seed (in Quintal)	22.9425	22.9425
8	Planting material produced and distributed (in Lakh)	1.50584	1.50584
9	Live-stock strains and finger lings produced and distributed (in Lakh)	0.00947	0.00947
10	Soil samples tested by Mini Soil Testing Kit (No)	250	250
11	Soil samples tested by Traditional Laboratory (No)	0	0
12	Water, plant, manure and other samples tested (No.)	0	0
13	Mobile agro-advisory provided to farmers (No.)	193887	193887
14	No. of Soil Health Cards issued by Mini Soil Testing Kits (No.)	250	250
15	No. of Soil Health Cards issued by Traditional Laboratory (No.)	0	0

Salient Achievements by KVK during January – December 2021:

- To increase the quality and productivity of the mango by 30 - 40 %, foliar nutrition have been promoted by KVK. Total quantity of 4,648 kg of IIHR Mango special (Micronutrient formulation) produced and distributed to farmers. At present the technology has spread over an area of 20000 ha in the district.
- To reduce the Mango fruit fly incidence, KVK produced 13,503 Mango fruit fly traps and distributed to farmers. Presently this technology spread over to 12000 ha.
- Quality fodder seeds like Hedge Lucerne, Subabul, COFS 31, Fodder Cowpea, Stylo etc., (4.885 qtl.) were supplied to the farmers and the varieties have spread over an area of 1500 ha in the district.

4. TECHNICAL ACHIEVEMENTS

Details of target and achievements of mandatory activities by KVK during 2021

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
18	18	36	36	18	18	108	108

FLD (crop/enterprise/CFLDs)

No of Demonstrations		Area in ha		Number of Farmers / Beneficiaries / Replications	
Targets	Achievement	Targets	Achievement	Targets	Achievement
22	22	54.4	54.4	211	211

Training

Number of Courses			Number of Participants	
Clientele	Targets	Achievement	Targets	Achievement
Farmers and Farm Women	101	101	1942	1942
Rural youth	12	12	233	233
Extn. Functionaries	10	10	200	200
Sponsored Training	7	7	297	297
Vocational Training	4	4	80	80

Extension Activities

Number of activities		Number of participants	
Targets	Achievement	Targets	Achievement
465	465	14860	14860

Seed Production (q)

Target	Achievement	Distributed to no. of farmers
22.9425	22.9425	242

Planting material (Nos)

Target	Achievement	Distributed to no. of farmers
150584	150584	121

Technology Assessments (OFTs) in Detail

OFT-1: Assessment of Greengram Varieties for Higher Productivity

1. **Thematic area** : Varietal Evaluation
2. **Title** : Assessment of Greengram varieties for Higher Productivity.
3. **Scientists involved** : SMS (Agrl. Extension)
4. **Details of farming situation** :

Greengram is cultivated in Krishnagiri district in an area of 285 ha. Among the pulses greengram is cultivated, only in few pockets of the district. Due to its short duration nature it is cultivated both in kharif and rabi seasons. Usually the kharif crop is raised using the rainfall received during the months of May, June & July. The soil suitability of greengram is widely varied from black soil to red laterite including the sandy loam soil. Most of the Krishnagiri district is of red sandy loam soil and that suits the cultivation of greengram. The soil nutrient status in the district is low in nitrogen, medium in phosphorus and medium in potassium. The micronutrient status is also poor in general especially the zinc and boron deficiencies are widely seen in most of the field crops and horticultural crops.

5. **Problem definition / description:**

Though the green gram crop is being cultivated in few pocket of Krishnagiri district the farmers are not aware of the newly released latest varieties that have higher productivity and pest and disease resistance. Low yield due to repeated cultivation of existing varieties, this OFT was conducted and assessed the performance of suitable variety for Krishnagiri district.

6. **Technology Assessed:**

Technology Option 1	Cultivation of CO8 Greengram
Technology Option 2	Cultivation of CO 7 Greengram
Farmers practice	Cultivation of Local variety

7. **Critical inputs given:**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
CO 8 seeds	2 kg	120	10 kg	1,200
CO 7 seeds	2 kg	212	10 kg	2,120
Rhizobium	1 kg	60	5 kg	300
Phosphobacteria	1 kg	60	5 kg	300

Pulse wonder	5 kg	1000	25 kg	5,000
Field board	1 no	200	5 no	1,000
TOTAL				9,920

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. in Lakh./ha)	B:C ratio	Average Number of Pods/plant
Technology 1 Cultivation of CO8 Greengram	5	8.10	0.291	2.50	20.5
Technology 2 Cultivation of CO 7 Greengram		7.40	0.2515	2.31	19.4
Farmers Practice Cultivation of Local variety		6	0.1830	1.94	16.8

Description of the results:

The OFT results showed that the yield obtained in CO 8 was found to be higher (8.10 qtl/ha) than the yield of CO 7 (7.40 qtl/ha) and the local check variety (6.00 qtl/ha). The average pods per plant were found to be more in CO 8 (20.5) than the CO 7 (19.4) and the local check (16.8). The average net return received by the farmers were Rs. 29,150 per hectare in CO 8 while it was Rs.25,150 in CO7 and Rs.18,300 in the local check variety. The B:C ratio obtained was more in CO 8 (2.50) when compared to CO7 (2.31) and the local check (1.94).

9. Constraints: Nil

10. Feedback of the farmers involved:

Farmers gave a positive feedback that the CO 8 being the short duration with high yield potential and it fetched good market price due to its bigger seed size and quality.

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

The yield potential of the both the varieties namely CO8 and CO 7 performed on par with each other in almost all the parameters. The farmers' preference was on slightly with the CO 7 than the CO8 due to its availability.

OFT - 2: Assessment on the Performance of Groundnut Varieties

1. **Thematic area** : Varietal Evaluation
2. **Title** : Assessment on the Performance of Groundnut Varieties.
3. **Scientists involved** : SMS (Agrl. Extension)
4. **Details of farming situation** :

Groundnut crop is one of the important oilseed cultivated in Krishnagiri district in an area of 13481 ha. Usually the Rabi crop is raised late October through January. Groundnuts plants need well drained sandy loam or clay loam soil for better performance. Most of the Krishnagiri district is of red sandy loam soil and that suits the cultivation of groundnut.

5. **Problem definition / description:**

The farmers obtained low yield due to repeated cultivation of existing varieties. Also the farmers are not aware of the newly released latest high yielding varieties. Hence this OFT was conducted and assessed the performance of suitable variety that have comparatively higher yield potentials (TMV 14 and ICGV 00350) in the farmers' fields of Mathur block.

6. **Technology Assessed:**

Technology Option 1	Cultivation of Groundnut variety TMV 14
Technology Option 2	Cultivation of variety ICGV 00350
Farmers practice	Cultivation of Local variety

7. **Critical inputs given:**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
TMV 14 seeds	25 kg	2125	25 kg	10,625
ICGV 00350 seeds	25 kg	2250	25 kg	11,250
Groundnut Rich	1 kg	200	5 kg	1,000
Field board	1 no	200	5 Nos	1,000
TOTAL				23,875

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. in lakh./ha)	B:C ratio	Average Number of Pods/plant
Technology 1 Cultivation of Groundnut variety TMV 14	5	19.5	0.454	1.87	29.90
Technology 2 Cultivation of variety ICGV 00350		29.5	0.9425	2.77	34.38
Farmers Practice Cultivation of Local variety		17.5	0.325	1.59	22.89

Description of the results:

The OFT results showed that the yield obtained in ICGV 00350 was found to be higher (2.95 t/ha) than the yield of TMV 14 (1.95 t/ha) and the local check variety (1.75 t/ha). The average pods per plant were found to be more in ICGV 00350 (34.38) than the TMV 14 (29.90) and the local check (22.89). The average net return received by the farmers were Rs.94250 per hectare in ICGV 00350 while it was Rs.45,400 in TMV 14 and Rs.32,500 in the local check variety. The B:C ratio obtained was more in ICGV 00350 (2.77) when compared to TMV 14 (1.87) and the local check (1.59).

9. Constraints:

Availability of seeds throughout the year may be ensured from the research station /Universities.

10. Feedback of the farmers involved:

Farmers gave a positive feedback that the ICGV 00350 has recorded higher yield and getting good market price compared to TMV 14. This variety suitable for Rabi season.

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

Based on the assessment of groundnut varieties at field level, this ICGV 00350 variety is performed well and highly suitable for Rabi season.

OFT - 3: ASSESSMENT ON THE PERFORMANCE OF CHILLI HYBRID

1. **Thematic area** : Varietal Evaluation
2. **Title** : Assessment on the performance of Chilli Hybrids
3. **Scientists involved** : SMS (Horticulture)
4. **Details of farming situation** :

Chilli is one of the important vegetable crop cultivated in Krishnagiri district in an area of 1100 ha. In this district chilli is cultivated more area in Shoolagiri and Hosur block under irrigated condition. In some areas Chilli is grown as an intercrop with mint. Mostly private hybrids are grown by the farmers. It is grown in red loamy soil under garden lands condition. It can be grown in diverse tropical conditions from sea level to 1500 mm above MSL within a temperature range of 20 to 30 degree Celsius.

The OFT was conducted in Thottakanavu village of Veppanapalli block cluster during 2020-21. Seeds were sown in Protrays during November 2020 in a community nursery and the farmers were given training on portrays nursery production techniques. Transplanting was done during the first week of December. The soil is sandy loam with high content of gravel. Soil is medium in Phosphorous and Potassium where as low in Nitrogen.

5. Problem definition / description:

Most of the farmers cultivate private hybrids of chilli for the vegetable purpose. Green Chilli is mostly preferred by the farmers. The problem with the private hybrids is that it is susceptible to array of pest and diseases. Farmers use heavy dose of pesticides mostly mixing 3 to 4 pesticides together once in a week . This leads to resurgence of sucking pests especially thrips and whiteflies to an uncontrollable level. There is a yield loss of even up to 80 %. Hence this trial was conducted to assess the performance of CO 1 Hybrid and Arka Khyati against major pest and diseases.

6. Technology Assessed:

Technology Option 1	Cultivation of Chilli Hybrid Arka Khyati (IIHR, 2019)
Technology Option 2	Cultivation of Chilli Hybrid CO 1 (TNAU2017)
Farmers practice	Cultivation of Private Hybrids

7. Critical inputs given:

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Arka Khyati Seed	30g	600	150g	3000
CO 1 Chilli Hybrid	30g	720	150g	3600

Veg Spl	2Kg	360	10 Kg	1800
Field board	1	200	5	1000
TOTAL				9400

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (ql/ha)	Net Returns (Rs. in lakh./ha)	B:C ratio	Data on Other performance indicators*		
					Powdery Mildew %	Wt/Fruit (g)	No. of Fruits/plant
Technology 1 Cultivation of Arka Khyati	5	279.59	1.64904	2.28	1.964	5.06	117.72
Technology 2 Cultivation of COCH 1		256.68	1.41544	2.11	3.06	4.79	176.24
Farmers Practice Cultivation of Private Hybrid		221.82	0.99728	1.75	4.416	4.36	111.48

Description of the results:

Arka Khyati recorded the highest yield of 279.59 ql/ha while the COCH 1 recorded 256.68 ql/ha. The yield increase of 25.77 percentages was recorded in Arka Khyati Hybrid over the farmers practice. The net return of Rs.1,64,904 was obtained in TO1 and Rs.1,41,544 in T02. The net return of Rs 99728 was obtained in farmers practice. The B:C ratio of 2.28 was obtained in TO1 followed by 2.11 in TO 2.

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

9. Constraints: Nil

10. Feedback of the farmers involved:

Cultivation of Arka khyati recorded the higher yield compared to COCH1. The pest and disease incidence in Arka Khyati was less. The marketable produce was higher in Arka Khyati

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

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

OFT - 4: ASSESSMENT ON PERFORMANCE OF RIBBED GOURD HYBRID

1. **Thematic area** : Varietal Evaluation
2. **Title** : Assessment on the performance of Ribbed Gourd Hybrids
3. **Scientists involved** : SMS (Horticulture)
4. **Details of farming situation** :

Ribbed Gourd is an important vegetable consuming wide range of people in tropic and sub tropic parts of India. Ribbed Gourd is crop cultivated in Krishnagiri in area of 150 hectares particularly in Hosur block. Ridge gourd is low in saturated fat and cholesterol, high in dietary fiber, vitamin C, riboflavin, zinc, thiamin, iron, magnesium and manganese. The nutritional value of gourd makes it suitable for maintaining optimum health and weight lose. It has excellent cooling properties. Ridge gourd contains a gelatinous compound called luffein. Ribbed gourd is come up very well in sandy loam rich in organic matter with good drainage and pH range from 6.5-7.5. Plough the field to fine tilth. Dig pits of 30 cm x 30 cm x 30 cm size at 2.5 x 2 m spacing and form basins.

