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	:	Ariyalur KVK	
records (MoU)			
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	:	Centre for Rural Education and Economic Development	
as per office records		(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 Programme	:	Dr.G.Alagukannan
Coordinator / SS&H:		
b) Residential Address:	:.	
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 (specify)	1.24
	Total	20.01

1.7. Infrastructural Development: A) Buildings

			Stage					
		Source of		Complete			Incomp	lete
S.No.	Name of building	funding	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 (add rows if required)							
	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. Oyster Mushroom-1	RF	10.08.2016	90	0.5			
	5. Cattle shed -1	RF	24.03.2020	363	3.5			
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 31.12.2020	Present status
Jeep	2020	8,00,000	11713	Good
Tractor	2020	8,00,000	180.00	Good
Power Tiller	2010	1,50,000		Not in working condition
Two wheeler(2)				
Bajaj Pulsar	2010	1,00,000	87,434	Poor condition
Bajaj Platina	2010		98,362	Poor condition

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	Good
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

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

S.No.	Date	No of Participants	Salient Recommendations
1.	23.03.2021	24	 Indicating KVK working villages in the District map and also ensure the KVK visibility all along the District by various activities of KVK. To improve KVK RF (About 1.5 lakh/ac./year.) SAC recommendation should be reflected in Action Plan 2021-2022. Kalnadai Corner KVK app should be reached to all farmers of the district. To submit the details of news on AIR app installed farmers Choose climate resilient crops to adapt to the changing climatic conditions. More concentration should be given on water management practices. Introduce less water requiring and more drought tolerant crop varieties both in agriculture and horticulture areas. Promote crops that having good market potential.

	• Promotion of FPO.
	• Proper planning and execution of agri and allied activities in DFI villages.
	• Increase IFS farming system approach in district.
	• Adoption of cluster based crop. Eg: Moringa and
	Onion
	• Scientist should update knowledge on recent technologies then and there.
	• Formation of Farmer Interest Groups.
	• Value addition in minor millets.
	• Promote commercial crops like Tapioca and Finger millet.
	 Promotion of women Entrepreneur in value
	addition
	Promote Banana based IFS system.
	• Promote and supply Banana Sakthi micronutrient among Banana growers.
	• Arrange trainings for women entrepreneurs in
	Banana value addition at NRCB campus (2-3
	• Promote NPCB app for Nematode problems during
	the training programme
	Promotion of traditional paddy varieties like
	Mapillai Samba and Kavuni types.
	• Promotion of drought tolerant cashew variety.
	• Government barren lands may be converted into
	• Introduce new Cotton variaty CO17 suitable for
	 Introduce new Cotton variety CO17 suitable for mechanized cultivation.
	• Conduct method demonstration in HDP in Cotton
	cultivation.
	• Conduct demonstration on rain hose technologies
	in Groundnut and Onion
	• Promotion of traditional Paddy varieties and minor millets.
	• To arrange market facilities for horticulture crop
	through e-trade promotion and Uzhavan app.
	• Promotion of IFS.
	• Training on cultivation of crops under rainfed
	condition and as per soil suitability.
	• Arrange the training on Livestock at VUTRC,
	Perambalur to the needy farmers
	• Use social media to promote the new technologies
	 Promote seed production in Groundput along with
	RRS seed hub project
	Promote and recommend single dose herbicide
	(Pendimathalin + Imazethapyr) @1.25 lit/ac. for

		Groundnut crop.
	•	Promote groundnut rich booster.
	•	Disseminate IFS technologies among the farmers
	•	Promote CO5 fodder single bud slips
	•	Conduct CAT programme on recent technologies
	•	Use NABSKILL portal for conduct of training
	•	Initiate SHG in value addition in Millet

* Attach a copy of SAC proceedings along with list of participants in Annexure -1

2. DETAILS OF DISTRICT (2020)

2.0. Operational jurisdiction of KVKs

District	New districts governed by the KVK after	Taluks/Tehsils and/or Mandals
	division of the district, if applicable	under the KVKs jurisdiction
Ariyalur	Not Applica	ble

