ICAR-KRISHI VIGYAN KENDRA

(Hosted by CREED)

Ariyalur District, Tamil Nadu

ANNUAL REPORT 2024

(JANUARY 2024 TO DECEMBER 2024)

Submitted to

The Director

ICAR-ATARI

Hyderabad

CONTENT

ANNUAL REPORT
(1st January 2024 to 31st December 2024)

1. GENERAL INFORMATION ABOUT THE KVK

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

a) Name of the KVK as per office records (MoU)	:	Ariyalur KVK
b) Address	:	ICAR Krishi Vigyan Kendra, (Hosted by CREED) Cholamadevi Post, Jayankondam (Via), Udayarpalayam Taluk, Ariyalur District, Tamil Nadu – 612902
c) Official Mobile No.	:	9751280089
d) Email ID	:	kvk.Ariyalur@icar.gov.in , creedkvk@gmail.com

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

a) Name of the Host Organization as per office records	:	Centre for Rural Education and Economic Development (CREED)
b) Status of the Host Organization		Non – Governmental Organization
c) Address	:	23, Aranganathan Nagar, Near Chinna Market Chidambaram – 608001, Cuddalore District, Tamil Nadu
d) Landline Phone No.	:	04144-224987
e) Fax No.	:	---
f) Email	:	creed.ngo@gmail.com
e) Name of the Chairperson	:	Dr.V.Nadanasabapathy
e) Mobile No.	:	9443262222
f) Email ID	:	vnsabapathy@gmail.com

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

a) Name of the SS&H:	:	Dr.G.Alagukannan
b) Residential Address:	:	No.1, Sri Nagar, Jayankondam, Ariyalur District - 612802
c) Mobile No	:	9629246586
d) Email	:	gakannan@rediffmail.com

1.4. Year of sanction of the KVK (as per Official Order): 2009

1.5. Month and year of establishment: 23.03.2009

1.6. Total land with KVK (in ha) (Consolidated figure):

S. No.	Item	Area (ha)
1	Under Buildings	0.13
2.	Under Demonstration Units	0.02
3.	Under Crops	5.76
4.	Orchard/Agro-forestry	12.86
5.	Others (Roads, Borewell and Pond)	1.24
	Total	**20.01**

1.7. Infrastructural Development:

A) Buildings

S.No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs. In Lakhs)	Starting Date	Plinth area (Sq.m)	Status of construction (Completed/ in progress/ to be initiated)
1	Administrative Building	ICAR	31.03.2011	550	71.75381	---	---	---
2	Farmers Hostel	ICAR	31.03.2011	305	49.77500	---	---	---
3	Staff Quarters (No.)							
	1	ICAR	31.03.2011	399.96	55.58500	---	---	---
	2	ICAR						
	3	ICAR						
	4	ICAR						
	5	ICAR						
	6	ICAR						
4	Demonstration Units							
	1. Goat -1	ICAR	31.03.2011	80	4.00	---	---	---
	2. Nursery-1	ICAR	31.03.2011	80	4.00	---	---	---
	3. Poultry-3	RF	25.10.2018	954	7.0	---	---	---
	4. Cattle shed - 1	RF	24.03.2020	363	3.5	---	---	---
	5. Biocontrol Lab	DST	19.03.2021	72	10.58	---	---	---
5	Fencing	ICAR	31.03.2012	1500 m	10.00	---	---	---
6	Rain Water harvesting system	---	---	---	---	---	---	---
7	Threshing floor	---	---	---	---	---	---	---
8	Farm godown	---	---	---	---	---	---	---
9	Shed (Farm equipment)	---	---	---	---	---	---	---

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms covered as on 31.12.2024	Present status
Jeep	2020	8,00,000	87786	Good
Tractor	2020	8,00,000	1120	Good
Scooter	2023	70,000	1622	Good

C) Equipment & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Computer dual core	Jan. 2010	50,000	Good
Xerox cum printer	Jan. 2010	70,000	Not in working condition
Camera	March 2010	25,000	Good
Generator	March 2011	1,00,000	Good
PUSA STFR Meter	March 2017	73,000	Good
Mini soil testing unit – Mridaparikshak	March 2017	80,000	Good
Computer i3 (2 Nos.)	March 2017	75,000	Good
UPS 2.0 KW (Battery and Inverter)	March 2017	29,000	Good
LED Projector (3200 lumens)	March 2017	29,000	Good
Portable PAS	March 2017	12,000	Good
Digital camera	March 2017	7,000	Good
Handy cam (Video camera)	March 2017	22,000	Good
Refrigerator	March 2017	16,000	Good
Fire extinguisher	March 2017	3,000	Good
Computer i5 and Epson Printer	March 2023	84,400	Good

1.7. A). Details SAC meeting* conducted in the year

S.No.	Date	No of Participants	Salient Recommendations
1.	05.03.2025	22	• KVK should concentrate on revenue generation through seed production. Organic seed productions for organic farmers fetch good income. • Attract external funds from CSR, NABARD to establish soil testing lab. • Establish sales counter in city • Farm demo units may be increased i.e. atleast 2 or 3 demo units per year. • Contribute to increase district productivity in crops like Paddy, Maize, Cotton, Groundnut, Sugarcane, Milk production. Collect details from both successful and unsuccessful farmers like practices, varieties, technologies they follow. Analyze the gap and propose it for upcoming action plan.

			• Submit Expression of Interest and submit proposal for ARYA project. • Include atleast one programme per year on "Production Management'' which should includes livestock components also i.e. enhancement of productivity in crop/ animal in the district by suitable technologies. • Scripted interview of 4 successful farmers with full technologies may be broadcasted in AIR. • Contact and get technologies from DCR, Puthur specially for value addition from Cashew apple. • Contact IIPR, Kanpur and introduce new varieties through OFTs and concentrate on YMV resistant Black gram varieties. • Integrated farming system is highly suitable for this district. Farmers may bring to visit IFS model developed by NRCB, Trichy. • Concentrate on revenue generation through paid trainings and by selling technological inputs. • Connect with other institution in district like Dalmia, SHGs to reach more farmers in district. • Branding & Marketing is still difficult for farmers. Awareness on e-commerce may be given. • For reach of successful technology, OFT may be taken to FLD next year & FLD to trainings. More newspaper messages, TV talk and radio talk on successful technologies may be given. • Focus on Mushroom cultivation, marketing and mainly on value addition. • Take farmers to more exposure visits and trainings and convert successful farmers as a master trainer. • New Paddy varieties - Slender variety ADT 53, 57, fine slender variety ADT-56, ADT-59 suitable for saline soil may be introduced. • ADT-56 alternate to RNR 15048 – suitable for Late Samba and Thaladi may conduct OFT. • Conduct FLD on IPM in Blackgram for YMV control. • Conduct FLD on VBN-12 (Rice follow pulses) which is resistant to YMV. • Less expenditure more income for farmers is our motto. So introduce Dew gram (i.e) 8kg seed/ acre and Rs.18000 exp/ha yields more income as alternate for Groundnut. • Groundnut Rich booster in liquid form is developed. So, it may be popularized. • Zinc and potassium mobilizing bacteria may be promoted.

			• Cotton area reduced from 1200 ha to 2900ha in Ariyalur District. So KVK may conduct demo on new variety VPT- 2 which is 130 days duration, suitable for machine harvest and has Long Stable Cotton. • Conduct demonstration on IPM in pink boll worm management through mating disruption technology • All crops cultivated in 2ft gap are suitable for Rain hose technology like Groundnut, Blackgram and Sesame. So conduct more demos on Rain hose pipe technology. • KVK may join hands with CRS to give capacity building programme in water saving technology. • COH(M) 6, COH(M) 8, COH(M) 9, COH (M) 11, VGIH 1 are drought tolerance Maize hybrids – conduct OFT. • Groundnut is the major crop in Ariyalur District. So high yielding Gujarat varieties may be introduced. • Introduce alternate Paddy variety for CO 55 as it has less grain filling. • Drought resistant variety for all crops may be introduced. • Conduct more demonstration on value addition in Cashewnut & Cashew apple. • Established demo plot under grafted brinjal in KVK. • Conduct demonstration on drone spray in cashew crop in Sendurai block. • Ultra HDP Cashew plantation demo unit may be established in KVK. • More awareness and trainings on agricultural machineries and techniques / technologies to use machineries like summer ploughing. • Department machineries are underutilized. Create awareness on ‘’Uzhavan App’’ in all trainings. • Identify real entrepreneurs and link with Agricultural Engineering Department to get Value added machineries such as solar dryer, pulverizer, etc., in subsidy. • Create awareness on department schemes and application procedure for subsidy schemes in all trainings. • Eucalyptus, Casuarina peeled barks are used to prepare more byproducts. KVK may explore technologies & take farmers to exposure visit to briquette production unit, using saw dust/wood shavings.

			• Fodder crops may be promoted as an intercrop in Agro forest. • Apiculture promotion in Cashew rich areas • KVK can help in popularizing our schemes in all trainings such as tree plantation, canals construction for water management, farm pond with maximum 3 Lakh for individual, land development fund for individual, trench cutting. • Individual farmer who fall under small margin farmer category can apply for open well scheme. • Infrastructure development scheme for azolla cultivation, cow & goat shed are also there. Awareness may be created in all trainings. • Cover uncovered villages with minimum 10 contact farmers in each village. • New technological inputs should available in KVK by all time. • Bankable project proposals may be issued by KVK for all agri and allied activities. • Organize paid courses with good content to increase income source. • KVK may give 5 minutes message on '' Organic farming'' to broadcast in Organic farming programme at 6.35 AM every Sunday. • 5 Minutes message on '' Water saving Technology'' to broadcast in "நீரின்றி அமையாது உலகு" programme at 6.35AM every Tuesday. • Create Awareness among farmers that all recorded programmes are available in YouTube. • Technologies which need to be popularized in mass may be given for Radio programme. • Nominate Best Youth farmers for 60th year celebration of AIR, Trichy. • Dalmia is ready to extend support to KVK to reach all over Ariyalur District – Our field staff may be given capacity building and use them for programmes. • Project proposal to mitigate burning agri wastes after harvest in Ariyalur Block. • New fodder varieties such as Ratoon Sorghum may be popularized. • KVK must help in marketing organic produce and to get good prize for organic produce. • KVK may take efforts to find out suitable management practices to control flower midge in Tuberose as it poses serious loss nowadays. • Awareness on insurance policy available for farmers & farm labours for accidental death may be created in all training.

			• Create tie-up with any scent factories to get high income by marketing flowers directly. • Opportunities & tie-up with export agency to get more income. • KVK may promote poultry rearing in rainfed cashew field as Ariyalur is known for ''Siruvidai'' breed and to meet out demand all over Tamilnadu. • KVK should help in identifying the causes of death in poultry birds and measures. • KVK should bring all poultry farmers in district together and conduct one meeting every month. • Value addition training on Millet may be given. • Promote more organic farmers and give continuous support for organic farming. • KVK providing continuous support for Cashewnut processing. Extend more support in future.

**** Attached a copy of SAC proceedings along with list of participants***

2. DETAILS OF DISTRICT (2024)

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
Ariyalur	Not Applicable	

2.1. Major farming systems/enterprises

Classification	First crop	Second crop	Third crop
Wet land	Paddy (Kuruvai) (June-Oct.)	Paddy (Samba) (Oct. to Feb.)	Paddy (Navarai) (Jan – May)
	Paddy (Kuruvai) (June-Oct.) Sunflower (June – Aug.)	Paddy (Thaladi) (Oct. to Feb.) Fallow	Blackgram, Sesame (Feb to May) Sesame (Feb to April)
Garden land	Groundnut (Jun to Sep)	Groundnut (Oct-Jan)	Drumstick (Oct - May)
	Groundnut (Jun to Sep)	Vegetable (Oct – Jan)	Blackgram (Feb-May)
	Groundnut (Jun to Sep)	Groundnut (Oct – Jan)	Blackgram, Sesame (Feb-May)
Dry land	Fallow	Maize (Aug-Sep)	Sesame (Jan – March)

	Fallow	Cotton (Aug-Sep)	Sesame (Jan – March)
	Fallow	Sorghum/Varagu (Aug-Sep)	Fallow
	Cashewnut as perennial crop		

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

S. No	Agro-climatic Zone	Characteristics
1	North Eastern Zone	Ariyalur district is located in Northern eastern part of TamilNadu. The climate in the zone basically tropical with an average rainfall of 954 mm. The soil p^H is ranging from 6.5 to 8.0. Ferruginous red loam soil and black cotton soils are the predominant soil types. Salinity occurs during summer ranging from 8.00 – 9.5 and EC is 1.5-2.5

S. No	Agro ecological situation	Characteristics
1	North Eastern portion of VIII Agro ecological Zone of India	The maximum precipitation is contributed by North East Monsoon. The soil texture is usually loamy, the colour varying from red at the surface to yellow at the lower horizon. Black soil favours the cultivation of rainfed crops viz., cotton, maize in a larger area.

2.3. Soil types

S. No	Soil type	Characteristics	Area (ha.)
1	Red Soil	Rich source of Fe, Mn, High P fixation capacity due to the presence of kaolinitic clay along with sesquioxides, low organic matter & clay.	66,315
2	Black Soil	More than 30% clay, Mn adding black color to the soil. High CEC with high p^H range, abundant source of Mo and Boron.	49,550

2.4. Area, Production and Productivity of major crops cultivated in the district for 2024

S. No	Crop	Area (ha)	Production (q)	Productivity (q/ha)
1	Paddy	22842	1082.88	41.36
2	Maize	21418	1260.98	70.76
3	Bajra	1154	42.54	34.64
4	Cotton	6073	78.69	9.32
5	Black gram	7820	58.78	6.74
6	Groundnut	13320	472.07	37.05

7	Sesame	4114	8.45	5.50
8	Sugarcane	3462	3611.71	820.47
9	Cashewnut	30472	182596.2	5.99
10	Drumstick	1041	393750	350
11	Brinjal	133	15780	90.34
14	Mango	513	30776	56.86
15	Tapioca	659	71320	322.7

2.5. Weather data

Month	Rainfall (mm)	Temperature°C		Relative Humidity (%)
		Maximum	Minimum	
January 2024	68.48	28.3	26.6	58.4
February 2024	0.00	31.5	24.7	73.5
March 2024	0.00	37.4	27.3	65.5
April 2024	1.59	36.3	27.3	73.7
May 2024	81.93	38.8	28.8	72.9
June 2024	59.45	30.3	26.4	59.3
July 2024	13.63	28.5	27.7	57.4
August 2024	123.29	29.4	27.3	63.9
September 2024	26.50	28.6	26.7	62.3
October 2024	155.54	26.4	22.3	62.2
November 2024	139.00	27.2	24.1	72.7
December 2024	276.64	26.4	23.7	75.7
Total/Average	**946.05**	**30.8**	**26.1**	**66.5**

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

Category	Population	Production	Productivity
Cattle			
Cross breed	98,507	3.2 Lakh lit.	10 lit /cow
Goats	2,78,427	12.98 Lakh Kgs.	18 kg/goat
Pigs			
Indigenous	7,603	23,540 kg	20 kg/ Pig
Poultry			
Desi bird	90,346	58,800 kg	1 kg/bird

Category	Area (ha.)	Production (q.)	Productivity (q/ha.)
Fish	357	8,354	23.4

2.7. Details of Adopted Villages (2024)

S. No.	Taluk/ Mandal	Name of the block	Name of the village	Year of adoption	Major crops & enterprises	Major problem identified	Identified Thrust Areas
KVK adopted villages							
1	Udayarpalayam	T.Palur	Kelakudikadu	2023	Paddy, Maize, Sesame, Blackgram, Cotton, Chilli, Vegetables, Dairy, Goat & Poultry	**Paddy** • Increased level of salinity in ground water (p^H is 8.5 and EC >1.5 dsm^{-1}) and in clay soil causes algae occurrences leads crop failure. • > 500 ha of Summer/Kuruvai paddy area was affected by high salinity in district. • Poor crop growth and crop establishment which resulted in reduced yield (up to 50 %) with existing salinity susceptible varieties namely ADT 45, ADT 39 and ASD 16. • Cost of production increased due to imbalanced use of fertilizer application. • Unaware of salinity tolerant paddy varieties.	Varietal evaluation and ICM
						Paddy • Low yield (2600kg/ ha) due to less adoption of complete organic practices in traditional paddy varieties. • Lodging character of Karuppu kavuni tend to harvesting difficulties	Varietal introduction and ICM
2			Dinakudi	2022		**Cluster bean** Local varieties are susceptible to root rot and leaf spot diseases; low yield (17.30 q/ha).	Varietal introduction and ICM

						Maize • Maize leaves and stubbles are burn after cob harvest and not used as fodder • Fodder shortage during summer months	Effective utilization of crop residues
3			Gunamangalam	2024		**Cotton** • Non adoption of IPM practices leads yield loss upto 30% with increased production cost 20% • Spraying of non recommended pesticides increases cost of cultivation	IPM
4			Arulmozhi	2024		**Chilli** • Yield loss (36%) due to cultivation of local varieties susceptible to downy mildew and Anthranose diseases incidence.	Varietal introduction and ICM
5			TKP Natham	2023		**Paddy** • Yield loss up to 40 % due to false smut disease • Imbalanced spray of fungicides • Non adoption of IDM practices • Poor crop growth and crop establishment which resulted in reduced yield (up to 50 %) with existing salinity susceptible varieties namely ADT 45, ADT 39 and ASD 16. • Cost of production increased due to imbalanced fertilizer application	IPDM
6			Anaikudam	2021		**Dairy** • Approximately 20-30 % of milch animal suffer with	Disease management

						sub clinical mastitis (SCM) results in 5-10% milk yield loss • As sub clinical mastitis (SCM) progress into clinical mastitis increase the health expenses and complete loss of production infected udder quarters.	
						Small ruminants • Poor health and productivity of goats • Reduced No. of kids / kidding.	Animal health management
						EDP • Poor uptake of millets in the recent changes in food due to deficiency among women and children • Lack of entrepreneurial avenues to women in semi urban areas	Women empowerment
7			Uthayanatham	2022		**Poultry** • Less egg production potential of country chicken (60-70 eggs/ year/hen) • Less weight gain i.e,. less than 900-1000 g in 6-7 months	Introduction of Breed
8		Jayankondam	Uthrakudi	2024	Paddy, Groundnut, Blackgram, Bhendi Casurina, Brinjal, vegetables, Dairy, goat & poultry	**Blackgram** • Lack of intercropping in Casuarina plantation • Weed menace in casuarina new plantations	Intercropping
9			Padanilai	2024		**Brinjal** • Yield loss up to 50% • Increase in production cost due to repeated	IPM

						spraying of same chemicals • Non adoption of IPM practices.	
10			Cholankuruchi	2024		**Bhendi** • Cultivation of YMV susceptible hybrids causes yield loss upto 30 % • Unaware of IPDM practices in Bhendi	Varietal introduction and ICM
11			Valavaneri	2024		**Paddy** • Reduction of yield up to 35% during high dry spell under semi dry condition. • Unaware of drought tolerant variety for direct sown semi dry condition • Non adoption of drought management technologies leads to crop failure or 35 % yield loss.	Varietal introduction and ICM
12			Kulothunganallur	2024		**Jasmine** • Bud worm and blossom midge causes poor flower quality and resulted in yield loss up to 50 % • Indiscriminate use of pesticides leads increase in production cost	IPM
13			Meensrutti, Katchiperumal, Silal	2024		**Nutrition garden** • Unutilized school space • Less uptake of vegetable by the students in noon meal	Nutri Garden
14	Ariyalur	Thirumanur	Kamarasavalli	2024	Paddy, Sugarcane, Sesame, Cotton, Dairy, Goat, Poultry & Fish	**Blackgram** • 1200 ha of blackgram area being cultivated under rice follow condition. • YMV incidence (25%) causes yield loss up to 40 % with existing variety ADT 5.	Varietal evaluation and ICM

						• Unaware of high yielding MYMV resistance rice follow Blackgram varieties with Synchronized harvest under rice fallow condition	
						Sesame • Sesame area has been increased from 2500 ha. to 4000 ha. in district due to loss in sugarcane cultivation by Pokkah boeng disease • Unavailability of drought tolerant high yield variety for summer crop • Infestation of hopper (18 %) and ear head bug (26 %) causes yield loss up to 40 % with existing varieties TMV 4 and local.	Varietal evaluation and ICM
						Paddy • Reduction in yield up to 22% by stem borer & 15 % by Leaf folder • Bacterial leaf blight causes low photosynthesis and resulted in low yield (25% loss) • Unaware of IPDM technologies in paddy	IPDM
15		Ariyalur	Kuruchinatham	2024		**Cotton** • Non adoption of INM techniques causes reddening, stunted growth, flower drop leads to yield loss up to 40-45 %. • Unaware and poor adoption of micro nutrient spray causes low boll formation and poor quality of kapas.	INM

16	Sendurai	Sendurai	Mathumadakki	2024	Cashew, Paddy, Millets, Groundnut, Tapioca, Chilli, vegetables, Dairy, goat and Poultry	**Ragi** • Low productivity with the existing ragi varieties (1400kg/ha) under rainfed condition • Susceptibility of existing varieties to lodging and neck blast	Varietal evaluation
						Ridge gourd Yield loss (36%) due to cultivation of local varieties susceptible to downy mildew disease and fruit fly pest incidence.	Varietal evaluation
						Tapioca Local varieties are low yielding (220 q/ha) due to heavy incidence of cassava mosaic virus and mealy bug pest.	Varietal introduction and ICM
						Sugarcane • Farmers practicing burning of sugarcane trashes and other agriculture waste *in-situ* that affects soil micro flora • Poor recycling of organic resources • Reduction in germination and yield loss to the tune of 10 -15% in the ratoon crop due to burning of trashes • Air pollution and leads to global warming	Waste management
						Jasmine Low yield (27.65 q/ha) from local varieties and are susceptible to Bud worm pest and leaf spot diseases.	ICM
						Cattle Ectoparasites infestation led to poor performance of cattle	Animal health management

17			Kumuliam	2022		**Chilli** • Leaf curl virus in chilli causes yield reduction upto 30% • Indiscriminate use of pesticides leads to high plant protection cost.	IPM
18			Udayankudikadu	2024		**Sorghum** • Single crop area, Sorghum is being cultivated for fodder purpose only in an area of 500 ha under rainfed • Unaware of drought tolerant dual purpose sorghum variety for rainfed condition	Varietal introduction and ICM
19	Andimadam	Andimadam	Kuvagam	2024	Paddy, Groundnut, Blackgram, Cashewnut, Tuberose, Vegetables, Dairy, Goat & Poultry	**Tuberose** • Poor tillering and crop establishment due to nematode • Unaware of Nematode infestation • Flower shape is affected and colour is dull. • Cost of production is increased by repeat application of different pesticides.	Nematode management
DFI villages							
20	Sendurai	Sendurai	Veeerakkan	2016	Cashewnut, Groundnut, Blackgram, Dairy, Goat & Poultry	**Cashewnut** • Local varieties are low yielding (0.65 q/ha) due to heavy weed population and low fertile soil. • Underutilization of interspace in Cashewnut plantation	Intercropping and ICM
						Dairy Hypocalcaemia is one of the transition period metabolic disease most common in mature dairy cow which occur due to the deficiency of	Disease management

						calcium and total economic loss of the farmer due to milk fever is Rs.1500 to 2000 per affected animal	
						Fodder • Fodder Shortage during lean season • Poor Milk yield and quality due to shortage of green fodder	Varietal evaluation
						Greengram • MYMV causes yield loss up to 35 % • Lack of knowledge on green gram cultivation as it is higher values than black gram. • Less productivity due to its cultivation as intercrop in groundnut and not as sole crop.	Varietal introduction and ICM
21	Udayarpalayam	T.Palur	Venmmankondan			**Sunhemp** • Seed availability is shortage during season • Poor adoption of green manure *in-situ* conservation in sandy type soils. • Unaware of new variety for high bio mass yield	Varietal introduction and ICM

2.8. Priority/thrust areas

Crop/Enterprise	Thrust area
Paddy	Varietal Evaluation, Varietal Introduction with Integrated Crop management and Nutrient Management
Maize	Integrated Crop Management and Waste Management
Sorghum	Varietal Introduction, Integrated Crop Management & Value addition
Finger Millet	Varietal Evaluation, Integrated Crop Management & Value addition
Groundnut	Varietal Evaluation, Integrated Crop Management with Pest & Disease Management
Sesame	Varietal Evaluation and Integrated Crop Management
Blackgram	Varietal Introduction with Integrated Crop Management and Intercropping

Greengram	Varietal Introduction with Integrated Crop Management
Sunhemp	Varietal Introduction with Integrated Crop Management
Cotton	Integrated Crop Management and Integrated Pest & Disease Management
Sugarcane	Waste Management, Pest and disease management
Cashewnut	Integrated Crop Management, Intercropping & Integrated Pest Management
Tapioca	Varietal Introduction with Integrated Crop management
Cluster bean	Varietal Introduction with Integrated Crop Management
Brinjal	Integrated Pest Management
Bhendi	Varietal introduction and Integrated Pest Management
Chilli	Varietal Introduction and , Disease Management
Gourds	Varietal Evaluation and Integrated Pest Management
Jasmine	Varietal Introduction with Integrated Pest Management
Tuberose	Integrated Crop Management with Nematode Management
Nutri Garden	Nutritional Garden
Fodder	Varietal Evaluation and Integrated Crop Management
Dairy	Animal Health Management and Disease Management
Goat	Animal Health Management and Disease Management`
Poultry	Introduction of Breed and Feed Management
Fish	Breed Evaluation
EDP	Women empowerment

3. Salient Achievements

Achievements of Mandated activities (1st January 2024 to 31st December 2024)

S. No	Activity	Target	Achievement
1.	Technologies Assessed and refined (No.)	---	---
2.	On-farm trials conducted (No.)	15	16
3.	Frontline demonstrations conducted (No.)	21	21
4.	Farmers trained (in Lakh)	0.02625	0.03931
5.	Extension Personnel trained (No.)	200	226
6.	Participants in extension activities (in Lakh)	39200	32130
7.	Production and distribution of Seed (in Quintal)	15	20.6
8.	Planting material produced and distributed (in Lakh)	45000	60309
9.	Live-stock strains and finger lings produced and distributed (in Lakh)	7305	4067
10.	Soil samples tested by Mini Soil Testing Kit (No)	500	725
11.	Soil samples tested by Traditional Laboratory (No)	---	---
12.	Water, plant, manure, and other samples tested (No.)	500	199
13.	Mobile agro-advisory provided to farmers (No.)	20000	60775
14.	No. of Soil Health Cards issued by Mini Soil Testing Kits (No.)	500	725
15.	No. of Soil Health Cards issued by Traditional Laboratory (No.)	1000	817

Salient Achievements

- Our KVK farm in 20 ha is a certified organic farm serves as model to 480 organic farmers and promoting on-site input production among 4015 farmers in 286 villages.
- Technological products viz., seeds (18.7 q), Planting materials (39,825 Nos.), Bio products (5730 kg), Livestock (197 Nos.) were distributed benefitting 8151 farmers.
- Mechanized transplanting / sowing is facilitated to overcome labour shortage in Paddy (6420 ha), Maize (5,600 ha) and Groundnut (16,500 ha) crops
- 810 ha. of area brought under fodder crops to ensure health of animals in the District.
- 164 ha. of farm ponds brought under fisheries and 246 tonnes fish production ensured.
- As a pilot programme pest repellent spray was undertaken in 640 acres using drone and it become familiar among the farmers.
- Promotion of high end technologies viz., use of assorted sexed semen in Dairy, Black Soldier Fly in Poultry, Genetic upgradation in goat, Biofloc fish rearing are being initiated by the project funded by DST, New Delhi , Tribal development fund and LEDP (NABARD) programmes.
- Emphasize is being given to conserve natural resources viz., land, water, and environment. Distributed 5730 kg of Bio products covering 2450 ha. by 3505 farmers, promoted Waste decomposer in 410 ha. by 148 farmers.
- Water saving technologies like drip and sprinkler irrigation facilitated in 399 ha through department subsidies, irrigation scheduling by Water meter (Pani-pipe) and Soil Moisture Indicator is being practiced in 40 ha. by 95 farmers by our interventions.
- Water harvesting structures like staggered trenches in Cashewnut (6450 ha), renovation of eight village water bodies paved the way for increased area under irrigated Agriculture.
- Promoting Group Action by Farmers Clubs (23 Nos.), Farmers Associations (3 Nos.) and FPOs (4 Nos.) JLG (3 Nos.) comprising of 4,520 farmers.
- Special programmes TDF were implemented to cover 492 ST families to ensure social inclusion.
- Our KVK has created wide awareness on Government priority programmes viz., Revamped PMFBY, DFI, Soil Health Management, Livestock Management and Swachhta Hi Sewa among 38,450 farmers.
- We could reach 60,500 farmers by mass propagation of technologies through Farmer Friend, Whatsapp, mKisan, Voice messages, YouTube, Facebook, Radio and TV talks.
- Involved in documentation and validation of innovation of 8 farmers.