5. Problem definition / description:

Varietal evaluation and screening of variety is very important necessary process to obtain most suitable and economical variety for farmer's cultivation. Each variety is having its own specific genetical characters which are inherent. The variation in yield parameters for different varieties is due to its genetic behaviours. More number of private hybrids is available in the market but they are prone to pest and diseases particularly fruit fly and virus diseases. If the virus infected in the early stage of the crop leads to total failure of the crop. Sometimes the yield loss up to 30 percent was recorded due to the powdery mildew, virus and fruit fly incidences. The main objectives of this trial are to know the suitable ribbed gourd hybrids suitable for Krishnagiri district.

6. Technology Assessed:

Technology Option 1	Cultivation of Ribbed gourd CO 1 (TNAU, 2018)
Technology Option 2	Cultivation of Ribbed gourd Arka Vikram (IIHR, 2016)
Farmers practice	Cultivation of Private Hybrids

7. Critical inputs given:

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Ribbed gourd Arka	300 gm	900	1.5 kg	4,500

Vikram hybrids				
Ribbed gourd CO1 hybrids	300 gm	750	1.5kg	3,750
Fruitfly trap	10	800	50 nos.	4000
Field board	1	100	5 no	750
TOTAL				13,000

8. Results:

Technology Option	No. of trials	Yield (ql/ha)	Net Returns (Rs. in lakh./ha)	B:C ratio	Data on Other performance indicators*		
					Powdery Mildew %	Wt/Fruit (g)	No. of Fruits/plant
Technology 1 Ribbed gourd CO1 hybrids	5	332.65	2.34084	3.03	4.072	0.545	7.148
Technology 2 Ribbed gourd ARKA VIKRAM hybrids		309.75	2.10039	2.83	5.344	0.522	6.952
Farmers Practice Cultivation of private hybrids		285.37	1.84448	2.56	6.10	0.487	6.928

Description of the results:

CO1Hybrid recorded the highest yield of 332.65 ql/ha while the Arka Vikram recorded 309.75 ql/ha. The yield increase of 16.56 % was recorded in CO1Hybrid over the farmers practice. The net return of Rs. 2,34,084 was obtained in TO1 and Rs. 2,10,039 in TO2. The net return of Rs. 1,84,448 was obtained in farmers practice. The B:C ratio of 3.03 was obtained in T01 followed by 2.83 in TO2.

It was concluded that CO1Hybrid recorded the highest yield and net returns when compared to Arka Vikram. The pest and disease incidence in CO1Hybrid was less which contributed to higher income and yield. Hence it is recommended that farmers can cultivate CO1Hybrid for higher yield and net return.

9. Constraints: Nil

10. Feedback of the farmers involved:

Cultivation of CO 1Hybrid recorded the higher yield compared to Arka Vikram. The fruit size of CO 1 hybrid was larger compared to Arka Vikram and more preferred by the consumer.

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

From the above trial it is concluded that cultivation of CO1Hybrid recorded the higher yield, gross return, net return and B:C ratio compared to Arka Vikram. The incidence of Leaf miner, Downey mildew and Fruit flies were less in CO1 hybrid.

OFT - 5: ASSESSMENT ON THE PERFORMANCE OF FRENCH BEANS

1. **Thematic area** : Varietal Evaluation
2. **Title** : Assessment on the performance of French Beans
3. **Scientists involved** : SMS (Horticulture)
4. **Details of farming situation** :

The OFT was conducted in Ennekolpudur of Veppanapalli block during Rabi 2019-2020. Sowing was done during March 2020. First harvest was done during last week of April 2020. The farming situation is irrigated. The soil type is sandy loam, medium in phosphorus and potassium where as low in Nitrogen.

5. Problem definition / description:

French Beans is grown in an area of around 90 ha in the Veppanapalli village cluster. French Beans is affected by a number of pest and diseases which hamper the yield of the crop. The viral diseases like Cucumber mosaic virus and insect pest like leaf miner, mites, fruit borer etc. are the reason for the reduction in yield. And farmers spray a lot of pesticides thereby damaging the environment. Hence an OFT was conducted to assess the performance of hybrids towards pest and disease.

6. Technology Assessed:

Technology Option 1	Cultivation of Arka Arjun
Technology Option 2	Cultivation of Arka Sharath
Farmer's practice	Cultivation of Private Hybrids

7. Critical inputs given:

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Arka Arjun seed	6 kg	1,800	30 Kg	9,000
Arka Sharath seed	6 kg	1,800	30Kg	9,000
IIHR –Vegetable special	2 kg	360	10 kg	1,800
Field board	1 no	200	5	1,000
TOTAL				20,800

8. Results:

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. in lakh. /ha)	B:C ratio	Data on Other performance indicators*
TO 1: Cultivation of Arka Arjun	5	174.08	1,46,323	2.34	Mosaic-5.6% Fruit weight-10.25 gm No. of Fruit/plt.-15.84
TO 2: Cultivation of Arka Sharath		162.71	1,29,523	2.19	Mosaic-5.8% Fruit weight-9.892 gm No. of Fruit/plt.-15.32
FP: Cultivation of Private Hybrids		650.01	0.99286	1.91	Mosaic-8% Fruit weight-9.388gm No. of Fruit/plt.-14.16

Description of the results:

Highest individual yield among all three varieties was obtained in Arka Arjun (186.33q/ha) Average yield was highest in Arka Arjun (174.08q/ha) followed by Arka Sharat (162.71 q/ha) and Private hybrid (142.47q/ha). Lowest individual yield was seen in Private hybrid (131.3q/ha). Fruit weight was more in Arka Sharat (10.248 gm) followed Arka Arjun (9.892gm) and Private hybrid (9.388gm). No of fruits per plant was highest in Arka Arjun (15.84 nos.) followed by Arka Sharat (15.32 nos.) and Private hybrid (14.16nos.). Incidence of mosaic was lowest in Arka Arjun (5.6%) followed by Arka Sharat (5.8%) & Private Hybrid (8%).

9. Constraints: Nil

10. Feedback of the farmers involved:

Highest yield was obtained in Arka Arjun (174.08q/ha).The incidence of mosaic was low. The market preference was more for Arka Arjun because of the tender nature.

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

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.

OFT - 6: Assessment on Groundnut Varieties (K1812 and TCGS 1043) for Higher Productivity

1. **Thematic area** : varietal Assessment
2. **Title** : Assessment of groundnut varieties
(K1812 and TCGS 1043) for higher productivity
3. **Scientists involved** : SMS (Agronomy)
4. **Details of farming situation** :

Groundnut is the most important oilseeds crop in India. India ranks second next to China in groundnut production. In Tamil Nadu, Groundnut was cultivated in 3.47 Lakh ha area with the average productivity of 2574 kg ha⁻¹. In Krishnagiri district groundnut was cultivated more area 11200 ha in Kharif season as rainfed with an average production of 1700 kgs ha⁻¹. Eventhough, there was a wider spread of cultivated area in different blocks of Krishnagiri district have less contribution on total production due to lack of awareness on package of practices and new high yielding varieties. The soil type in Jagadap village was sandy loam in nature. This soil type is well suited for groundnut cultivation. This study assists to found the efficient cropping zone for Groundnut in Krishnagiri district which helps to get higher yield in a limited area through better variety selection.

5. Problem definition / description:

Groundnut is cultivated in an area of 11200 ha in the district in which 2800 ha is irrigated. Major variety is VRI 2 and some existing varieties are cultivated which is susceptible to water stress, *Helicoverpa*, dry root rot, tikka leaf spot and rust. It leads to a low yield (17.40 q/ha). Due to uneven distribution of rainfall during monsoon season, existing varieties are not able to withstand drought conditions. And also farmers have been lack of knowledge in package of practices, modern high yielding varieties benefits. These are the main reasons for getting low yield in groundnut crop during kharif seasons at Krishnagiri district.

6. Technology Assessed:

Technology Option 1	Cultivation of Groundnut variety K1812 (Kadiri Lepakshi)
Technology Option 2	Cultivation of Groundnut variety TCGS 1043 (Dharani)
Farmer's practice	Cultivation of Local variety VRI 2

7. Critical inputs given:

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
K1812 Seeds	24 kg	3,720	120 kg	18,600
TCGS 1043 Seeds	25 kg	2,450	125 kg	12,250
Field board	1 no.	200	5 no.	1,000
Total				31,850

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. in lakh. /ha)	B:C ratio	Other performance indicators – 100 Kernels Weight (g)
Technology Option 1	5	22.71	0.72055	2.36	40
Technology Option 2		24.70	0.71935	2.44	42
Technology Option 3		19.74	0.32910	1.59	48

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

TCGS 1043 (Dharani) variety has recorded a higher pod yield than K1812 and VRI 2. It was also found to be moderately resistant to root rot disease. The kernel of K1812 variety gave a bitter taste than TCGS 1043 and VRI 2.

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

K1812 variety showed unsynchronized flowering that resulted in uneven maturity.

OFT - 7: 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 thrives well in almost all the regions of the country from sea level to an altitude of about 1,400 m, provided there is no high humidity, rain or frost during flowering period. It may not be desirable to grow mango commercially in areas above 600 m above MSL in subtropics. It cannot stand severe frost, especially when plants are young. Though the best mango growing regions of the world have the annual mean temperature ranging from 21 to 27 °C, it can tolerate a temperature range of 5 to 44°C. High temperature accompanied by low humidity and wind affects the trees adversely. 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
Farmer's 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.)
<i>Tebuconazole</i>	500 ml	590.00	2. 5 lits	2950.00
Chlorothalonil	250 grams	400.00	1250 nos.	2000.00
Field board	1 no.	200	5 no.	1000.00
Total				5950.00

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. in lakh. /ha)	B:C ratio	Other performance indicators – Disease incidences
Technology Option 1	5	52.69	0.46639	2.72	10
Technology Option 2		50.46	0.42030	2.47	22
Technology Option 3		44.95	0.29720	1.90	64

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 spread of the disease and management of the disease through bio agents.

OFT - 8: Assessment of Technology Modules against Jasmine Budworm

1. **Thematic area** : Integrated Pest Management
2. **Title** : Assessment of Technology Modules against Jasmine Budworm
3. **Scientists involved** : Senior Scientist and Head
4. **Details of farming situation** :

Jasmine is one of the major flower crops having more than two-fifth of the total area under flower cultivation cultivated in Tamil Nadu and Krishnagiri district having its share of 30% in area with around 1,500 hectares and is still growing gradually. The cultivation of jasmine flower generated impressive returns to the farmers and good employment opportunities for farm family as well as agricultural laborers especially for female workers. As it is being the perennial crop and the labour requirement is more during the harvesting seasons, most of the farmers cultivate the crop in smaller pockets in irrigated conditions. The crop comes up well in the red loamy soil with well drainage facilities besides the favourable climate of warm summer with moderate rainfall and sunny days that which makes Kaveripattinam and Krishnagiri blocks of the district for a best suited place to have jasmine cultivation. The crop gives blooming and yields during the March to October and it goes off-season during November to February.

5. Problem definition / description:

Jasmine is a good profitable crop provided there is a good yield and high price for the flowers. The yield of the crop is influenced by the soil fertility and the pest and disease free crop environment. There are about 50 different insect pest species belonging to more than eight orders harbour the varied microhabitats of the jasmine plants. The most devastating pest of jasmine is bud worm, *Hendecasis duplifascialis*. Bud borers bore into the unopened tight buds, reducing its size and quality. Bud borer larvae cause greatest injury to immature buds of *Jasminum sambac*. The larvae found inside the bud or in flower cluster feeding on buds. It feeds on the inner most petals of the closed bud in the initial stages, emerged through a circular hole made on the tubular portion of the corolla for tunnelling into the other buds in the same shoot and pupates in the soil. The larvae makes tunnels of silk and excreta within an affected flower cluster, thus affecting the flower opening and flower buds may drop off and finally the flower buds changes into pinkish colour. To manage the budworm this OFT is proposed.

6. Technology Assessed:

Technology Option 1	Spraying of <i>B. bassiana</i> @ 5 gm/lit of water three times along with six release of <i>T. chilonis</i> @ 1,00,000/ha at 7 days interval & <i>Chrysoperla zastrowisillemi</i> @ 4-5 grubs per plant @ 7 days interval from bud initiation stage
Technology Option 2	Fixing of light trap 1/acre, Neem seed kernel extract 5 %, <i>Beauveria bassiana</i> 5 grams/litre, Spray any one of the following insecticides Thiacloprid 240 SC @ 1 ml /lit or Spinosad 45SC 0.5ml/lit
Farmer's practice	Spraying of combination of insecticides

7. Critical inputs given:

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
<i>Beauveria bassiana</i>	1 lit	370.20	5 lits	1851.00
Light trap	1 No	1600	5 nos.	8000.00
<i>Trichogramma chilonis</i>	18cc	540	90cc	2700.00
Field board	1 no.	200	5 no.	1000.00
Total				13551.00

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. in lakh. /ha)	B:C ratio	Other performance indicators % pest incidences
Technology Option 1	5	72.46	4,10,718	4.65	9.6
Technology Option 2		71.54	4,05,211	4.64	11.4
Technology Option 3		68.39	3,46,609	3.35	15.3

9. Constraints: Nil

10. Feedback of the farmers involved:

Integrated use of bio control agents and light traps are reliable and effective pest control in jasmine, while reducing pest management cost and chemical exposure to the growers and workers.