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

Classification	First crop	Second crop	Third crop
Wet land	Paddy (Kuruvai) (June-Oct.)	Paddy (Thaladi) (Oct. to Feb.)	Paddy (Navarai) (Jan – May)
	Paddy (Kuruvai) (June-Oct.)	Paddy (Thaladi) (Oct. to Feb.)	Blackgram (Feb to May)
Garden land	Groundnut (Jun to Sep)	Groundnut (Oct-Jan)	Groundnut (Feb-May)
	Groundnut (Jun to Sep)	Vegetable (Oct – Jan)	Blackgram (Feb-May)
	Groundnut (Jun to Sep)	Groundnut (Oct – Jan)	Blackgram (Feb-May)
	Fallow	Maize (Aug-Sep)	Fallow
Dry land	Fallow	Cotton (Aug-Sep)	Fallow
	Fallow	Sorghum/Varagu (Aug-Sep)	Fallow

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
		semi-arid tropical with an average
		rainfall of 954 mm. The soil pH is
		ranging from 6.5 to 8.0. Ferruginous
		red loam occurs

S. No	Agro ecological situation	Characteristics
1	North Eastern portion of VIII Agro ecological Zone	The maximum precipitation is
	of India	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 in ha
1	Red Soil	Rich source of Fe, Mn, High P fixation capacity due to the	66,315
		presence of kaolinitic clay along with sesquioxides, low	
		organic matter & clay.	
2	Black Soil	More than 30% clay, Mn adding black to the soil. High CEC	49,550
		with high pH range, abundant source of Mo and Boron.	

2.4. Area, Production and Productivity of major crops cultivated in the district (or the jurisdiction as the case may be) for 2020

Kharif

S. No	Сгор	Area (ha)	Production (q)	Productivity (q/ha)
1	Paddy	9,860	42,101	45.5
2	Maize	18,239	90,756	64.1
3	Cotton	10,850	16,136	15.8
4	Black gram	6,435	5,718	8.23
5	Sorghum	1,531	3,368	22.0
6	Bajra	1,425	4,674	32.8
7	Kodo millet	285	427	15.0
8	Finger millet	35	63	18.0

Rabi

S. No	Сгор	Area (ha)	Production (q)	Productivity (q /ha)
1	Paddy	24,143	1,03,090	42.7
2	Groundnut	18,450	39,800	22.0
3	Sugarcane	7,440	6,89,865	860.9
4	Banana	167	80,160	308.3
5	Watermelon	85	23,800	357.1
6	Brinjal	122.5	24,500	500
7	Chillies	30	3,600	833.3
8	Bhendi	65.89	9,240	713.1
9	Ash gourd	30.02	6,604	454.5
10	Drumstick	1,166.25	2,33,250	500

Summer

S. No	Сгор	Area (ha)	Production (q)	Productivity (q /ha)
1	Cashew nut	30,345	13,655	4.50
2	Sesame	1,660	614	3.70

Month	Rainfall (mm)	Temp	erature°C	Relative Humidity (%)
		Maximum	Minimum	
January 2020	19.12	31.3	23.6	66.4
February 2020		32.5	25.7	73.5
March 2020		34.6	26.3	80.5
April 2020	1.10	35.4	27.3	76.7
May 2020	33.47	37.6	28.8	75.9
June 2020	94.85	38.3	27.4	58.3
July 2020	29.42	37.5	28.7	57.4
August 2020	84.38	36.2	27.3	73.9
September 2020	27.72	34.7	28.7	74.3
October 2020	204.64	34.4	27.3	72.2
November 2020	198.13	31.2	26.1	72.7
December 2020	223.44	28.4	23.7	75.7
Total	916.27	412.1	320.9	857.5

2.5. Weather data

2.6. Production and productivity of livestock, Poultry, Fisheries etc. in the district (2020)

Population	Production	Productivity
98,507	3.2 Lakh lit.	10 lit /cow
2,78,427	12.98 Lakh Kgs.	18 kg/goat
7603	23540 kg	20 kg/ Pig
90,346	58,800 kg	1kg/bird
	Population 98,507 2,78,427 7603 90,346	Population Production 98,507 3.2 Lakh lit. 2,78,427 12.98 Lakh Kgs. 7603 23540 kg 90,346 58,800 kg