- Wild animal problem is big menace now a days and we have promoted Wild Animal Repellent (Herboliv plus) and rescued the crops in an area of 160 ha.
- We have promoted drone spray in an area of 660 ha. and solved the labour scarcity.
- QR code demo unit – 32 Nos.
- 25 success cases and 10 new technologies were video documented.
- Facilitate to 210 entrepreneurs under Scheme Connect activity to avail department subsidy schemes.

4. TECHNICAL ACHIEVEMENTS

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

OFT (Technology Assessment)

No. of OFTs		Number of technologies		Number of locations (Villages)		Total no. of Trials / Replications / Beneficiaries	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
15	16	30	32	45	30	45	45

FLD (crop/enterprise/CFLDs)

No of Demonstrations		Area in ha		Number of Farmers / Beneficiaries / Replications	
Targets	Achievement	Targets	Achievement	Targets	Achievement
21	21	29	29	122	130

Training (including sponsored, vocational, and other trainings carried under Rainwater Harvesting Unit)

Number of Courses			Number of Participants	
Clientele	Targets	Achievement	Targets	Achievement
Farmers and Farm Women	118	137	2625	3931
Rural youth	14	23	280	501
Extn. Functionaries	10	9	200	226

Extension Activities

Number of activities		Number of participants	
Targets	Achievement	Targets	Achievement
1271	1082	39200	32130

Seed Production (q)

Target	Achievement	Distributed to no. of farmers
15	20.6	343

Planting material (Nos.)

Target	Achievement	Distributed to no. of farmers
45000	60309	1667

Technology Assessments (OFTs) in Detail

OFT 1 : Assessment of Paddy varieties for Navarai season at Ariyalur district

1. Thematic area: Varietal Evaluation

2. Title: Assessment of Paddy varieties for Navarai season at Ariyalur district

3. Scientists involved: SMS (Agronomy) and SMS (Plant Protection)

4. Details of farming situation: Low land, Irrigated, Clay loam soil

5. Problem definition / description:

- Low yield (4600kg/ha) from existing fine grain varieties under Navarai season.
- Non availability of high yielding varieties with high market demand.
- Brown Leaf spot and sheath blight causes 28 % yield loss during Navarai season

6. Technology Assessed:

Technology option 1 (TO 1)	**CO 55 (TNAU, 2022)** Duration : 110 – 115 days ; • Season : Kar / Kuruvai / Sornavari / Navarai • Special features: White medium slender rice with high milling (70%) and head rice recovery (65 %) • Reaction to major pests and diseases : Moderately resistant to blast, sheath rot, brown spot, RTD and BPH, grain yield – 6000 Kg/ha
Technology option 2 (TO 2)	**RNR 15048 (PJTSAU, 2021)** Telangana Sona (RNR 15048) is a short duration (125 days) variety with short slender grain type. This variety is resistant to leaf blast and moderately resistant to cold. It has good cooking quality with high head rice recovery (68-70%) and photo sensitive variety. The variety has low glycemic index and intermediate amylose content (51.5), grain yield – 6500 – 7000Kg/ha
Farmer practices	**ADT 43** ADT 43 - Duration : 110 days, Avg. yield : 55 q/ha.

7. Critical inputs given:

S.No	Particulars	Quantity	Cost /unit (Rs.)	Amount (Rs.)
1	Paddy CO 55	120 kg	37	4565
2	Paddy RNR 15048	120	50	6000
	Total			**10565**

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Return (Rs./ha)	B:C ratio	No. of grains per earhead	Straw yield (q/ha.)	% of stem borer infestation	% of BLB incidence
Farmers' Practice	3	52.2	68340	2.00	125	19.2	13	12
Technology 1 (CO55)		59.4	87430	2.32	144	21.5	8	9
Technology 2 (RNR 15048)		63.5	100200	2.57	153	24.5	5	6

9. Constraints: Nil

10. Feedback of the farmers involved:

- Super fine grain varieties CO 55 and RNR 15048 are performed well than existing variety ADT 43.
- TO 1 though has germination and grain filling issue gives better yield than existing variety.
- TO 2 has better growth, more productive tillers yield and less pest and disease occurrence than TO 1.
- TO 2 RNR 15048 holds good cooking quality and has high marketable value than TO 1 .

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

- CO 55 super fine grain paddy has grain filling issue in Navarai season
- An RNR 15048 paddy variety is highly suitable for Navarai season. It may be recommended to short duration season for getting high yield and profit.

<u>OFT 2 : Assessment of saline tolerant paddy varieties for Ariyalur district</u>

1. Thematic area: Varietal Evaluation

2. Title: Assessment of saline tolerant Paddy varieties for Ariyalur District

3. Scientists involved: SMS (Agronomy) and SMS (Plant Protection)

4. Details of farming situation:

The study area is under Cauvery delta region of Ariyalur district. The soil type is clay in nature with p^H of 7.5 -8.5 and EC is > 1.5 dsm^{-1}. Bore well irrigation. The salinity issues occurs in fields during summer/kuruvai season (May-July)

5. Problem definition / description:

- Increased level of salinity in ground water (p^H is 8.5 and EC > 1.5 dsm^{-1}) and in clay soil causes algae occurrences leads crop failure.
- > 500 ha of Summer/Kuruvai paddy area was affected by high salinity in district.

- Poor crop growth and crop establishment which resulted in reduced yield (up to 50 %) with existing salinity susceptible varieties namely ADT 45, ADT 39 and ASD 16.
- Cost of production increased due to imbalanced use of fertilizer application.
- Unaware of salinity tolerant paddy varieties.

6. Technology Assessed:

Technology option 1 (TO 1)	**Paddy TRY 5 (TNAU, 2022)** • The crop matures in 110-115 days with an average grain yield of 5100 kg per hectare (ha) with an advantage of 12.64 per cent grain yield over TRY 2. • The variety is moderately resistant to blast and brown leaf spot diseases and pests such as brown plant hopper, green leaf hopper and white backed plant hopper.
Technology option 2 (TO 2)	**Paddy CSR 56 (CSSRI, 2018)** • The grain yield ranges from 6.5 to 7.0 t/ha under non-stress soil conditions • 4.6 t/ha grain yield in salt-affected soils. • Duration (120-130 days) variety with semi dwarf stature (95-105cm) and having long bold grain. • Moderate degree of resistance against major diseases namely, leaf blast, neck blast, sheath rot, bacterial leaf blight, brown spot and glume discoloration diseases. • It also showed moderate resistance to major insect pests namely, stem borer, leaf folder and white backed plant hopper. • It has high milling recovery (68.2%) and head rice recovery (52.25%), possessing a good cooking quality. CSR56 is a high yielding genotype for salt affected soils.
Farmer practices	**ADT 39** • Duration : 120-125 days • Avg. yield : 45 q/ha.

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

S.No	Particulars	Quantity	Cost /unit (Rs.)	Amount (Rs.)
1	Paddy TRY 5 seed	18 kg	36	666
2	CSR 56 seed	18 kg	65	1170
3	TNAU Vithai Amirtham	1 lit.	350	350
4	*Bacilus subtilis*	3 kg	120	360
	Total			**2546**

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Return (Rs./ha)	B:C ratio	No. of productive tillers	% of BLB incidence	% of false smut incidence	% of stem borer infestation
Farmers' Practice	3	45.6	62760	2.14	22	12	9	8
Technology 1 (TRY 5)		53.5	79850	2.39	29	6	3	7
Technology 2 (CSR 56)		50.3	70630	2.24	25	8	7	10

9. Constraints: Nil

10. Feedback of the farmers involved:

- TRY 5 paddy variety perform better than CSR 56 and farmers existing variety ADT 39 under salinity condition.
- TRY 5 holds good plant population per sq.m. (22 Nos.), less BLB and false smut incidence and stem borer infestation than CSR 56 and DAT 39 (Farmers Practice).
- TRY 5 results good quality higher grain and paddy straw yield than others.

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

- TRY 5 Paddy variety is highly recommendable for salinity issue Paddy areas followed by CSR 56 which is susceptible to stem borer.
- With precaution measures we can expect the good yield with both varieties

OFT 3: Assessment of Ragi varieties in Ariyalur district

1. Thematic area: Varietal evaluation

2. Title: Assessment of Ragi varieties in Ariyalur District

3. Scientists involved: SMS (Agrl. Extn) and SMS (Agronomy)

4. Details of farming situation:

Temperature: 32 to 36^{o} C, Soil type: Red loamy soil, p^{H} : 6.5 to 8.0, Annual Rainfall : 954mm

5. Problem definition / description:

- Low productivity with the existing ragi varieties (1400kg/ha) under rainfed condition
- Susceptibility of existing varieties to lodging and neck blast disease

6. Technology Assessed:

Technology option 1 (TO 1)	**Ragi CFMV 1 (Indravathi) (ANGRAU,2022)** • Resistant to finger blast, neck blast, foot rot, and banded blight. Duration : 110–115 days, ear head length of 8–9 cm & 7–8 fingers • Potential yield - 3200 – 3400 Kg/ha
Technology option 2 (TO 2)	**Ragi ATL 1 (TNAU, 2020)** • Ragi ATL 1 is rich in protein (11.9%) and calcium (325mg/100g), high flouring capacity (92%). low residual weight (8%), moderately resistant to leaf, neck, and finger blasts • Potential yield: Rainfed : 2506kg/ha and Irrigated : 4394 kg/ha
Farmer practices	**Local variety Paiyur 2** • Duration: 115 days Avg. yield : 1500kg/ha.

7. Critical inputs given:

S.No	Particulars	Quantity	Cost /unit (Rs.)	Amount (Rs.)
1	Ragi CFMV 1 (Indravathi)	6 kg	62	372
2	Ragi ATL 1	6 kg	70	420
	Total			**792**

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio	No. of productive tiller/hill	% of neck blast incidence	% of Earhead bug infestation
Farmers Practice	3	21.5	49200	2.21	3	13	8
Technology 1(Ragi CFMV 1)		23.5	58300	2.49	4	6	8
Technology 2(Ragi ATL 1)		25.1	65080	2.70	6	3	2

9. Constraints: Nil

10. Feedback of the farmers involved:

- The growth and establishment of Ragi crops is better in ATL 1 followed by CFMV -1 results higher yield than farmer existing variety.
- ATL-1 has less neck blast incidence and earhead bug infestation than CFMV1 and farmers' variety.
- ATL-1 was tufty and medium tall stature, strong and long panicles, non-lodging than CFMV-1 and farmers existing variety.

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

- ATL-1 gives better grain and quality straw yield. The marketability is no issue and high demand among farmers.
- ATL-1 is highly suitable for rainfed and also irrigated condition in Ariyalur district.

OFT 4: Assessment of Groundnut varieties for Rabi season under irrigated condition at Ariyalur district

1. Thematic area: Varietal evaluation

2. Title: Assessment of Groundnut varieties for Rabi season under irrigated condition at Ariyalur district

3. Scientists involved: SMS (Agronomy) and SMS (Plant Protection)

4. Details of farming situation: Upland, Irrigated, Sandy loam soil

5. Problem definition / description:

- Reduced yield due to tikka leaf spot (38%) & root rot (14%)
- Cultivation of low yielding (1950kg/ha) bunch type varieties like GJG 9 & Gujarat local under irrigated condition

6. Technology Assessed:

Technology option 1 (TO 1)	**VRI 10 (TNAU, 2022)** • Duration : 90-95 days , Yield : 2492 kg/ha of dry pod yield (13.4 and 24.0 % over TMV 14 and GG 7, respectively) Moderate resistance to late leaf spot, rust diseases and moderate resistance to sucking pests and defoliators , Oil content is 46-48 % • Potential yield: 2492 kg/ha
Technology option 2 (TO 2)	**TCGS 1694 (ANGRAU, 2022)** • Duration: 105 to 110 days • Yield per hectare: Kharif- 33 to 35 quintals and Rabi - 42 to 45 quintals Short stature, LLS and Rust tolerant, drought tolerant, pink testa. Oil content is 50%. • Potential yield: 3500-4500 kg/ha
Farmer practices	**GJG 9** • Duration: 100 days, Spanish bunch groundnut with pod yield of 1632kg/ha.

7. Critical inputs given:

S.No	Particulars	Quantity	Cost /unit (Rs.)	Amount (Rs.)
1	VRI 10 seed	120 kg	100	12000
2	TCGS 1694 seed	120 kg	120	14400
	Total			**26400**

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C	No. of pods/plant	Haulm yield	% Tikka leaf spot incidence	% of grampod borer infestation
Farmers Practice	3	20.6	97600	2.12	32	39.1	15	18
Technology 1 (VRI 10)		24.5	134500	2.57	45	52.4	7	5
Technology 2 (TCGS 1694)		22.9	118150	2.37	36	45.3	5	9

9. Constraints: Nil

10. Feedback of the farmers involved:

- VRI 10 bunch type variety has bold seed, uniform seed size and shape than TCGS 1694 and GJG-9.
- VRI-10 has early maturity (95 days), less tikka leaf spot incidence (< 5%) and pod borer infestation (< 8%) and no defoliation leads to better pod & haulm yield than others.
- TCGS 1694 faced problem in a synchronized maturity than VRI 10 and GJG 9.

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

- Short duration (95 days) VRI 10 Groundnut variety highly suitable for irrigated condition to get maximized yield with less production cost.

OFT 5: Assessment of Integrated Nutrient Management practices in Cotton

1. Thematic area: Integrated Nutrient Management

2. Title: Assessment of integrated nutrient management practices in Cotton

3. Scientists involved: SMS (Agronomy) and SMS (Plant Protection)

4. Details of farming situation:

Cotton cultivation is being taken up during *rabi* season under rainfed condition. The soil type is clay loam with p^H of 7.5 and EC < 0.3 ds/m. The mean temperature of area during crop season is 32^{o}C-34^{o}C

5. Problem definition / description:

- Non adoption of INM techniques causes reddening, stunted growth, flower drop leads to yield loss of upto 30-35 %.
- Unaware and poor adoption of micro nutrient spray causes low boll formation and poor quality of kapas.

6. Technology Assessed:

Technology option 1 (TO 1)	**TNAU INM technology (TNAU, 2023)** • Soil test based NPK application • Seed treatment with TNAU Vithai amirtham @11ml/kg. • Application of Azophos @2.5kg/ha as basal • Application of TNAU MN mixture @15kg/ha. with enriched FYM (1:10) as basal • Foliar spraying of TNAU Cotton plus @2.5kg/acre twice during flowering and boll formation stage • Foliar spraying of PPFM @200ml/acre on 30, 45, 60 and 90 DAS
Technology option 2 (TO 2)	**CICR INM technology (CICR, 2021)** • Soil test based NPK application • Seed treatment with Azhopos @1200 g/ha. • Soil application of MN mixture formulated by Dept. of Agriculture, TN @12.5kg/ha. with 50 kg of sand as basal • Foliar spraying of 2 % DAP + 1 % KCL and multi K to improve kapas yield. • Need based foliar spray of 2% $MgSo_4$ + 1% urea during boll formation stage
Farmer practices	Soil application of DAP @100kg/ha., Complex fertilizer (17:17:17) @200kg/ha. and Foliar spraying of NAA @0.4 ml/lit. during flowering stage

7. Critical inputs given:

S.No	Particulars	Quantity	Cost /unit (Rs.)	Amount (Rs.)
1	TNAU Cotton Vithai Amirtham	66 ml	680/100 ml	450
2	PPFM	1.5 lit.	332.8	533
3	TNAU Cotton plus	7.5 kg	203	1523
4	MN mixture	15 kg	101	1515
5	DAP	6 kg	60	360
6	Pottasium Nitrate	1.5 kg	260/500ml	600
	Total			**4981**

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio	No. of bolls/plant	% of square drop
Farmers Practice	3	26.2	94800	2.26	45	12
Technology 1(TNAU INM technology)		31.8	132600	2.79	62	2
Technology 2(CICR INM Technology)		29.3	115650	2.55	55	6

9. Constraints: Nil

10. Feedback of the farmers involved:

- TNAU INM techniques results more number of bolls (62 Nos./plant/ha.) and less square drops (2 %) in cotton crop than CICR techniques and farmers practices.
- TNAU Cotton plus spray is boon to crop growth, produce more bolls, increase the color, quality and weight of lint.
- Nutrient uptake is high in TO1 than TO2 results good crop establishment and higher kapas yield.

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

- Very less micronutrient disorders noticed in TO1 TNAU INM technique followed by TO2 CICR INM technique.
- TO1 TNAU INM packages will highly influence in cotton yield which will be recommended to all Cotton areas.

OFT 6: Assessment of Integrated Diseases Management practices for the management of False smut diseases in Paddy

1. Thematic area: Integrated diseases management

2. Title: Assessment of Integrated Diseases Management practices for the management of False smut diseases in Paddy

3. Scientists involved: SMS (Plant Protection) and SMS (Agronomy)

4. Details of farming situation:

The study area is under Cauvery delta region of Ariyalur district. The soil type is clay in nature with p^H of 7.5 -8.5 and EC is > 1.5 dsm^{-1}. Bore well irrigation.

5. Problem definition / description:

- Yield loss up to 30 % due to diseases of false smut
- Imbalanced spray of fungicides causes increased production cost
- Non adoption of IDM practices

6. Technology Assessed:

Technology option 1 (TO 1)	**TNAU, 2020** Seed treatment with carbendazim 2.0g/kg of seeds. Two sprays with Propiconazole 25 EC @ 500 ml/ha (or) Copper hydroxide 77 WP @ 500 g/ac at one week before boot leaf and during flowering stages
Technology option 2 (TO 2)	**UAS, Raichur, 2020** Spraying of Fluxapyroxad 62.5% + Epoxyconazole 62.5% (300 ml/ ac) followed by Trifloxystrobin 25% + Tebuconazole 50% (80 g/ac) OR Two sprays of Trifloxystrobin 25% + Tebuconazole 50% (80 g/ac) at booting stage [80 days after transplanting (DAT) and post flowering (100 DAT) stag
Farmer practices	Spraying of Propiconazole 200 ml/ac alone after the incidence

7. Critical inputs given:

S.No	Particulars	Quantity	Cost /unit (Rs.)	Amount (Rs.)
1	Carbendazim	0.750 kg	1120	840
2	Copper hydroxide	1.500 kg	1260	1890
3	Trifloxystrobin + Tebuconazole	1 kg	1800	1800
	Total			**4530**

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio	% of incidence of false smut	No. of productive tillers/hill
Farmers Practice	3	47.5	49950	1.90	13	22
Technology 1(Seed treatment with carbendazim 2.0g/kg of seeds. Two sprays with Propiconazole 25 EC @ 500 ml/ha (or) Copper hydroxide 77 WP @ 500 g/ac at one week before boot leaf and during flowering stages)		49.6	56700	2.06	8	25

Technology 2(Spraying of Fluxapyroxad 62.5% + Epoxyconazole 62.5% (300 ml/ ac) followed by Trifloxystrobin 25% + Tebuconazole 50% (80 g/ac) OR Two sprays of Trifloxystrobin 25% + Tebuconazole 50% (80 g/ac) at booting stage [80 days after transplanting (DAT) and post flowering (100 DAT) stag)		52.4	65460	2.26	5	41

9. Constraints: Nil

10. Feedback of the farmers involved:

- Spraying Trifloxystrobin + tebuconazole have given good control of false smut disease from flowering stage to till harvest.
- Harvested good quality grains and hence fetched good price from the merchants by implementing TO2 IDM practices.

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

- The combination of seed treatment with Carbendazim @ 100g/acre and foliar spray of copper hydroxide 500g/ac at boot leaf stage and spraying of Trifloxystrobin + tebuconazole 80g/ac at post flowering stage found to be very effective in controlling false smut disease during the Navarai season``

OFT 7: Assessment of Integrated Pest Management Modules against sucking pest complex in Cotton

1. Thematic area: Integrated pest Management

2. Title: Assessment of Integrated Pest Management Modules against sucking pest complex in Cotton

3. Scientists involved: SMS (Plant Protection) and SMS (Agronomy)

4. Details of farming situation:

The soil is clay in nature with p^H of 7.5 - 8.0 and EC is < 0.5 dsm^{-1}. The mean temperature during the season is 26^0C to 36^oC. Rainfed situation

5. Problem definition / description:

- Non adoption of IPM practices leads yield loss upto 25 - 30% with increased production cost up to 20%
- Spraying of non-recommended pesticides

6. Technology Assessed:

Technology option 1 (TO 1)	**TNAU, 2022** • Seed treatment with *Beauveria bassiana* @ 10 g/kg of seed. • Soil application of neem cake @ 250 kg/ha • Yellow sticky trap @ 12 nos./ha • Release of green lacewing bug @ 1 lakh eggs/ha at 30 DAS • Need based spray of azadirachtin 1% EC @ 1000 ml/ha • Need based spraying of diafenthiuron 50% WP @ 600 g/ha or thiamethoxam 25% WG @ 100g/ha.
Technology option 2 (TO 2)	**ICAR –CICR , 2019** • Installation of Yellow sticky trap @ 8/acre • Maize as border crop • Spray NSKE 5 % • Spray Neem oil 2 ml • Spray *Verticillium lecanii* 10gm/l • Need based spraying of Flonicumid 50 WG 4g/10 litre of water.
Farmer practices	Monocrotophos 5ml/lit, Mancozeb 2 g/lit., Spray of Lambda cyhalothrin 2ml/lit.

7. Critical inputs given:

S.No	Particulars	Quantity	Cost /unit (Rs.)	Amount (Rs.)
1	*Beauveria bassiana*	3 kg	160/kg	480
2	Yellow sticky trap	3 Nos.	65/No.	195
3	Maize and Castor seeds	1.5kg	800/kg	1200
4	Neem Oil	3 lit	700/lit	2100
5	*Verticillium lecanii*	3 kg	460/kg	1380
6	Flonicumid	3 kg	475	1425
7	Thiamethoxam	300 ml	506/100 ml	1518
8	Phermone trap	9 Nos.	120	1080
	Total			**9378**

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio	% incidence of thrips	% incidence of Aphids	No. of bollworm affected squares
Farmers Practice	3	21	70900	2.08	24	21	16
Technology 1(TO 1-TNAU, 2022)		24.5	96425	2.53	21	18	11
Technology 2(TO 2-ICAR –CICR , 2019)		25.9	107100	2.73	8	12	7

9. Constraints: Nil

10. Feedback of the farmers involved:

- Normally we prefer to spray only chemicals by seeing the pest problem. By this demonstration we could realize the effect of yellow sticky trap, border cropping and bio-control measures in effectively managing the sucking pest in Cotton.
- We did only two chemical sprays now but before we used to go for more than five sprays.
- Thus cost of cultivation reduced @Rs.7000-8000/acre. So cost saved.

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

- Most of the practices are cultural. Maize border crop harbors Ichnimonida & Brachonids and manage the sucking pests like aphids, jassids in Cotton.
- Environmental hazards avoided by curtailing four sprays.

OFT 8: Assessment of shoot and fruit borer management technologies in Brinjal

1. Thematic area: Integrated Pest Management

2. Title: Assessment of shoot and fruit borer management technologies in Brinjal

3. Scientists involved: SMS (Plant Protection) and SMS (Horticulture)

4. Details of farming situation:

The soil is clay in nature with p^H of 7.5 - 8.0 and EC is < 0.5 dsm^{-1} . The mean temperature during the season is 26^0C to 36^oC. Bore well irrigation

5. Problem definition / description:

- Yield loss up to 50% due to shoot and fruit borer damage
- Increase in production cost due to repeated spraying of same chemicals
- Non adoption of IPM practice

6. Technology Assessed:

Technology option 1 (TO 1)	**TNAU, 2022** • Installation of pheromone traps @12/ha. • Release of larval parasitoids *Pristomerus pestaccus* 3 cc/ha. for 5 times • Application of Azadiractin 10,000 ppm/ha. at 50 DAT
Technology option 2 (TO 2)	**IIHR, 2022** • Installation of pheromone traps @12/ha. • Release of egg paracitoids, *Trichogramma chilonis* @ 50,000/week/ha. • Two spray of BT formulation @1ml/lit. at 50 DAT or flowering stage

Farmer practices	Foliar spraying of Chlorantraniliprole @0.5 ml/lit, Spinosid @0.5ml/lit.

7. Critical inputs given:

S.No	Particulars	Quantity	Cost /unit (Rs.)	Amount (Rs.)
1	Pheromone traps	30 Nos.	60	1800
2	*Pristomerus pestaccus*	6 cc	300/cc	1800
3	Azadiractin	3 lit	700	2100
4	*Trichogramma chilonis*	9 cc	50/cc	450
5	Bt	3 kg	400	1200
	Total			**7350**

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio	No. of shoots & fruit borer
Farmers Practice	3	18.4	173450	2.69	18
• Technology 1(Installation of pheromone traps @12/ha. • Release of larval parasitoids Pristomerus pestaccus 3 cc/ha. for 5 times • Application of Azadiractin 10,000 ppm/ha. at 50 DAT)		20.3	203660	3.02	11
• Technology 2(Installation of pheromone traps @12/ha. • Release of egg paracitoids, *Trichogramma chilonis* @ 50,000/week/ha. • Two spray BT formulation @1ml/lit. at 50 DAT or flowering stage)		22.4	235900	3.36	8

9. Constraints: Nil

10. Feedback of the farmers involved:

- Pheromone trap was helped for us to know about the onset of pest problem.
- Bio control agents like egg card, Bt and neem oil very effective in controlling fruit borer.
- By this demo we could harvest 86 % of good fruits (not damaged by fruit borer), earlier it was only 40-50%.
- Cost towards pesticides reduced from Rs.1200 – Rs.3500/acre.

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

- Bt exerts effective control against Brinjal shoot and fruit borer.
- Cost effective methods when compared to only chemical sprays as farmers do earlier.

OFT 9: Assessment on Bhendi hybrids against yellow mosaic virus

1. Thematic area: Integrated diseases management

2. Title: Assessment on Bhendi hybrids against yellow mosaic virus

3. Scientists involved: SMS (Plant Protection) and SMS (Horticulture)

4. Details of farming situation:

The soil type is sandy clay loam in nature with p^H of 7.5 and EC is < 0.3 ds/m. The mean temperature of area during crop season is 32^{o}C-34^{o}C. Bore well irrigation.