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

Easy availability of bio control agents at door step is necessary.

OFT - 9: Assessment of Management Module against Wild Boar in Groundnut

1. **Thematic area** : Integrated Pest Management
2. **Title** : Assessment on management of different module against wild Boar in Groundnut
3. **Scientists involved** : Senior Scientist and Head
4. **Details of farming situation** :

India is one of the largest producers of oilseeds in the world and occupies an important position in the Indian agricultural economy. Groundnut is called as 'King' of oilseeds. It is one of the most important food and cash crops of our country. While being a valuable source of all the nutrients, it is a low priced commodity. Groundnut is also called as wonder nut and poor men's cashew nut. Groundnut is one of the most important cash crops of our country.

Groundnut generation is gathered in five states viz., Gujarat (26.34 percent), Andhra Pradesh, Tamil Nadu, Karnataka and Maharashtra. These five states represented around 86 percent of the absolute region under groundnut. Generally, as a Kharif crop, groundnut is grown year after year.

VARIETIES

The varieties of groundnut under cultivation fall into three groups in respect of the habit of growth, namely bunch (Spanish), semi-spreading (Virginia bunch) and spreading (Virginia runner). In the bunch group, the plants grow erect, possess light-green foliage, produce pods in clusters at the base of the plant and have round, plump non-dormant seeds, with light-rose testa. In the case of the semi-spreading and spreading varieties, the branches trail either partially or completely on the surface of the soil, produce pods all along them, possess dark green foliage and have oblong, dormant brownish seeds. The semi spreading and spreading types are usually heavier yielding and later-maturing than the bunch varieties

Groundnut is grown throughout the tropics. Soil: Groundnut is grown on a wide variety of soil types. However, the crop does best on sandy loam and loamy soils and in black soils with good drainage. Heavy and stiff clays are unsuitable for groundnut cultivation as the pod development is hampered in these soils. Kharif crop, with the onset of rains in May and June, the field is given two ploughings and the soil is pulverized well to obtain a good tilt. The third ploughing may be given just before sowing. Harrows or tillers can be used for cultivation.

5. Problem definition / description:

The production of groundnut is ruined by a series of diseases, insect and vertebrate pests, among the vertebrate pests' rodents, wild boar, and birds that cause vulnerable damage. The wild boar is one of the most widely distributed mammals native to North Africa, Europe, and Asia. Due to a reduction in preferred habitats and hunting the population of wild boar is getting fragmented and these isolated populations have become locally abundant, and have forced them to depend upon crops. Wild boars are prolific breeders and breed throughout the year. The reproduction period in wild boar is seasonal and mostly correlated with the availability of food and other climatic factors. Its activity is peculiarly at dawn and dusk than in the actual day period. They also have a unique feature of identifying cropped areas through their smell sensory mechanism. The head of the wild boar is elongated with truncated mobile snout which ends in a flattened disk containing the nostrils. The head is very strong and used in fighting, digging, and damaging vegetation. Wild boar has been regarded as a serious pest of agriculture crops and more pronounced in crop fields accounting for 70 percent damage which are near adjoining forest areas. Crop depredation by wild boars is enormous and includes agricultural crops like millets and groundnut. The initial damage to crops was by eating away the sprouted seeds and further damage is seen at crop maturity, mature crops were highly susceptible to damage. Many of the physical, chemical, traditional, biological, and sonic methods are innovated for the management of wild boar in which they are highly cumbersome and unavailable to the economically backward farming community. The plant contains secondary metabolites such as alkaloids, phenols, essential oils, terpenoids, and tannins, etc. which produce strong undesirable odor have a greater impact on vertebrates by deterring them. Hence the trial was conducted to know the status of wild boar menace in groundnut crop to know the effectiveness of cost-effective methodologies like spraying of natural products in managing the wild boar menace. Hence the OFT is proposed.

6. Technology Assessed:

Technology Option 1	Herboliv(Foliar spraying and soil application of Herboliv@10 litre spray at 15 days interval - 6 times in crop duration
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Technology Option 2	Neelbo repellent (Neelbo repellent @500 ml/2.5 litres of water, soak the coir/jute rope in solution for overnight (minimum 8 hrs. and tied at 1 feet above ground level once in every 30 days interval - 4 times in crop duration.
Farmer's practice	By putting rope and cloth along the border of field

7. Critical inputs given:

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Herboliv	6 can (30 litres)	425	30 can (150 litres)	12750.00
Neelbo repellent	2 litres	2300	10 litres	11500.00
Field board	1 no.	200	5 no.	1000.00
Total				25250.00

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. in lakh. /ha)	B:C ratio	Other performance indicators wild boar incidences(%)
Technology Option 1	5	23.12	0.74208	2.46	2.5
Technology Option 2		22.12	0.67363	2.28	10.6
Technology Option 3		19.3	0.60800	2.11	30.5

9. Constraints: The trials needs more laborers

10. Feedback of the farmers involved:

The maximum area damage was recorded during the harvesting stage followed by pod formation and sowing stages.

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

OFT - 10: Assessment on Efficiency of Fertilizer schedule in increasing the yield of Brinjal

1. **Thematic area** : Integrated Nutrient management
2. **Title** : Assessment on Efficiency of fertilizer schedules in increasing the yield of Brinjal
3. **Scientists involved** : SMS (Soil Science)
4. **Details of farming situation** :

Brinjal is one of the good remunerative vegetable crops in Krishnagiri district. In Jagatap village of Kaveripattinam block an OFT was conducted during the Rabi season of 2020 to assess the efficiency of different fertilizer schedules in increasing the yield of brinjal. The farming situation was irrigated. The selected fields in the OFT had the soil texture of sandy loam soil type with the Low : Medium : Medium NPK status. The pH of the soil was in the range of 6.8 to 7.6 in the OFT fields.

5. Problem definition / description:

As the vegetables greatly responds to nutrients supplementation, most of the vegetable growers in the district use fertilizers injudiciously for getting the higher yields. But the problem is in due course of time the yield starts to decline from certain level due to the poor soil health maintenance. Also, the mismanagement of soil with nutrients leads to the soil health deterioration in the long run. Hence proper nutrient supplementation with good practical knowledge is essential to get a sustainable yield in brinjal. In this OFT two fertilizer schedule packages (one from IIHR and another one from TNAU) were assessed to know the efficiency of nutrition supplementation in increasing the yield of brinjal without deteriorating the soil health much.

6. Technology Assessed:

Technology Option 1	FYM – 25 t/ha + RDF – 150:125:150 NPK kg/ha + Vegetable special – 0.5 % (4 times after 35-40 days with 15-20 days interval). (IIHR, 2018)
Technology Option 2	FYM – 25 t/ha + RDF – 200:150:100 NPK kg/ha + Spraying of 2 ppm (1 ml in 500 lit) Triaccontanol + Sodium Borate or Borax 35 mg/l of water 15 days after transplanting and at the time of full bloom + Zinc Sulphate – 0.5 % (3 times in 10 days interval). (TNAU, 2013)
Farmer's practice	Application of complex fertilizers without any standard recommended doses and no application of micronutrients

7. Critical inputs given:

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Vegetable special	1.000 kg	180.00	5.000 kg	900
Triacontanol	0.250 lit	172.60	1.250 lit	863
Sodium borate	0.100 kg	49.20	0.500 kg	246
Zinc sulphate	1.500 kg	109.20	7.500 kg	546
Field board	1 no.	200.00	5 no.	1000
Total				3,555

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. in lakh. /ha)	B:C ratio	Other performance indicators – Weight per Fruit (g)
Technology Option 1	5	343.7	1.76995	3.19	70.8
Technology Option 2		320.9	1.56455	2.86	66.2
Technology Option 3 (Farmers Practice)		287.9	1.22625	2.31	59.4

Description of the results:

Highest average yield of 343.7 q/ha was obtained in the fertilizer schedule-150:125:150 NPK kg/ha along with foliar spraying of Vegetable special – 0.5 % (4 times after 35-40 days with 15-20 days interval) followed by the 320.9 q/ha with the fertilizer schedule of 200:150:100 NPK kg/ha along with Spraying of 2 ppm (1 ml in 500 lit) Triacontanol + Sodium Borate or Borax 35 mg/l of water 15 days after transplanting and at the time of full bloom + Zinc Sulphate – 0.5 % (3 times in 10 days interval). The percentage of yield increase was found to be 19.38 in the Technological option 1 over the farmer's practice.

9. Constraints: Nil

10. Feedback of the farmers involved:

Foliar nutrition with micronutrient mixture especially the vegetable special of IIHR in combination with recommended dosage of fertilizers gave increased yield in brinjal.

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

IIHR vegetable special as foliar spraying along with the application of fertilizers @ 150:125:150 NPK kg/ha gave an increased yield of 19.38 over the farmers practice.

OFT - 11: Assessment on Technology Modules to enhance the bunch weight in Banana

1. **Thematic area** : Integrated Nutrient management
2. **Title** : Assessment on Technology modules to enhance the bunch weight in Banana
3. **Scientists involved** : SMS (Soil Science)
4. **Details of farming situation** :

The OFT was conducted in Belavarthi village of Bargur block during Rabi 2020-21 in 5 farmers' fields. The farming situation was irrigated. The soil texture was sandy loam and the nutrient status was low in nitrogen, medium in phosphorus and low potassium.

5. Problem definition / description:

Banana is grown in Krishnagiri district by most of the farmers who have good irrigation facilities. As the profit from banana varies greatly with the yield and marketing price, farmers are not hesitating to spend on inputs. Mostly the bunch weight in banana greatly varies with the nutrition. The farmers supply the nutrients through fertilizers as a soil application and/or foliar nutrition. Hence in this OFT, two different modules to enhance the bunch weight in banana were assessed.

6. Technology Assessed:

Technology Option 1	De-navelling & Post shoot feeding of N, K & S through distal stalk end of rachis by blending of 15g of nutrients (7.5 g Urea & 7.5 g SOP) dissolved in 100 ml water + 500 g Cow dung – applied at de-navelled stalk end. (IIHR, 2017)
Technology Option 2	Bunch spraying of SOP – 2% during the opening of last hand (after the removal of male bud) and 2nd spraying after 30 days + Banana Sakthi - 2 % spraying (3, 4 & 5 MAP). (NRCB, 2007)
Farmer's practice	No bunch feeding and no Micro nutrient sprayings

7. Critical inputs given:

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Banana Sakthi	4.000 kg	800	20 kg	4,000
Urea	1.600 kg	11	8 kg	55
Sulphate of potash (SOP)	3.600 kg	284	18 kg	1,418
Field board	1 no	200	5	1000
TOTAL				6,473

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs. in lakh. /ha)	B:C ratio	Other performance indicators – Weight per Bunch (kg)
Technology Option 1	5	329.60	5.07060	4.33	14.18
Technology Option 2		321.26	4.91760	4.26	13.66
Technology Option 3 (Farmers Practice)		287.00	4.25160	3.86	12.72

Description of the results:

Highest average yield obtained was 329.60 q/ha in Technology option 1 namely, De-navelling & Post shoot feeding of N, K & S through distal stalk end of rachis by blending of 15g of nutrients (7.5 g Urea & 7.5 g SOP) dissolved in 100 ml water + 500 g Cow dung – applied at de-navelled stalk end. This was followed by the Technology option 2 namely, Bunch spraying of SOP – 2% during the opening of last hand (after the removal of male bud) and 2nd spraying after 30 days + Banana Sakthi - 2 % spraying (3, 4 & 5 MAP) in which the yield obtained was 321.26 q/ha. The yield increase in Technology option 1 was 14.85.

9. Constraints: Nil

10. Feedback of the farmers involved:

Highest yield was obtained in de-navelled and post shoot feeding of N, K & S done trees than the normal foliar nutrient supplemented trees. The quality of the fruits also has got improved much with shape, size and weight.

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

The average bunch weight was 14.18 kg which was 14.85% increase over the farmers practice where the average bunch weight was 12.72 kg.