Category	Area (ha.)	Production (q/ha.)	Productivity (q/ha.)
Fish	3,574	2,980.80	83.4

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	Venmankondan	2017	Paddy, Maize,	Paddy	Varietal
					Groundnut,	• Low yield in existing	Evaluation
					Drumstick, Dairy,	varieties(4.5 t/ha)	
					Goat & Poultry	• Heavy incidence of blast	
						(35%), leaf spot (27%) &	
						stem borer (25%)	
						• Increasing soil salinity (pH	
						up to 8) leads to reduction in	
						yield up to 15-20%	Variatal
						• Low yield with existing	Valletal Introduction
						• Low yield with existing	Introduction
						$\sqrt{(4.5 t/h_2)}$	
						• Wastage of water by	
						stagnation always	
						Heavy incidence of bacterial	
						leaf blight (35%), leaf spot	
						(27%) and stem borer $(25%)$	
						Groundnut	IPDM
						• Low yield due to early and	
						late Leafspot (22%)	
						• Root rot (12%) incidence	
						and thereby lack of optimum	
						plant population	
						• Heavy infestation of	
						Spodoptera (16%)	

2.7. Details of Adopted Villages (2020)

				Brinjal	Resource
				• Over irrigation/ flooding	conservation
				leads to wastage of water	
				• Leaching of nitrates below	
				the root zone	
				• Shortage of water resources	
				due to ground water	
				depletion	
				Drumstick	ICM
				Yield loss upto 30-35%	
				• Leaf webber	
				Flower shedding	
				Fruit fly damage	
				• Low income and net profit	
				(Rs.6000/ac.)	
				• Lack of awareness in value	
				addition	
	Kodalikaruppur	2018	Paddy, Maize,	Paddy	Varietal
			Groundnut,	• Low zinc content in existing	Evaluation
			Drumstick, Dairy,	paddy varieties	
			Goat & Poultry	• Lack of awareness on bio	
				fortified crop varieties	
				Paddy	IDM
				• Yield loss due to occurrence	
				of blast disease (41%)	
				• Lack of awareness on	
				precaution measures for	
				disease control	
				Paddy	ICT
				Issues in providing farm	
				specific agro advisory services	
				in time	

					Bhendi	Drudgery
					Inconvenience faced by the	reduction
					farmers during harvesting of	
					bhendi	
					Goat	Health
					• Mortality of kids during	Management
					rainy and winter season	
					• Unhygienic shed conditions	
					leads to diseases like	
					E.coli., coccidiosis & there	
					by causes mortality in kids	
					up to 10%	
		Karaikuruchi	2018	Paddy, Vegetables,	Vegetables	Prevention
				Dairy, Goat &	• Fast spreading of COVID-	Measures
				poultry	19 even at village level	
					Agricultural workers gives	
					less importance in following	
					Government guidelines	
					(Masking, Personal	
					distancing, etc.) while	
					performing instructional	
					operations	
	Jayankondam	Devamangalam	2019	Paddy, groundnut,	Tuberose	Varietal
				Blackgram,	• Low yield with existing	Evaluation
				Drumstick,	varieties	
				Tuberose,	• Heavy incidence of	
				Vegetables, Dairy	Nematode	
				,goat & Poultry	• Rotting of bulb, leaf drying	
					and death of plants	
					Poultry	Nutritional
					• Low FCR (3-5)	Management
					 High feed cost (Rs.200/kg) 	

						involved in rearing desi chicken due to long time to obtain marketing weight (1 to 1.5kg)	
			Melanikuzhi		Groundnut, Watermelon, Dairy, Goat and	 Field and Horticultural crops Labour intensive Time consumption Drudgery in manual rolling Watermelon Low yield due to Anthracnose disease 	Drudgery reduction ICM
					Poultry	 Poor flesh colour and low consumer Preference Incidence of mosaic virus 	
			Udayarpalayam	2020	Paddy, Groundnut, cashew, Blackgram, Dairy, goat & poultry	 Mushroom Less yield (200 g / kg substrate) Short shelf life (one day at ambient condition) Lack of entrepreneurship opportunity for farm women 	Varietal Evaluation
						Mushroom Farmers selling mushroom as it is sold without any value addition which earns less income.	Value addition
2	Andimadam	Andimadam	Kuvagam	2020	Cashew, Groundnut ,Marigold ,Tuberose, Dairy, goat and poultry	 Marigold Low yield in existing variety Lack of awareness on newly released public 	Varietal Evaluation