5. Problem definition / description:

- Cultivation of YMV susceptible hybrids causes yield loss up to 30 %
- Unaware of IPDM practices in Bhendi

6. Technology Assessed:

Technology option 1 (TO 1)	**TNAU, 2023** • Bhendi Hybrid COBh 4 • Soil test based NPK application • Seed treatment with TNAU Vithai amirtham 11ml/kg.
Technology option 2 (TO 2)	**IVRI-Varanasi -2021** • Bhendi hybrid Kashi chaman • Soil test based NPK application • Seed treatment with TNAU Vithai amirtham @11ml/kg. • Application of Azophos @2.5kg/ha as basal
Farmer practices	Growing of susceptible varieties (Mahyco 10)

7. Critical inputs given:

S.No	Particulars	Quantity	Cost /unit (Rs.)	Amount (Rs.)
1	COBh 4 seed	1.5kg	883/kg	1325
2	Kashi chaman	1.5 kg	933/kg	1400
3	Azophos	3 kg	50/kg	150
4	TNAU Vithai amirtham	50 ml	225/50 ml	225
	Total			**3100**

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio	% of YMV incidence
Farmers Practice	3	13.11	44820	1.40	26
Technology 1 • (Bhendi Hybrid COBh 4 • Soil test based NPK application • Seed treatment with TNAU Vithai amirtham @11ml/kg.)		17.65	106550	2.01	8
Technology 2 • (Bhendi hybrid Kashi chaman • Soil test based NPK application • Seed treatment with TNAU Vithai amirtham @11ml/kg. • Application of Azophos @2.5kg/ha as basal)		16.2	86880	1.80	12

9. Constraints: Nil

10. Feedback of the farmers involved:

- Bhendi hybrid COBh4 was good as there was no yellow mosaic disease.
- The fruits are dark green and medium sized fetched good price.

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

- Khasi chaman expressed its susceptibility to Yellow Mosaic Virus disease and upto 8% disease incidence observed.
- Khasi chaman pods are light green, small and the seeds are bigger sized and thereby less market preference.

OFT 10: Assessment of Ridge gourd varieties (MDU 1 and Arka prasan) for higher yield at Ariyalur District

1. Thematic area: Varietal evaluation

2. Title: Assessment of Ridge gourd varieties (MDU 1 and Arka prasan) for higher yield at Ariyalur District

3. Scientists involved: SMS (Horticulture) and SMS (Plant Protection)

4. Details of farming situation: Irrigated, Sandy clay loam

5. Problem definition / description:

Yield loss (36%) due to cultivation of local varieties is susceptible to downy mildew disease and fruit fly pest incidence. The newly released Ridge gourd varieties MDU 1 and Arka prasan are yielding 26% higher than local varieties.

6. Technology Assessed:

Technology option 1 (TO 1)	• MDU 1 (TNAU, 2023)
Technology option 2 (TO 2)	• Arka Prasan (IIHR Bengaluru, 2016)
Farmer practices	• Local varieties

7. Critical inputs given:

S.No	Particulars	Quantity	Cost /unit (Rs.)	Amount (Rs.)
1	MDU 1 seed	2.5 kg	1200/kg	3000
2	Arka Prasan seed	1.5 kg	2000/kg	3000
	Total			**6000**

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio	Downy mildew disease incidence (%)	Fruit fly incidence (%)
Farmers Practice	3	125.9	121875	1.94	28.51	22.1
Technology 1(MDU 1)		134.3	142260	2.13	3.75	5.43
Technology 2(Arka Prasan)		162.2	196576	2.54	8.42	7.22

9. Constraints: Nil

10. Feedback of the farmers involved:

- Arka prasan variety gave higher yield (152.2q/ha.) than the MDU 1 (124.3q/ha) and local variety (115.9 q/ha.)
- Market preference was good for Arka Prasan variety

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

- Arka prasan variety is recommended for cultivation in Ariyalur district.
- In MDU -1 Ridge guard variety mosaic virus incidence (12%) was observed.
- Arka prasan variety was resistant to mosaic virus disease.

OFT 11: Assessment of Chilli hybrids (Arka Dhriti and CO (ch)1) for higher yield and market preference

1. Thematic area: Varietal evaluation

2. Title: Assessment of Chilli hybrids (Arka Dhriti and CO (ch)1) for higher yield and market preference

3. Scientists involved: SMS (Horticulture) and SMS (Plant Protection)

4. Details of farming situation: Irrigated, clay loam soil

5. Problem definition / description:

Yield loss (36%) due to cultivation of local varieties susceptible to downy mildew disease and fruit fly pest incidence. The newly released Ridge gourd varieties MDU 1 and Arka prasan are yielding 26% higher than local varieties

6. Technology Assessed:

Technology option 1 (TO 1)	• Arka Dhriti (IIHR, 2024)
Technology option 2 (TO 2)	• Chilli hybrid CO 1 (TNAU, 2010)
Farmer practices	• Private hybrids (sierra)

7. Critical inputs given:

S.No	Particulars	Quantity	Cost /unit (Rs.)	Amount (Rs.)
1	Arka Dhriti (IIHR, 2024)	90 g	33000/kg	2970
2	Chilli hybrid CO 1 (TNAU, 2010)	90 g	32000/kg	2880
	Total			**5850**

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net (Rs./ha)	B:C	Leaf Curl Virus incidence (%)	Fruit rot incidence (%)
Farmers Practice	3	172.9	220620	2.76	22.3	17
Technology 1(Arka Dhriti)		198.3	273843	3.23	3.1	8
Technology 2(Chilli hybrid CO 1)		210.5	298848	3.45	4.7	1.5

9. Constraints: Nil

10. Feedback of the farmers involved:

- Chilli hybrid CO 1 gave higher yield than the Arka Dhriti hybrid and existing variety (Sierra).
- Leaf curl disease was less in Arka Dhriti hybrids than the other two hybrids.

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

- Leaf curl virus disease incidence (4.7%) was observed in TNAU Chilli hybrid CO 1 and it was very less in Arka Dhriti (3.1%).
- TNAU Chilli hybrid CO 1 is recommended for Ariyalur district for getting higher yield (210.5 q/ha).

OFT 12: Assessment of prepartum dietary anionic supplement for management of hypocalcaemia in pleuriparous dairy cow

1. Thematic area: Disease Management

2. Title: Assessment of prepartum dietary anionic supplement for management of hypocalcaemia in pleuriparous dairy cow

3. Scientists involved: SMS (Animal Science), SS & Head and SMS (Agrl. Extn)

4. Details of farming situation:

Milch animal is an important livelihood activity for both farmers and landless people. Farmers adopts poor feed management and disease management practices leads to poor health and less average milk yield (4 to 5.5 lit/day)

5. Problem definition / description:

Hypocalcaemia is one of the transition period metabolic disease most common in mature dairy cow which occur due to the deficiency of calcium and total economic loss of the farmer due to milk fever is Rs.1500 to 2000 per affected animal.

6. Technology Assessed:

Technology option 1 (TO 1)	• TANUVAS PAM 21 (TANUVAS, 2023)
Technology option 2 (TO 2)	• Anionic Mishran AFS (NDRI, Karnal, 2023)
Farmer practices	• No anionic supplement

7. Critical inputs given:

S.No	Particulars	Quantity	Cost /unit (Rs.)	Amount (Rs.)
1	TANUVAS PAM 21 (TANUVAS, 2023)	50 kg	150	7500
2	Anionic Mishran AFS (NDRI, Karnal, 2023)	50 kg	300	10500
	Total			**18000**

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (lit/day/cow)	Net Returns (Rs./ha)	B:C Ratio	% of incidence of hypocalcaemia	Serum calcium (mg/dl)
Farmers Practice	5	4.5	16038	2.2	92	7.7
Technology 1(TANUVAS PAM 21)		5.2	20218	2.5	78	9
Technology 2(Anionic Mishran AFS)		5	18468	2.3	80	8.8

9. Constraints: Nil

10. Feedback of the farmers involved:

- TANUVAS PAM 21 is a better technology for hypocalcaemic animals
- It improves the milk yield and gives economic gain.

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

- TANUVAS PAM 21 supplementation leads to increase average milk yield of 0.5 to 1 litre per day per cow.
- Improvement in milk fat and SNF content
- The calcium level of animal was increased
- TANUVAS PAM 21 mineral formulation can effectively enhance the dairy cattle health and production performance.

OFT 13: Assessment of Masti heal gel to control Sub Clinical Mastitis in Dairy animal

1. Thematic area: Production and Management

2. Title: Assessment of Masti heal gel to control Sub Clinical Mastitis in Dairy animal

3. Scientists involved: SMS (Animal Science), SS & Head and SMS (Agrl. Extn)

4. Details of farming situation: Semi intensive farming system

5. Problem definition / description:

Bovine mastitis is a major problem faced by dairy farmers affecting crossbred dairy animals but Subclinical Mastitis (SCM) is a silent problem causing high economic loss to farmers. Also farmers unaware of SCM and their impact on Milk production and udder health. To control and prevent mastitis / Subclinical mastitis in dairy cows there is need to assess different therapeutic herbal combinations. Also to reduce Somatic cell count and improve udder health and milk quality and quantity.

6. Technology Assessed:

Technology option 1 (TO 1)	Mastirak herbal gel with Pre-mast oral powder (NIF- DST, 2021)
Technology option 2 (TO 2)	Mastiheal gel with Masti Next oral powder (TANUVAS, VIF 2021)
Farmer practices	Use of Potassium Permanganate / traditional practices

7. Critical inputs given:

S.No	Particulars	Quantity	Cost /unit (Rs.)	Amount (Rs.)
1	Mastirak herbal gel with Pre-mast oral powder	30 tubes	150	4500
2	Mastiheal gel with Masti Next oral powder	15 tubes	400	6000
	Total			**10500**

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (lit/day/cow)	Net Returns (Rs./ha)	B:C ratio	Somatic cell count in milk (cells/ml)
Farmers Practice	5	5.5	19602	2.22	30×10^4
Technology 1 (Mastirak herbal gel with Pre-mast oral powder)		6.6	24806	2.38	$<20 \times 10^4$
Technology 2 (Mastiheal gel with Masti Next oral powder)		6.4	23640	2.3	$<20 \times 10^4$

9. Constraints: Nil

10. Feedback of the farmers involved:

- TO 1 (Mastirak herbal gel with Pre-mast oral powder) application is very easy after udder cleaning.
- It increases milk production leads economic gain.

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

- An inflammation of the udder was reduced.
- Mammary gland infection was reduced while applying this ointment.
- Milk production of the animals was increased(20%).
- The ointment contains minerals, vitamins like Vit AD3E. It improved the udder health of the animal.

OFT 14: Assessment of Cumbu Napier Fodder variety in Ariyalur District

1. Thematic area: Feed and Fodder Management

2. Title: Assessment of Cumbu Napier Fodder variety in Ariyalur District

3. Scientists involved: SS & Head and SMS (Agrl. Extn)

4. Details of farming situation: Intensive Farming

5. Problem definition / description:

- Increase Fodder Shortage during lean season
- Poor Milk quality due to shortage of green fodder
- Poor growth of fodder due to water scarcity

6. Technology Assessed:

Technology option 1 (TO 1)	Susthira (KAU, 2019)
Technology option 2 (TO 2)	CO5 (TNAU, 2018)
Farmer practices	CO4

7. Critical inputs given:

S.No	Particulars	Quantity	Cost /unit (Rs.)	Amount (Rs.)
1	Susthira (KAU, 2019)	3000 slips	2	6000
2	CO5 (TNAU, 2018)	3000 slips	2	6000
	Total			**12000**

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (lit/day/cow)	Net Returns (Rs./ha)	B:C ratio	Palatability %	Yield (t/ha)
Farmers Practice	5	5.2	18483	2.22	70	210
Technology 1(Susthira)		6.2	23302	2.38	80	222
Technology 2(CO5)		6.5	25200	2.49	85	245

9. Constraints: Nil

10. Feedback of the farmers involved:

- CO 5 fodder variety performed better than other variety.
- It improved the milk yield and health of the animal.
- Wastage of fodder was reduced in CO5 compare to other fodder due to its palatability.
- Green fodder yield of CO5 fodder was higher (245t/ha) than Susthira(222t/ha).

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

- CO5 variety was similar to CO4 and highly suitable for our district condition.
- It has high yield and nutritional benefits.
- CO5 has impressive bio-mass production.
- This nutritional richness improved the health condition of the animal.
- The milk production, milk fat and SNF content was high thus gives good income.

OFT 15: Assessment of Amur common carp under polyculture in short seasonal fish ponds

1. Thematic area: Fish Production

2. Title: Assessment of Amur common carp under polyculture in short seasonal fish ponds

3. Scientists involved: SS & Head and SMS (Agrl. Extn)

4. **Details of farming situation**: Clayey loam soil, irrigated

5. Problem definition / description:

- Lack of scientific knowledge in fish rearing under poly culture
- Often getting low fish yield/production (< 1000kg/ha.)
- Poor knowledge on new fish varieties suitable for polyculture

6. Technology Assessed:

Technology option 1 (TO 1)	Indian Major Carps (IMC) at stocking density ratio of Catla: Rohu: Amur common carp - 40: 20: 40/Ha (KVAFSU, Bidar, 2020)
Technology option 2 (TO 2)	IMC at stocking density ratio of Catla: Rohu: Mrigal: Amur common carp - 30: 40: 15: 15/Ha (ICAR-CIFA, Bhubaneswar, 2020))
Farmer practices	IMC at stocking density ratio of Catla: Rohu: Mrigal – 30: 40: 30/Ha

7. Critical inputs given:

S.No	Particulars	Quantity	Cost /unit (Rs.)	Amount (Rs.)
1	Amur common carp	2830	3.5	9900
	Total			**9900**

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (kg/harvest)	Net Returns (Rs./ha)	B:C ratio	Survival %
Farmers Practice	3	1513	99858	2.2	55
Technology 1(Catla: Rohu: Amur common carp - 40: 20: 40/Ha)		1788	122300	2.3	65
Technology 2(Catla: Rohu: Mrigal: Amur common carp - 30: 40: 15: 15/Ha)		1814	130608	2.5	62

9. Constraints: Nil

10. Feedback of the farmers involved:

- The yield was increased (20%) and weight gain also noticed compare to other polyculture of fish
- The feed cost of the fishes also reduced (40%) and 31percent income increased.

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

- This variety of fishes was mildly disease resistance.
- The liveability of fishes was more compare to other type of fishes.
- The smaller quantity of feed utilized and weight gain was more.
- In short period of time the fish attained weight gain due to stocking ratio.
- Both Amur and Mrigal fish varieties are bottom feeder thus results in increased body weight.

Frontline Demonstrations in Detail

FLD 1. Demonstration of Paddy variety TKM 15 under direct sowing semi dry condition at Ariyalur district

Crop	Paddy
Thematic area	Varietal Demonstration
Technology demonstrated	Paddy variety TKM 15 with ICM practices
Season and year	(Aug to Dec) Samba, 2024
Farming situation	About 300 ha of paddy being cultivated as dry seeded direct sowing in T. Palur and Jayankondam block of Ariyalur district. Temperature: 32^0 to 38^0 C, Soil type: Clay loam, p^H: 7.5, EC : < 0.5 ds/m. & Average Annual Rainfall : 954 mm. The farmer practicing one crop per year due to rainfed condition.
Source of fund	KVK Main
No of locations	3
No. of demonstrations	5
No of SC/ST Farmers and women farmers	Nil
Area proposed (ha)	2.0
Actual area (ha)	2.0
Justification for shortfall	Nil
Feedback from farmers	• TKM 15 Paddy mature 15 days earlier than check variety CR1009. It is highly helpful in delayed sowing under direct sown semi dry condition. • Very minimal usage of pesticide and fungicide required (1-2 sprays) and also fertilizers for this variety • Drought withstanding ability and ICM practices helps to get better yield than CR 1009
Feedback of the Scientist	• TKM 15 has huge demand among direct sown dry condition Paddy growers. It is highly suitable for this semi dry condition. • It can recommend for delayed sowing area for synchronized harvest same time. • TKM 15 Paddy variety recorded yield of 41.1q/ha than check variety CR 1009 (34.30q/ha) and 20% yield increased. • Net income of Rs.61,110/ha and BCR is 1:2.35 was recorded in TKM 15 Paddy variety under direct sown semi dry condition.
Extension activities on the FLD	Field day - 1 Farmers training – 2 Nos.

FLD 2. Demonstration of Organic nutrient management techniques in improved Karuppu Kavuni - CO 57 Paddy variety

Crop	Paddy
Thematic area	Nutrient Management
Technology demonstrated	• Improved Karuppu Kavuni - CO 57 Paddy variety with Organic nutrient management ICM practices *Viz.*, • 30 min. before sowing – Application of *Azospirillum* @2.5kg/ha with 25 kg FYM • Basal application of vermi compost @1000 kg/ha., Neem cake @150 kg/ha. & Top dressing @60kg/ha., Groundnut cake @100 kg/ha. as basal, 25 kg on 30 DAT as top dressing • Spraying of Panchagavya 3% during tillering and booting stage • Soil application of Amirtha karaisal @25 lit./ha. on 15 DAT
Season and year	Samba, 2024
Farming situation	The traditional paddy varieties like Karuppu kauvni, Mapillai Samba, Thooya malli, Kattuyanum and other Kavuni varieties being cultivating in an area of 20 ha in T. Palur block. Cauvery delta region with soil type is clay and the p^H is 7.5-8.0 and EC is < 0.5 dsm^{-1}. The mean temperature during season 35^0 C. Irrigation source bore well and canal irrigation.
Source of fund	KVK Main
No of locations	3
No. of demonstrations	5
No of SC/ST Farmers and women farmers	Nil
Area proposed (ha)	2.0
Actual area (ha)	2.0
Justification for shortfall	Nil
Feedback from farmers	• Improved Kavuni Co57 Paddy required very minimal usage of organic manures and onsite inputs. • Noticed no pest and disease in Co57 than traditional Kavuni. • No lodging occurred in Co57 and full lodging noticed in the traditional Kavuni which may save 8-10% harvest loss. • Non broken rice with 70% milling recovery thus creates good demand among consumers. • There is no difference between traditional kavuni and improved kavuni towards cooking quality and aroma.
Feedback of the Scientist	• Improved Kavuni Co57 had less production cost and 35% more yield than traditional Kavuni, good market opportunities may help more farmers will to cultivate. • Improved Kavuni Co57 variety recorded yield of 36.50 q/ha than check variety Traditional Kavuni (27.30q/ha) and 34% yield increased.

	• Net income of Rs.91,250/ha and BCR is 1: 2.77 was recorded in Improved Kavuni variety CO 57.
Extension activities on the FLD	Field day - 1 Farmers training – 2 Nos.

FLD 3. Demonstration of Blackgram CO 7 variety as intercrop in Casuarina plantation

Crop	Blackgram
Thematic area	Cropping System
Technology demonstrated	Sowing of Blackgram CO 7 as intercrop in newly planted Casuarina
Season and year	Rabi, 2024
Farming situation	Casuarina is being cultivated as sole crop with constraints of weed and nutrient management in district. The soil type is clay sandy loam with p^H 7.5 and EC < 0.5 dsm^{-1} and borewell irrigation.
Source of fund	SCSP
No of locations	3
No. of demonstrations	5
No of SC/ST Farmers and women farmers	5
Area proposed (ha)	2.0
Actual area (ha)	2.0
Justification for shortfall	Nil
Feedback from farmers	• Co7 Blackgram performs well as intercrop in Casuarina plantation (1st year) and shows synchronized maturity, MYMV resistance • Yield of demo plot was less than check and also improvement of soil fertility and Casuarina growth is high in demo plot. • The cost towards fertilizers was saved upto 20% in demo plot.
Feedback of the Scientist	• Blackgram Co7 has very less incidence of MYMV and gave better yield as intercrop • Soil fertility was increased from 72.4 : 21.2 : 94.9 NPK kg/ha to 91.3 : 23.4 : 95.3 kg/ha.
Extension activities on the FLD	Field day - 1 Farmers training - 2

FLD 4. Demonstration of Greengram variety WGG42 with ICM

Crop	Green gram
Thematic area	Varietal Demonstration
Technology demonstrated	Greengram Variety WGG42
Season and year	Rabi, 2024
Farming situation	Temperature: 32 to 36 0C, Soil type : Red sandy loam, p^H : 7.5, EC : < 0.5 ds/m. & Average Annual Rainfall : 954 mm; Rainfed
Source of fund	KVK Main
No of locations	3
No. of demonstrations	5
No of SC/ST Farmers and women farmers	Nil
Area proposed (ha)	2.0
Actual area (ha)	2.0
Justification for shortfall if any	Nil
Feedback from farmers	• WGG42 Green gram variety has less incidence of MYMV (<5%) and required minimal usage of pesticide. • WGG42 is bold seeded with good demand in market. • WGG42 gave better yield with reduced production cost than existing variety VBN 3
Feedback of the Scientist	• WGG42 is highly drought resistance and resistance to MYMV and gives better yield in both rainfed and irrigated condition. • Marketability for WGG42 is good. Demand among both farmers (for seed purpose) and merchants. • WGG42 Green gram variety recorded yield of 7.80 q/ha than check variety VBN 3 (6.70 q/ha) and 16% yield increased. • Net income of Rs.41,900 /ha and BCR is 1:2.48 was recorded in WGG42 variety.
Extension activities on the FLD	Field day - 1 Farmers training - 2

FLD 5. Demonstration of dual purpose Sorghum K 13 in Ariyalur district

Crop	Sorghum
Thematic area	Integrated Crop Management
Technology demonstrated	Sorghum variety K 13 with ICM practices
Season and year	Rabi, 2024
Farming situation	Sorghum is being cultivated for fodder purpose only in the study area under rainfed condition. The soil type is clay loam, p^H 7.5 and EC < 0.5 ds/m. Temperature: 32^0 to 36^0 C, & Average Annual Rainfall : 954mm
Source of fund	SCSP

No of locations	3
No. of demonstrations	5
No of SC/ST Farmers and women farmers	SC farmers 5 nos. includes 2 women farmers
Area proposed (ha)	2.0
Actual area (ha)	2.0
Justification for shortfall	Nil
Feedback from farmers	• The growth and establishment of Sorghum K-13 variety was very good and its drought withstanding capacity is very well evidenced compared to local variety. • Medium tall stature and good drought tolerant reflects better yield and easy to harvest in K13 than local variety. • Observed very less (<5%) shoot fly infestation and downy mildew incidence (<6%) in K13 Sorghum.
Feedback of the Scientist	• The dual purpose Sorghum K13 gave better grain yield and high quality of dry fodder which is highly recommended for rainfed dry areas for getting better profit and fodder for fodder shortage time • Sorghum K13 variety recorded yield of 20.50 q/ha than check Local sorghum variety (17.20 q/ha) and 19% yield increased. • Net income of Rs.41,050 /ha and BCR is 1:2.40 was recorded in Sorghum K 13 variety.
Extension activities on the FLD	Field day - 1 Farmers training – 2

FLD 6. Demonstration of composting of Sugarcane trash by using PUSA decomposer tablet

Crop	Sugarcane
Thematic area	Resource Conservation
Technology demonstrated	Composting of sugarcane trash by using PUSA decomposer
Season and year	Rabi, 2024
Farming situation	• The soil type is clay loam, p^H 7.5 and EC < 0.5 ds/m. Temperature : 32^0 to 36^0 C, & Average Annual Rainfall : 954mm. • Farmers practicing burning of sugarcane trashes and other agriculture waste '*in-situ'* that affects soil micro flora • Poor recycling of organic resources • Reduction in germination and yield loss to the tune of 10 - 15% in the ratoon crop due to burning of trashes • Air pollution and leads to global warming
Source of fund	KVK, Main
No of locations	3
No. of demonstrations	5

No of SC/ST Farmers and women farmers	Nil
Area proposed (ha)	2.0
Actual area (ha)	2.0
Justification for shortfall	Nil
Feedback from farmers	• PUSA decomposer tablet effectively decompose the Sugarcane trashes within 60 days of application. • Water holding capacity and fertility of the soil is improved and results required 20% reduced 'N' fertilizer application and 15% of irrigation supply. • Earthworm activity in soil is more than expected.
Feedback of the Scientist	• Difficult to handle the methodologies of buffer solution by farmers and it may be simplified. • The decomposition ratio is double the time than existing decomposing practice. • PUSA decomposer technology contributed in yield of 861 q/ha than check (754 q/ha) and 14% yield increased. • Net income of Rs.1,31,240 /ha and BCR is 1:2.11 was recorded in PUSA demo field
Extension activities on the FLD	Field day 1 Farmers training - 2

FLD 7. Demonstration of Sunnhemp ADT 1

Crop	Sunhemp
Thematic area	Varietal Demonstration
Technology demonstrated	Sunhemp ADT 1
Season and year	Rabi, 2024
Farming situation	Temperature : 380 to 240 C, Soil type : Red sandy loam, p^H range : 6.5-8 & Average Annual Rainfall : 954mm
Source of fund	KVK, Main
No of locations	3
No. of demonstrations	5
No of SC/ST Farmers and women farmers	Nil
Area proposed (ha)	2.0
Actual area (ha)	2.0
Justification for shortfall	Nil
Feedback from farmers	• Appearance and quality of seed is good in ADT 1 Sunhemp variety than local. • Good net return from 1 ha of land than cultivation of local Sunhemp. • Less capsule borer infestation noticed (<6%) in ADT-1 than local. • Weed population will be reduced for next crop.

Feedback of the Scientist	• Marketability is good on this new variety of Sunhemp ADT-1 • Huge bio-mass is observed (Avg = 5.6 t/ha) 45 days • Recommend to seed production and spread among farmers for enrichment of soil fertility • Sunhemp ADT 1 variety recorded yield of 8.30 q/ha than check Local variety (6.70 q/ha) and 24% yield increased. • Net income of Rs.35,600 /ha and BCR is 1: 2.58 was recorded in Sunhemp ADT 1 variety.
Extension activities on the FLD	Field days – 1 Farmers training – 2 Nos.