OFT - 12: Assessment on Tree Leaf Meal incorporated concentrate Feed for Backyard Native Chicken

- 1. Thematic area** : Production and management
- 2. Title** : Assessment on Tree leaf meal incorporated concentrate feed for backyard native chickens
- 3. Scientists involved** : SMS (Animal Science)
- 4. Details of farming situation** :

In Krishnagiri District Native chicken rearing was commonly adopted by farmers for household purpose. The farmers rear the chicken under backyard condition with available leftover grains, household waste, crop residue etc to meet daily nutrient requirements. With the growing demand for desi chicken meat, the farmers increasing the flock size to get additional income. Feed is one of the important factor in rural poultry production. At present situation, with the introduction of improved desi chicken the farmers depend on external feed inputs to increase the bodyweight for increased return from native chicken rearing. In this growing demand for desi chicken meat the farmers depend on Conventional concentrate feeding rations.

5. Problem definition / description:

Feeding constitutes the fundamental and major management concern in poultry production since major expenditure (60-70%) in poultry rising is feed cost. Efficiency in feeding therefore is one of the key factors for successful poultry production. A balanced ration is the one which will supply different nutrients in right proportions according to the requirements for maintenance and various productive functions. The nutrients required by poultry must be supplied in rations through the ingredients available in sufficient quantity economically.

The demand for animal protein is still rising and the cost of Conventional poultry rations is also increasing. With the cost of feed soaring high and the availability of conventional ingredients becoming scarce, intensive and continuous efforts are being made to determine the nutritive value of agro industrial byproducts and available forages to replace more costly ingredients in poultry rations.

In this regard, Institute of Animal Nutrition - TANUVAS had made efforts to include Tree meal based concentrate feed at 2.5% level with feed ingredients namely Maize, Soyabean meal, DORB, Fish meal, Mineral mixture, Sodium bicarbonate and Salt. Hence it has been proposed to assess the Effectiveness of Tree meal incorporated concentrate feed for native chicken to improve body weight gain in rural poultry production.

6. Technology Assessed:

Technology Option 1	Tree leaf meal incorporated (2.5 – 5%) concentrate feed (<i>TANUVAS, 2019</i>)
Technology Option 2	Concentrate feed without Tree leaf meal (<i>Feeding standards of Poultry, BIS, 2007</i>)
Farmer's practice	Scavenging, waste grain, imbalanced feeding

7. Critical inputs given:

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Tree leaf meal incorporated concentrate feed	76.8 kg	2272.51	384 Kg	11362.56
Conventional concentrate feed	75 kg	2196.75	375 Kg	10983.75
TOTAL				22346.31

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Average Body weight gain (in Kgs)	Net Returns	B:C ratio
Technology 1: Tree leaf meal incorporated (2.5 – 5%) concentrate feed	5	1.11	0.04107	1.95
Technology 2: Concentrate feed without Tree leaf meal		1.004	0.03258	1.79
Farmer's Practice		0.884	0.01541	1.48

Description of the results:

Based on the assessment Tree meal incorporated concentrate feed found to increase the body weight of native poultry by 26 % (TO1) when compared to feeding of conventional concentrate feed without tree meal (14% in TO2). The net return on feeding Tree meal incorporated concentrate feed was comparatively higher when compared to feeding Concentrate feed without tree meal and scavenging / irregular feeding.

9. Constraints: Nil

10. Feedback of the farmers involved:

The farmers felt that feeding the native chicken using tree meal concentrate feed was satisfied as the body weight gain was comparatively high by using this technology. The cost of feeding was not much reduced on addition of tree meal. Farmers felt efforts can be taken further for cost effective concentrate feed for small scale farmers.

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

The feeding of tree meal incorporated concentrate feed had yielded comparatively higher average body weight gain in native chicken. But efforts can be taken further to include the alternate feed source like tree meal to reduce the cost by 10-20%.

OFT - 13: ASSESSMENT ON EFFECTIVENESS OF INFERTILITY TREATMENT IN DAIRY COWS

1. **Thematic area** : Livestock Infertility Management
2. **Title** : Assessment On Effectiveness of infertility treatment in dairy cows.
3. **Scientists involved** : SMS (Animal Science)
4. **Details of farming situation** :

In Krishnagiri district, cattle and buffalo population is 3.8 Lakhs. The farming system is of semi-intensive system, mainly small and marginal farmers possess 60 - 70% of the population. Mostly farmer's rear crossbred HF and Jersey animal for higher milk production. Infertility is a common problem in high yielding dairy animals and most predominantly due to hormonal imbalance.

5. Problem definition / description:

Fertility is a multi-factorial trait and its deterioration has been caused by a network of genetic, environmental and managerial factors and their complex interactions. Cattle in rural areas of Tamil Nadu generally suffer from two major reproductive conditions - Anoestrus condition or failure of coming to heat (20 – 30 %) and Repeat Breeding or repeated failure to conceive (around 10 %). These conditions result in abnormally long average inter-calving intervals of more than two years, as against an ideal interval of one year. Majorly, hormonal imbalance is the prime reason for causing infertility in crossbred dairy cows. Farmers experience severe economic loss due to anoestrus condition and repeat breeders. Most farmers not aware of latest hormonal treatment methods and latest technologies available for inducing estrus and treating repeat breeders. Hence it has been proposed to assess the effectiveness of infertility treatments using Prosync Nano Cream Progesterone and Prosync NF Nano Fiber Progesterone (TANUVAS) to induce estrus in short time and to improve the conception rate.

6. Technology Assessed:

Technology Option 1	Prosync NC Nano cream Progesterone applied on the back region of animal (<i>TANUVAS, 2018</i>)
Technology Option 2	Prosync NF Nano fiber cream Progesterone applied on the back region of animal (<i>TANUVAS, 2017</i>)
Farmer's practice	Repeated Artificial Insemination (not using prosync NC / CIDR)

7. Critical inputs given:

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Prosync NC Nano Cream Progesterone	1no.	367.60	5 nos.	1838
Prosync NF Nano Fiber Progesterone	1 no.	420	5 nos.	2100
TANUVAS Mineral Mixture	6Kg	55	30 kg	1650
TOTAL				5588

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Conception Percentage (%)	Net Returns (Rs. per animal / 90 days)	B:C ratio	Data on Other performance indicators
Technology 1: Prosync NC Nano Cream progesterone	5	60	0.11240	2.14	Exhibited Estrus signs - 80%
Technology 2: Prosync NF Nano Fiber Progesterone		40	0.07772	1.85	Exhibited Estrus signs - 60%
Farmer's Practice		20	0.00632	1.09	Exhibited Estrus signs - 30 %

Description of the results:

Based on the assessment Prosync NC cream progesterone found to increase the conception rate (60% in TO1) in repeat breeders / anestrus condition when compared to Prosync NF Nano Fiber progesterone (40% in TO2). 80% of the animals and 60% of animals Exhibited estrus signs in TO1 and TO2 respectively. The net return from Prosync NC Nano cream progesterone applied animals was higher when compared to Prosync NF nano fiber applied animals.

9. Constraints:

Retention of Prosync NC Cream/Nano Fiber patch over the body is a constraint in the trial.

10. Feedback of the farmers involved:

The farmers felt that using Prosync NC Nano cream progesterone patch in repeat breeding dairy animals was satisfied since the conception rate is comparatively high by using this technology.

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

OFT - 14: Assessment of suitable Banana Variety for Nutrimix

1. **Thematic area** : Post Harvest Technology
2. **Title** : Assessment of suitable banana variety for nutrimix.
3. **Scientists involved** : SMS (Home Science)
4. **Details of farming situation** :

The farmers usually sell the raw banana to the middlemen or traders at very low price due to glut in the market. The krishnagiri district finds suitable for cultivation of banana due to the climatic condition, soil and other ecological factors.

5. **Problem definition / description:**

The farmers cultivate banana and sell as raw produce immediately after harvest. The farmers are reluctant of the post harvest technologies and lack awareness on the processing and dehydration of banana for nutrimix and the postharvest treatments for its shelf life enhancement.

6. **Technology Assessed:**

Technology Option 1	Nutrimix enriched with banana flour (Nendran), Pearl millet, Sorghum, Ragi, Wheat, Roasted Bengal Gram, and Jaggery-TNAU 2015
Technology Option 2	Nutrimix enriched with banana flour (Yellaki), Ragi, Pearl millet, Sorghum, Wheat, Roasted Bengal Gram and Jaggery -NRCB-2016
Farmer's practice	Sale of raw banana to the Middlemen.

7. **Critical inputs given:**

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Pearl millet, Sorghum, Ragi, Wheat, Roasted Bengal Gram	20 kg/trial	1110	100 kg	5550
Stickers	29 nos	110	145 nos	550
Nendran Yellaki	12 kg	690	60	3450
Standing Pouch	36	90	180	450
Total				10000

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Price Realized(Rs. /ha)	Net Returns (Rs. in lakh. /ha)	B:C ratio
Technology Option 1	5	700	18600	2.79
Technology Option 2		575	13737	2.56
Technology Option 3		408	7875	2.29

9. Constraints: Nil

10. Feedback of the farmers involved:

There was good awareness and acceptance of the technology, and used for culinary purposes and good food for the toddlers, supplementing the energy rich diet for all groups.

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

The banana flour enriched with Nendran has overall acceptability with good organoleptic characteristics and good keeping qualities.

OFT - 15: Assessment of Performance of Oyster Mushroom Varieties

1. **Thematic area** : Income Generation
2. **Title** : Assessing the performance of Oyster Mushroom Varieties
3. **Scientists involved** : SMS (Home Science)
4. **Details of farming situation** :

The farmers usually cultivate oyster mushroom and unaware of the new varieties. The climatic condition and its humidity of krishnagiri district play a major role in the cultivation of mushroom as an enterprise for farm women, because of the availability of paddy straw in abundance, as the major crop is paddy cultivated in irrigated condition due to reservoir.

5. Problem definition / description:

The farmers usually cultivate oyster mushroom, the yield is also low and the shelf life is normally one or two days and get low price. Hence there is a need to cultivate newer varieties which fetches higher yield and high income with good shelf life. Hence this OFT was designed with different treatments and to assess the acceptability.

6. Technology Assessed:

Technology Option 1	IIHR-Arka om-1 Oyster mushroom variety-2011
Technology Option 2	TNAU - CO 2 - Oyster mushroom-2008
Farmer's practice	Oyster Mushroom

7. Critical inputs given:

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
IIHR Arka OM - 1 Bed spawn	20	1400	60	4200
TNAU CO2 - bed spawn	20	800	60	2400
Field board	3no.	200	3 no.	600
Total				7200

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q)	Net Returns (Rs. in lakh. /Unit)	B:C ratio
Technology Option 1	3	2.4	0.36	2,88
Technology Option 2		1.8	0.27	2.50
Technology Option 3		1.2	0.15	1.77

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

The IIHR Arka OM - 1 variety fetched good profit due to increased shelf life, keeping quality, organoleptic characteristics.

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

The yield of Arka OM-1 IIHR per bed was comparatively high, with good fragrance and cooking characteristics suitable for culinary purposes.

OFT - 16: Assessment of different flavors of Protein enriched Mango Bar using Solar Drier

1. **Thematic area** : Value Addition
2. **Title** : Assessment of different flavors of protein enriched Mango Bar using Solar Drier
3. **Scientists involved** : SMS (Home Science)
4. **Details of farming situation** :

The farmers lack awareness on the post harvest management practices and technologies.

5. Problem definition / description:

The mangoes deteriorated easily due to poor shelf life and farmers are unaware of the post harvest technologies. The farmers usually sell immediately to the traders or middle men directly and get low price. Hence this assessment was taken to find its acceptance and its flavours.

6. Technology Assessed:

Technology Option 1	Preparation of protein enriched mango bar using Alphonso Pulp
Technology Option 2	Preparation of mango spicy bar using Totapuri Pulp
Farmer's practice	Direct sale of raw mango to the Middle Men

7. Critical inputs given:

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Sugar, Chilli powder, Corn flour, Skimmed milk powder, Greengram, defatted soya flour	5.4 kg	248.60	27 kg	1243
Totapuri pulp	11.2 kg	537.6	56 kg	2688
Alphonso pulp	11.2 kg	694.4	56 kg	3472
Preservatives, Pectin, Standing pouch	2 kg	1029.80	10 kg	5149
Total				12552

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Price realized (Rs./kg)	Net Returns (Rs. in lakh. /Unit)	B:C ratio
Technology Option 1	5	400	0.1379	2.67
Technology Option 2		295	0.0875	2.35
Technology Option 3		225	0.04875	2.25

9. Constraints: Nil

10. Feedback of the farmers involved:

The farmers liked the acceptance and flavour of the protein enriched mango bar, and fetched more price due to bar marketability rather than sale of raw mango, and can be used as an snack for all ages and can be used for offseason.