						 sector varieties High seed cost of private hybrids (Rs.2000 per 25 g) 	
3 Ariyalur		Thirumanur	K.Mettutheru	2018	Paddy, Sugarcane, vegetables, dairy, goat, Poultry and fish	 Paddy Reduction in yield due to incidence of bacterial leaf blight (22%), sheath blight (18%) & blast incidence (16%) Adoption of disease susceptible varieties like BPT 5204 	Varietal Evaluation
			Sembiyakudi	2019	Paddy, Sugarcane, vegetables, dairy, goat, Poultry and fish	 Sugarcane Low awareness on Value addition in sugarcane as jaggery Less income 	Value addition
						Dairy Burning of Sugarcane trash Shortage of fodder during summer season	Feed Management
						 Fish Poor quality and weight gain in existing fish varieties Lack of Knowledge on Improved Fish variety 	Varietal Introduction
		Ariyalur	Mallur	2020	Paddy,Sugarcane, Maize,Vegetables, Dairy, goat & Poultry	 Maize Lack of adoption of balanced nutrition Poor grain filling in cob Yield loss due to incidence of FAW (20 %) 	ICM

			Mannuzhi	2019	Paddy, Groundnut, Drumstick, Vegetables, Dairy, Goat & Poultry	 Castor and Redgram Low income (<rs.20,000 from="" ha.)="" non<br="">adoption of viable intercropping system for rainfed condition</rs.20,000> Low yield from existing varieties due to susceptibility 	Mixed cropping
						 to Redgram pod borer (16%), Castor capsule borer (18%), castor semi looper (22%) and wilt disease occurrence Cultivation of long duration varieties for rainfed condition 	
DFI v	illages						
1	Sendurai	Sendurai	Veerakkan	2019	Cashew, groundnut, Blackgram, vegetables, Dairy, goat & Poultry	 Chilli Thrips, fruit borer and flower dropping. The average damage due to Thrips is 16-23 %. The approximate yield loss is 15 % and severe incidence leads to yield loss. 	IPM
						Cashewnut • Technology transfer mechanism need to be improved to reach the individual farmers' farm holding in time, especially during COVID 19 like situation	ICT

					 Virtual tools is playing 	
					important role now days	
					• Significant number of	
					farmers are using smart	
					phone and its poor usage for	
					agricultural technologies	
					Nutrigarden	Health
					• Lack of knowledge in multi	Management
					nutritive value of greens and	
					vegetables	
					• Improper utilization of waste	
					water	
					 Increased cost of vegetables 	
					• Poor nutritional status of family	
					Fodder	Varietal
					• Low yield of existing fodder	Introduction
					(<100 t/ha.)	
					• Waste or rejection by	
					animals is high	
					 Green fodder shortage 	
					during summer season	
					• Low milk yield	
					• Unawareness of newly	
					released fodder variety	
2	Udayarpalayam	T.palur	Puliyankuzhi	2019	Groundnut	ICT
					Technology transfer	
					mechanism need to be	
					improved to reach the	
					individual farmers' farm	
					holding in time, Unavailability	
					of Information when farmer	
					need it	

Crop/Enterprise	Thrust area
Paddy	Varietal Evaluation, Varietal Introduction, IDM & ICT
Maize	Integrated Crop Management
Groundnut	IPDM & ICT
Sugarcane	Value addition
Castor and Redgram	Mixed Cropping
Vegetables	Prevention Measures & Nutritional Management & Drudgery reduction
Drumstick	Integrated Crop Management
Brinjal	Soil and water conservation
Bhendi	Drudery Reduction
Chilli	Integrated Pest management
Watermelon	Integrated Crop Management
Mushroom	Varietal Evaluation & Value addition
Fodder	Varietal Introduction
Cashewnut	ICT
Tuberose	Varietal Evaluation
Marigold	Varietal Evaluation
Dairy	Feed Management
Goat	Health Management
Poultry	Feed Management
Fish	Varietal Introduction, feed management