FLD 8. Demonstration on Integrated Pest and Diseases Management in Paddy

Crop	Paddy
Thematic area	IPDM
Technology demonstrated	• Seed treatment with *Bacillus subtilis* @ 10 g/kg, Soil application @ 1kg/acre • Seedling root dip with *Bacillus subtilis* @ 1kg/acre • Release of *Trichogramma japonicum* @ 2 cc & *Trichogramma chilonis* @ 2 cc at weekly interval • Installation of solar light trap @ 1/acre • Stem borer pheromone trap-Nano SciLure @ 10/acre • Application of Neem oil @ 3% and Camphor oil 400 ml/acre • Need based foliar application of Cartop Hydrochloride 50% SP@ 400 g/ac • Azoxystrobin 25 SC @ 200 ml /ac at tillering stage
Season and year	Samba, 2024
Farming situation	Cauvery delta region of Thirumanur block. Temperature: 32^0 to 38^0 C, Soil type: Clay loam, p^H : 7.5, EC : < 0.5 ds/m. & Average Annual Rainfall : 954 mm. Irrigation by Bore well.
Source of fund	SCSP
No of locations	3
No. of demonstrations	5
No of SC/ST Farmers and women farmers	5
Area proposed (ha)	2.0
Actual area (ha)	2.0
Justification for shortfall if any	Nil
Feedback from farmers	• Seed treatment with *Bacillus subtilis* resulted in seedlings with good vigour. • Egg card placement resulted in reduction of stem borer and leaf folder • Cost of cultivation reduced and yield increased

Feedback of the Scientist	• Neem oil spray gave pest repellent action against major pests of Paddy • Action of egg parasitoids *Trichogramma chilonis* and *Trichogramma japonicum* • Well evidenced in controlling stem borer and leaf folder • Demonstration of IPDM recorded yield of 54.20 q/ha than check (46.30 q/ha) and 17% yield increased. • Net income of Rs.70,320 /ha and BCR is 1: 2.20 was recorded after following IPDM practices.
Extension activities on the FLD	Field day 1 Farmers training - 2

FLD 9. Demonstration of IPM technologies in Chilli leaf curl virus management

Crop	Chilli
Thematic area	Integrated Pest Management
Technology demonstrated	Chilli leaf curl virus management with IPM technologies. • Inter crop with Agathi (Sesbania) • Seed treatment with Imidaclopride 70% WS @12g/kg. • Foliar spraying of fipronil 5% SC @1.5ml/lit.
Season and year	Rabi, 2024
Farming situation	The Cauvery delta region of T.Palur block. The soil is clay in nature with p^H of 7.5 - 8.0 and EC is < 0.5 dsm^{-1} . The mean temperature during the season is 26^0C to 36^oC. Irrigation by bore well.
Source of fund	SCSP
No of locations	3
No. of demonstrations	5
No of SC/ST Farmers and women farmers	5
Area proposed (ha)	2.0
Actual area (ha)	2.0
Justification for shortfall if any	Nil
Feedback from farmers	• Agathi intercrop is good in minimizing sucking pests and thereby reduced leaf curl virus diseases. • Following field sanitation gave good result in reducing pest problem and thereby less need of pesticide sprays
Feedback of the Scientist	• Imidachloprid seed treatment proved to be effective in control of pests. • Following IPM practices from nursery to main field resulted in good management of pests in Chillies. • Demonstration of IPM recorded yield of 20.50 q/ha than check (18.00 q/ha) and 14% yield increased. • Net income of Rs.183400 /ha and BCR is 1: 2.20 was recorded after following IPDM practices.
Extension activities on the FLD	Field day 1 Farmers training 2

FLD 10.Demonstration of Integrated Nematode management in Tuberose

Crop	Tuberose
Thematic area	Nematode Management
Technology demonstrated	Integrated Nematode management with Soil application of *Bacillus thuringiensis* (1 lit.) + *Pseudomonas fluorescens* (1 kg) + *Trichoderma harzianum* (1 kg) + *Paesilomyces lilacinus* (1 kg) mixed with 50 kg of neem cake applied as a basal
Season and year	Kharif, 2024
Farming situation	The soil is clay in nature with p^H of 7.5 & EC is < 0.3 dsm^{-1}. The mean temperature during the season is 26^0C to 36^oC. Borewell irrigation
Source of fund	KVK Main
No of locations	3
No. of demonstrations	5
No of SC/ST Farmers and women farmers	Nil
Area proposed (ha)	2.0
Actual area (ha)	2.0
Justification for shortfall if any	Nil
Feedback from farmers	• Earlier we did not know about the bio products in controlling Nematode and hence we faced yield reduction. • By soil application of *Pseudomonas fluorescens, Trichoderma harzianum, Paecilomyces lilacinus* along with neem cake gave good growth of plants and increased yield. The flower quality also good.
Feedback of the Scientist	• More number of spikelets observed by effective management of RKN through biological measures • Flower quality increased and thereby good market price. • Demonstration of Integrated nematode management recorded yield of 12.80 q/ha than check (10.60 q/ha) and 21% yield increased. • Net income of Rs.429520 /ha and BCR is 1: 3.30 was recorded after following nematode management practices.
Extension activities on the FLD	Field day 1 Farmers training 2

FLD 11. Demonstration on Major pest management in Jasmine

Crop	Jasmine
Thematic area	Pest Management
Technology demonstrated	• Soil application of fipronil – 0.3% GR @3g / plant after pruning • Apply *Bacillus thuringiensis Sp. Kurstaki* @2ml.lit as foliar spray on flowering stage. • Apply Azadiractin 0.1% @2ml/lit. at 15 days interval during flowering stage • Spraying of chlorantraniliprole 18.5% SC @0.5 ml/lit. at budding stage • Spraying of spinosad 45 % @0.5 ml/lit. or Thiacloprid 240 SC @1ml/lit. during flowering stage
Season and year	Kharif, 2024
Farming situation	The soil is clay sandy in nature with p^H of 6.5 to 7.5 and EC is < 0.3 dsm^{-1}. The mean temperature during the season is 26^0C to 36^{o}C. Borewell irrigation.
Source of fund	KVK Main
No of locations	3
No. of demonstrations	5
No of SC/ST Farmers and women farmers	Nil
Area proposed (ha)	2.0
Actual area (ha)	2.0
Justification for shortfall	Nil
Feedback from farmers	• Neem oil and Bt spray gave good control of bud worm. • Harvested good quality of more Jasmine flowers only this time. Earlier there was heavy problem of this pest and more damaged flowers.
Feedback of the Scientist	• Eggs and pupal stages of budworm are well controlled by soil racking with fipronil G 3g/plant. • Bt and neem oil gave good control at larval stage. • The above practices warranted only 3 sprays of chlorantraniliprole in eight months. But in check it was 11 sprays. • Demonstration of IPM recorded yield of 5.60 q/ha than check (4.90 q/ha) and 14% yield increased. • Net income of Rs.443000 /ha and BCR is 1: 2.89 was recorded after following IPM practices.
Extension activities on the FLD	• Field day 1 • Farmers training 2

FLD 12. Demonstration of Cluster bean variety MDU 2 for higher productivity

Crop	Cluster bean
Thematic area	Varietal Demonstration
Technology demonstrated	Demonstration of high yielding Cluster bean variety MDU 2 under irrigated conditions, seed treatment with *Trichoderma viridi* @ 4g/kg of seed and soil test based fertilizer application.
Season and year	Rabi, 2024
Farming situation	Borewell, irrigated upland condition, clay loam soil type Local varieties are susceptible to root rot and leaf spot diseases; low yield (17.30 q/ha).
Source of fund	KVK Main
No of locations	3
No. of demonstrations	5
No of SC/ST Farmers and women farmers	Nil
Area proposed (ha)	2.0
Actual area (ha)	2.0
Justification for shortfall if any	Nil
Feedback from farmers	• Cluster bean variety MDU 2 gave higher yield (96.71q/ha) than the local variety (80.25q/ha).
Feedback of the Scientist	• Cluster bean variety MDU 2 is recommended for Ariyalur district condition. • Market preference was good due to its dark green colour. • Observed 21% yield increase. • Net income of Rs.96315 /ha and BCR is 1:2.98 was recorded in Cluster bean MDU 2 variety.
Extension activities on the FLD	Field day 1 Farmers training 2 Nos.

FLD 13. Demonstration of *Muccuna* as cover crop for weed management in Cashewnut gardens.

Crop	Cashewnut
Thematic area	Weed Management
Technology demonstrated	Demonstration of *Muccuna* as cover crop for weed management and increasing the soil fertility in Cashewnut garden and soil test based fertilizer application.
Season and year	Kharif, 2024
Farming situation	Rainfed upland condition, Red sandy loam soil type
Source of fund	KVK Main
No of locations	2
No. of demonstrations	5
No of SC/ST Farmers and women farmers	1 woman farmers
Area proposed (ha)	2.0

Actual area (ha)	2.0
Justification for shortfall	Nil
Feedback from farmers	• Good weed control was observed in Cashewnut crop where *Muccuna* crop was grown as cover crop. • Goat and cattle eat well and excess foliage can be used as fodder.
Feedback of the Scientist	• *Muccuna* crops suppressed the weed growth in Cashewnut orchards and increased the soil fertility. So it can be recommended as cover crop in Cashew orchard. • Cashewnut yield recorded as 11.75 q/ha than check (10.47 q/ha) and 12% yield increased. • Net income of Rs.50240 /ha and BCR is 1:2.15 was recorded in Cashew field where *Muccuna* sown as cover crop.
Extension activities on the FLD	• Field day 1 • Farmers training 2 Nos.

FLD 14. Demonstration of Star Jasmine variety CO 1for higher productivity

Crop	Star Jasmine
Thematic area	Varietal Demonstration
Technology demonstrated	Demonstration of high yielding Star Jasmine CO 1 under irrigated conditions, soil test based fertilizer application, spraying of micro nutrient mixture @ 4ml/litre of water.
Season and year	Kharif, 2024
Farming situation	Borewell, irrigated upland condition, Sandy loam soil type - Low yield (27.65 q/ha) from local varieties and are susceptible to Bud worm pest and leaf spot diseases;
Source of fund	KVK Main
No of locations	3
No. of demonstrations	5
No of SC/ST Farmers and women farmers	Nil
Area proposed (ha)	0.50
Actual area (ha)	0.50
Justification for shortfall	Nil
Feedback from farmers	• Year round flowering with bold buds harvested from the Star Jasmine. • Star Jasmine has good market price and thereby increased net income.
Feedback of the Scientist	• The performance of the Star Jasmine was good in Ariyalur condition. • The keeping quality of the flower was above 12 hours. • It was resistant to leaf spot disease

	• Star Jasmine CO1 variety recorded yield of 36.85 q/ha than check local variety (31.27 q/ha) and 18% yield increased. • Net income of Rs.235925 /ha and BCR is 1:2.78 was recorded in Star Jasmine CO1 variety.
Extension activities on the FLD	Field day 1 Farmers training 2 Nos.

FLD 15 : Demonstration of Banana variety CO 2

Crop	Banana
Thematic area	Varietal Demonstration
Technology demonstrated	Banana variety CO 2
Season and year	Rabi, 2023
Farming situation	Cauvery delta, Upland and Red loam soil
Source of fund	KVK Main
No of locations	2
No. of demonstrations	5
No of SC/ST Farmers and women farmers	Nil
Area proposed (ha)	1
Actual area (ha)	1
Justification for shortfall	Nil
Feedback from farmers	Banana CO 2 variety gave higher yield than the local variety. Market preference was good for its sweet taste.
Feedback of the Scientist	• Banana Variety CO2 yield performance is very good in Ariyalur condition. • Leaf spot disease incidence was very less. • So it is recommended for cultivation in Ariyalur district. • Banana CO2 variety recorded yield of 247.50 q/ha than check Local sorghum variety (215.40 q/ha) and 15% yield increased. • Net income of Rs.149245 /ha and BCR is 1:2.52 was recorded in Banana CO2 variety.
Extension activities on the FLD	Field Day 1 Farmers training 2 Nos.

FLD 16. Demonstration of Nanomethicone Spray in Cattle

Crop	Cattle
Thematic area	Production and Management
Technology demonstrated	Spray of Nanomethicone in Cattle
Season and year	Throughout the year
Farming situation	• Extensive and intensive rearing • Ectoparasites infestation led to poor performance of cattle

Source of fund	SCSP
No of locations	5
No. of demonstrations	10
No of SC/ST Farmers and women farmers	10
Area proposed (ha)	20 animals
Actual area (ha)	20 animals
Justification for shortfall	Nil
Feedback from farmers	• This spray was very useful for us but the availability was very less • Other medicines are toxic to animals but this spray was non-toxic • Tick causing anaemic condition to our animal. This helps us to improve animal health and production thus results in increased income.
Feedback of the Scientist	• The availability of nanomethicone spray to be ensured to the farmers through KVK and veterinary hospitals for further adoption. • Milk yield increased from 5.5 lit/cow/day to 6.4 lit/cow/day with 16% yield increase. • Net income of Rs.23640/cow and BCR 1:2.33 was recorded.
Extension activities on the FLD	Farmers training 2 Nos.

FLD 17. Demonstration of NIANP Small ruminants mineral mixture

Crop	Goat
Thematic area	Nutrition Management
Technology demonstrated	Demonstration of NIANP Small ruminants mineral mixture
Season and year	Throughout the year
Farming situation	• Weight loss, High mortality & low immune status in kids • Low milk yield in mother stock
Source of fund	SCSP
No of locations	5
No. of demonstrations	10
No of SC/ST Farmers and women farmers	10
Area proposed (ha)	50 goats
Actual area (ha)	50 goats
Justification for shortfall	Nil
Feedback from farmers	• Weight gain noticed. • Feed and water intake was increased. • It is cost effective technology • It improves the income

Feedback of the Scientist	• Goatmin mineral mixture showed improvement in weight gain and also has immune booster activity. • In pregnant animals it improves the health. • Availability may be ensured through KVK and other veterinary hospitals • Average body weight observed 18.6kg at 6 months in demo where in check it is 15.5kg and 20% yield increase. • Net income of Rs.5,394 / goat and BCR 1:2.38 was recorded.
Extension activities on the FLD	Farmers training 2 Nos.

FLD 18. Demonstration of maize silage as cattle feed

Crop	Cattle
Thematic area	Feed and Fodder Management
Technology demonstrated	Silage making using maize straws will serve as cattle feed when the feed is shortfall particularly during summer season.
Season and year	Rabi, 2024
Farming situation	Maize is cultivated through the year but not used as cattle feed
Source of fund	SCSP
No of locations	3
No. of demonstrations	5
No of SC/ST Farmers and women farmers	5
Area proposed (ha)	5 animals
Actual area (ha)	5 animals
Justification for shortfall	Nil
Feedback from farmers	• It is very useful during fodder shortage period. • It improves the milk yield and animal health. • Economic gain due to increased milk.
Feedback of the Scientist	• Nutritive value of the silage was more so it improved the health and milk yield. • Feed intake increased due to silage characters like particle size and digestibility. • Silage feed improved SNF content of milk. • Milk yield increased to 6.2 lit/cow/day from 5 lit/cow/day with 24% yield increase. • Net income of Rs.22900 / cow and BCR 1:2.33 was recorded.
Extension activities on the FLD	• Farmers training 2 Nos.

FLD 19. Demonstration of TANUVAS STAR Chicken for Small farmers in Ariyalur District

Crop	Poultry
Thematic area	Evaluation of Breeds
Technology demonstrated	Demonstration of TANUVAS STAR Chicken for Small farmers
Season and year	Throughout the year
Farming situation	• Poultry birds are grown in backyard • Some youth take poultry farming as enterprise
Source of fund	SCSP
No of locations	5
No. of demonstrations	5
No of SC/ST Farmers and women farmers	5
Area proposed (ha)	250 birds
Actual area (ha)	250 birds
Justification for shortfall	Nil
Feedback from farmers	• Better marketing weight compare to other breeds. • Mild disease resistance and liveability percentage was high. • Market preference for meat purpose is high.
Feedback of the Scientist	• The Star Chicken variety ideal for both meat and egg purpose for economic support to the farmers. • Suitable for commercial backyard rearing for small farmers. • This new breed TANUVAS STAR Chicken gained average body weight of 1.3 kg than check 1.15 kg observed 13% improvement. • Net income of Rs.250/bird earned and BCR was 1:2.22
Extension activities on the FLD	Farmers training 2 Nos.

FLD 20. Efficacy of organic nutrition Garden in Schools to increase the food and nutrition security of the children

Crop	Vegetables
Thematic area	Health Management
Technology demonstrated	Demonstration on Organic nutrition garden in schools
Season and year	Throughout the year
Farming situation	Most of the schools have area to raise vegetable garden but the cultivation is not practiced
Source of fund	KVK Main
No of locations	5
No. of demonstrations	5
No of SC/ST Farmers and women farmers	Nil

Area proposed (ha)	0.04
Actual area (ha)	0.04
Justification for shortfall	Nil
Feedback from students	• We have gained knowledge on organic vegetable cultivation. • We have developed interest on nutri garden and it became our hobby in our house. • Vegetables are fresh, tasty and pesticide free. • Vegetable consumption rate was increased.
Feedback of the Scientist	• Students participation was very good and they shown keen interest. • Nutri garden can be demonstrated in all the schools for developing interest among students on organic farming.
Extension activities on the FLD	Students and teachers training 5 Nos.

Extension Studies

Extension Study 1 : Farmers' perception and extent of adoption of IPM Technologies in Groundnut cultivation at Ariyalur district, Tamil Nadu

Introduction

Groundnut (*Arachis hypogaea*) botanically belongs to family fabaceae. It is known as the 'king of oilseed' crops. Groundnut is also called as the wonder nut and poor man's cashew. It is one of the most important oilseed crop in the world containing 48-50% of oil and 26-28% of protein and is a rich source of dietary fiber, minerals and vitamins.

In India, groundnut is grown in an area of 6.6 million hectares with a production of 4.7 million tones of pods per annum. The average productivity of groundnut in India is about 1,400 kg ha^{-1} (Anon., 2016a) against the world's average yield of 1,600 kg ha^{-1} (Anon., 2015). Of the total gross cropped area (GCA) in India, three per cent is under groundnut cultivation of which 19 per cent is irrigated. In India, it is cultivated in the States of Gujarat, Andhra Pradesh, Tamil Nadu, Karnataka, Maharashtra, Madhya Pradesh, Uttar Pradesh, Rajasthan, Punjab and Orissa. Tamil Nadu recorded the highest productivity of 2553 kg/ha followed by Gujarat with the productivity of about 2262 kg/ha. The kernel contains 47 to 49% oil and 20% protein which are consumed as roasted or salted. Vegetable ghee is prepared from Groundnut oil. It is a rich source of Thiamin, Riboflavin, Nicotinic acid, Vitamin E, and B Vitamins except B12.

Groundnut production shares a major income source for the farmers in Ariyalur district of Tamil Nadu in addition to the Paddy crop. Though the crop is preferably grown after Paddy, the production and productivity are less resulting in lower yield.

The District's weather is wet and dry with an average temperature of 29^0C. Most of the rain is received during the northeast monsoon from October to November. The average rainfall is 950mm. The total cultivable area covers nearly 1,93,338 hectares of which Groundnut occupies 13,320 ha (District handbook 2021-22). The crop is mainly grown as sole and also as intercrop with Pulses. Despite the release of various Agricultural technologies, the farmers are still facing the problem of quality seed supply and the adoption of Crop management practices and Integrated Pest Management creating a wider gap when compared with the potential yield with actual yield due to non-adoption or partial adoption of recommended technologies.

Importance of the study

In Tamil Nadu, Ariyalur is one of the major groundnut-growing States in the country. According to the Ministry of Agriculture and Farmers Welfare (2021-22), groundnut production in Tamil Nadu is 10.47 lakh tonnes (lt) with an area of 3.72 lakh hectares.

Ariyalur is one of the districts where groundnut is being grown in rabi season after the harvest of maize in kharif. As the district area falls under North Eastern Zone with assured residual moisture during the cropping season of Groundnut, normal area under groundnut is 13,320 hectares with a production of 472.07q/ha and productivity 37.05q/ha. Productivity of groundnut in Ariyalur district is 14.82 qt/acre which is more compared to state and national average. Since there is no study has been conducted for assessing the adoption of groundnut production technologies and its Integrated Pest Management by the farmers in this district, this study has significance for further studies. Considering the above aspects of groundnut cultivation among farmers, the study was conceived to understand the farmer's views about

groundnut production practices which will go a long way in appropriate policy interventions to increase the productivity and acreage of the crop.

Objectives

1. To study the profile characters of groundnut growers
2. To know the farmers' perception about groundnut production technologies
3. To assess extent of adoption of IPM in groundnut production technologies by the growers

Methodology

The present study was conducted in Ariyalur district of TamilNadu and two taluks having highest area under groundnut cultivation namely Udayarpalayam and Andimadam were selected for the study. Six villages from each taluks were selected based on the highest area under groundnut. Ten respondents were selected from each village those who were cultivating groundnut for more than 10 years. Thus, the sample size of the study comprises of 120 respondents and data was collected from the respondents through personal interview method by using structured interview schedule (Kerlinger, 1976).

The expost-facto research design was used for the present study. Farmer perception refers to a farmer's understanding, beliefs, and interpretations about various aspects of farming, Perception scale was developed and standardized for measuring the farmer's perception of groundnut production technology. The scale was developed using the methodology suggested by Likert (1932) Edward (1957) and Patil et al. (1996) . The final scale with 24 statements representing five components was administered to the respondents along a five-point continuum representing strongly disagree, disagree, neutral, agree, strongly agree, and with weight age of 1, 2, 3, 4, and 5, respectively. The perception score of an individual respondent was obtained by summing up the responses over all the 24 statements. The respondents were grouped into three categories low, medium and high perception on the basis of their perception scores by using mean and standard deviation.

Result and Discussion

The results obtained from the analysis of the data collected have been discussed in detail as follows:

1. Profile Characters of the growers

It is evident from Table 1 that nearly 46.67 percent of the respondents selected were in the middle age group followed by old age (30.00%), 43.33 percent of the respondents were having higher secondary school level of education followed by primary school level (36.66%) of education. 40.00 percent of the respondents were having small farm size followed by marginal farm size (33.33%). 43.33 percent of the respondents were having medium farming experience followed by high (30.00%) farming experience. 56.67 percent of the respondents had received no training followed by undergone trainings (43.33%). 40.00 percent of the respondents were having medium level of extension contact followed by high level (36.67%) of extension contact. 43.33 percent of the respondents were having medium socio participation followed by low (30.00%) socio political participation. 40.00 percent of the respondents were having medium risk-taking ability followed by low (33.33%) risk taking ability.

Table 1: Profile characteristics of the farmers

n=120

S.No	Variables	Category	Frequency	Percentage
1	Age	Young (22- 37)	28	23.33
		Middle(38 – 53)	56	46.67
		Old(54-69)	36	30.00
2	Education	Illiterate	4	3.33
		Primary School	44	36.66
		High School	8	6.67
		Hr.Sec.School	52	43.33
		Diploma	2	1.67
		Degree	8	6.67
		Post graduation	2	1.67
3	Farm Size	Margianal (0-2.5)	40	33.33
		Small (2.5 -5)	48	40.00
		Large(5 & above)	32	26.67
4	Farming Experience	Low(0-7)	32	26.67
		Medium(8-14)	52	43.33
		High(15-21)	36	30.00
5	Training undergone	No training	68	56.67
		Undergone training	52	43.33
6	Annual Income	Low (70,000 – 1,50,000)	36	30.00
		Medium (1,50,000 – 2,50,000)	52	43.33
		High(2,50,000 –3,00,000)	32	26.67
7	Extension Contact	Low(11-17)	28	23.33
		Medium(18-25)	48	40.00
		High(26-33)	44	36.67
8	Social Participation	Low(10-16))	36	30.00
		Medium(16-22)	52	43.33
		High(22-28)	32	26.67
9	Risk taking ability	Low(6-10))	40	33.33
		Medium(10-14)	48	40.00
		High(14-18)	32	26.67

2. **Overall level of perception of groundnut growing farmers**

The results pertaining to the overall level of perception in Table 2 indicated that majority of the respondents (63.33 %) belonged to high level of perception category, followed by 23.33 per cent belonged to medium level of perception category and only 13.33 per cent of the farmers belonged to low level of perception category. This reveals that farmers had high sensation of production technology aspects of groundnut.

Table 2: Overall level of perception of groundnut growing farmers

Particulars	Criteria	Respondents (#)	
		Frequency	Per cent
Low	< (Mean - SD)	16	13.33
Medium	(Mean ± SD)	28	23.33
High	> (Mean + SD)	76	63.33
		Mean = 3.96 S. D=145.27	

2. **Perception level of groundnut growing farmers**

Farmers' perception is highest as the following practices provide economic yield and benefit to the farmers that is why they have been perceived as best practices for groundnut production. Table 3 revealed the perception level of farmers as follows.

2.1 Pre sowing phase

In the pre-sowing phase majority (72.50 %) of the farmers had agreed to the pre sowing practices. Followed by 10 per cent of the farmers were having strongly agreed. Followed by 9.16 and 5 per cent of the farmers had neutral perception and disagreed to the pre sowing practices. The reason for this might be due to the fact that Ariyalur, all the farmers are well aware of the groundnut production technologies with existing practices. They were faced bitter experiences in past by non-adoption of ICM technologies in groundnut like seed treatment with bio control agents, use of soil test based fertilizer application, use of micro nutrient etc., They understand the root causes of increased production cost.

2.2 Sowing phase

In sowing phase, majority (52.50 %) of the farmers had agreed to the sowing practices. Whereas 30.83 per cent of the farmers had strongly agreed, followed by 10.83 per cent of the farmers had neutral perception. Followed by 4.16 and 1.60 per cent of the farmers had disagreed and strongly disagreed respectively to the sowing practices. The reason for this result might be due to, the farmers are having good extension participation due to which the farmers gets awareness from the results demonstrations like use of viable and disease free seeds, selection of variety, sowing depth at 2.5 to 4.5 cm, spacing at 45x 20 cm, plant density (optimum plant population of 33 plants/m2), seed rate at 55 kg/acre and use of improved seed drills, seed treatment with bio fungicide, use of basal application of Gypsum and STL based fertilizer application and the all these promote better germination, good yield, reduced cost of production and get higher income. The sowing during the second fortnight of December to second fortnight of January is best for sowing rabi groundnut.

2.3 After/post sowing phase

In the post sowing phase, majority (60 %) of the farmers had agreed to the post sowing practices. Whereas 23.33 per cent of the farmers had strongly agreed, followed by 8.33 per cent of the farmers had neutral to the post sowing practices. Followed by 5.0 and 3.33 per cent of the farmers had strongly disagreed and disagreed respectively to the post sowing practices. The reason for this type of result might be that most of the farmers were having a very good perception about the practices like the critical period of crop is top dressing of fertilizer application, foliar spray of micro nutrient boosters and weed competition is between 15 and 45 days after sowing. Excess use of fertilizer as top dressing, poor weeding, non-use of micro nutrients is one of the main factors for loss in yields. Whereas pre-emergence application of Pendimethalin / Metlachlor, earthing up with gypsum can be done to facilitate maximum penetration of pegs. Proper Pest and disease management practices are not taken up by the farmers due to lack of awareness. The information about all the above practices have been sensitized and made available to the farmers by the efforts made by the extension officials working in KVK and agriculture department through method and result demonstrations.

2.4 Harvesting phase

In the harvesting phase, majority (56.67 %) of the farmers had agreed to the harvesting practices. Whereas, 28.33 per cent of the farmers had strongly agreed, followed by 12.50 per cent of the farmers had neutral perception. Followed by 1.67 and 0.8 per cent of the farmers had disagreed and strongly disagreed to the post harvesting practices. The reason for this might be that the farmers in Ariyalur district use bunch type of groundnut variety for sowing, majority of them harvest by hand pulling and mechanical threshed when their crops were going to be harvested by seeing symptoms like yellowing of leaves, shedding of older leaves, development of proper colour of testa, a dark tint inside shell and by maturity time also. Ensuring the farmers on pest and disease-free pod production and plan for timely harvest.

2.5 Post harvesting phase

In post harvesting phase, majority (65.83 %) of the farmers had agreed to the post harvesting practices. Whereas, 17.50 per cent of the farmers had strongly agreed, followed by 10.0 per cent of them had neutral perception. Followed by 5.0 and 1.67 per cent of the farmers had disagreed and strongly disagreed with the post harvesting practices. The reason for this might be that majority of the farmers are having good perception about the post harvesting practices as they are aware of the aflatoxin contamination while storage due to improper drying of pods and due to less information provided on groundnut in regulated markets, majority of the farmers market their produce immediately after drying of the produce. As some progressive farmers use to plan seed supply activity and also sell for oil extraction units to get better prices.