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

OFT - 17: Assessment on different coating formulations to improve Shelf Life of Fruits and Vegetables

1. **Thematic area** : Post Harvesting Technology
2. **Title** : Assessment of different coating formulations to improve the Shelf life of fruits and vegetables
3. **Scientists involved** : SMS (Home Science)
4. **Details of farming situation** : NIL
5. **Problem definition / description:**

The farmers cultivate tomato extensively in their land and get low price and price fluctuation, due to high moisture content it gets deteriorated easily and used for table purposes only. The farmers do not adopt cold storage or processing activity, and sell immediately from their field to market, and enormous loss due to glut.

The farmers lack awareness on the post harvest practices for shelf life Extension of the vegetables, and get low price for the sale of raw tomato due to glut in the market. The District is suitable for cultivation of tomatoes and sell directly to the traders and get marginal price. The farmers are unaware of the different coating formulations for the shelf life extension of the fruit or vegetable.

6. Technology Assessed:

Technology Option 1	Dipping in 2% ICAR-IINRG- Fresh coat-for 5 minutes and surface dry -IINRG-2019
Technology Option 2	Dipping in 2 % TNAU Fruity fresh coat for 5 minutes and surface dry -TNAU 2020
Farmer's practice	Non adoption of post harvest practices

7. Critical inputs given:

Particulars	Qty./ trial	Cost/trial (Rs.)	Total Qty.	Total Cost (Rs.)
Blue trays	1	180	5 nos	900
White trays	1	400	5 nos	2000
IINRG - FRESH COAT	1 litre	1180	5 litres	5900
Total				8800

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Price Realized (Rs./Kg)	Net Returns (Rs. in lakh. /Unit)	B:C ratio
Technology Option 1	5	94	0.032	3.13
Technology Option 2		90	0.027	3.00
Technology Option 3		65	0.014	2.17

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

The shelf life of the tomato comparatively increased with application of IINRG fresh coat and fetched more price after selling the produce.

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

OFT - 18: Assessment of social media Facebook for dissemination of information to farmers

1. **Thematic area** : Information Communication Technology
2. **Title** : Assessment of social media Facebook for dissemination of information to farmers
3. **Scientists involved** : SMS (Agrl. Extension)
4. **Details of farming situation** : NIL
5. **Problem definition / description:**
Lack of awareness on social media for dissemination of information to farmers.

6. Technology Assessed:

Technology Option 1	Facebook- Providing periodic advisories to 25 Coconut farmers on ICM practices and marketing aspects including supply and value chain management
Technology Option 2	Whatsapp group - Providing periodic advisories to 25 Coconut farmers on ICM practices and marketing aspects including supply and value chain management
Farmer's practice	mKisan test message- Providing periodic advisories to 25 Coconut farmers on ICM practices and marketing aspects including supply and value chain management

7. **Critical inputs given:** Multi color user guide pamphlet

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Knowledge level(%)		Adoption level(%)	
		Pre Evaluation	Post Evaluation	Pre Evaluation	Post Evaluation
Technology 1 Facebook - Providing periodic advisories to Coconut farmers on ICM practices and marketing aspects including supply and value chain management	25	40	56	32	68
Technology 2 Whatsapp group - Providing periodic advisories to Coconut farmers on ICM practices and marketing aspects including supply and value chain management		48	88	40	92

Farmers Practice mKisan test message- Providing periodic advisories to Coconut farmers on ICM practices and marketing aspects including supply and value chain management		24	40	16	68
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Description of the results:

Compared to two modes of technology transfer to the farmers, sending SMSs through Whatsapp mode could impact 88 percentage of knowledge and 92 percentage of adoption level followed by Facebook mode (56 percentage of knowledge and 68 percentage) and Text SMS (40 percentage of knowledge and 68 percentage).

9. Constraints: Nil.

10. Feedback of the farmers involved:

The farmers preferred WhatsApp Application as a user-friendly mode for farm advisory services and transfer of technology in Coconut.

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	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
					No. of villages	No. of farmers	Area in ha
1	Paddy ADT 53	IPDM	Integrated Pest and Disease Management in Paddy (ADT 53)	Demonstration and training	22	88	53
2	Ragi CO 15	ICM	Integrated crop management Finger millet (CO15)	Demonstration and training	47	115	34
3	Little Millet ATL 1	ICM	Integrated crop management Little millet (ATL 1)	Demonstration and training	12	30	16
4	Brinjal	ICM	Integrated Crop Management in Brinjal	Demonstration and training	14	31	20
5	Mango	ICM	Integrated crop management Mango	Demonstration and training	25	137	105
6	Fodder	Feed and fodder management	Mixed fodder intercrop under coconut garden	Demonstration and training	18	54	10
7	Paddy	Farm mechanization	Demonstration on power weeder in paddy	Demonstration and training	24	47	35

b. Details of FLDs implemented during the reporting period

S. No	Crop	Thematic area	Technology Demonstrated	Season and year	Farming Situation	Source of funds	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
							Proposed	Actual	SC/ST	Others	Total	
1	Cereals - Paddy (Rice)	Varietal Demonstration	Demonstration on Paddy Variety ADT 53	Kharif 2021	Irrigated	ICAR	4	4	0	10	10	-
2	Cereals - Maize	IPM	Demonstration on IPM on Maize Fall Army Worm	Kharif 2021	Irrigated	ICAR	4	4	0	10	10	-
3	Vegetables - Bhindi/Okra	Varietal Demonstration	Demonstration on Bhendai Hybrid (Akra Nikita)	Rabi 2021	Irrigated	ICAR	4	4	0	10	10	-
4	Vegetables - Tomato	Varietal Demonstration	Demonstration on Tomato Hybrid (Arka Abeth)	Rabi 2021	Irrigated	ICAR	4	4	0	10	10	-
5	Fruits - Mango	Storage	Demonstration on Enhancing Shelf Life of Mango using Nano Technology	Rabi 2021	Irrigated	ICAR	4	4	0	10	10	-
6	Fruits - Mango	ICM	Demonstration on ICM in Mango	Kharif 2021	Irrigated	ICAR	6	6	15	0	15	-
7	Fruits - Banana	INM	Micro Nutrient Management in Banana	Rabi 2021	Irrigated	ICAR	4	4	0	10	10	-
8	Poultry - Chicken	Evaluation of Breeds	Popularization of TANUVAS Aseel Chicken under Backyard Condition	-	-	ICAR	-	-	10	0	10	-
9	Fodder_Crops - Mixed Fodder	Varietal Demonstration	Demonstration of 10 Cent Multi-crop Fodder Production Model	Kharif 2021	Irrigated	ICAR	0.4	0.4	0	10	10	-
10	Cattle - Cow	Disease Management	Demonstration of Mastiguard for Clean Milk Production	-	-	ICAR	-	-	0	10	10	-
11	Banana	Farm Mechanization	Demonstration on Tractor Mounted Post Hole Digger and Power Weeder	-	-	ICAR	2	2	0	5	5	-

S. No	Crop	Thematic area	Technology Demonstrated	Season and year	Farming Situation	Source of funds	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
							Proposed	Actual	SC/ST	Others	Total	
12	Tomato	Farm Mechanization	Demonstration on Needle Type Tray Seeder for Vegetables Nursery	-	-	ICAR	4	4	0	10	10	-
13	Mushroom	Value Addition	Demonstration on Ready to eat and Ready to cook mushroom products	-	-	ICAR	-	-	5	0	5	-
14	Onion	Value Addition	Demonstration of Onion Flakes and Onion Paste	-	-	ICAR	-	-	3	0	3	-
15	Vegetables	Nutrigarden	Demonstration of Nutri Garden	-	-	ICAR	-	-	3	0	3	-
16	Cereals - Paddy (Rice)	IPDM	Demonstration on IPDM in Paddy	Kharif 2021	Irrigated	ICAR	4	4	10	0	10	-
17	Cereals - Paddy (Rice)	Varietal Demonstration	Demonstration on Paddy Variety ATL 53	Kharif 2021	Irrigated	ICAR	4	4	0	10	10	-
18	Millets - Little Millet	Varietal Demonstration	Demonstration on Little Millet Variety ATL 1	Kharif 2021	Irrigated	ICAR	6	6	15	0	15	-
19	Millet	Value Addition	Demonstration on Value Added Products in Foxtail Millet	-	-	ICAR	-	-	15	0	15	-
20	Tamarind	Value Addition	Demonstration on Value Added Products in Tamarind	-	-	ICAR	-	-	15	0	15	-
21	Groundnut	Farm Mechanization	Farm Mechanization in Groundnut Cultivation	-	-	ICAR	4	4	2	8	10	-
22	Paddy	ICT	Demonstration on TNAU Mobile Application among Farmers Mobile User Group	-	-	ICAR	-	-	0	10	10	-

Feedback of the farmers involved:

S. No	Feed Back
1	The paddy variety ADT 53 gave an increased yield of 51.79 q/ha and the crop showed lesser incidences of stem borer and blast diseases.
2	Timely application of Biological and chemical control methods leads to effective management of the Fall army worm.
3	Arka Nikitha Bhendi gave higher yield than the private hybrid due to less pest and disease problem. The fruits were tender and preferred in market.
4	Arka Abhed Tomato gave higher yield than the private hybrid since the pest and disease was less than in Private hybrid . Because of the green shoulder the market preference was more.
5	The shelf life of mango was extended by 15 days by the application of Hexanol before harvest followed by post harvest treatment. The appearance of mango was attractive.
6	The balanced nutrient management along with Mango special foliar nutrition gave an enhanced yield and average net income increased by Rs.55,710 per hectare. Also, the quality of the fruits has got tremendously improved. The farmers expressed the satisfaction of using Mango special micronutrient mixture for the improved yield and Methyl euginol traps for the reduced loss due to fruit fly's infestation.
7	The integrated nutrient management that included the Banana special foliar nutrition has proved to improve the yield and quality of the fruits in banana and thereby the net income per hectare increased by Rs.4,88,213/-.
8	TANUVAS Aseel obtained better body weight with good market opportunity, also fetches good price due to its external appearance. This improved native chicken is adoptable and can be reared for better income and household use.
9	10 cent fodder production provides combination of grass and velimassal fodder, and also multicut sorghum fodder instead of grass only. We used to cultivate velimassal for the first time. Mixed fodder provided higher fodder yield and growth in grass and also added leguminous fodder as protein source for cattle which enhances milk yield.
10	Regular Management practices by using Teat protect spray had increased milk yield marginally and reduced the chances for mastitis. Also learned about udder hygiene and importance of washing udder before milking with potassium permanganate solution.

11	Pit making process and weeding operations are very easy and cost effective saves time and reduce the labour requirement
12	Seeds placed in all the cells in a single stroke, Quick operation and reduce the labour drudgery, Saved time and labour
13	More awareness and accepted the technology on Value Added Products to the Shelf Life of the product, Marketability of the Product.
14	Enriched the knowledge on Post Harvest Technology and increase the effort for culinary purposes for enterprise development, minimizing the post harvest loses during Glut.
15	Accepted the concept of Nutrigarden, enhancing the nutrition security of the Household, Curtailing the Family Expenses and income to the Farmer
16	Integration of Biological and Chemical methods on pest and diseases management of Paddy gave increased yield over the local check and the blast incidence was not observed in the demonstration plots.
17	Modern package of practices followed by farmers in ADT 53 variety Paddy Crop resulted increased in grain and straw yield and this variety moderately resistant to stem borer and leaf roller.
18	ATL 1 little millet variety highly drought tolerant and it is endured with special attributes like easy thresh ability, synchronized maturity and non-lodging type with bold grain quality than check.
19	More awareness and accepted the technology on Value Added Products to the Shelf Life of the product, Marketability of the Product.
20	Enriched the knowledge on Post Harvest Technology and increase the effort for culinary purposes for enterprise development, minimizing the post harvest loses during Glut.
21	Yield increased by doing the necessary operations in appropriate time, Was able to sow the seeds before the soil moisture evaporate, Machines were user and gender friendly, Saved time, cost and labour.
22	TNAU Mobile Application System support them to make the right decisions at right time for Paddy Cultivation.

Feed back to the scientist who developed the technology:

S. No	Feed Back
1	The paddy variety ADT 53 gave 19.41 % yield increase over the local check and found to be resistant to stem borer, leaf folder and blast incidences.
2	Seed treatment followed by Integration of bio and chemical methods on management of fall army worm is very effective.
3	Arka Nikitha bhendi gave 21.89 % higher yield than the private hybrid The Yellow Vein Mosaic virus incidence was 19.5 less than in Private hybrid.
4	Arka Abhed tomato gave 22 % higher yield than the private hybrid The pin worm incidence was less than in Private hybrid BC ratio was 2.12 compared to 1.68 in farmers practice.
5	The shelf life of mango was extended by 15 days by the application of Hexanol before harvest followed by post harvest treatment.
6	The foliar nutrition with mango special resulted in 23.75 % yield increase and a BCR of 2.81 in the demonstration fields over the farmer's practice
7	The foliar nutrition with banana special helped to get 24.50 % yield increase and a BCR of 4.24 in the demonstration fields over the farmer's practice.
8	TANUVAS Aseel chicken attained average body weight of 1.134 kg and 2.205 kg at 12th week and 6th month respectively. This breed had better market acceptability and recommended to farmers to rear this improved strain for better livelihood and nutritional security.
9	TANUVAS 10 cent model had increased the yield by 23%. Mixed fodder of legume, non-legume with tree fodder provided balanced nutrition to dairy cows and increased milk yield. Also provides higher fodder yield.
10	Teat protect spray had reduced the somatic cell count and also slight increase in milk yield by 9%, due to clean management practices and udder hygiene. The occurrence of Subclinical Mastitis had been reduced in dairy cows by 70%.