S.No	Activity	Target	Achievement
1.	Technologies Assessed and refined (No.)	10	10
2.	On-farm trials conducted (No.)	10	10
3.	Frontline demonstrations conducted (No.)	18	18
4.	Farmers trained (in Lakh)	0.03100	0.03437
5.	Extension Personnel trained (No.)	250	265
6.	Participants in extension activities (in Lakh)	0.20000	0.83838
7.	Production and distribution of Seed (in Quintal)	50.00	61.37
8.	Planting material produced and distributed (in Lakh)	100000	148459
9.	Live-stock strains and finger lings produced and	0.00200	0.00236
	distributed (in Lakh)		
10.	Soil samples tested by Mini Soil Testing Kit (No)	500	335
11.	Soil samples tested by Traditional Laboratory (No)		
12.	Water, plant, manure and other samples tested (No.)	200	129
13.	Mobile agro-advisory provided to farmers (No.)	30000	34278
14.	No. of Soil Health Cards issued by Mini Soil Testing	500	335
	Kits (No.)		
15.	No. of Soil Health Cards issued by Traditional		1334
	Laboratory (No.)		

Achievements of Mandated activities (1st January 2020 to 31st December 2020)

Give Salient Achievements by KVK during the year in bullet points:

- Served the farmers during Covid 19 lockdown by facilitating marketing of farm produce and pledge loan, timely technical advisories to the farmers
- Our KVK farm in 20 ha is a certified organic farm serves as model to72 organic farmers and promoting on-site input production among them
- Mixed cropping of Drumstick and Groundnut (1125 ha), Cashewnut production technologies (21,000 ha.), YMV resistant Blackgram varieties (4,042 ha), Drought tolerant Groundnut varieties (50 ha.), disease resistant Paddy varieties (10 ha.) are noteworthy to claim for large scale adoption of technologies by our KVK intervention.
- Mechanized sowing is facilitated to overcome labour shortage in Maize (900 ha), Groundnut (4,100 ha) and Paddy (580 ha).
- 220 ha of area brought under fodder crops to ensure health of animals in the District.
- 185 ha of farm ponds brought under fisheries and 276.5 tonnes fish production ensured.

- Water saving technologies like drip and sprinkler irrigation facilitated in 450 ha through department subsidies, irrigation scheduling by 'Pani-pipe' and Soil Moisture Indicator, alternate wetting and drying is being practiced in 34 ha by 162 farmers by our interventions.
- The concept of mulching and weed mat is practiced by 42 farmers in 24 ha. of Tuberose.
- Promoted Waste decomposer in 260 ha to avoid burning of crop stubbles.
- The flagship activity of KVK, Ariyalur is empowerment of rural youth and reducing migration. Rs. 10.31 lakhs mobilized to skill the youth, facilitated loan to the tune of Rs.15.78 lakhs and 45 youth self employed and created 8,197 man days/year.
- Two villages adopted under DFI concepts covering 100 farmers.
- Women empowerment interms of employment income and social status is created to 285 farm and landless women.
- Promoting Group Action by Farmers Clubs (14 Nos.), Farmers Associations (3 Nos.) and FPOs (2 Nos.) comprising of 1550 farmers.
- We could reach 34,278 farmers by mass propagation of technologies through Farmer Friend, Whatsapp, M-KISAN, Voice messages, youtube, Radio and TV talks.
- Wild animal problem is big menace in now a days and we have promoted Wild Animal Repellent (Herboliv plus) and rescued the crops in an area of 459 ha.
- Replaced 450 hand operated sprayers with battery operated sprayers to reduce drudgery.