Table 3: Perception level of Groundnut growers

(n = 120)

Sl.No	Practices	SDA (1)	DA(2)	N(3)	A(4)	SA(5)	Total	Mean
		F (%)	F (%)	F (%)	F (%)	F (%)		
1	Pre sowing phase	4 (3.33)	6(5.00)	11(9.16)	87(72.5)	12(10.0)	120	3.80
2	Sowing phase	2(1.60)	5(4.16)	13(10.83)	63(52.5)	37(30.83)	120	4.06
3	After/post sowing phase	6(5.0)	4(3.33)	10(8.33)	72(60.00)	28(23.33)	120	3.93
4	Harvesting phase	1(0.8)	2(1.67)	15(12.50)	68(56.67)	34(28.33)	120	4.10
5	Post harvesting phase	2(1.67)	6(5.0)	12(10.0)	79(65.83)	21(17.50)	120	3.92

The valves in the table includes total number of farmers expressed their opinion under different questions for each phase

F – Frequency SA- Strongly agree A- Agree N- Neutral DA- Disagree SDA- Strongly disagree

3. Overall level of extent of adoption of IPM practices in groundnut growing farmers

The perusal of data in Table 4 indicated that majority of the respondents (64.16%) came under medium adoption group followed by 20.00 per cent of the respondents belonged to high adoption group and least percentage of respondents (15.84%) belonged to low adoption group of groundnuts growing farmers. The reason is acceptance of farmers by adoption of IPM practices is once by doing in their field level.

Table 4: Extent of adoption of IPM in Groundnut disseminated by KVK, Ariyalur

n=120

S. No	Technologies disseminated by KVK, Ariyalur	Respondents					
		Low		Medium		High	
		F	%	F	%	F	%
1	IPM in Groundnut	19	15.84	77	64.16	24	20.00

Distribution of respondents according to their extent of adoption of technologies disseminated by KVK, Ariyalur

4. Practice wise extent of adoption of groundnut production technology

A cursory look at the results in Table 5 showed practice wise extend of adoption of IPM practices in groundnut production technology as follows:

Table 5: Rank analysis of adoption of IPM technology in Groundnut

n=120

S. No	Particulars	Extent of adoption						M.S	Rank
		FA		PA		NA			
		F	%	F	%	F	%		
I	**Cultural practices**								
1	Deep ploughing in summer to expose soil	109	90.83	11	9.16	0	0.00	2.90	I
2	Soil application of neem cake @200kg/ha	76	63.33	9	7.5	35	29.16	2.34	II
3	Crop rotation	29	24.16	86	71.6	5	4.16	2.20	III
II	**Mechanical practices**								
4	Installation of light traps 1 No./5 ha.	48	40.00	20	16.66	52	43.33	1.96	III
5	Installation of each pheromone traps @5No./ha. for monitoring and trapping of *S.litura* and *H.armigera*	40	33.33	8	6.67	72	60.00	1.73	IV
6	Collection and destruction of egg masses of leaf eating caterpillar	78	65.00	4	3.33	38	31.67	2.33	II
7	Setting of yellow sticky traps 16 / acre	82	68.33	16	13.33	22	18.33	4.55	I

III	**. Biological control of pest and diseases**								
8	Seed treatment with *T.viride*10g/kg of seed	72	60.00	44	36.66	40	33.33	4.67	I
9	Soil application of *T.viride* @10 kg/ha	80	66.67	29	24.16	11	9.16	4.57	II
10	Bt Formulation	28	23.33	10	8.33	82	68.33	1.55	IV
11	Use of bio-pesticides	36	30.00	10	8.33	74	61.67	1.68	III
IV	**Chemical control**								
12	Two spray of Hexzaconazole 5% EC @1500 ml/500 lit. of water at 15 days interval	18	15.00	6	5.00	96	80.00	1.35	II
13	Need based application of Imidacloprid 17.8@ SL @125ml/ha. for managing sucking pest of Groundnut	16	13.33	8	6.66	96	80.00	1.33	III
14	Spraying of chloripyriphus 20%EC @1500ml/500 lit. of water for managing defoliators	28	23.33	10	8.33	82	68.33	1.55	I

Further, the rank wise analysis of level extend of adoption of respondents on various IPM practices (Table 5) infers that complete adoption of cultural practices such as deep ploughing in summer has been perceived as first rank followed by Soil application of neem cake (II rank), and crop rotation (III rank). The results are quite obvious due to the fact that these cultural practices part and parcel of groundnut cultivation practices and generally known to the groundnut growers are regularly being practiced. The least preferred practices with regards to IPM practices through mechanical control methods were such as Installation of pheromone traps @5No./ha. for monitoring and trapping of *S.litura* and *H.armigera* (IV rank), Installation of light traps 1 No./5 ha.(III Rank), Collection and destruction of egg masses of leaf eating caterpillar (II Rank) and Setting of yellow sticky traps 16 / acre (I rank). The possible reason may be due to the fact that lack of information on availability of pheromone trap and skill to use it, destruction of alternate host plants, light traps and its method of installation, including the difficulty in identification of larval stages and pupal stage. With regards to IPM practices through biological control table 5 further reveals that the great the least preferred adopted practices were Bt Formulation (IV rank), use of bio-pesticides (III rank), Soil application of *T.viride* @10 kg/ha(II rank) and Seed treatment with *T.viride*10g/kg of seed. (I rank). The probable reason might be due to fact that complexity of these practices and non-availability of the said material. The table further indicated that IPM practices through chemical control evident that the most preferred and adopted practices were spraying of chloripyriphus 20%EC @1500ml/500 lit. of water for managing defoliators and two spray of Hexzaconazole 5% EC @1500 ml/500 lit. of water at 15 days interval with I and II rank respectively. The probable reason for complete level of adoption of these specific chemical control practices by farmers might be that effective management of the pest within economic injury level. The other reasons that the farmers getting pesticides from the dealer on credit basis and repay after the sale of the produce. The above span of time and farmers express quick responses for their action. This is in consonance with the findings of Singh *et al.* (2012) and Bagenia and Lakhera (2017) in Groundnut.

Table 6. Correlation analysis of profile characters of the groundnut farmers with their extent of adoption IPM technologies.

S. No.	Variables	Pearson Correlation
1	Age	0.279 **
2	Educational Status	0.373**
3	Farm size	0.197**
4	Farming Experience	0.222**
5	Annual income	0.198**
6	Social Participation	0.264**
7	Extension linkage	0.179*
8	Risk taking ability	0.352**
9	Training Undergone	0.083 ^{NS}

From the Table 6 , it could be observed that out of nine profile character studied, the variables such as age, educational status, farm size, Farming experience, annual income , social participation and training under gone were found to have positive and significant association with extent of adoption of IPM practices in groundnut farmers at 1 per cent level of probability. Extension linkage were found to have positive and significant association with extent of adoption at 5 per cent level of probability. It could be inferred that all the above nine characteristics would have influenced the respondents preference of extent of adoption of IPM practices in groundnut.

Majority of the cashew nut farmers had extension linkage and attended training programme. This showed that greater the extension contact, greater would be the extent of adoption of IPM practices in groundnut . This might be due to the reason for the farmers to approach extension personnel belongs to department and KVK when they need solution for problems in adopting IPM practices in groundnut

Table 7: Reasons for non-adoption of IPM practices

n=120

S. No.	Category	F	%
1	Installation of light traps 1 No./5 ha.	52	43.33
2	Installation of each pheromone traps @5No./ha. For monitoring and trapping of *S.litura* and *H.armigera*	72	60.00
3	Bt Formulation	82	68.33
4	Use of bio – agent and bio-pesticides	74	61.67
5	Two spray of Hexzaconazole 5% EC @1500 ml/500 lit. of water at 15 days interval	96	80.00
6	Need based application of Imidacloprid 17.8@ SL @125ml/ha. For managing sucking pest of Groundnut	96	80.00
7	Spraying of chloripyriphus 20%EC @1500ml/500 lit. of water for managing defoliators	82	68.33

It was revealed that (Table 7), the possible reason for non- adoption of technology might be due to non-availability of light traps (43.33%) and pheromone traps (60.00%) in time. lack of knowledge regarding Bt formulation (68.33%), unaware of bioagents and bio

pesticides (61.67%) and unaware about chemical spray for control of pest and soil and seed born diseases (80.00%).

Table 8: Suggestions from respondents to improve their extent of adoption of IPM in Groundnut

n=120

S. No	Category	F	%
1.	Provide disease resistant varieties through research stations/KVKs	106	88.33
2.	Conduct as many as group discussions, field days, exhibitions, Kisan mela and exposure trip to groundnut growers to convince the benefit of various IPM modules	116	96.67
3.	Establish groundnut growers club and conduct regular meetings and focused group discussion (FGD) with scientist and progressive farmers.	108	90.00
4.	To conduct more method demonstration on seed treatment with Rhizobium and Trichoderma.	112	93.33
5.	Availability of IPM modules in nearby input shops	118	98.33

Regarding suggestions (Table 8) for respondents to improve their extent of adoption of IPM in Groundnut were availability of IPM modules in nearby input shops (98.33%), conduct as many as group discussions, field days, exhibitions, kisan mela and exposure trip to groundnut growers to convince the benefit of various IPM modules (96.67%) and conduct more method demonstration on seed treatment with Rhizobium and *Trichoderma* in Groundnut (93.33%) respectively.

Conclusion

It could be concluded that most of the respondents had partially adopted the IPM practices in groundnut cultivation. It appears that farmers were not fully aware about IPM practices. All these nine profile characters jointly explain significant amount of variation to the extent of 62.48 percent in adoption of IPM practices in groundnut. Thus, it can be recommended that the respondent's adoption about IPM practices in Groundnut. More specifically how to do aspect of specific technologies on biological control practices to increase the adoption of IPM practices among the respondents. It is important to organize the training, discussion and group meeting, field days, field visit by considering the characteristics having significant relationship with adoption level. This will certainly help to increase the desired level of adoption of IPM practices in groundnut by the farmers of study area.

Salient findings:

- Groundnut is the predominant oilseed crop of Ariyalur District cultivated in 13,320 hectares with a production of 472.07q/ha and productivity 37.05q/ha.
- The study has been contemplated with the objective to study the perception of farmers of Ariyalur District on IPDM technologies in groundnut and its adoption rate.
- There were 120 respondents randomly selected among six blocks of Ariyalur district and collected by standard questionnaire data were analyzed for perception score, frequency, percentage, rank analysis for correlation and regression coefficients to arrive at conclusion.

- The respondent's perception was high for sowing practices viz., seed treatment, optimum seed rate, soil test-based fertilizer application, use of micro nutrient spray, gypsum application and IPM measures as post sowing practices.
- The respondent's education level, trainings undergone and contact with extension agencies found positive and highly significant. Correlatin with adoption of IPM technologies in Groundnut.

Extension Study 2: Impact of SCSP Programme

A new way of employment and Income – Smiling SC Landless women

1. Present situation

Sendurai block of Ariyalur district is rainfed and its red loamy soil favours the cultivation of cashewnut both as rainfed and irrigated crop. About 40,000 acres are under cashewnut with the average productivity of 240 kg nuts / ha. ICAR-KVK, Ariyalur selected one of its village namely Veerakkan to effect various intervention as the model village for DFI from 2017-2022.

The total population of the village is 750 of which 165 (22%) are SC people. They are completely landless and the men from all the families are landless working in various places in construction, porters, drivers etc. The women members in the family engaged in MNREGS for only 40-55 days in a year and agriculture wage workers for 30-40 days. Most of the days they are idle without any income. Their total family income comes to Rs.75,000 to 80,000/annum. Hence their living condition and socio-economic status is very poor.

2. Plan and Support

By considering the poor condition of SC people at Veerakkan villages, FLD on Poultry (Nandhanam 4) has been conducted during 2020-21. 50 chicks were distributed per family to rear and collect eggs for family consumption and hatching. Training on vaccination of poultry birds, feed and disease management were given to 50 SC women member. Five manual

hatcheries (120 eggs capacity) were distributed to the members for chicks production under DST project of our KVK. As the part of Dalmia Bharath Foundation's CSR activity, they were given with azolla bags to produce azolla and use as fed to poultry birds.

As cashew is the predominant crop here, our KVK promoted women entrepreneur Mrs.Uma, already running a cashew processing unit at medium scale (60 MT by procured cashew nuts/year). During 2022-23, our KVK has provided them with 10 cashew shelling machine under the scheme of SCSP. Ten machines were placed at Mrs.Uma's processing unit and 20 SC women members are using that machine on shift basis. Trainings with demonstration of safe shelling of cashewnut have been given by trained persons. They felt that the manual machineries is very easy and drudgery free even working after 6 hours.

The illiterate SC women belongs to all age could shell nuts to earn a regular income. Now they are planned to form a JLG to start their own processing unit.

3. Output

They can shell 2 kg of raw nuts / hour, so that one woman gets Rs.300-350/day as wage. Thus year round employment is being guaranteed to the tune of 7200 mandays/year. Thereby SC women landless labourers learn to shell cashewnut and earn an income Rs.350/day by shelling 15 kg nut. As this is the year round employment opportunity they are getting employment for 300 days in a year. They could get MGNREGA employment days, labour days from agricultural lands and also cashewnut shelling in night hours. By this way they can get a net mandays of 300 days thus earns Rs.70,000/year, earlier it was only rs.43,750/year by 175 days.

4. Outcome and Impact

A landless SC woman was facilitated to access year round income and employment by cashew shelling. By seeing this activity, the remaining 65 SC women are seeking the same help. Our KVK is talking with M/s.Shiva Cashews, Kulamangalam (An exporting large scale cashew industry) which is located 8 km away from that SC villages. The owner of Shiva Cashews has consented to extend a satellite shelling unit at Veerakkan village to support the SC people by giving employment by Cashew shelling.

In future, it is planned to farm JLGs and FPCs consisting of SC population to start their own cashew processing unit at small scale.

Technology Week Celebrations (From 10.02.25 to 15.02.2025)

Types of Activities	No. of Activities	Number of Participants	Related Crop / Livestock technology
Gosthies	5	300	Self-employment opportunities for agriculture and allied activities to SC people
Lectures organized	15	300	Opportunities of agriculture and allied activities
Exhibition	5	300	Exhibits agriculture and allied technologies
Farm Visit	5	300	Exposure and experience sharing of successful farmers
Distribution of Literature (No.)	1	300	Self employment opportunities for agriculture and allied activities to SC people
Total number of farmers visited the technology week	5	300	Farmers visited exhibition and learnt about agricultural technologies

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

Trainings attended in the relevant field of specialization

Name of the staff	Title	Dates	Duration	Organized by
Mr.M.Ashokkumar	Training cum Exposure visit on Natural Farming for the Master Trainers	26.02.24 to 01.03.24	Five days	MANAGE, Hyderabad
Dr.G.Alagukannan	Digital Extension Programme	10.03.24	One day	Tamil Nadu Agricultural University, Coimbatore
Dr.G.Alagukannan Mr.M. Thirumalaivasan	Interface Meeting on Action plan	25.03.24	One day	TamilNadu Agricultural University, Coimbatore
Dr.G.Alagukannan Dr.A.Rajkala Mr.Y.Raja joslin Mr.M.Ashokkumar Mr.M. Thirumalaivasan	Review Meeting with Annual Action Plan Meeting	25.04.24 to 27.04.24	Three days	TamilNadu Agricultural University, Coimbatore
Dr.A.Rajkala Mr.Y.Raja joslin Mr.M.Ashokkumar Mr.M. Thirumalaivasan	Orientation programme of Master Trainers on Natural Farming	25.06.24 to 29.06.24	Five days	MANAGE, Hyderabad
Dr.A.Rajkala	Artificial Intelligence and TOT applications in Agri and allied sector	05.08.24 to 09.08.24	Five days	Extension Education Institute, Hyderabad
Dr.G.Alagukannan Mr.Y.Raja joslin Mr.M.Ashokkumar Mr.M. Thirumalaivasan	State level Workshop on Nutrient Deficiency and crop booster importance	07.08.24	One day	KVK, Sirugamani

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

S.No	Title of the programme / project	Sponsoring / collaborating agency	Objectives	Duration	Amount (Rs)
I. External Project					
1	Agri based S&T Backstopping towards Socio-economic improvement of SC people of Ariyalur district, Tamilnadu	Department of Science and Technology, New Delhi	To field test, demonstrate and disseminate high end technologies like assorted sexed semen, Black Soldier Fly larvae production, genetic upgradation of goat etc. to improve the livelihood status of SC people in the district	3 years	8,00,000 [Total project cost is Rs. 71.3 lakhs]
2	Livelihood and Enterprise Development Programme (LEDP)	NABARD	To build the capacity of ST women on animal husbandry aspects	Two days (Refresher training and follow up)	3,16,000
3	Tribal Development Fund Project	NABARD	Towards the holistic development of 492 ST families by skilling and livelihood intervention	Four years	4,26,00,000 Rs. 1,08,67,040 (Received by 2024)
II. Sponsored Project					
1	Skill Training Programmes	NSDC- ASCI, New Delhi	To capacitate rural youth on vermicompost production	25 days	90,000

Detailed report of each project/programme separately with objectives, nature of collaboration / programme, outcome of the collaboration etc.

1. Title: <u>Agri based S & T backstopping towards socio-economic improvement of SC people of Ariyalur district, Tamil Nadu</u>

Budget : Rs. 71,31,000/-

Duration: 3 years (August,2021 to July,2024)

Objectives:

- To built the capacity of 1000 SC people on various Science and Technology based entrepreneur activity that are novel.
- To develop 300 SC landless and migrant workers into entrepreneur on Science and Technology based activities
- To improve the socio-economic status of SC population by paving the way of employment and income generation.

Expected Deliverable

- Establishment of STI models at host premises with the relevant infrastructure to serve the SC farmers – Biofloc fish rearing unit, bio control Laboratory
- Standardization of Artificial Insemination procedures using sexed semen technology
- Standardization of operating procedures for the production of Black Soldier Fly (BSF) and its product refining strategies
- Optimization of BSF feed supplement with the conventional feed by series of field experiments in backyard poultry
- Development of hatchery that could be affordable to SC landless women i.e. Less than Rs.3000/- cost
- Development of lure or antagonistic agent (either fungal or bacterial or insect) for Tea Mosquito Bug
- Capacity building of 1,000 SC people including women and migrant workers on the proposed five technologies

Remarks: An impactful exclusive programme for inclusive development of SC people at Ariyalur district

2. Title : <u>Livelihood and Enterprise Development Programme (LEDP)</u>

Budget : Rs.9.60 lakhs

Duration : 18 months (November 2023 to April 2025)

Objectives :

- To build the capacity of 120 ST landless women on animal husbandry activities.
- To improve the socio economic status of SC women by Entrepreneurship development programme.
- To link them with formal credit facilities for establishing entrepreneurial activities

Expected Deliverables

- No. of ST women trained
- No. of ST women linked with credit support
- No. of entrepreneur developed
- Rise in income level
- Additional employment generated

3. Title : Integrated Tribal Development of Irula tribes in T.Palur block, Ariyalur district

Budget : Rs.4.26 crores

Duration : Four years (June 2024 to May 2028)

Objectives :

- To promote scientific Goat rearing enterprise among 443 families, milch animal rearing by 40 families and poultry as a community activity in 6 villages.
- To build the capacity of 492 ST families by various science and technology aspects to success in their Income Generation Activities.
- To improve the nutritional status of 492 families by establishment of nutritional gardens by utilizing the available space and waste water
- To impart the learning and higher education standards among the children in nine ST villages

Expected Deliverables

- Livelihood intervention on farm sector includes goat farming, dairy farming, poultry rearing, mushroom production, Azolla cultivation, vermicompost production, organic input production and Honey Bee Keeping.
- Livelihood intervention on non- farm sector for youth like Plumbing, electrician work.
- Processing, value addition and marketing includes establishment of meat shop, petti shop/mobile vending cart and branding and labelling of the products.
- Formation of Participant groups, Village Planning Committee and Producer organization
- Women development through Self employment activities like Tailoring and Aari embroidery, artificial jewellery making and beautician.
- Establishment of beauty parlour
- Organizing awareness campaigns on human health, animal health, financial literacy, career guidance and government schemes.
- Establishment of kitchen garden to ensure nutritional security.
- Interventions based Capacity building program to 492 family members

SUCCESS STORIES

iii. Success stories/Case studies

1. Mr.V,Kamaraj – An IFS Farmer

1. Situation analysis

Mr.V.Kamaraj is 70 years old farmer from Thinakudi village, T.Palur block of Ariyalur district. He owns 7.5 acres land but without proper guidance and awareness, he cultivated Groundnut, Blackgram and drumstick with high dose of chemical inputs. He also reared 3 cattle and 5 goats from which he got meager income. He earned an income of Rs.2,26,500 per annum from his components. Due to his less income his two sons Mr.Ragunath and Mr.Premnath went for private job in Chennai.

2. Plan and Support

His aim is to build a successful integrated farm by providing good quality organic inputs and to convert his farm as a certified organic farm. With this interest he visited CREED KVK in 2017 to get advisories from the officials on Organic farming. He has attended several on campus and off campus trainings provided by KVK. With the technical support and knowledge provided by the KVK he initially started the organic farm by using organic inputs like five leaf extract, fish amino acids, jeevamritham, panchakavya and other insect traps replacing the synthetic herbicides and pesticides. He also uses FYM that he obtains from the cattle in his farm. To maintain the soil health he encouraged to follow proper crop cultivation practices and agronomic practices like crop rotation with subsequent cropping pattern suitable for particular season and intercropping of bendi with flower crops.

He was suggested to do integrate farming by including vegetables, flowers, groundnut, fish pond, increase animal numbers and value addition.

Upgradation of local goat breed with Tellichery breed for weight gain of goat kids, high milk yield also explained and he was supplied with one Tellichery buck from our KVK. Our KVK expert made periodical field visits to his farm for disease diagnosis in animal components and plant protection and other advisories in crops cultivation.

3. Output

He started cultivating groundnut, marigold, brinjal, lady's finger organically. It is also advised to integrate additional components like cattle, goat, fish and value addition. His effort attracts his sons to take part in agriculture who were the sole supporters in developing the certified organic farm. He is producing vermi compost and on-site inputs like five leaf extract, fish amino acids, jeevamritham, panchakavya and buying pest repellent. Fertilizer cost was cut down and his income was increased. Due to the use of organic inputs he could harvest good quality, bold groundnut kernels fetches premium price at regulated market and direct sales. Milk quality is increased due to fat content and hence he is selling milk between Rs.35-38/lit.

As he cultivates vegetables organically his produce has good market demand and getting good returns from it.

Regarding the cattle farm he owns 10 cows and 25 upgraded goat breed of Tellicherry male crossed with local female goat breed. He also feeds the cattle and goat from his own farm outputs like groundnut cake, groundnut haulm and other green fodder raised in 1.5 acres.

Additionally he owns several farm machineries such as tractor, combined harvester, groundnut plucker, and groundnut decorticator. He also gives on rental basis to the local farmers and earns additional income by this process.

Regarding the field crops, in groundnut he gets an average yield around 2.5 to 3 tonnes per ha and vegetable crops brinjal gives an yield 11 tonnes, ladys finger that yields around 2 to 3 tonnes and flower crop marigold yields around 4 to 5 tonnes. From the fish pond he harvests 150 kg fish and sell them to local markets for every alternate day. From the cattle farm he gets around 50 – 60 litres of milk per day and he also uses the cow dung and cow urine as crop cultivation inputs. In value addition aspect he is doing groundnut oil and selling it in the market without any middlemen and fetching a very good demand and price for his product in the market.

Economical benefits

Sl. No.	Component	Numbers/ area		Yield(Nos./litre/kg)		Expenditure		Net income		BCR	
		Before	After	Before	After	Before	After	Before	After	Before	After
1	Groundnut	6 ac	5 ac	6480	7900	1,85,000	1,45,000	1,80,000	210000	1.97	2.45
2	Brinjal	--	0.5 ac	--	11500	--	95,000	--	178000	--	2.87
3	Ladies finger	--	0.5 ac	--	3000	--	32,500	--	52000	--	2.60
4	Marigold	--	0.5 ac	--	4500	--	38,700	--	45000	--	2.16
5	Goat	10	25	6	18 kids	24,000	68,000	26000	106000	2.08	2.56
6	Dairy	2	10	2520 lit	14400 lit	42,000	1,27,000	20500	162500	1.48	2.28
7	Fishery	--	25 cents	--	150 kg	--	8000	--	14500	--	2.81
8	Value Addition (Groundnut Oil)	--	200 lit	--	200	--	24,000	--	32000	--	2.33
9	Rent from machineries	--	35 days	--	1100	--	8000	--	30500	--	4.81

4. Outcome

Mr.Kamaraj is a successful IFS farmer who adopt all novel technologies and acting as a role model to the village farmers. His farm has been visited by nearby farmers and farmers from other villages. In 2017, he started converting his land into organic farming. In 2021, with the technical support and guidance from KVK, Ariyalur his farm was certified as an organic farm.

By renting farm machineries, nearby farmers are getting benefitted. He also supplies his organic inputs at free of cost to his fellow farmers. Farmers who wish to start organic farming and agri college students are visiting his farm to gain knowledge and he is acting as role model for his village.

5. Impact

Seeing his success, 10 farmers in his village trying to convert their farm as organic farm and approaching KVK for organic farming training and technical support. His socio economic status improved and he constructed his own house. His both the sons' resigned their private job to support him and all living together happily in their native itself. Based on his successful farming, fellow farmers taking his advice and thus chemical load in the soil being reduced in his village.

2. A Cow rearing revives the life of teacher

1. Situation analysis

Mr. Rajaji, a 40-year-old cattle farmer from Ponparappi village, Ariyalur district, has 13 years of farming experience. Previously he worked as a teacher in a private school but he left his job to pursue farming as he is from agriculture background. He wished to start to cattle farm but his parents and family convinced him to go monthly salary job to run family smooth.

2. Plan and Support

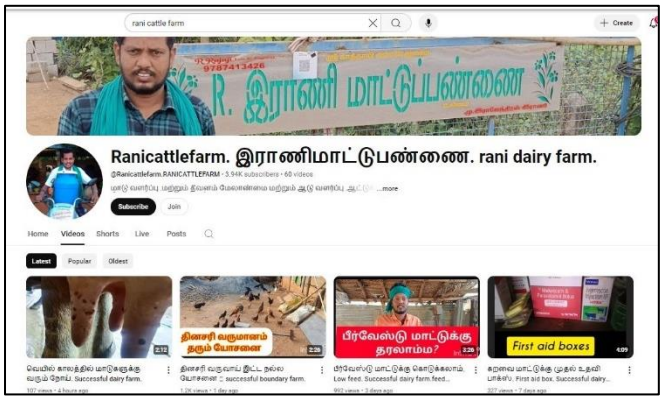
Mr.Rajaji learned about ICAR-KVK, Ariyalur through his villagers in 2017 and visited KVK to know about profitable dairy farming and he became member of Rural youth club. Then he consulted our Kendra regularly to get knowledge updation on dairy farming and requested to guide him to start a dairy farm to secure good income. Mr. Rajaji has actively participated in vermicomposting and azolla production trainings to reduce feed cost. He was created awareness on mineral mixtures, calcium tonic, different green fodders, etc., by our KVK.

With the technical support of KVK, he started a cattle enterprise named Rani Cattle Farm, where he rears 21 cows, 5 goats, and 150 country birds, including Holstein Friesian, Jersey, and Sindh breeds. His farm is well-maintained with proper cowsheds. In 1 acre of land, cultivating Super Napier, CO5, CO6, Agathi, and Mulberry.

KVK provided him ethno veterinary practices to treat various disease and deficiencies in cattle. However, he was providing proper medication and cares to manage the condition like cowpox, fever, calcium deficiency effectively.

3. Output

He follows a structured cattle care routine, including vaccination every six months and timely deworming. He primarily relies on family labour for managing the farm, feeding his cows with CO5, fodder sorghum, Super Napier, and straw, while also supplementing their diet with 50 grams of mineral mixture and 100 grams of calcium tonic per 400 kg cow.