11	An average of 47 pits was made per hour with 60 cm diameter and 90 cm depth without disturbing the adjacent soil layer, Should promote mechanization through more number of demonstrations, Post hole digger and power weeder suitable for banana can be included in custom hiring centres where ever possible.
12	Promote through more number of demonstrations, Needle type tray seeder can be included in custom hiring centre
13	Short duration high yield in variety and shelf life of Mushroom Oyster Varieties to be promoted
14	Low cost storage techniques for Onion to be promoted for the farm women
15	Low cost containers for cultivation of Vegetables at Nutrigarden to be promoted
16	Bio-based IPM is one of the important component for controlling insect-pests and disease in paddy, as it is environmentally friendly, effective, and economically viable.
17	The short duration ADT 53 variety has increased the grain yield 24% than local check.
18	The drought tolerant little millet ATL 1 variety has the increased the yield of 21% than local check.
19	Parboiling of Foxtail Millet machineries to be promoted at low cost.
20	Low cost tamarind deseeded for availability to the farm women for Easy Handling.
21	Power operated decorticator machine can be included in custom hiring centre at KVK
22	TNAU Paddy 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	10	03-Feb-21, 09-Mar-21, 11-Mar-21, 16-Mar-21, 18-Mar-21, 29-Mar-21, 01-Oct-21, 21-Oct-21, 06-Dec-21, 23-Dec-21	367	-
2	Farmers Training	23	08-Jan-21, 12-Jan-21, 23-Jan-21, 25-Jan-21, 30-Jan-21, 19-Feb-21, 25-Feb-21, 10-Mar-21, 12-Mar-21, 18-Mar-21, 09-Jul-21, 12-Jul-21, 19-Jul-21, 30-Jul-21, 31-Jul-21, 13-Aug-21, 13-Sep-21, 23-Sep-21, 04-Oct-21, 11-Nov-21, 08-Dec-21, 24-Dec-21, 21&22-Dec-21	433	-
3	Media coverage	10	03-Feb-21, 09-Mar-21, 11-Mar-21, 16-Mar-21, 18-Mar-21, 29-Mar-21, 01-Oct-21, 21-Oct-21, 06-Dec-21, 23-Dec-21	-	-
4	Training for extension functionaries	9	27-Jul-21, 28-Jul-21, 12-Aug-21, 15-Sep-21, 22-Sept-21, 24-Sep-21, 06-Dec-21, 14-Dec-21, 22-Dec-21	179	-

Technology Week Celebrations:

Types of Activities	No. of Activities	Number of Participants	Related crop/livestock technology
Gosthies	-	-	-
Lectures organized	6	162	Lectures delivered on 1) INM, IPM, ICM in Field Crops, 2) Fodder Management, Dairy and Livestock, 3) Canopy Management in Horticultural Crops and Nursery, 4) Post-harvest Technology and Value Addition.
Exhibition	6	162	1) Farm Machinery Tools, 2) Traditional Nutrigarden Seed Kit, 3) Plant Materials, 4) Value Added Products

Film show	1	40	IPM in Field Crops
Fair	-	-	-
Farm Visit	6	162	Farm Visit 1) Vermicompost, 2) Coconut Farm, 3) Banana Farm, 4) Mango Nursery, 5) High Density Planting Unit.
Diagnostic Practical's	-	-	-
Distribution of Literature (No.)	-	-	-
Distribution of Seed (q)	-	-	-
Distribution of Planting materials (No.)	-	-	-
Bio Product distribution (Kg)	-	-	-
Bio Fertilizers (q)	-	-	-
Distribution of fingerlings	-	-	-
Distribution of Livestock specimen (No.)	-	-	-
Total number of farmers visited the technology week	-	162	-

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

Name of the staff	Title	Dates	Duration	Organized by
Dr. T. Sundarraj, Senior Scientist & Head	Bureau of Indian Standard Activities of KVK	29-Jul-21	1 Day	Bureau of Indian Standard
	District Investment Plan under Tamil Nadu Rural Transformation Project	02-Jul-21	1 Day	TNRTP
	Brain storming session on millets	07-Aug-21	1 Day	Department of Agriculture
	Tamilnadu Rural Transformation Project (TNRTP) regarding training programs	17-Sep-21	1 Day	TNRTP
	District Level Steering committee meeting for RPMFBY	14-Dec-21	1 Day	RRS, Paiyur
Mrs. S. Poomathi, SMS (Home Science)	Tomato processing and value addition	06-Sep-21	1 Day	MOFPI-IIFPT-PMFME
	Poshan Vatika Maha Abhiyan	15-Sep-21	1 Day	ATARI X
	Nutri Smart village -an innovative model for strengthening poshan Abhiyan	10-Nov-21	1 Day	ICT Unit, ICAR
	Gender and Nutri sensitive Agriculture	23-Dec-21	1 Day	ICAR, DDG (Agrl extn)
Dr. S. Ramesh, SMS (Animal Science)	Sustainable Development in Dairy Sector – Clean Milk Production	26-Nov-21	1 Day	ICAR-NDRI, Karnal
Mr. S. Senthil Kumar, SMS (Agrl. Extension)	Organic Farming for Sustainable Agriculture	01-Jun-21	6 Days	MANAGE & Extension Education Institute
	Integrated Farming System for doubling Farmer's income	17-Jun-21	1 Day	DEE, TNAU & ATARI X
Mr. S. Udhayan, SMS (Agronomy)	Role of weed biology in improving weed management strategies	22-Jun-21	1 Day	Indian Society of Weed Science and ICAR-DWR

	Nutrient Deficiency and Management Techniques in Crops	29-Jul-21	1 Day	TNAU
	High yielding Rice varieties with special reference to the seasons and Agro-climatic zones of Tamil Nadu	12-Aug-21	1 Day	TNAU
Mr. S. Mohammed Ismail, Prog. Asst (Agrl. Engg)	Farm Mechanization in Paddy Cultivation	05-Aug-21	1 Day	CAE, TNAU

Details of sponsored projects/programmes implemented by KVK

S. No	Title of the programme / project	Sponsoring agency	Objectives	Duration	Amount (Rs)
1	Watershed Management	Agricultural Engineering Department	To observe, understand and learn the various technical aspects of Soil & water conservation	8 Days	2,00,000
2	Mango	NABARD	To create knowledge on quality mango production for export and domestic market	2 years	8,70,000
3	Scientific Dairy Farming	ESAF	To enhance knowledge on Feed and fodder crops	2 Days	30,100
4	Organic Farming Under Skill Training on Rural Youth	ATMA	To enhance knowledge on Organic Farming	6 Days	42,000
5	Scientific Dairy Farming	ESAF	To enhance knowledge on Feed and fodder crops	2 Days	30,100
6	Mango, Guava, Lemon SPARK Training	TNRTP	To enhance knowledge on Mango, Guava, Lemon Cultivation Techniques	5 Days	86,800
7	Coconut SPARK Training	TNRTP	To enhance knowledge on Coconut Cultivation Techniques	3 Days	55,400

1. Programme on Watershed Management:

Introduction:

ICAR – Krishi Vigyan Kendra organized a two days training programme on Watershed management techniques under River Valley Project Scheme (2020-2021). The programme was conducted as per the following schedules:

Sl. No.	Batch	Date	Duration	No. of participants
1	First	27.01.21 to 28.01.21	2 days	25
2	Second	29.01.21 to 30.01.21	2 days	25
3	Third	01.02.21 to 02.02.21	2 days	25
4	Fourth	03.02.21 to 04.02.21	2 days	25

with the support of Department of Agricultural Engineering, Hosur, Krishnagiri which benefitted 25 Progressive farmers from Aalusonai, Peppalapalli, Thiradi, Bethasigaralapalli, Medupalli and Semparaganapalli villages of Shoolagiri block of Krishnagiri district.



Farmers visit to Centre of Excellence for Cut flowers, Thally

Objectives:

The training programme and farmer's exposure visits were organized which covered the following points:

- To observe, understand and learn the various technical aspects of Soil & water conservation
- To enhance the knowledge and skills of the farmers on Dry land agriculture practices
- To make farmers learn new skills, technology and methods of farming
- To enhance the knowledge on cut flower cultivation techniques
- To enhance the knowledge on Animal husbandry and fodder management
- To create an additional knowledge on High density planting & Water conservation techniques

- g) To create an informal platform for Community based watershed area management where farmers from various watershed areas can share their experiences.

Content:

On First day, 25 progressive farmers from Aalusonai, Peppalapalli, Thiradi, Bethasigaralapalli, Medupalli and Semparaganapalli villages of Shoolagiri block had a visit to ICAR – Krishi Vigyan Kendra, Elumichangiri, Krishnagiri and attended the training programme. Er. Viswanathan, Assistant Engineer, AED delivered the keynote address on River valley project schemes, Watershed area management techniques and formation of farmers group & their responsibility to maintain the water harvesting structures.

Dr. T. Sundarraj, Senior Scientist and Head presided over the two day training programme and explained about the Importance of Soil & water conservation and various techniques to improve their production



Training session at KVK, Krishnagiri

Subject Matter Specialists and Agricultural Engineer of KVK, Krishnagiri conducted the theory sessions and explained in detail through power point presentations on the following topics. During the training programme:

- Watershed concepts & management techniques and Water harvesting structures
- Dryland agronomy practices
- High Density Planting in Mango
- Maintenance of Animal husbandry and fodder management
- Soil and water conservation technologies



Training session on 'Watershed Management Techniques' at KVK, Krishnagiri



Training session on 'Watershed Management Techniques' at KVK, Krishnagiri

Farmers learned about Farm ponds, Check dams, Gabion and Rock out crop structures. Er. Viswanathan explained the construction procedure, requirements and usage of these structures to the farmers. Farmers were enthusiastic and showed much interest to learn these technologies.



Visit to KVK farm

On Second day, 25 progressive farmers from Aalusonai, Peppalapalli, Thiradi, Bethasigaralapalli, Medupalli and Semparaganapalli villages of Shoolagiri block were taken for a visit to Centre of Excellence for Cut flowers at Thally, in order to encourage them to adopt new crops and technologies in farming. The farmers had an opportunity to see the first

hand information on how the agronomical practices with new techniques can significantly increase their yield of the crops and thereby their income.

Mr. Ramkumar, Horticulture Officer explained about computerized automatic drip irrigation system with fertigation units. Farmers visited the Rose, Gerbera, Carnation and foliage plants cultivation units and observed the scientific techniques followed in the centre. Ms. Deepika, SRF explained about the activities of the centre and techniques to increase the income with very less water.



Exposure visit at Centre of Excellence for Cut flowers, Thally

The visit was followed by some useful presentations on Package of practices of cut flower and vegetable cultivation and on technologies adopted in Israel. The use of video presentation made farmers to get more interested. A technical talk on Water conservation related to Horticulture crops has been delivered to the farmers by Mr. Ramkumar.

Afterwards farmers visited Kumbalam and Ramanthotti villages and observed the Soil and water conservation structures like Field bunds, Farm pond, Check dams constructed and maintained by Agricultural Engineering Department, Hosur. The farmers group plays a major role to maintain the water harvesting/conservation structures. The benefits of water harvesting structures were well perceived by the trainees.



Exposure visit at Kumbalam & Ramanthotti village

Feed Back from Participants:

The farmers expressed their thanks to The Agricultural Engineering Department and Krishi Vigyan Kendra, Krishnagiri for having organized the training programme. The following were the direct statements of the farmers as their feedback.

1. With the help of Agricultural Engineering Department, we will build Soil and water conservation structures in our villages.
2. We will form a Farmers group and make awareness on maintenance of water harvesting structures in our villages.
3. We cannot believe that – “by adopting Dry land techniques, applying organic compost, organic manure, organic fertilizer and organic pesticides crops can be grown in very healthy manner”
4. We must adopt this technology in our field and increase our yield.
5. We must motivate our neighbor to do soil and water conservation
6. This training created a good awareness on Government schemes on Soil and water conservation
7. By applying the techniques we have learnt, we will get better production in a low cost.
8. This exposure visit will change our family economy and health status.

Outcome:

The exposure visit was beneficial to the farmers. They had a good opportunity to gather knowledge on several technologies that are adopted for Soil and water conservation. As a way forward one can expect that the knowledge gathered will be used in future to put into practice. The beneficiaries were thankful to the Executive Engineer, Department of Agricultural Engineering, Krishnagiri, Asst. Executive Engineer, AED, Hosur and ICAR-Krishi Vigyan Kendra, Krishnagiri for the exposure visit and technical sessions.

2. Programme on Mango: Good agricultural practices in mango for domestic and export markets - On Going

3. Programme on Organic Farming:

Department of Agriculture, Krishnagiri and ICAR-Krishi Vigyan Kendra ,Krishnagiri jointly conducted 6 days (22.04.2021 to 28.04.2021) organic farming training programme to organic growers under Skill Training on Rural Youth –SAMETI, at ICAR-KVK, Krishnagiri. The Joint Director of Agriculture, Krishnagiri ,inaugurated the Organic Farming training programme on 22.04.2021 and explained the importance and need of Organic Farming training to farmers. Deputy Director of Seed inspection, Dharmapuri and Krishnagiri, Deputy Director of Agriculture (GOI), Krishnagiri, Assistant Director of Agriculture(Quality Control), Krishnagiri also participated in the inauguration session.

During the training period from 22.04.2021 to 28.04.2021, farmers were trained in the following topics on Soil wealth management, Use of bio fertilizer in organic farming, Panchakavya preparation & Application – practical, Pest management in Organic farming, Different types of mulches & their use in organic farming, Use of Bio control agents in the field ,Application method and demonstration and Organic farming – Method of certification by KVK Scientists.

Final day (28.04.2021) on Organic farming training, trainees given their feedback on the training programme and Organic farming booklet and Certificate to distributed the trainees by Joint Director of Agriculture, Krishnagiri, The President of Tamil Nadu Board of Rural Development, Chennai and Senior Scientist and Head, ICAR, KVK, Krishnagiri. Twenty Eight farmers were benefitted in the training programme.



4. Programme on Scientific Dairy Farming:

Introduction

ICAR – Krishi Vigyan Kendra organized two days training programme on Scientific dairy farming under CSR initiative of ESAF small finance Bank. The programme was conducted from 22.04.2021 to 23.04.2021 with the support from ESAF society, Thrissur which benefitted 20 Progressive farmers at K. Mallasandiram, Thally.



Objectives:

The training programme was organized with the following objectives:-

- To impart knowledge on dairy animal selection, Nutrition
- To enhance knowledge on Feed and fodder crops
- To impart knowledge on clean milk production , breeding management, disease management and also on Ethnoveterinary practices in dairy cattle management
- To impart knowledge on Compost, Vermicompost techniques

SCHEDULE /COURSE MODULE:

NO. OF DAYS : Two Days (22.04.2021 and 23.04.2021)

Day	Session	Course
Day 1	I	Inauguration
	II	Scope of dairy farming , Selection of dairy animals Fodder crops - classification and cultivation practices
	III	Nutrition and feeding of dairy animals, Preparation of concentrate, Use of Azolla , Breeding management -
	IV	Calf management practices, Disease management - management of mastitis and control Importance of Deworming and vaccination
Day 2	I	Clean milk production
	II	Metabolic disease in dairy cattle , Importance of mineral mixture Ethno veterinary practices in dairy cattle management

	III	Compost and Vermicomposting techniques, Value addition in Milk, preparation of Milk products
	IV	Valedictory and Feedback - Certificate distribution

Dr. Mayakrishnan explained about Selection of dairy animals by a farmers , important points to consider for a good dairy animal. Also explained the farmers about the fodder crops and cultivation, type of fodder for dairy cattle and its nutritive value to enhance the milk yield. The farmers were also informed about importance of concentrate feed and use of Azolla, its cultivation method and its benefits to dairy animals. The farmers were explained about infertility / reproductive management- Signs of oestrus and Artificial insemination.

Dr Ramesh explained the farmers the about care and management of pregnant animals, Care and management of calf. He also informed the farmers about the importance of Mineral mixture. Also the farmers were informed about the important disease affecting dairy cows, its symptoms and preventive measures to be taken. The importance of deworming and vaccination was explained.

The farmers were informed about the ethno veterinary practices in dairy cattle disease management. Also explained about importance of cattle manure and its value. The farmers were informed about composting farm waste and manure. The farmers were also informed about vermicompost production and its benefits to reduce the cost of production in crops.

A Booklet on Dairy farming was given to participant farmers. At the end of the Session Certificate was distributed to the participant farmers

Feed Back from Participants:

The farmers expressed their feedback about the training programme.

- We were informed about fodder varieties and its cultivation. We were not known about these varieties before.
- We were informed about mastitis prevention and control in dairy cattle. Also about latest technologies available for control.
- We came to know about disease and its symptoms and about the important Ethno veterinary medicines for livestock
- Also we came to know about Azolla cultivation and its benefits to livestock.
- We were well informed about vermicomposting method for enriching manure
- The training created awareness about care and management of dairy cattle during winter and summer season, and also about tick management.



TECHNICAL SESSIONS



VALEDICTORY/ FEEDBACK SESSION AND CERTIFICATE DISTRIBUTION

5. Programme on Scientific Dairy Farming:

Introduction

ICAR – Krishi Vigyan Kendra organized two days training programme on Scientific dairy farming under CSR initiative of ESAF small finance Bank. The programme was conducted from 22.06.2021 to 23.06.2021 with the support from ESAF society, Thrissur which benefitted 20 Progressive farmers in ARCOD Nammaveedu - Godampatty village, Rayakottai, Krishnagiri district



Objectives:

The training programme was organized with the following objectives :

- a) To impart knowledge on dairy animal selection, Nutrition
- b) To enhance knowledge on Feed and fodder crops
- c) To impart knowledge on clean milk production , breeding management , disease management and also on Ethnoveterinary practices in dairy cattle management
- d) To impart knowledge on Compost, Vermicompost techniques

SCHEDULE /COURSE MODULE:

NO. OF DAYS: Two Days (22.06.2021 and 23.06.2021)

Day	Session	Course
Day 1	I	Inauguration
	II	Scope of dairy farming , Selection of dairy animals Fodder crops - classification and cultivation practices
	III	Nutrition and feeding of dairy animals, Preparation of concentrate, Use of Azolla , Breeding management -
	IV	Calf management practices , Disease management - management of mastitis and control Importance of Deworming and vaccination
Day 2	I	Clean milk production
	II	Metabolic disease in dairy cattle, Importance of mineral mixture Ethno veterinary practices in dairy cattle management
	III	Compost and Vermicomposting techniques, Value addition in Milk, preparation of Milk products
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Feed Back from Participants:

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- We were informed about mastitis prevention and control in dairy cattle. Also about latest technologies available for control.
- We were informed about fodder varieties and its cultivation. We were not known about these varieties before.
- Also we came to know about Azolla cultivation and its benefits to livestock.
- We came to know about disease and its symptoms and about the important Ethno veterinary medicines for livestock
- We were well informed about vermicomposting method for enriching manure
- The training created awareness about care and management of dairy cattle during winter and summer season, and also about tick management.



TECHNICAL SESSIONS



TECHNICAL SESSIONS / FEEDBACK



VALEDICTORY - CERTIFICATE DISTRIBUTION

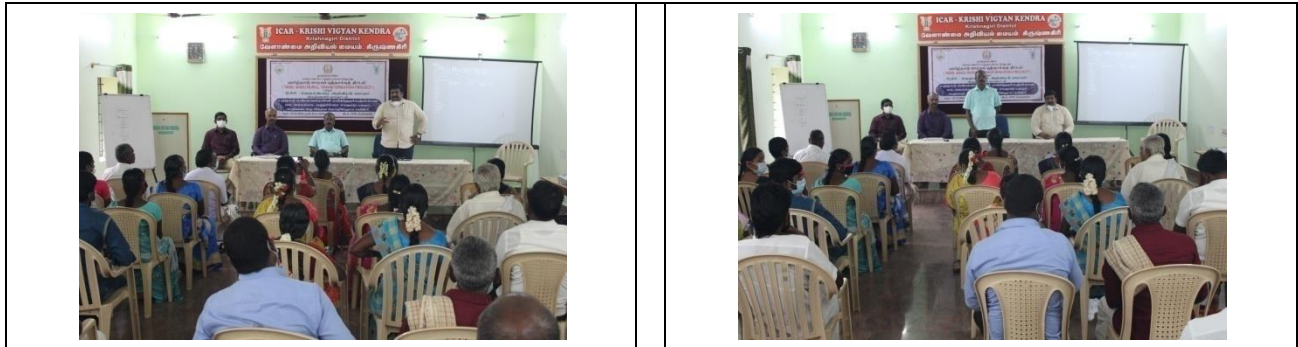
6. Programme on Mango, Guava, Lemon SPARK Training:

Tamil Nadu Rural Transformation Project, Krishnagiri and ICAR-Krishi Vigyan Kendra, Krishnagiri jointly conducted 5 days (08-11-2021 to 12-11-2021) Mango, Guava, Lemon SPARK training programme to Spark Trainers (TOT) at ICAR- KVK, Krishnagiri. The District Executive Officer, TNRTP - Krishnagiri, inaugurated the Mango, Guava, Lemon SPARK training programme on 08-11-2021 and explained the importance and need SPARK Training to the participants.

During the training period from 08-11-2021 to 12-11-2021, the participants were trained in the following topics on Varieties, Soil Field Preparation and in Mango, Lemon and Guava, Pest and Disease in Mango, Lemon and Guava, Integrated Nutrient Management in Guava, Lemon and Guava, Mechanization and Irrigation Management in Mango, Lemon and Guava, Value Addition in Mango, Lemon and Guava by KVK Scientists.

Final day (12-11-2021) on Mango, Guava, Lemon SPARK training programme, participants given their feedback on the training programme, booklet and Certificate to distributed the participants by District Collector, Krishnagiri. Thirty Five Participants were benefitted in the training programme

MANGO, GUAVA AND LEMON SPARK TRAINING - PHOTOGRAPHS



Mango, Guava And Lemon Spark Training Inauguration



Varieties and Field Preparation on Mango, Guava and Lemon



Nutrient Management in Mango, Guava and Lemon



Pest Management in Mango, Guava and Lemon



Disease Management in Mango, Guava and Lemon



Exposure Visit

	
<p align="center">Farm Mechanization in Mango, Guava and Lemon</p>	<p align="center">Value Addition in Mango, Guava and Lemon</p>
	
<p align="center">Certificate and Book distribution by District Collector</p>	

7. Programme on Coconut SPARK Training:

Tamil Nadu Rural Transformation Project, Krishnagiri and ICAR-Krishi Vigyan Kendra, Krishnagiri jointly conducted 3 days (07-12-2021 to 09-12-2021) Coconut SPARK training programme to Spark Trainers (TOT) at ICAR- KVK, Krishnagiri. The District Executive Officer, TNRTP - Krishnagiri, inaugurated the Coconut SPARK training programme on 07-12-2021 and explained the importance and need SPARK Training to the participants.

During the training period from 07-12-2021 to 09-12-2021, the participants were trained in the following topics on Varieties, Soil Field Preparation and in Coconut, Pest and Disease in Coconut, Integrated Nutrient Management in Coconut, Mechanization and Irrigation Management in Coconut, Value Addition in Coconut by KVK Scientists.

Final day (09-12-2021) on Coconut SPARK training programme, participants given their feedback on the training programme, booklet and Certificate to distributed the participants by District Executive Officer, TNRTP - Krishnagiri. Thirty Five Participants were benefitted in the training programme.

COCONUT SPARK TRAINING - PHOTOGRAPHS



Coconut Spark Training Inauguration



Varieties and Field Preparation on Coconut



Nutrient Management in Coconut



Pest and Disease Management in Coconut



Mother Palm Selection and Nursery Management



Weed Management in Coconut



Disease Management in Coconut



Feedback on Participants



Certificate and Book distribution by District Executive Officer



Success stories

A. 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 shoologiri village of Krishnagiri district. A model demonstration was conducted in the year of 2015 -16 and work shop was conducted in shoologiri 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. 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 farmers practice.

4. Outcome

From the Front Line Demonstrations conducted during the 2018-19 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. Nagaraj, progressive farmers resorted to four 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.

B. MASTIGUARD FOR CLEAN MILK PRODUCTION

1. Situation Analysis /Problem Statement

In Krishnagiri district, farmers rear crossbred dairy cows under semi-intensive system and mainly maintained by small and marginal farmers. Mastitis has been and continues to be recognized as one of the major disease problems concerning the dairy industry. It is also one of the most costly diseases confronting the dairy farmer. Unlike the clinical mastitis, in sub clinical mastitis there is neither visual abnormality in milk nor in mammary gland. Therefore, knowledge of routine physical examination of udder and diagnostic screening tests for early detection of mastitis and proper treatment of affected animal is one of the paramount importance in order to minimize losses encountered due to sub clinical as well as clinical mastitis. In a dairy cow, if one quarter is affected, there will a loss of 30% of the milk production capacity

Subclinical mastitis is more prevalent than mastitis. Somatic cell count is a useful predictor of intra mammary infection and therefore, an important component of milk in assessment of aspects of quality, hygiene and mastitis control. In Krishnagiri district most dairy farmers were unaware of the latest technologies and clean milk production practices to prevent subclinical mastitis/mastitis.