Mr. Rajaji produces 130 litres of milk/day, selling it to Aavin society and local consumers at Rs.37 per litre.

In addition to dairy farming, he also raises country birds, feeding them with sorghum, cumbu, and field waste. In 150 parent stocks 136 hens and 14 cocks are there which yields average of 72 eggs/bird/year and sells eggs at Rs.20 each and birds at Rs.350 per kg. He further generates income by selling well-decomposed farmyard manure (FYM) at Rs.2500 per ton. Through these diversified farming activities, he earns an annual income of approximately Rs. 9.81 lakhs, showcasing a sustainable and profitable farming model.

4. Outcome and Impact

Sl. No.	Product	Yearly production	Sale price (Rs.)	Gross income (Rs.)	Expenditure (Rs.)	Net income (Rs.)
1	Milk	32,500 lit	37	12,02,500	3,92,670	8,09,830
2	Egg	9792 Nos.	20	1,95,840	54,300	1,41,540
3	Farm Yard Manure	30.5 tonnes	1000	30,500	-	30,500
	Total					**9,81,870**

- Employment generated :1000 days / year by engaging 3 persons
- Annual income : Rs.9,81,870

- Milk yield/ cow = 10 lit / day
- Lactation period = 250 days
- Milk yield/cow/year = 250 days x 10 lit = 2,500 lit. x 13 cows = 32,500 lit. (13 lactating cows and 6 pregnant cows and 2 calves)
- Milk Selling price = Rs.37/lit
- Average manure or cow dung/cow/day = 10kg (i.e. Dung/year = 76650 kg/year from 21 cows. He is getting compost of 30.5 ton @ 40% recovery and selling @Rs.1000/ton)
- Expenditure @ Rs.18700/cow/year includes insurance, fodder, feed, labor, electricity, depreciation

5. Impact

Beyond the success, his service mind makes him to start a YouTube channel named Rani Cattle Farm to share his farming experiences and to motivate other farmers to start dairy farming. He is serving as a master trainer for our trainings. His farm has been visited by more than 50 farmers and 100 agricultural students. His success case has been broadcasted in AIR Trichy, AIR, Karaikal and telecasted in Makkal TV. Doordharshan invited him to share his secret of success to motivate other entrepreneurs. His vision is to develop quality dairy products by value addition in future.

<u>3. Pig Farming - Big Farmer</u>

1. Situation analysis

Mr. Srinivasan, a 42-year-old farmer from Ariyalur, has been actively engaged in pig farming for several years. With a vision for sustainable livestock rearing, he started with a small number of pigs. Mr. Srinivasan faced a significant challenge. African Swine Fever (ASF) which restricted him from selling his pigs to Kerala, one of his primary markets. This posed a financial setback, as Kerala had been a major buyer. However, with perseverance and support from CREED KVK Ariyalur, he found alternative ways to sustain and expand his business.

2. Plan and Support

He approached KVK to establish his Piggery unit and make it more profitable. Understanding the challenges faced by Mr. Srinivasan, CREED KVK Ariyalur provided him with crucial financial and technical assistance. The KVK facilitated a loan to expand his piggery unit, allowing him to invest in better housing, breeding infrastructure, and disease management measures. KVK's experts also guided him on Preventive measures for ASF, including vaccination protocols and biosecurity measures. Today, he owns 100 sows and 10 boars, including Landrace, Yorkshire, and Duroc breeds. With this financial support, to improve breeding efficiency, he recently constructed a modern breeding unit at a cost of Rs.20 lakhs, aiming to enhance productivity and maintain high-quality piglets.

Additionally, he follows an innovative feeding strategy by collecting food waste from hotels, reducing feeding costs and promoting waste recycling. His farm is well-equipped with bore wells, ensuring a stable water supply for both pigs and agricultural use. Beyond pig farming, Mr. Srinivasan utilizes pig excreta as an organic fertilizer, applying it to his own fields and supplying it to nearby farmers, contributing to sustainable agricultural practices.

3. Output

From 100 sows and 10 boars he is getting 3 farrowing in two years with average of 8 litters per farrowing. After 80% of conception rate and 10% mortality rate 864 piglets are available for sale from 2nd year.

1. Sale price: Weight – 75 kg @ Rs. 120/kg live weight
2. Manure: 75 ton/year @ Rs. 1500

S.No	Particulars	Unit cost (Rs.)	Unit	Gross income (Rs.)	Gross Expenditure (Rs.)	Net Income (Rs.)
1	Income from sale of piglet	9000	864	77,76,000	28,11,200	49,64,800
2	Income from manure (tons/year)	1500	75	1,12,500		1,12,500
				Total Income		**50,77,300**

Expenditure includes concentrate and roughage feed cost for sows, boars and piglets, electricity, labor, insurance and veterinary aids.

He is earning an net income of Rs.50,77,300 per annum and creating employment of 4 numbers that is 730 labors /year. Also expecting 15 farmers get impacted from his project.

4. Outcome

Mr. Srinivasan's journey serves as an inspiration for aspiring pig farmers. His ability to adapt, innovate, and sustain his business despite challenges has made him a role model in the community. With KVK's continuous support, he has improved his farm's productivity while contributing to waste recycling, organic farming, and local employment. The guidance on ASF management and alternative markets has not only helped him but also benefited other pig farmers facing similar challenges.

Special Features:

- Breeds are Landrace, Yorkshire (female) and Duroc (male).
- Newly constructed breeding unit worth Rs.20 lakhs.
- Waste-based feeding system using hotel food waste.
- Pig manure utilization for agricultural benefits.
- Bore wells for water management.
- Biosecurity measures to prevent disease outbreaks.
- Alternative marketing strategies to mitigate ASF restrictions.

5. Impact

His farm was visited by several budding entrepreneurs and 2 youth farmers came forward to start piggery farm and they are applying in NLM scheme to get credit linkage with subsidy. His success case was also broadcasted in AIR, Karaikal and after that he is guiding other district farmers also for successful pig farming.

4. Mr.Kannadasan – A daily wager into Successful entrepreneur

1. Situation analysis

Ariyalur district of Tamil Nadu is backward in socio economic condition of people living here. Though agriculture occupies of the rural labour force, the land owned by the SC people are meagre or they are landless. The Veerakkan village of Sendurai blocks total population is 750 of which 165 (22%) are SC people. They are completely landless and the men from all the families are landless working in various places in construction, porters, drivers etc.

Mr.Kannadasan, is a 38 year old poultry farmer residing in Veerakkan village. Initially he is a daily labour who is not aware of agricultural enterprise opportunities and earned very less income from daily wage.

2. Plan and Support

By considering the poor condition of SC farmer Mr.Kannadasan and his enthusiasm to start agri enterprise, in 2022 – 23 under SCSP program our KVK distributed him 50 parent birds (Siruvidai breed) to rear and collect eggs for family consumption and hatching. Training on vaccination of poultry birds, feed and disease management were given. Regular follow up and technical supports were provided then and there to fetch good income from poultry rearing. Our experts made periodical field visits to his farm for disease diagnosis. Manual hatchery (120 eggs capacity) was given for chicks' production.

Technologies like low cost feed composition, black soldier fly, azolla, ethno veterinary practices were provided to cut down the feed cost and to prevent the diseases in birds which are challenge in poultry rearing.

3. Output

He reared desi parent birds with utmost care to fetch income by sale of egg and chicks. With 45 hens, he gets 4050 eggs/year @90 eggs/bird/year. The marketing age of birds he follows is one month and the selling price of one month old desi chick is Rs.100/chick.

Production chart

S.No.	Particulars	No.
1.	Total No. of eggs to be produced	4,050
2.	Breakage (1%)	40
3.	Total Eggs removed after candling (unfertile eggs)* – 10%	401
4.	Total no. of chicks hatch out (@ 95 % Hatching	3,429
5.	Chicks' mortality upto one month (2%)	69
6.	No. of salable chicks	3,360

Income/year

S.No.	Particulars	Income (Rs.)
1.	From sale of one month old chicks @Rs.100/chick	3,36,000
2	By sale of unfertile eggs removed after candling @ Rs.15/egg	6,015
Gross Income		**3,42,015**

His monthly expenditures cost Rs.4,500 which includes low cost feed, vaccines, electricity, labors.

4. Outcome and Impact

Now his life style and socio economic status was uplifted. He is also acting as a role model for his community people. In nutshell, he could earn an net income of Rs.2,88,000 from poultry farming. He is earning good income from his native itself and he could able to provide good education to his children. Our KVK is trying to provide credit linkage with financial institutions with subsidy schemes to expand his unit.

5. Friends to Entrepreneurs: Paavai Mushroom's Inspiring Story

1. Situational Analysis:

O.Koothur is a village in Ariyalur district, Tamil Nadu. The village has population of 4703 of which 2344 are males while 2359 are females as per Population Census 2011. This village has lower literacy rate compared to other districts in Tamil Nadu. In 2011, literacy rate of O.Koothur village was 65.93 % compared to 80.09 % of Tamil Nadu. In this Male literacy stands at 79.27 % while female literacy rate was 52.79 %.

In which women from the village are mostly homemakers and they depend on their daily wages. In the early stages the wages were good enough but in this situation of growing inflation the wages were not enough for their needs. Also due to mechanization in agriculture reduces the daily wage opportunities among women.

A total of 10 self help groups are active in this village. Being members of these self help groups 4 women friends group Mrs.Banumathi, Mrs.Arulmozhi, Mrs.Rajakumari, Mrs.Meena came forward to enhance their livelihood by cultivating mushrooms based on the trainings they attended from KVK.

With the consistent support and guidance from CREED KVK Ariyalur they are successful in establishing the mushroom unit.

2. Plan, Implement and Support:

They attended training from RSETI (Rural Self Employment Training Institute) and Krishi Vigyan Kendra, Ariyalur initially in 2023 and the shed was established with our KVK experts guidance. Initially their business was named as IYARKAI KAALAN and then they changed the name to PAAVAI KAALAN. At first their investment for shed was nearly 2,00,000 and their family didn't support investing this huge amount. ICAR – KVK, Ariyalur supported them with fund of Rs.0.50 lakh under SCSP component for shed construction. At the beginning the mushrooms they cultivated did not give good profit and it was just 200-300 rupees. They decided not to give up and continued with the support of ICAR – KVK, Ariyalur. After guidance of CREED KVK the income started rising.

3. Output

With consistent support from KVK they not only boosted their income by just cultivating mushrooms but also by selling them through proper marketing channels and value addition. They established in 300 sq.ft i.e.(20 * 15)

Production Chart

1. Mushroom production/year : 2,800 kg
2. No. of harvest days/year : 280
3. Production/day : 10 kg
4. Yield/bag : 1.0 kg
5. No. of batches : 7
6. Growing period per batch : 40 days
7. Total no. of bags/year : 2,800
8. One unit shed can accommodate : 400 bags
9. Mushroom selling price : Rs.250/kg

From sale of mushroom they are earning gross income of Rs.7,00,000/year. After meeting out all the expenditures of Rs.1,40,000 includes spawn, polythene bags, labours, electricity, Paddy straw, sorghum seed, fire wood, chemicals, personal protective equipments, packing materials, labelling and marketing they are earning net income of Rs. 5,60,000.

Income status:

Gross Income	: Rs.7,00,000
Gross Expenditure	: Rs.1,40,000
Net Income	: Rs.5,60,000

They also trained to develop value added products as follows in future.

Value Added Products:

- Mushroom biscuits
- Mushroom pickle
- Mushroom soup mix powders

Seeing their growth, our KVK have facilitated them to avail subsidy from Department of Horticulture and they provided them a subsidy Rs.50,000 to develop labeling and branding.

4. Outcome and Impact

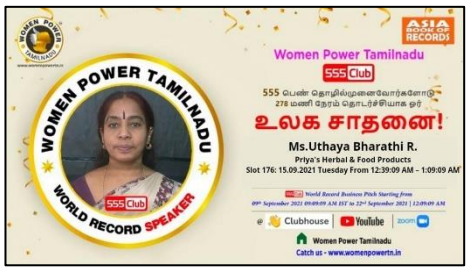
PAAVAI MUSHROOMS became experienced mushroom cultivators and they are successfully managing the shed, generating an annual income of Rs.7,30,000. Their marketing in mostly in local and they mainly focus on maintaining quality and loyalty to customers. They are becoming an inspiration for women. They are now serving as resource person for KVK trainings, RSETI trainings and for Mahalir Thittam trainings. This creates more market linkages for mushroom. Now they have facilitated to form a Joint Liability Group (JLG) to move forward to expand their business.

Seeing their group approach and enthusiasm, many are coming forward to extend credit support.

<u>6. Mrs.Udayabharathi – A Decade of Mothers Care</u>

1. **Situation analysis/Problem statement:**

Mrs.R.Udayabharathi, 54 years old, is an M.Sc, B.Ed holder and mother of two children residing in Ariyalur. Initially she wished to go for job but her family situation and children care restricted her dreams. But as a mother, she wanted to give quality products for her children and prepared health mix, nalangu maavu, shikakikai, poosu manjal powder for her children. These products attracted her relatives and neighbours where her journey started but she didn't get any support from family. So she could able to supply these products only to the closed circle with no branding and proper labeling in 2015.



2. **Plan, Implement and Support**:

In 2019, our KVK visited Mrs.R.Udayabharathi when she was doing only 10 products. Since then our KVK provided her continuous technical support for legal compliances, branding, labeling and marketing. She was invited to KVK for several trainings, exhibitions and entrepreneurs meet. She became member of Mahila Youth Technological and Entrepreneurs Club - Agri (MYTEC-A) mission of our KVK. Her company was registered in October 2020 and her products were kept for display in KVK premise and displayed in exhibitions to promote marketing.

In 2021, she increased number of products and her production also increased. KVK, Ariyalur supported her with Solar dryer in 2023 and linked her with PMFME – DIC scheme in 2023. Under this scheme, she availed credit facility of Rs.3,20,000 with 30% subsidy and she purchased Roaster, Blender, Mixer, Sealing machine and weighing balance.

She was introduced to agriculture marketing department, District Industries Centre (DIC) through them she attended department exhibitions and expos to enhance her marketing.

In 2024, she attended export oriented training organized by our KVK inviting Regional Head from APEDA, Chennai. With this initiation, now she is taking steps to export her products with our KVK support.

3. **Output**:

Now there are 30+ natural products in market like health mix, 9 types of natural soaps, bath powders, shikaikai powder, herbal hair oil, etc., and she is active in digital marketing. Her products are available in Amazon. She also sells her products in social media pages as follows:

Website: www.priyasudhayam.com
Youtube Channel: Priyas Udhayam Products
Facebook: Priya's Herbals
Instagram: priyas_udhayam
Whatsapp: 7598238142

Her annual turnover is Rs.7,00,000 and earning a net income of Rs.4,00,000. All her income is plough backed for business development.

She focuses mainly on quality rather than quantity. To ensure the quality and to satisfy her customers, she purchased 85 cent farming land with family support in 2023 and cultivating herbs and flowers organically required for her products such as Hibiscus, *Senna auriculata* (Avarampoo), Indian Nettle (Kuppaimeni), etc.,

4. **Outcome and Impact**:

Quality of her products is the success of her business. She is purchasing her raw materials for good price directly from organic farmers in Ariyalur, Tanjore, Pudhukottai, Kumbakonam and Perambalur districts. Among various products in the market, she has special place among her customers.

Publications

- Her successful journey was documented by **Krishi jagran** and published on 26th March, 2024
- In **Dinamalar – Pengalmalar** special edition her success story was published on 25.11.2023.
- She was invited by our KVK to share her success case in Vikshit Bharat Sankalp Yatra on 09.01.2024 organized by SBI, Chennai circle and DIC.

Radio Talks

- AIR, Trichy – Star of the Week – Feb, 2025
- Pudhugai FM 91.2 Community Radio – Special Program on "Sadhanai Penmani" broadcasted on 05.03.2025, 5.00 PM

Representative of Ariyalur district:

- Participated in Start – up Thiruvizha conducted by TamilNadu Government held at Madurai on 28 & 29, September 2024 and received StartupTn smart card. She also applied for fund rising to get investors through StartupTN. She also got appreciation from founder of Nagas Food Mr. Karu Palaniappan.

- TamilNadu State Planning Commission conducted impact study on startup opportunities in Trichy region on 24th Jan, 2025 held at Indra Ganesan College of Engineering, Trichy only for 15 startup entrepreneurs where she participated and represented Ariyalur district.
- She participated in Swasti Mentorship Milestone Meet at Chennai in 2024.
- She shared her success story in "Women Power of TamilNadu" organized by 555 club on 15.09.2021 where 555 women entrepreneurs success case was documented and recorded in **ASIA Books of Record.**

Awards:

- Awarded for **Best Women Entrepreneurs** by our KVK in 08.03.2021
- Awarded as best women entrepreneur from Dinamani newspaper in 2023.
- Awarded as best entrepreneur in Vithai Thuiruvizha every year.

Case study

Title 1 : <u>An Engineer became Master in Poultry and You Tuber of Village Events</u>

Problem Statement

Unemployment and under employment among the rural youth is the curse for the development and the nation as a whole. The uncertainty in agriculture and unsustained income drive away the rural youth from involving in agriculture in their own villages.

Mr.S.Rajadurai is being developed by ICAR-KVK, Ariyalur as our youth entrepreneur involving in rearing of native chicken and getting an income of Rs.30,000/month. His innovation in development of low cost feed, incubation of eggs using low cost hatchery, ethno veterinary practices and an unique marketing style make his venture more profitable. Now he is the master trainer for poultry related trainings and role model for other youth members.

Plan and Support

Mr.S.Rajadurai has completed Diploma in Civil Engineering during the year 2015. He has attended the native chicken rearing training at KVK campus and got inspired by KVK training programme. He has started his professional as Native chicken rearing in a smallest scale with 20 birds during the year 2015

He started innovative method of feeding his birds with locally available feed stocks to reduce the cost on feed. Later, by seeing the demand of chicks he has expanded his poultry unit with 150 parent birds belongs to different varieties as below:

Sl.No.	Variety	Mother parent	
		Hen	Cock
1	Siruvidai	100	12
2	Kadaknath	20	6
3	Nicobari	6	3

To utilize the eggs effectively for the production of chicks he has purchased one low cost hatchery from Mr.Suresh (An innovator developed by ICAR-KVK, Ariyalur Dt.) with the capacity of 120 eggs. As out of box thinking he has developed his own low cost feed consisting of locally available resources.

Output

Table. 1. Economics/ profitability of innovative practice/technology (costs and return) (per intervention or area or household)

Sl.No.	Particulars	Amount (Rs.)
A	**Fixed cost**	
1	Poultry shed (2 Nos.)	
	30 x 12 feet 6 x 8 feet	55,000
2	Auto feeder (12 Nos.)	3,000
3	Auto drinker (12 Nos.)	3,000

4	Low cost Hatchery (2 nos.)	12,000
	Total	**73,000**
	10% depreciation /year (I)	**7,300**
5	Parent bird (150 birds)	75,000
	Depreciation per year (II)	**25,000**
	Fixed cost per year(I + II)	**32,300**
B	**Expenditure**	
1	Feed cost per year (2.5 kg feed/bird/month for 150 birds (375 kg feed /month) @Rs.800/100 kg of feed)	36,000
2	Commercial feed for one month chick (4,000 chicks/year @Rs.600/month/100 chick feed cost)	24,000
3	Vaccination and Ethno veterinary practices per year	2,000
4	Fixed cost per year	32,300
	Total Expenditure	**94,300**
C	**Gross Income**	
	Sale of 400 chicks per month @Rs.75/chicks Sale of 4,800 chicks per (year)	3,60,000
D	**Net Income (Gross Income – Expenditure)**	**2,65,700**
	Benefit Cost Ratio (BCR)	**3.81**

Table 2. Income Generated through Poultry farming

Sl. No.	Year	No. of parent stock	Gross Income (Rs.)	Net Income (Rs.)
1	2021	50 birds	90,000	56,000
2	2022	100 birds	2,40,000	1,77,000
3	2023	150 birds	3,60,000	2,65,700

Outcome

He is also very active in social media like YouTube and Face Book where he share all his own experiences and also the cases of successful farmers of Ariyalur District to provide marketing support. His Face book account name is “Gramathu Koothugal” with 50,000 followers and his YouTube channel is “Kozhi Koothugal” with 30,000 subscribers. From this social media, Face Book and YouTube is paying him for more views and followers. He is earning an additional income of Rs.1,00,000/month from Social media pages since 2021.

Impact

His technologies and innovative marketing ideas attracting large number of rural youths those who attend the training and visiting his poultry unit. His technology was spread through All India Radio, Trichy and Karaikal at several occasions. He is acting as a resource person for the beginners in the aspect of constructing shed, selection of parent breeds, care of chicks and marketing.

Currently he is having market tie-up with 42 farmers belongs to Ariyalur District and 150 farmers from other districts. He is networking all his clients and farmers through a

WhatsApp group named “Gramathu Pokkisam” (Village Treasure). It is expected that a minimum of 175 youth will be motivated in this venture during the year 2024.

He awarded as Best Innovator award during Farm innovators meet at Agriculture conclave at Lucknow on 5th to 8th October 2018.

Title 2 : *Trichoderma viride* – A saviour of Groundnut farmers

1. Problem statement

Groundnut is being cultivated in 18,000 ha. at Ariyalur district in four blocks viz., T.Palur (12,000 ha.), Jayankondam (3,000 ha.), Andimadam (2,000 ha.) and Sendurai (1,000 ha.). Root rot was he small problem in Groundnut resulted in death of seedlings upto 20 days to the tune of 5-30 percent that was managed by the farmers at little higher seed rate. From 2020, it became the root rot wilt and pod rot problem led to mortality of plants upto harvest and pods are heavily affected. The disease affected pods are decayed and still remain in the soil after harvest resulted in 40-50% yield loss. It goes upto 60-70% loss where groundnut is cultivated without any rotation.

2. Plan and Support

To safeguard the farmers by taking prophylactic measures in management of pod rot our KVK underwent series of interventions as below :

- Awareness creation by village level meetings, news paper news, radio talks, lectures and seed treatment demonstrations in Kisan Ghosthis organized by ATMA, WhatsApp message etc. It could be possible to reach 3750 groundnut farmers during 2021-2022.
- Distributed handouts in 35 major Groundnut growing villages in Ariyalur districts.
- Conducted OFT and FLDs on pod rot management covering 15 farmers and 73 farmers participated in field days.
- Our KVK has produced and sold 1076 kg of *Trichoderma viride* from our lab and it covers 200 ha. during 2021 and 230 ha. during 2022.
- As per request Agriculture department labs and private dealers also sold sizeable quantum of *Trichoderma viride.*

3. Output

- 4500 farmers directly educated about pod rot management practices
- By production and distribution of 960 kg. *Trichoderma viride* from all sources for groundnut seed treatment 180 ha. and 210 ha. was under prophylactic measures against pod rot during 2021 and 2022.

4. Outcome

- A total of 390 ha. was free of root rot and pod rot problems since beginning to till harvest.
- The normal yield of 2200 kg/ha. was restored.
- Farmers reaped a high net income of Rs.58,000 /ha, in 105 days.
- Haulm yield also normal and used for their cattle

5. Impact

- Mass awareness created about the groundnut pod rot among the farmers in the district.
- Yield loss / loss in district groundnut pods was saved upto 858 MT in during 2022 and expected to rise year by year.
- The farmers are happy by getting a net income of Rs.40,000 / acre by spending Rs.100/kg of *Trichoderma viride* to save the crop completely.

Title 3 : <u>"Thirumalapadi" – Proud to be a zero burning village by KVK Ariyalur</u>

1. Problem statement

Ariyalur district comprising of six blocks and the Thirumanur block comes under Cauvery delta area favours the cultivation of paddy and Sugarcane. Sugarcane is being cultivated in 9600 ha. across the district and 3100 ha. at Thirumalapadi village. They permit sugarcane for 5-6 ratoons to get good remuneration out of sugarcane cultivation. The farmers practice was to burn the sugarcane crop stubbles after every harvest to make the field clean and they believe that "burning and potash to the soil and good for crop". But burning causes death of flora and fauna in soil ecosystem and leads to global warming.

2. Plan and Support

ICAR-CREED KVK has took relentless effort by series of interventions to educate the farmers about the ill effects of burning in crop field.

OFT on Assessment of different microbial decomposer using to composting of sugarcane trash (2018)

↓

OFT on Suitable intercrop in Sugarcane (2020)

↓

FLD On Pokkah boeng disease management in Sugarcane (2022)

↓

Method demonstration - 10

↓

Trainings – 18

↓

Awareness creation – 200 farmers

↓

Distribution of literatures -- 1000 copies

3. Output

OFT was conducted using the waste decomposer developed by National Centre of Organic Farming and TNAU Bio mineralizer. The results revealed that waste decomposer is fast in decomposing Sugarcane trash in 45 days. Then it was taken in FLD and the results were also promising. By OFT and FLDs, 12 acres were covered and avoided burning. Mass awareness also created by WhatsApp, Newspaper, Radio talks, Handouts and also two extension personnel of agriculture department and sugar industry were sensitized. Demand for waste decomposer comes from farmers and it was made available to farmers from our KVK. One bottle of culture costs Rs.40 is enough for spraying in one acre. Its low cost is also the reason for gaining popularity among the farmers.

4. Outcome

- Sugarcane trashes from 1650 ha. was safely decomposed using beneficial microbes.
- Paved the way for improved soil fertility as average NPK available in the soil after decomposition was 98.4: 47.2: 117 kg/ha.
- As Sugarcane trash act as mulch the weed population gets reduced or nil and thereby saving to the tune of Rs.2000/ac. (weeding cost) was curtailed.

5. Impact

- The emission from 1650 ha. has been avoided
- The microflora in the soil eco system preserved and hence sustainable sugarcane cultivation ensured.
- Weeding cost of Rs.2,500/acre saved and hence total saving for 10,000 ha. was achieved by 65 sugarcane farmers
- Average of 15.5 % yield increase achieved and it comes to an additional yield of 11,550MT of canes in the district was realized.
- Proud of our KVK that one model village on zero burning was developed
- Now the technology spreads the neighbouring 6 villages Kulamanikum, Sembiyakudi, Pudukottai, Aranmanikuruchi and Thirumanur in an area of 875 ha.

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

1. Forward and Backward Linkages

ICAR – CREED KVK, Ariyalur is promoting organic agriculture in the district since 2015. Though the farmers accepted the organic practices in raising vegetables and oil seeds, they couldn't sell their produce for a higher price than produces produced out of chemical farming. Hence, a plan was prepared this year to organize market tie-up for vegetables as the first step. We approached ORG.FARM – a vegetable retailing company at Chennai by selling vegetables at super markets and also providing door delivery of vegetables to their customers. After 3-4 sittings with them and field visit, it could be materialized during Aug, 2023 with the plan to produce vegetables at KVK farm and also from 18 farmers' field. The selected farmers were given training and demos under natural farming project.

Backward Linkages:

Linked these 18 farmers to obtain required farm inputs like organic granules, organic crop boosters, and plant protection products from Uyirmai FPO (A FPO promoted by our KVK) on credit basis.

Forward Linkages:

- Market tie-up for fresh organic vegetables with ORG.FARM at fixed price. The price was fixed as [cost of cultivation x 2.5]. Average price per kg of vegetables comes to Rs.28. Farmers felt this price is very lucrative.

- An agreement also made by ORG.FARM, farmers and KVK and laid down the terms and conditions of quality supply from farmers and timely payment by company.