2. Plan, Implement and Support

To overcome the problems faced by the farmers and to create awareness among the farmers Front Line demonstrations was taken up to demonstrate the use of Mastiguard (Teat protect Spray and TANUCHEK SCC kit) and Clean milk production practices in comparison with farmers practice at farmers level to prevent and control Subclinical mastitis/ mastitis in Krishnagiri district during 2018 -19, 2019-20 and 2020-21. Demonstrations was conducted in 40 locations at Kaveripatinam and Krishnagiri block during these periods.

Technology Demonstrated:

- Post milking Teat protect spray
- Detection of Subclinical Mastitis using TANUHCEK SCC Kit

Efforts of Krishi Vigyan Kendra in clean milk production

- **Webinar conducted** on Scientific Dairy farming and created awareness on Mastitis management and its control, Ethno veterinary practices for better udder health and hygiene during World Milk day 2021. About 212 farmers participated during the programme.
- Conducted on and off campus training, Skill/Vocational training and also through other linkage programmes , where 200 farmers benefitted.

3. Output

Demonstration of Mastiguard with Clean milk production practices has increased average Milk yield by 6%, 10.17% and 9.01% in 2018-19 , 2019-20 and 2020-21 respectively. The somatic cell count was higher in farmers practice (5.1 lakhs , 4.4 lakhs and 3.8 lakhs during 2018-19, 2019-20 and 2020-21 respectively) when compared with demonstration (2.3 lakhs during 2018-19 ,1.2 lakhs during 2019-20 and 1.1 lakhs during 2020-21).

Incidence of Sub-Clinical Mastitis was lower (10% during 2018-19) or no incidence during 2019-20, and 2020-21 when compared to farmer's practice.

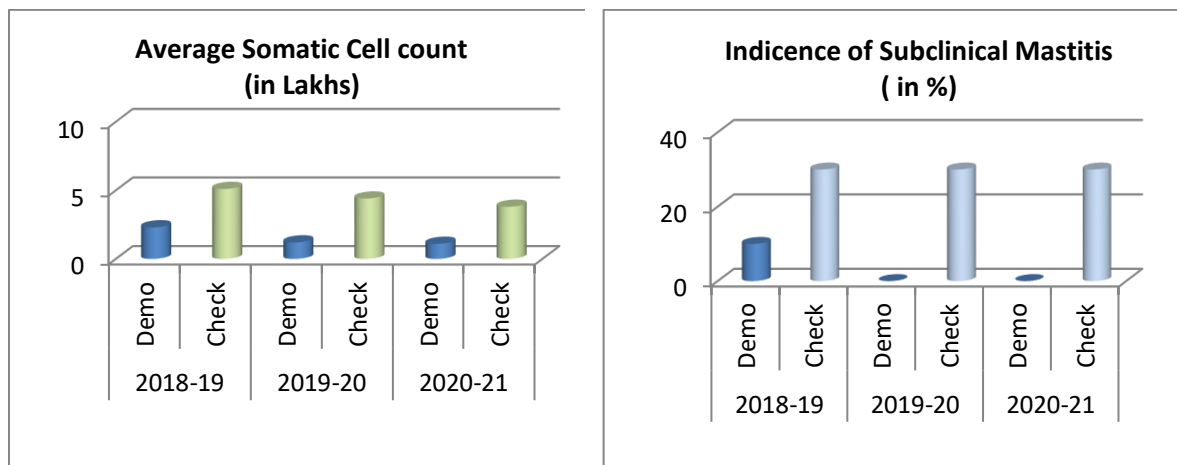
Performance of Demonstration on Milk Yield and incidence of Subclinical mastitis

Parameters	2018-19		2019-20		2020-21	
	Using Mastiguard	Farmer's practice	Using Mastiguard	Farmer's practice	Using Mastiguard	Farmer's practice
Average Milk Yield(in Liters)	9.97	9.35	10.31	9.38	9.34	8.57
Average Somatic Cell count (in Lakhs)	2.3	5.1	1.2	4.4	3.8	1.1
Incidence of Sub-Clinical Mastitis (in %)	10	30	Nil	30	Nil	30

4. Outcome

Farmers realized net income of about Rs.21614, Rs.30586 and Rs.22814 (2018-19 ,2019-20 and 2020-21 respectively) with the use of Mastiguard technology and by adopting clean milk production practices.

Hence the farmers realized higher benefit cost ratio of 1.76, 2.46 and 1.97 during 2018-19, 2019-20 and 2020-21 when compared to farmers practice with Benefit cost ratio of 1.32, 1.86 and 1.53 during 2018-19, 2019-20 and 2020-21 respectively. The higher economic return might be due to change in management practices in udder health and hygiene by dairy farmers.



5. Impact

Demonstration of using Mastiguard for control of subclinical mastitis with clean milk production practices has increased the milk yield and income of farmers. Also, by adopting this technology and good management practices the somatic cell count was reduced and the incidence of subclinical mastitis was lowered, which reduced the chances of mastitis in dairy cows.

The cost for treatment of Rs.3500-4500 can be saved by adopting the technology. KVK had continuing its efforts For large scale adoption of management practices in clean milk production with Mastiguard technology through trainings. Method demonstrations and linkage programmes.

C. HIGH INCOME FROM LITTLE MILLET VARIETY ATL 1

1. Situation Analysis /Problem Statement

Little millet is an important food crop in some part of the Krishnagiri district. It is cultivated in an area of 50 ha as rainfed condition only. Due to the repeated cultivation of old traditional varieties the yield was low. So, the farmers need some high yielding short duration varieties for higher production. Also, the new short duration varieties of little millet should be resistant to pest and disease. Hence, it could be sown as rainfed conditions. So, a FLD was conducted during 2021-22 on demonstration of Little Millet variety ATL 1 suitable for Krishnagiri district which is of short duration, drought tolerant, pest and disease resistance with high yielding type.

2. Plan, Implement and Support

During 2021-22, Front line demonstrations were conducted in Indira Nagar village of Bargur block in Krishnagiri district. In this FLD also 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 Little Millet variety ATL 1 variety (1.49Qtl/ha) followed by farmer's practice. The net return was highest in Little Millet variety ATL 1 variety demonstrated field was (Rs. 32,030) than compared to the farmers practice (Rs. 14,050). Yield increase percentage was 25.05 in Little Millet variety ATL 1 variety compare to local variety.

4. Outcome

From the FLD conducted during the 2021-22 it was found that Little Millet variety ATL 1 variety was best suited for the Krishnagiri district. The variety Little Millet variety ATL 1 variety is short duration, short duration, drought tolerant, pest and disease resistance with high yielding type performed. It comes well up in rainfed condition.

5. Impact

The Little Millet variety ATL 1 variety was well received by the farmers due its short duration nature 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 Little Millet variety ATL 1 variety in Krishnagiri district.

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 750 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	2287	45	11,000	20,000
Foliar nutrition supplementing of micro nutrient	325	70	10,000	18,000
Preparation of value addition	255	25	-	10,000/Month
Fodder production techniques	310	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	20,150	16,240	22,495	36,53,18,800	<ul style="list-style-type: none"> ✓ 14 Front Line Demonstration conducted covering 48 ha and 140 Farmers. ✓ Organized 35 Training were covering 630 Farmers 	State Department of Horticulture, NABARD - Krishnagiri	Yield increased 43.18%
2	Micronutrient Management in Mango	IIHR	10,200	8,165	46,225	37,74,27,125	<ul style="list-style-type: none"> ✓ Conducted 12 Front Line Demonstration Conducted 20 methods demonstration ✓ Conducted 23 trainings for Extension Officials ✓ Provided 15 mobile advisory service to farmers ✓ Spread of this technology through medias (TV/ Newspapers) 	State Department of Horticulture - Krishnagiri	Yield increased 29.4%

3	Integrated Crop Management in Little Millet	UAS	15,600	8,670	21,668	18,78,61,560	✓ Conducted Front Line Demonstration and Trainings	State Department of Agriculture - Krishnagiri	Yield increased 16.44%
4	Farm Mechanization in Paddy	TNAU	5,850	8,560	40,425	34,60,38,000	✓ Training and Demonstration	State Department of Agriculture - Krishnagiri	Yield increase 22.86%
5	Farm Mechanization in Groundnut Cultivation	TNAU	10,100	7,250	28,340	2,05,46,500	✓ 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 Alphonso 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 20⁰ C to 40⁰ C during April to May and the lowest temperature 15⁰ C to 28⁰ C observed during December and January. The low night temperature during the flowering season helps in better fruit set. The low rainfall and low humidity (60% to 70%) helps in low spread of diseases.

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

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

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

Technology

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

Intervention

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

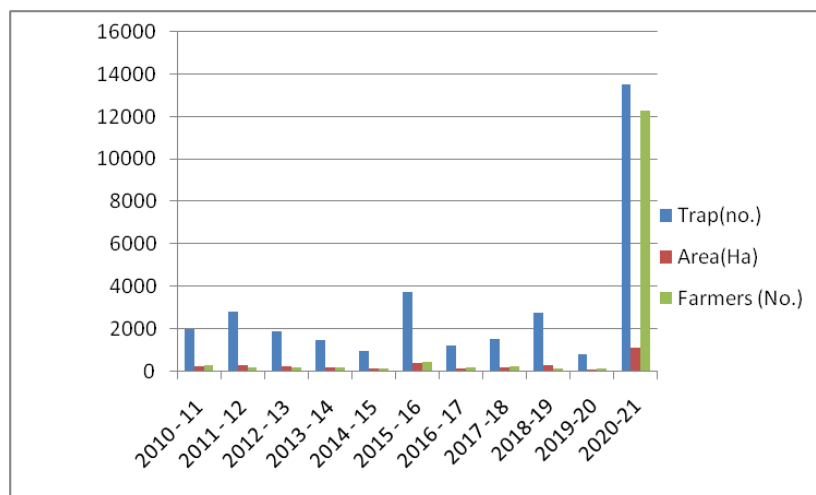
Technical presentations were done regularly during the meetings of Agricultural officials including monthly Zonal workshop. Commissioner of Agriculture allotted Rs.1,00,000 for conducting large scale demonstration of fruit fly management under ATMA programme during 2012-2013 in all blocks of the district. 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



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.

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

Impact study on application of Mango special to enhance the production of mango in Krishnagiri district

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 Alphonso 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 packet 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, Kaveripatinam, 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	Ifyes (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	<ul style="list-style-type: none"> ✓ Conducted 12 Front Line Demonstration Conducted 20 methods demonstration ✓ Conducted 23 trainings for Extension Officials ✓ Provided 15 mobile advisory service to farmers ✓ Spread of this technology through medias (TV/ Newspapers) 	<ul style="list-style-type: none"> ✓ KVK produced 4,648 kg of mango special on need based and 1724 farmers used this technology 	<ul style="list-style-type: none"> ✓ 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 	<ul style="list-style-type: none"> ✓ 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

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, Krishnagiri	Collaboration in conducting skill development initiative programme, Farmers Technology transfer fund programmes (FTTF), MEDP

Name of organization	Nature of linkage
Department of Agriculture, Krishnagiri	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 <i>Tutaabsoluta</i> in tomato and Shoot and fruit borer in brinjal.
INSETI, Krishnagiri	Resource persons for training
TNRTP, Krishnagiri	Resource persons for training programme and conducting extension functionaries programme

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

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
-	-	-	-

Important Visitors to KVK Krishnagiri during 2021

	
<p style="text-align: center;">The District Collector, Krishnagiri - SPARK Training Programme</p>	<p style="text-align: center;">The District Executive Officer, TNRTP Krishnagiri - SPARK Training</p>
	
<p style="text-align: center;">Child Development Project Officer (ICDS), Krishnagiri - International Womens Day</p>	<p style="text-align: center;">DDM NABARD, District Forest Officer, Social Forestry & Extension Division of Krishnagiri - Tree Plantation Drive</p>
	
<p style="text-align: center;">Joint Director of Agriculture, Krishnagiri - PM Live Webcating Programme</p>	<p style="text-align: center;">Professor and Head, RRS Paiyur - PoshanVatikaMahaAbhiyan</p>



Agricultural Officer, Krishnagiri - World Food Day



Deputy Director, Department of Animal Husbandry, Krishnagiri - Farm Visit



DDM NABARD, Krishnagiri - Technology Week



Joint Director of Agriculture, Krishnagiri - World Coconut Day