By this way our KVK farm and eighteen farmers supplied 135 tonnes of vegetables and the amount realized was Rs.22,50,000 in the past seven months (Aug, 2023 to Feb, 2024). The percentage increase in income to the farmers is 35% higher than the produces produced from chemical farming.

It is also planned to produce and supply 2 tonnes of different vegetables per day to ORG.FARM, Chennai and thereby a net inflow to district/year would be Rs.150 lakhs in the next year.

2. Resorting wild repellent sprays using Kisan Drone

ICAR CREED KVK is forerunner in taking innovative and advanced technologies for the welfare of farmers. Wild animals (monkey, deer, wild boar and peacock) become the menace in crop cultivation and its damage to the crops resulted in crop loss upto 20-30 percent. Our KVK promoted a wild animal repellent namely Herboliv Plus (An organic product of Mivipro company) since 2017 to ward off / repel wild animals from crop fields. Though its an organic product its efficacy was excellent and there was huge preference among the farmers to mitigate wild animal problems. Farmers' take up Herbolive spray with the sprayers till 2020. During 2022, we launched Kisan drone to resort Herboliv sprays at larger areas and we could cover 478 acres of paddy and groundnut in kharif and rabi season. Apart from wild animal menace, there was a reduction in rat damage, pest infestation and disease incidence. By considering our pro-activeness in use of drones, Government of India sanctioned Drone project for our KVK this year and covered 250 ha. under drone sprays.

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

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1	All crops	Adamant Creeper (Pirandai Karaisal) solution	To control caterpillars
2	All crops	Ponneem Solution (Pungam + Neem oil)	To control sucking pest
3	Pulses	Keeping Notchi leaves with dry chilli in seed storage gunny bags.	To control storage pests.
4	Fisheries	Basal application of Lime with Turmeric powder	To use as disinfectant
5	Paddy	Foliar application of 5 % cow dung solution	To control Bacterial leaf blight
6	Millet	Thresh the seeds from panicle by use of paired cow and wooden sticks	To preserve good quality seed
7	Red gram	Red soil grain Pelleting	To store the grains in long-term without pest
8	Dairy and Goat	Application of Custard apple leaf with neem oil in wound places	To cure wound

9	Cashew	1 kg goat meat + 1 kg cow meat+ 1kg pig meat + 1 kg desi chicken meat + 1 kg fish waste +1 kg blackgram flour+ 1 kg jaggery + 50 lit of water. mixed well. Kept for fermentation for 40 days stiring in morning and evening two times done. 1 litre gunapanjajam mixed with 30 litres of water and sprayed as nutrient for crops and also soil application. It will improve the growth of cashew plants traditionally.	Growth regulator
10	Vegetables	Cow urine and dung are collected, mixed with water and fermented for few days. After fermentation, the content is sieved to control pests. Cow urine act as germicide and cow dung provides nutrients to the crops.	To control the pest
11	Paddy	Soaking the paddy seeds in diluted cows urine before sowing.	To improve the seed germination percentage and early vigour of the seedlings.
12	Paddy	Bunds are strengthened with weeds and stubbles collected from the fields, bunds are plastered with mud.	To prevent rat holes and their damage.
13	Paddy	Placing bird perches in the field to allow birds to sit and predate on the pests.	To control all kinds of larvae.
14	Paddy	Storing of grains on a mud pot of more than 6 feet height.	To control storage pests.
15	Paddy	Keeping neem leaves and pungam leaves extracted solutions soaked gunny bags.	To control storage pests.
16	Duck rearing	Duck rearing in Paddy field	To increase soil fertility and collected pupae in summer season
17	Poultry	Leaves of *Phyllanthus niruri*, cumin seeds, garlic extract, and turmeric are grained and mixed with boiled rice and can be given as feed.	To contain ranikhet as prophylactic and after disease outbreak.

Impact of KVK activities

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs./ha.)		% increase
			Before (Rs./Unit)	After (Rs./Unit)	
Varietal introduction of ADT 51 Paddy	140	95	68,300	79,400	16
Direct sown paddy with drum seeder	40	70	60,800	74,500	23

under wetland condition					
Mechanization of Transplanting in Paddy	160	95	65,500	82,500	26
Introduction of Groundnut variety K-1812	250	91	32,600	54,300	67
Introduction of Sesame variety TMV 7	135	89	23,400	31,800	36
Varietal introduction of ADT 53 Paddy for Kuruvai season	140	85	27,120	34,700	28
MN mixture application to field crops	450	90	40,500	49,300	22
ICM in cashew	250	75	19,000	32,000	68
Management of shoot and fruit borer in brinjal	80	65	65,300	82,400	26
Hi-Tech Tuberose cultivation	50	40	8,30,000	11,15,000	34
Seed treatment with *Bacillus subtilis* in paddy and Pulses	120	65	39,050	54,800	40
Seed treatment and enriched soil application of *Trichoderma viride* in Groundnut	400	90	16,500	28,700	74
Introduction of fodder CO (CN) 5 and CO(FS) 29	160	85	18,500/cow	23,300/cow	26
Soil test based fertilizer application	90	60	36,700	60,400	65
Integrated feed management in cattle	58	60	12,600/cow /lactation	26,500/cow /lactation	110
Integrated disease	42	22	6,000/dairy/goat	9,510/dairy/goat	59

management in dairy and goat					
Mixed fodder cultivation	35	46	26,000/acre	45,100/acre	73
Composite fish culture	45	40	75,000/ha.	1,60,000/ha.	113
Disease management in poultry birds	190	80	5,800/ 20 birds	8,300/ 20 birds	43
Spraying of Pulse wonder	1550	80	6,100/ha	8,300/ha	36
Spraying of Groundnut rich	2400	80	20,100/ha	36,300/ha	31
NCOF Water decomposer in sugarcane	150	58	1,05,000	1,22,000	16
Paddy AWD water meter (Pani pipe) technology	160	56	19,500	26,500	36
Azolla cultivation	180	80	12,800/cow /lactation	14,400/cow /lactation	13

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

1. Large scale adoption of VBN Series of Blackgram

Problem

- Low yielding (5.2 q./ha.) Varieties (T9 & VBN 5) for long period
- Susceptibility to YMV disease in existing varieties
- Non adoption of foliar nutrient spray yield loss – 20%
- Non synchronized flowering and maturity

Intervention/ activity

- Introduction of high yielding blackgram varieties – VBN6, VBN 8, VBN10 & VBN11
- Foliar application of TNAU Pulse wonder, IPM practices

Parameter	Demo	Check
Output		
Additional cost (+) of technology / intervention or saving (-) in demo (Rs) over check	1,800	---
Productivity (in q/ha) in demo	7.6	5.5
Additional yield over check (in q/ha)	2.1	---
% increase in yield over check	28	---
Gross returns (in Rs/ha)	62,100	45,300
Net Returns (Rs / ha)	32,500	23,600
Additional Net Returns in demo (demo – check)	8,900	---

B:C ratio	2.38	1.9
Outcome		
Area covered, spread in adopted villages (ha)	1,350 ha. In 58 villages	
Economic impact of KVK interventions (Rs) (Additional net returns in demo x no. of ha)	6,61,27,000 (8,900 X 7430 ha.)	
Area spread in district through convergence (ha)	6080 ha.	

Convergence : Promoted 85 Seed growers and supplied seeds to Dept. - 560.6 q/year
Area increased with latest varieties from 1350 ha. to 6080 ha. in last 10 years

2. Promotion of direct seeding in rice under resource conservation

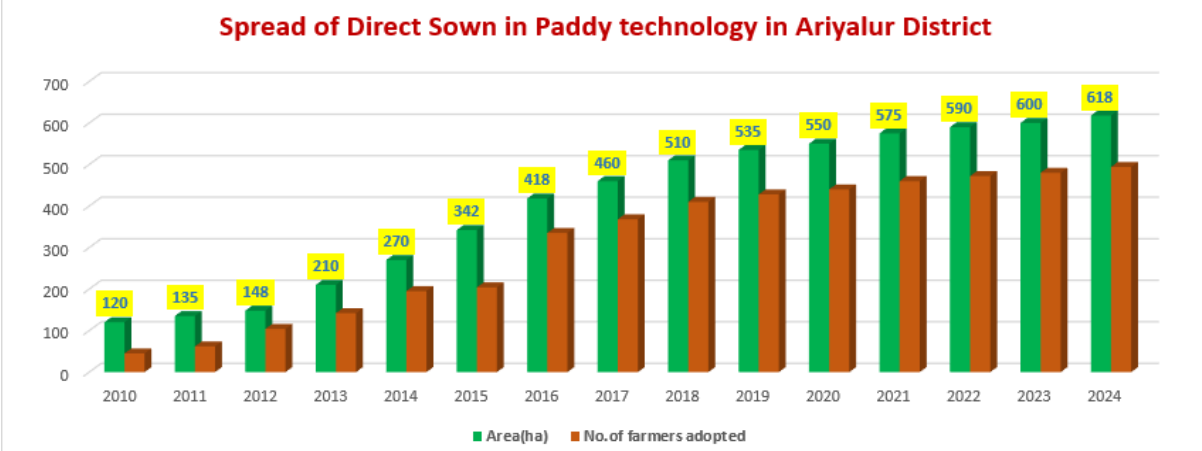
Problem

- ❖ High cost involved to nursery raising (20,000/ha)
- ❖ Shortage of labor during transplanting
- ❖ High seed rate (75kg/ha)
- ❖ Methane emission under puddled condition

Intervention/ activity

- Varieties like Anna 4,TKM 15 & CR1009
- Tractor drawn seed drill
- Drum seeder
- Slot Modified drum seeder
- Rotary weeder

Parameter	Demo	Check
Output		
Additional cost (+) of technology / intervention or saving (-) in demo (Rs) over check	25000	---
Productivity (in q/ha) in demo	45.1	37.5
Additional yield over check (in q/ha)	7.6	---
% increase in yield over check	20.2	---
Gross returns (in Rs/ha)	1,14,710	94,000
Net Returns (Rs / ha)	94,710	70,200
Additional Net Returns in demo (demo – check)	24,510	



3. Large scale adoption of ICM in Cashewnut

Problem

- Low population @75/ha. instead of 175/ha. due to Cashew stem and fruit borer incidence
- Low productivity (450 kg/ha.) in old senile plantation
- TMB affects the yield and quality of nuts up to 30 percent

Intervention/ activity

- Rejuvenation of unhealthy old Cashewnut trees
- Gap filling/replacing of VRI 3 grafts
- Stem borer and TMB management
- Foliar sprays
- Pruning techniques
- Water saving and promote intercrop of pulses for increase cropping intensity and also income

Parameter	Demo	Check
Output		
Additional cost (+) of technology / intervention or saving (-) in demo (Rs) over check	6,100	---
Productivity (in q/ha) in demo	6.65	5.35
Additional yield over check (in q/ha)	1.30	---
% increase in yield over check	24	---
Gross returns (in Rs/ha)	66,500	53,500
Net Returns (Rs / ha)	35,500	28,950
Additional Net Returns in demo (demo – check)	6,550	---
B:C ratio	2.10	1.70

Outcome	
Area covered, spread in adopted villages (ha)	240 ha. in 16 villages
Economic impact of KVK interventions (Rs) (Additional net returns in demo x no. of ha)	5,52,82,000 (6,550 X 8,440 ha,)
Area spread in district through convergence (ha)	8,200 ha.

Convergence: 8,200 ha. old orchards replaced by grafts by gap filling

4. Large scale adoption of Intercropping in Drumstick with Groundnut

Problem

- Low income per unit area from Drumstick as a sole crop.
- Cultivation of low yielding Drumstick varieties which is susceptible to pest and disease
- Under utilization of existing area between Drumstick during 3 months and Low income

Intervention/ activity

- Introduction of Groundnut as intercrop in Drumstick
- Introduction of ICM practices in Drumstick
- Introduction of PKM 1 variety
- Soil test based fertilizer application

Parameter	Demo	Check
Output		
Additional cost (+) of technology / intervention or saving (-) in demo (Rs) over check	42,500	---
Productivity (in q/ha) in demo	445*	240
Additional yield over check (in q/ha)	205	---
% increase in yield over check	85	---
Gross returns (in Rs/ha)	3,56,000	1,92,000
Net Returns (Rs / ha)	2,63,500	1,42,500
Additional Net Returns in demo (demo – check)	1,21,000	---
B:C ratio	3.81	2.61

* Intercrop yield converted into main crop yield

Outcome	
Area covered, spread in adopted villages (ha)	28 ha. in 18 villages
Economic impact of KVK interventions (Rs) (Additional net returns in demo x no. of ha)	9,09,92,000 (1,21,000 x 752 ha.)
Area spread in district through convergence (ha)	752 ha.

Convergence: Micro irrigation extended to 280 ha

5. Management of Fall Army Worm in Maize

Problem

- Low yield (43 q./ha.) due to fall army warm
- Excess usage of pesticide and high cost of cultivation

Intervention/ activity

- Introduction of TNAU IPM technologies

Parameter	Demo	Check
Output		
Additional cost (+) of technology / intervention or saving (-) in demo (Rs) over check	5,100	---
Productivity (in q/ha) in demo	56.20	46.5
Additional yield over check (in q/ha)	9.70	---
% increase in yield over check	20.00	---
Gross returns (in Rs/ha)	89,920	74,400
Net Returns (Rs / ha)	49,780	38,560

Additional Net Returns in demo (demo – check)	11,220	---
B:C ratio	2.02	1.73

Outcome	
Area covered, spread in adopted villages (ha)	780 ha. in 35 villages
Economic impact of KVK interventions (Rs) (Additional net returns in demo x no. of ha)	3,02,94,000 (11,220 X 2,700 ha.)
Area spread in district through convergence (ha)	1920 ha.

Convergence: Supply of IPM package for 1920 ha. in subsidy

6. Large Scale adoption of Tuberose cultivation

Need of Tuberose in District

- High commercial value in district for garlands making by more temples across and near district
- Need of flower crops for alternate good income source

Intervention

- Introduced of new tuberose varieties (Prajwal & Niranthara) from IIHR since 2010.
- Nematode management practices
- ICM with Micro irrigation & Mulching

Parameter	**Demo**	**Check**
Output		
Additional cost (+) of technology / intervention or saving (-) in demo (Rs) over check	9,400	---
Productivity (in q/ha) in demo	110.50	89.90
Additional yield over check (in q/ha)	2.60	---
% increase in yield over check	23.00	---
Gross returns (in Rs/ha)	3,30,600	2,83,700
Net Returns (Rs / ha)	2,30,260	1,84,150
Additional Net Returns in demo (demo – check)	46,110	---
B:C ratio	3.29	2.85

Outcome	
Area covered, spread in adopted villages (ha)	30 ha. in 16 villages
Economic impact of KVK interventions (Rs) (Additional net returns in demo x no. of ha)	39,65,460 (46110 X 86 ha)
Area spread in district through convergence (ha)	86 ha.

Convergence: KVK has promoted 12 farmers to produce bulbs. Additional income to the farmers in the district - Rs.78.4 lakhs

7. Large scale adoption of IPDM Technology in Brinjal

Problem

- Non adoption of IPDM practices
- Repeated dose of pesticides
- More pesticide residue in vegetable

Intervention/ activity

- Introduction of IPDM practices in Brinjal

Parameter	Demo	Check
Output		
Additional cost (+) of technology / intervention or saving (-) in demo (Rs) over check	6,500	---
Productivity (in q/ha) in demo	307.7	226.9
Additional yield over check (in q/ha)	80.8	---
% increase in yield over check	36	---
Gross returns (in Rs/ha)	2,76,948	2,04,228
Net Returns (Rs / ha)	1,96,197	1,24,577
Additional Net Returns in demo (demo – check)	71,620	---
B:C ratio	3.43	2.56

Outcome	
Area covered, spread in adopted villages (ha)	68 ha. in 18 villages
Economic impact of KVK interventions (Rs) (Additional net returns in demo x no. of ha)	80,93,060 (71,620 x 113)
Area spread in district through convergence (ha)	45 ha.

Convergence: Supply of IPM tool for 45 ha by KVK through PPP mode and by Department

District productivity increased from 22.7 t. to 30.77 t. (36%)

8. Low cost hatchery to augment chick production

Problem

- Low egg yield from desi birds (50-60/year) due to nature brooding
- Less income from backyard poultry
- Lack of other entrepreneurial scopes for rural youth

Intervention/ activity

- Low cost hatchery

Parameter	Demo	Check
Output		
Additional cost (+) of technology / intervention or saving (-) in demo (Rs) over check	6,000	---
Productivity (chicks/year) in demo	1,800	1,160
Additional yield over check (chick/year)	640	---
% increase in yield over check	55 %	---
Gross returns (in Rs/year)	81,000	52,200
Net Returns (in Rs / year)	56,000	29,200
Additional Net Returns in demo (demo – check)	26,800	---
B:C ratio	3.24	2.20

Outcome	
Area covered, spread in adopted villages	260 farmers in 21 villages
Economic impact of KVK interventions (Rs) (Additional net returns in demo x no. of farmer)	81,74,000 (26,800 x 305 farmers)
Area spread in district through convergence (ha)	45 farmers

Self sufficiency in chick production in the district – 5,49,000/year

Convergence: Supply of Desi birds to BPL and Landless farmers

An increase of Rs.81,000/year for a women maintaining 25 desi birds

9. Composite Fish rearing in Farm ponds

Problem

- Low weight gain by poor quality seed materials and poor feed management
- Under utilization of farm ponds

Intervention/ activity

- Composite fish culture

Parameter	Demo	Check
Output		
Additional cost (+) of technology / intervention or saving (-) in demo (Rs) over check	16,500	---
Productivity (in q/ha.) in demo	32.00	20.50
Additional yield over check (in q/ha)	11.50	---
% increase in yield over check	56 %	---
Gross returns (in Rs/ha.)	4,85,000	3,07,500
Net Returns (in Rs / ha.)	2,49,000	1,34,000
Additional Net Returns in demo (demo – check)	1,15,000	---
B:C ratio	2.84	2.20

Outcome	
Area covered, spread in adopted villages (ha)	12 ha. in 26 villages
Economic impact of KVK interventions (Rs) (Additional net returns in demo x no. of ha)	34,50,000 (1,15,000 x 30 ha.)
Area spread in district through convergence (ha)	18 ha.

Net income per unit area increased upto Rs.2,49,000

Convergence: Facilitation of farm ponds of about 18 ha. (180 farmers @25 cents)

Box item for APR 2024

SCSP- Employment Generation – SC group, Veerakkan Our dream to attain social upliftment became true due to KVK intervention under SCSP component. The Cashewnut shelling machine generated 300 days employment for 36 SC women without affecting MGNREGA and agriculture labor days. We are earning Rs.70,000/year thus brought huge smile on our life.	
Scheme connect, Mr.Sivasamy, Ayeepalayam Government subsidy schemes are always "unattainable fruit" or "something beyond reach'' till I get benefitted in NLM subsidy scheme with KVK, Ariyalur support. Now, I am a successful goat entrepreneur with 110 goats. I am sanctioned with loan of Rs. 25,00,000 with subsidy of Rs.10,00,000 in NLM scheme. Who can be happier than me now? Thanks to KVK, Ariyalur.	
Value Addition - Udhayabharathi, Ariyalur I feel proud to say that "I am R.Udhayabharathi, Founder of Priya's Herbal'' - An identity and confidence build up by KVK, Ariyalur by providing technical, credit and marketing support through several intervention. Now, I am mother of 1000 customers & earning net income of Rs.4,00,000/year.	
FLD Paddy – Improved Kavuni : CO57 – Mr.Murugapandiyan, Keezhakudikadu I Murugapandiyan cultivated Improved Karuppu Kavuni CO57 in 1 acre under KVK, Ariyalur FLD programme. No lodging observed and saved 10% harvest loss and yield increased to 35% . Milling recovery also 70% and has more consumer demand. Proud to be the supplier of traditional food in the food chain.	
Waste decomposer: J. Nagaraj, K.Mettutheru I am happy that small intervention of waste decomposer by KVK, Ariyalur has high impact on my soil fertility and sugarcane stubbles management. I feel proud that I made my contribution in bio-conservation & motivated fellow farmers covering 60 ha. and contributing for mitigation of global warming.	

Skilling and EDP by ICAR – KVK, Ariyalur

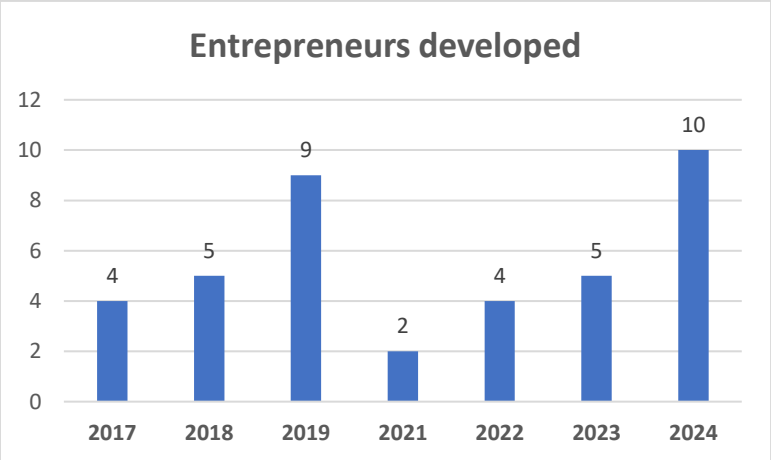
ICAR – KVK, Ariyalur is aiming towards entrepreneurs' development through several agriculture and allied activities. Among several enterprise opportunities, the demand for oyster mushroom has increased recently due to its health benefits, plant based diet for vegans, natural & nutria-dense food cultivated on agriculture waste, tastes, etc., But with the long term vision and forward thinking our KVK started this mission in 2017 with skill trainings and creating awareness among rural youths, women and also among consumers.

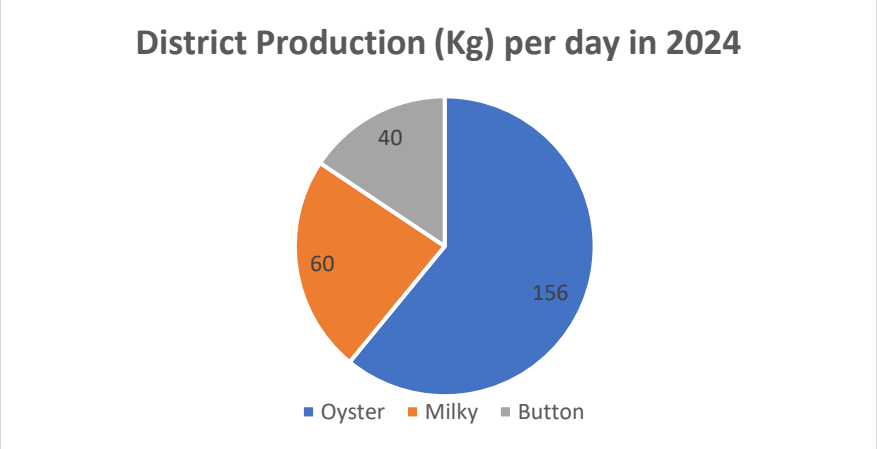
Skilling

S.No	Training title	Year	Sponsor	No. of participants
1	Mushroom Growers	2016-17	NSDC	20
2	Mushroom Growers	2018-19	NSDC	20
3	Mushroom Cultivation	2019-20	KVK	40
4	Profitable Mushroom Cultivation	2021-22	KVK	38
5	Spawn production and mushroom cultivation	22	KVK	25
6	Small Mushroom Cultivator	23	KVK	28
7	Mushroom Value Addition FLD	2021-22	KVK	20
8	Livelihood enterprise development programme	2023-24	NABARD	120
			Total	**311**

Outcome:

- Out of 311 farmers trained 39 no. of farmers started enterprise.
- Promoted one spawn producer to supply quality spawn to meet out district demand and other districts.
- Our entrepreneurs are producing Oyster and Milky mushroom at our district. But due to demand they are buying button mushroom from the Nilgiris and retailing along with other own varieties.
- Apart from selling mushroom they are preparing value added products from mushroom such as mushroom soup mix, mushroom idli podi, biscuits, health mix, etc.,





Handholding support:

- ICAR – KVK, Ariyalur is providing regular technical support and guidance.
- Arranged sales outlet at collectorate for improving sales.
- Formed three JLG especially for mushroom growers to avail government subsidy schemes and to link with financial institutions.
- Linking with Department of Horticulture to get Rs.50,000 subsidy.
- Formed 3 ST women groups in Erugaiyur, Azhisikudi and Thularankurichi and established 3 mushroom sheds with NABARD funding support under Tribal Development Fund project @Rs.50,000/shed and started mushroom cultivation.

S.No	No. of entrepreneurs developed	Qty. produced /year	Gross income (Rs.)	Average net income (Rs.)
1	39	43680 kg	1,09,20,000	76,44,000

- Through mushroom cultivation, 1441.44 kg protein on plate also ensured i.e. one kg of mushroom contains 33g protein.
- Each entrepreneur is getting a net income of Rs.1.96 lakh/year (Rs.537/day) and it makes to its sustenance.

Case pf Successful technology application and dissemination by ICAR-KVK, Ariyalur

Name of the technology: Integrated crop management techniques with new groundnut varieties.

Source of the technology: TNAU, Coimbatore.

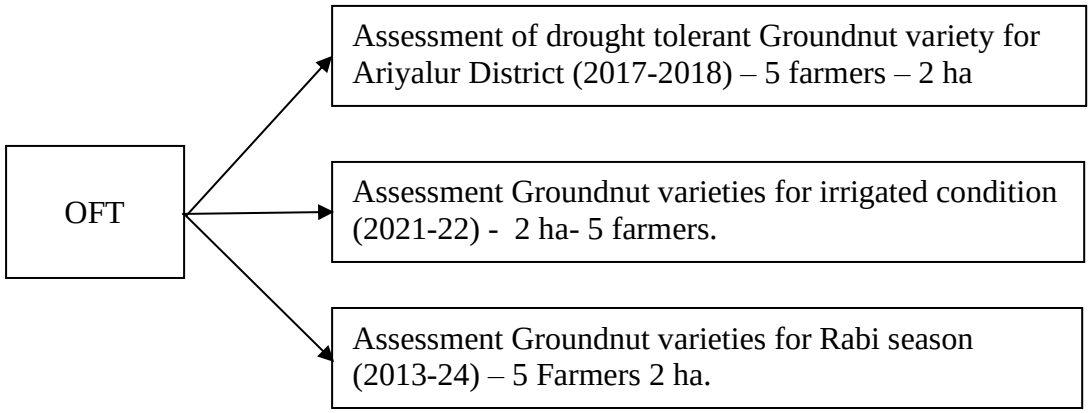
Need of the technology:

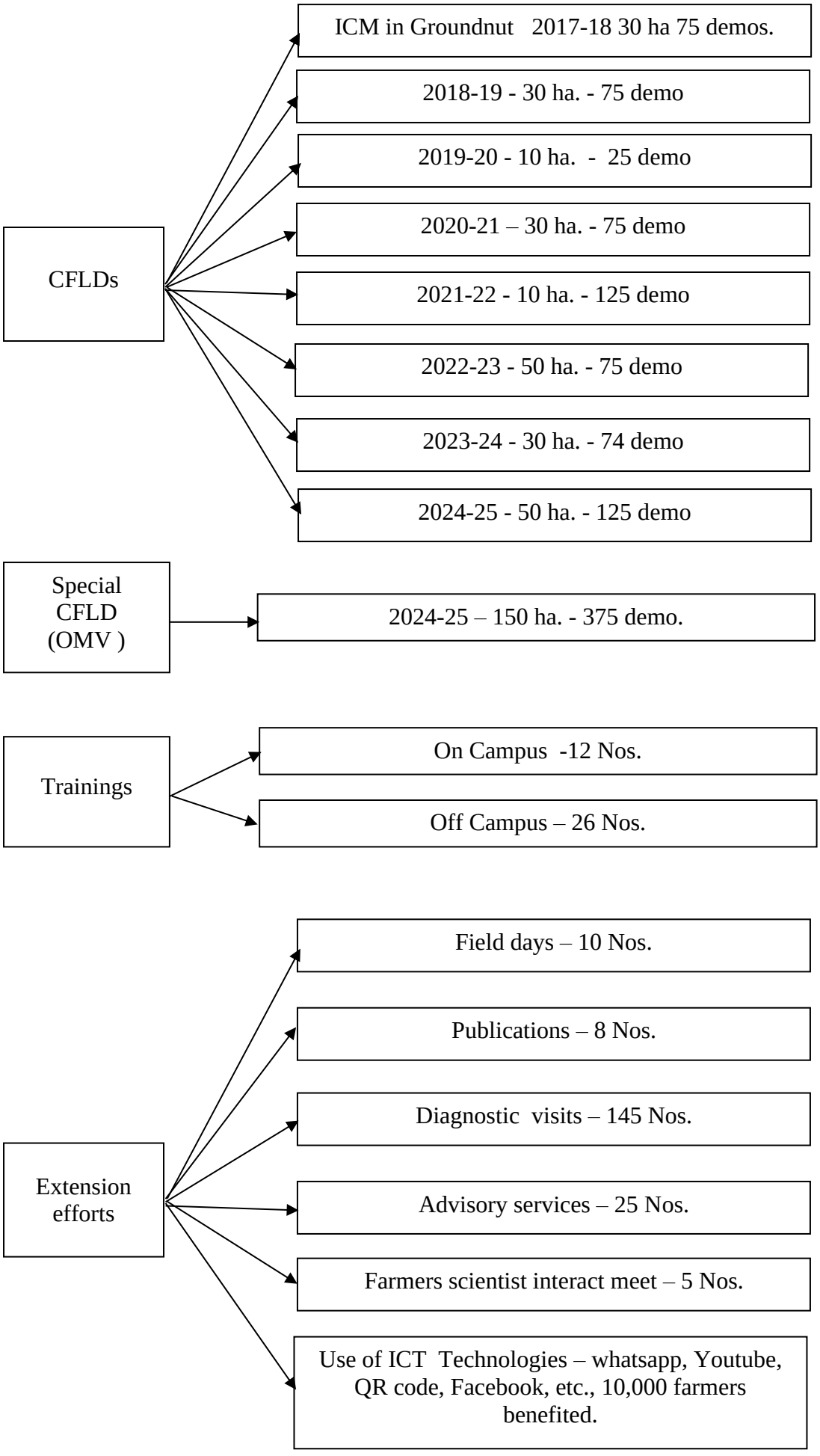
Groundnut is a predominant oilseed crop in Ariyalur District. The activation being taken during kharif and Rabi seasons. 80% of the crop being cultivated under immigrated condition remain 20% in rainfed. Major season is Rabi, the cultivation taken in an area of 28,000 ha.

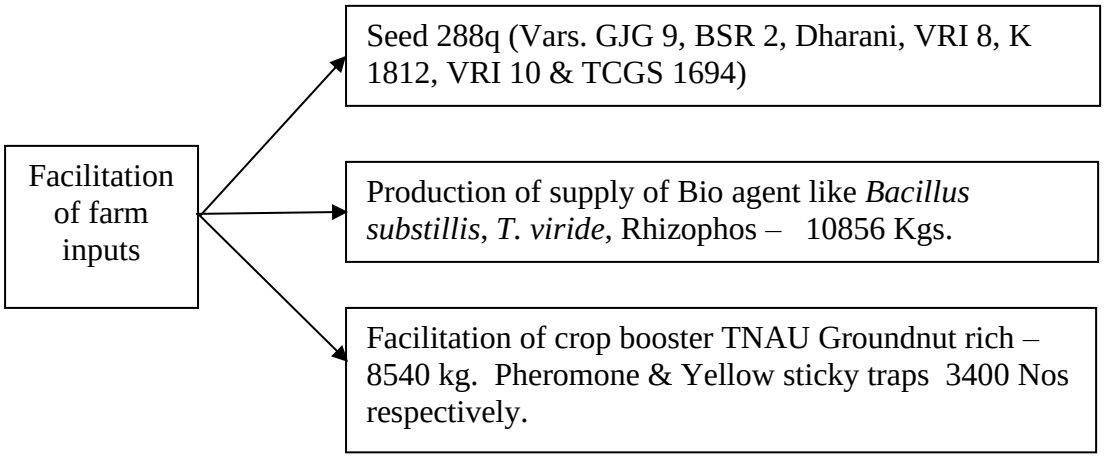
The productivity in 19.5 q/ha when compared to potential yield of 22q/ha when cheque to various problems.

1. Repeated cultivation of existing low yield (15.0q/ha) disease susceptible groundnut varieties.
2. Non adoption of proper seed rate 9200kg/ha instead of 150kg/ha)
3. Non adoption of seed treatment activity and use bio control agents.
4. Tikka lead spot (Early & late) and dry root lot disease incidents comes yield loss upto 25% and 15% respectively.
5. Non adoption of Micro nutrients foliar spray during peak harvesting and pod formation stages.
6. Non adoption of soil test based fertilizer application, weed management, IPM, etc.

ICAR-KVK, Ariyalur district taken services of efforts through us mandated activities to reduce these problems and get higher productivity in Groundnut and also enhanced income of the farmers. The services of interventions implemented are depicted in flow chart. To tackle the above problems.




CFLDs
ICM in Groundnut 2017-18 30 ha 75 demos.
2018-19 - 30 ha. - 75 demo
2019-20 - 10 ha. - 25 demo
2020-21 – 30 ha. - 75 demo
2021-22 - 10 ha. - 125 demo
2022-23 - 50 ha. - 75 demo
2023-24 - 30 ha. - 74 demo
2024-25 - 50 ha. - 125 demo
Special CFLD (OMV)
2024-25 – 150 ha. - 375 demo.
Trainings
On Campus -12 Nos.
Off Campus – 26 Nos.
Extension efforts
Field days – 10 Nos.
Publications – 8 Nos.
Diagnostic visits – 145 Nos.
Advisory services – 25 Nos.
Farmers scientist interact meet – 5 Nos.
Use of ICT Technologies – whatsapp, Youtube, QR code, Facebook, etc., 10,000 farmers benefited.



Output

By adopting the KVK Mandated activities like OFT, FLD, Trainings and other extension activities the ideal ICM package of technologies were taught to farmers of the district paved the way for improved productivity level along the economic benefits. The details are given below.

S.No	Intervention through	Productivity (q/ha)			Increased income/ha
		From	To	% yield increase	
1	OFT	16.5	19.3	17.00	63500
2	FLD	17.1	20.7	21.05	74600
3	CFLD	17.5	22.02	25.85	86300

It was estimated that there was a reduction of cost of cultivation to the tune of Rs. 13500/ha by adoption of improved cultivation practices.

It was also estimated that the average yield enhancement obtained by the efforts of KVK was 530 kg/ha (before intervention – 1650 kg/ha; after KVK interventions – 2180 kg/ha; 32% increase)

Outcome

S.No	Technologies	Horizontal spread to neighboring village	Area
1	ICM in Groundnut	45	11400 ha

- The nitrogen fixation of 100 kg /ha from Groundnut and 150 kg /ha from cultivation of Blackgram were achieved.
- By groundnut cultivation farmers reaped a maximum net income of Rs.58,400/ha. before KVK intervention. Currently the farmers are getting an average income of 86,300 (47 % increase) and they also getting additional income of 18,000 from Blackgram being grown as intercrop.

Impact

- The district production obtained by getting an additional yield of 6042 MT / year which paved the additional income inflow of Rs. 48.3 Crores / year benefitting around 9000 farmers belongs to Ariyalur District.
- 18 Groundnut seed growers have been promoted by KVK and supplying good quality seeds to department and in-turn to supply District Farmers.

Linkages

Functional linkage with different organizations

ICAR-KVK, Hosted by CREED is having good rapport and functional linkage with all the stakeholders. The organization and its nature of linkage made are given below.

ICAR Institutes/ NARS

S.No	Name of Organization	Nature of linkage
1	ICAR - National Research Centre for Banana (NRCB), Trichy	Conducting Farmers Training, Sponsored training programmes, exposure visits, disseminating NRCB varieties and technologies through OFTs' and FLDs', member of SAC, serves as a resource person for training programmes.
2	ICAR - Sugarcane Breeding Institute (SBI), Coimbatore	Disseminating SBI released varieties, technologies at Ariyalur district through OFTs, FLDs, Exposure visits
3	ICAR - Indian Institute of Horticultural Research, Bangalore	Introduction of IIHR newly released varieties, technologies through demonstration, exposure visits and trainings
4	ICAR – Directorate of Cashew Research (DCR), Puthur	Obtaining new technologies for Cashew and exposure visits
5	Directorate of Groundnut Research, Junagadh, Gujarat	Popularization of new varieties through OFT, FLD and CFLD programmes
6	ICFR –IFGTB	Conducting sponsored mela, trainings and obtaining technologies
7	NIFTEM - Tanjore	Obtaining value addition technologies through trainings and visits
8	CRRI, Cuttack	Introducing Bio fortified variety

Tamil Nadu Agriculture University (TNAU), Coimbatore and Research Stations

S.No	Name of Organization	Nature of linkage
1	TNAU, Coimbatore	Introducing new varieties through OFT, FLDs, technical guidance, Crop boosters, Mineral mixtures & biofertilizers, Exposure visit, publishing technologies in TNAU Magazines, resource person to trainings, SAC member, monitoring by DEE

2	Tamil Nadu Rice Research Institute (TRRI), Aduthurai	Introducing new varieties through OFT, FLDs, technical guidance
3	Regional Research Station (RRS), Virudhachalam	Introducing new cashew varieties, supply of planting materials, serves as resource person, exposure visits and disseminate new groundnut and Sesame varieties under OFT,FLD and CFLDs programmes
4	Cotton Research Station (CRS), Veppanthattai	Technologies dissemination through OFT and FLDs, trainings, diagnostic visits with CRS scientists
5	National Pulse Research Centre, Vamban	Supply of seed materials

With other KVKs

S.No	Name of Organization	Nature of linkage
1	KVK, Karur	Exposure visits, serve as resource person, cross learning, supply of inputs, obtaining technologies
2	KVK, Perambalur	
3	KVK, Trichy	
4	KVK, Cuddalore	
5	KVK, Namakkal	
6	KVK, Salem	
7	KVK, Erode	
8	KVK, Thirunelveli	
9	KVK, Madurai	

Tamil Nadu Veterinary and Animal Sciences University *(*TANUVAS*),* Chennai

S.No	Name of Organization	Nature of linkage
1	TANUVAS, Chennai	Obtaining technologies for FLD and OFTs and input purchase, Publishing articles in TANUVAS magazine
2	Veterinary University Training Research Centre (VUTRC), Perambalur	Scientist from VUTRC, Perambalur Serves as resource person, SAC Members, purchase of book materials

Linkage with Line Departments

S.No	Name of Organization	Nature of linkage
1	Department of Agriculture	• Conducting Farmers Training at village level, Joint • diagnostic visits, ATMA sponsored training programmes. • Monthly Zonal meeting to identify the season oriented • problem, exposure visits, exhibitions, Kisan Mela, FFS, collection of district profiles, facilitating farmers to avail • departmental subsidy schemes, MSDA schemes

		• Grievance day participation for monthly technology delivery
2	Department of Horticulture	Collection of District Profile on Horticultural crop production, NADP training programme, Precision farming training programme, facilitating farmers to avail schemes
3	Agricultural Engineering Department	Trainings on mechanization, facilitating farmers to avail subsidy and to hire farm machineries
4	Department of Animal Husbandry	Azolla seed supply for Free Goat and Dairy animal supply scheme beneficiaries, training for beneficiaries of the scheme, animal health camps, serves as resource person, identification of farmers for hydrophonics scheme
5	Department of fisheries	Identification of beneficiaries for Fish pond scheme
6	Department of Sericulture	Training for farmers
7	Department of Forestry	Supply of tree saplings , Tree mela

Financial Institutions

S.No	Name of Organization	Nature of linkage
1	NABARD	Supporting two FPOs, capacity building programmes, exposure visits, MEDP trainings, Jal Dhoot programme, facilitating DEDS scheme, funding for publications, trainings
2	Tamil Nadu Grama Bank	RY-RY group account and credit linkages to rural youth, training certificate from KVK to avail agri loans
3	State Bank of India	Credit linkages, SAC member, participating in trainings to create awareness on schemes

Skill Development Organizations

S.No	Name of Organization	Nature of linkage
1	National Skill Development Corporation (NSDC) and ASCI	Long duration skill training programmes to rural youth
2	SBI – Rural Self Employment Training Institute (RSETI)	Conducting vocational trainings, exposure visits, women SHG, credit linkages
3	Mahalir Thittam (Women Development Corporation)	Capacity building programmes to SHG members, Community resource persons
4	National Commission for Women, New Delhi	Workshop to empower farm women for livelihood security

Science &Technology organizations

S.No	Name of Organization	Nature of linkage
1	Department of Science and Technology (DST), New Delhi	Special Projects to empower SC/ST farmers of Ariyalur district

CSR Companies

S.No	Name of Organization	Nature of linkage
1	RAMCO Cement	Problem analysis around cement factory areas, trainings to SHG members, farmers, technical support to CSR farmers club
2	Ultra Tech Cement	
3	Dalmia Cement	

Non Government Organizations (NGO)

S.No	Name of Organization	Nature of linkage
1	Reliance Foundation	Trainings, Collaborative programmes, TV programmes, Jio chats, voice messages
2	RISE	Trainings to SHG members, college students
3	JP Trust	
4	CREATE	
5	OSAI	

Technology Dissemination through mass media

S.No	Name of Organization	Nature of linkage
1	AIR, Trichy	Disseminating technologies through radio talk by farmers and KVK scientists
2	AIR, Karaikal	
3	Doordharshan	Disseminating technologies through TV programmes Pon Vilaiyum Boomi and Malarum Boomi by farmers and KVK scientists
4	Makkal TV	
5	Dailies and Magazines	Publishing training details and popular articles, post event news

AWARDS and RECOGNITIONS

NIL

Important Visitors to KVKs during 2024

Director, ICAR-ATARI, Hyderabad discussed with farmer regarding Scheme Connect activity on 22.07.2024

Chief General Manager, NABARD inaugurated Tribal Development Project on 22.07.2024

Regional Head, APEDA, Chennai delivered lecture on APEDA activity and export procedure for produced crop during Radio Kisan Diwas programme conducted by KVK on

Programme Head, All India Radio, Karaikal recording Radio Talk on

Lead Bank Manager and Director, SBI-RSETI participated in the Validictory functon of Mushroom traing

Assistant Genral Manager, NABARD, Trichy inaugurated Vocational training programme on Mushroom

PHOTOS

1. Training

On campus training on Climate smart agriculture

On campus training on Entrepreneurship development programme

Off campus training on ICM in Groundnut cultivation

Off campus training on Natural Farming to Krishi Sakhis of Mahalir Thittam CRPs

Off campus training on IPDM in Vegetable crop

On campus training on Advanced technology in Goat rearing

2. OFT and FLD Programmes

Method demonstration of TANU Coton Plus foliar spray under OFT on INM in Cotton programme

Seed treatment with bio control agent in Ragi in OFT on Assessment of Ragi varieties

Scientific field visit of OFT on Fish poly culture

Scientific field visit on FLD on green variety WGG 42

Field observation of FLD on Organic nutrienet management in improve Kavuni CO57 Paddy

Field visit of FLD on TKM 15 Paddy variety under direct sown semi dry conditoin

3. Extension Activity

Group meeting regarding Entrepreneurship development programme at Rayampuram village

Cnducted Participatory Rural Appraisal at Pattanamkuruchi village

Exhibition at KVK, Kallakuruchi

Conducted Field day on FLD on Direct sown paddy

Conducted Stakeholders meet at Ariyalur

Conducted Animal Health Camp at Vanthirayanpattinam village

Photo for Annual Zonal Award

FLD on TKM 15 Paddy variety under direct sown semi dry condition

High resolution jpg format. Also to be uploaded in the link

Annexure – 1

Proceeding of SAC meeting minutes

Minutes of Twelfth Scientific Advisory Committee Meeting held on 05.03.2025

Twelfth Scientific Advisory Committee meeting of ICAR - CREED Krishi Vigyan Kendra, Ariyalur was held at the premises of ICAR KVK, Ariyalur District on 05.03.2025 by 10.00 AM. Among 28 SAC members, 21 members presented in the meeting. The SAC meeting was started with welcome address by Dr.V.Nadanasabapathy, Chairman, ICAR- KVK and gave brief introduction about KVK activities.

Dr.G.Alagukannan, Senior Scientist and Head presented the report of activities carried out in past year to SAC Members. After submission of report, the Scientific Advisory Committee members were interacted and gave their valuable suggestions to improve and strengthen the KVK activities. After interaction, Chairman briefed all the suggestions given by Scientific Advisory Committee members and gave assurance to execute the suggestions given. As a special event, a book entitled "Fodder crop management for dairy animal" has been released by dignitaries.

1. Dr. A.Bhaskaran, Principal Scientist, ATARI, Hyderabad

1. KVK should concentrate on revenue generation through seed production. Organic seed productions for organic farmers fetch good income and also try pure variety seed production without any mixed varieties.
2. Attract external funds from CSR, NABARD to establish soil testing lab.
3. Establish sales counter in city obtaining external funds.
4. Farm demo units may be increased i.e. atleast 2 or 3 demo units per year.
5. Contribute to increase district productivity in crops like Paddy, Maize, Cotton, Groundnut, Sugarcane, Milk production. Collect details from both successful and unsuccessful farmers like practices, varieties, technologies they follow. Analyze the gap and propose it for upcoming action plan.
6. Submit Expression of Interest and proposal for ARYA project.
7. Include atleast one programme per year on "Production Management'' which should includes livestock components also i.e. enhancement of productivity in crop/ animal in the district by suitable technologies.
8. Scripted interview of 4 successful farmers with full technologies may be broadcasted in AIR.

2. Director, NRCB, Trichy

1. District specific varieties may be promoted like ADT-56, ADT - 59.
2. Contact and get technologies from DCR, Puthur specially for value addition from Cashew apple.
3. Contact IIPR, Kanpur and introduce new varieties through OFTs and concentrate on YMV resistant Black gram varieties.
4. Integrated farming system is highly suitable for this district. Farmers may bring to visit IFS model developed by NRCB, Trichy.
5. Concentrate on revenue generation through paid trainings and by selling technological inputs.
6. Connect with other institution in district like Dalmia, SHGs to reach more farmers in district.

7. Branding & Marketing is still difficult for farmers. Awareness on e-commerce may be given.

3. Director I/C, Tamil Nadu Rice Research Institute, Aduthurai

1. For reach of successful technology, OFT may be taken to FLD next year & FLD to trainings. More newspaper messages, TV talk and radio talk on successful technologies may be given.
2. Focus on Mushroom cultivation, marketing and mainly on value addition.
3. Concentrate on seed production.
4. Take farmers to more exposure visits and trainings and convert successful farmers as a master trainer.

4. Assistant Professor, TRRI

1. New Paddy varieties - Slender variety ADT 53, 57, fine slender variety ADT-56, Bold variety ADT-59 suitable for saline soil may be introduced as alternate for ADT 37 and ADT 39.
2. ADT-56 alternate to RNR 15048 – suitable for Late Samba and Thaladi may conduct OFT.
3. Conduct FLD on IPM in Blackgram for YMV control.
4. Conduct FLD on VBN-12 (Rice follow pulses), 75 days crop – Resistant to YMV.

5. Programme Co-ordinator, KVK, Dindivanam (Nominee of DEE, TNAU)

1. Less expenditure more income for farmers is our motto. So introduce Dew gram (i.e) 8kg seed/ acre and Rs.18000 exp/ha yields more income as alternate for Groundnut.
2. Groundnut Rich booster in liquid form is developed. So, it may be popularized.
3. Zinc and potassium mobilizing bacteria may be promoted.

6. Associate Professor, Cotton Research Station, Veppanthattai

1. Cotton area reduced from 1200 ha to 2900ha in Ariyalur District. So KVK may conduct demo on new variety VPT- 2 which is 130 days duration, suitable for machine harvest and has Long Stable Cotton.
2. Conduct demonstration on IPM in pink boll worm management (i.e) mating disruption technology)
3. All crops cultivated in 2 feet running space which are suitable for Rain hose technology like Groundnut, Blackgram and Sesame. So conduct more demos on Rain hose pipe technology.
4. KVK may join hands with CRS to give capacity building programme in water saving technology.
5. COH(M) 6, COH(M) 8, COH(M) 9, COH (M) 11 and VGIH 1 are drought tolerance Maize hybrids – conduct OFT.
6. VPT 2 is Extra Long Stable cotton. Conduct demo on this variety and we are ready to supply seed.

7. Mrs. Geetha, Joint Director of Agriculture, Dept. of Agriculture, Ariyalur

1. Groundnut is the major crop in Ariyalur District. So high yielding Gujarat varieties may be introduced.
2. YMV resistant pulse varieties may be promoted for seed production.
3. Introduce alternate Paddy variety for CO 55 as it has less grain filling.
4. Drought resistant variety for all crops may be introduced.

8. Deputy Director of Horticulture, Dept. of Horticulture, Ariyalur

1. Conduct more demonstration on value addition in Cashewnut & Cashew apple.
2. Established demo plot under grafted brinjal in KVK.
3. Conduct demonstration on drone spray in cashew crop in Sendurai block.
4. Ultra HDP Cashew plantation demo unit may be established in KVK.

9. Executive Engineer, Department of Agricultural Engineering, Ariyalur

1. More awareness and trainings on agricultural machineries and techniques / technologies to use machineries like summer ploughing.
2. Department machineries are underutilized. Create awareness on ‘’Uzhavan App’’ in all trainings.
3. Identify real entrepreneurs and link with Agricultural Engineering Department to get Value added machineries such as solar dryer, pulverizer, etc., in subsidy.
4. Create awareness on department schemes and application procedurefor subsidy schemes in all trainings.

10. Forest Range Officer, Department of Forest, Ariyalur

1. Eucalyptus, Casuarina peeled barks are used to prepare more byproducts. KVK may explore technologies & take farmers to exposure visit to briquette production unit,using saw dust/wood shavings.
2. Fodder crops may be promoted as an intercrop in Agro forest.
3. Apiculture promotion in Cashew rich areas

11. Assistant Programme Office, District Rural Development Agency

1. KVK can help in popularizing our schemes in all trainings such as tree plantation, canals construction for water management, farm pond with maximum 3 Lakh for individual, land development fund for individual,trench cutting.
2. Individual farmer who fall under small margin farmer category can apply for open well scheme.
3. Infrastructure development scheme for azolla cultivation, cow & goat shed are also there. Awareness may be created in all trainings.

12. Assistant General Manager, NABARD, Trichy Cluster

1. Cover uncovered villages with minimum 10 contact farmers in each village.
2. New technological inputs should available in KVK by all time.
3. Bankable project proposals may be issued by KVK for all agri and allied activities.
4. Organize paid courses with good content to increase income source.

13. Director, SBI – RSETI, Ariyalur

1. KVK may content support to organize training jointly.

14. Assistant Director, All India Radio, Trichy

1. KVK may give 5 minutes message on ‘’ Organic farming’’ to broadcast in Organic farming programme at 6.35 AM every Sunday.

2. 5 Minutes message on '' Water saving Technology'' to broadcast in "நீரின்றி அமையாது உலகு" programme at 6.35AM every Tuesday.
3. Create Awareness among farmers that all recorded programmes are available in YouTube.
4. Technologies which need to be popularized in mass may be given for Radio programme.
5. Nominate Best Youth farmers for 60th year celebration of AIR, Trichy.

15. Mr. Alwin, CSR Head , Dalmia Bharath foundation

1. Dalmia is ready to extend support to KVK to reach all over Ariyalur District – Our field staff may be given capacity building and use them for programmes.
2. Project proposal to mitigate burning agri wastes after harvest in Ariyalur Block.
3. New fodder varieties such as Ratoon Sorghum may be popularized.

16. Mr.Velmurugan, Farmer, Kuvagam

1. KVK must help in marketing organic produce and to get good prize for organic produce.
2. KVK may take efforts to find out suitable management practices to control flower midge in Tuberose as it poses serious loss nowadays.
3. Awareness on insurance policy available for farmers & farm labours for accidental death may be created in all training.
4. Create tie-up with any scent factories to get high income by marketing flowers directly.
5. Opportunities & tie-up with export agency to get more income.

17. Mr.Rajadurai, Poultry Entrepreneur, Azhisikudi

1. KVK may promote poultry rearing in rainfed cashew field as Ariyalur is known for ''Siruvidai'' breed and to meet out demand all over Tamilnadu.
2. KVK should help in identifying the causes of death in poultry birds and measures.
3. KVK should bring all poultry farmers in district together and conduct one meeting every month.

18. Mrs. R. Shanthi, Orgnic Farmer, Cholamadevi

1. Value addition training on Millet may be given.
2. Promote more organic farmers and give continuous support for organic farming.

19. Mrs. Uma, Cashewnut processing, Veerakan

1. KVK providing continuous support for Cashewnut processing. Extend more support in future.

List of Participants of 12th SAC Meeting

Sl.No.	Name	Designation and Department	Remarks
1.	Dr.V.Nadanasabapathy	Chairman ICAR-CREED KVK	Direct
2.	Dr.Selvaraj	Director, NRCB, Trichy	Direct
3.	Dr.A.Bhaskaran	Principal Scientist, ATRAI, Zone X, Hyderabad	Direct
4.	Dr.Thiruvarasan	Programme Coordinator, KVK, Dindivanam	Direct
5.	Dr.Arunachalam	Director (i/c), Tamil Nadu Rice Research Institute, Aduthurai	Direct
6.	Dr.Dhandapani	Associate Professor, TRRI, Aduthurai	Direct
7.	Dr.Somasundaram	Professor, CRS, Veppanthattai	Direct
8.	Mrs.Geetha	Joint Director of Agriculture, Dept. of Agriculture, Ariyalur	Direct
9.	Mr.Balamurugan	Deputy Director of Horticulture, Dept. of Horticulture, Ariyalur	Direct
10.	Er.Sivaprakash	Executive Engineer, Department of Agricultural Engineering, Ariyalur	Direct
11.	Mr.Muthumani	Forest Range Officer, Department of Forest, Ariyalur	Direct
12.	Mr.Chelladurai	Assistant Project Officer, DRDA, Ariyalur	Direct
13.	Mr.Prabhakaran	Assistant General Manager, NABARD, Trichy cluster	Direct
14.	Mr.Kumar Ramasamy	Director, SBI-RSETI, Ariyalur	Direct
15.	Mr.Chinnasamy	Assistant Director, AIR, Trichy	Direct
16.	Mr.Allwin	Manager, CSR, Dalmia Cement Foundation	Direct
17.	Mr.Velmurugan	Farmer, Kuvagam	Direct
18.	Mr.S.Rajadurai	Poultry Entrepreneur, Azhisikudi	Direct
19.	Mr.Sivasamy	Ex- Army and Retired Youth club member, Cholamadevi	Direct
20.	Mrs.R.Shanthi	Woman Organic Farmer Cholamdevi	Direct
21.	Mrs.K.Uma	Cashew processing Women Entrepreneur, Veerakkan	Direct

****