4. TECHNICAL ACHIEVEMENTS

Details of target and achievements of mandatory activities by KVK during 2020

OFT (Technology Assessment)

No. of OFTs		Number of technologies		Number of locations (Villages)		Total no. of Trials / Replications / Beneficiaries	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
10	10	19	19	10	10	41	41

FLD (crop/enterprise/CFLDs)

No of Demonstrations		Area in ha		Number of Farmers / Beneficiaries / Replications		
Targets	Achievement	Targets	Achievement	Targets	Achievement	
18	18	40.8	40.8	148	148	

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

N	umber of Courses		Number of Participants		
Clientele	Targets	Achievement	Targets	Achievement	
Farmers and Farm	112	95	3100	3163	
Women					
Rural youth	15	10	250	274	
Extn. Functionaries	10	8	200	265	

Extension Activities

Num	ber of activities	Number of participants		
Targets	Achievement	Targets	Achievement	
1240	1821	20000	83838	

Seed Production (q)

Target	Achievement	Distributed to no. of farmers
52	61.37	532

Planting material (Nos.)

Target	Achievement	Distributed to no. of farmers
100000	148459	749

5. Technology Assessments (OFTs) in Detail

1. OFT on Assessment of Suitable Paddy varieties for high yielding during Samba season

1. Thematic area: Varietal Introduction

2. Title: Assessment of Suitable Paddy varieties for high yield during Samba season

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

4. Details of farming situation:

This comparative study was carried out through On-Farm Testing during Samba season of 2019 - 20 at Venmankondan village of T.Palur block in Ariyalur district with an objective to assess the suitable Paddy varieties for high yielding during Samba season as compared to the farmers practicing existing variety (Co-43). The Paddy nursery was raised during 1st week of September 2019 and transplanting was done during 4th week of September 2019 . Five farmers each having one acre of wet land was selected and compared with the farmers existing variety with recommended package of practices. All the trail fields have clay loamy soil with good fertility and the p^H of the soil range from 7 to 7.5.

5. Problem definition / description:

- Low Yield with existing varieties (4.5t/ha)
- Heavy incidence of blast (35%), leaf spot (27%) and stem borer (25%)
- Increasing soil salinity (pH upto 8) leads to reduction in yield upto 15-20%.

	TO1	TO2	TO3	
Varietal	Farmers Practice Variety	Cultivation of NLR	Cultivation of TKM	
Character	CO-43	34449	13	
	(TNAU 1982)	(ARS, Nellore, 2010)	(TNAU – 2016)	
Duration	135 days	125 days	130 days	
Average Yield	4.8 t/ha	6.2 t/ha	5.5t/ha	
Grain Type	Medium slender fine grain	Fine grain	Medium Slender	
Resistant to	Lodging and Moderate resistant to Blast, Brown spot & Leaf blight	Blast	Moderately resistant to stem borer, leaf folder, disease such as blast, brown spot, Rice Tungra and	
Tolerant to	Green hopper and Salt tolerant	Saline tolerant	-	
Purpose	-	High yielding	High Yielding	

6. Technology Assessed:

7. Critical inputs given:

Name of critical input	Quantity/Trial (0.4ha)	Value (Rs.)			
NLR 34449 Paddy seed	12 kg @ Rs.30/kg	360			
TKM 13 Paddy seed	12 kg @ Rs.30/kg	360			
Pseudomonas fluorescens	1 kg @ Rs.120/kg	120			
Field board	1 No @ Rs.400/ No	400			
Total 1,240					
Rs.1,240 * 5 = Rs.6,200					

8. Results:

Table 1: Yield and yield contributing characters of different varieties assesse

Technology Option	No. of trials	No. of plants/sq.m	No. of productive tillers/hill	Green horn caterpillar incidence (%)	PDI of blast	Yield (q/ha)	Straw yield (t/ha)
Technology 1 (Farmers' Practice)		24	42	23	22	46.3	5.42
Technology 2 (NLR 34449)	5	18	48	18	10	50.4	5.85
Technology 3 (TKM 13)		18	63	11	12	52.8	6.17

Table 2: Economics of different Paddy varieties assessed

Technology option	Gross Cost (Rs.)	Gross Income (Rs.)	Net Income (Rs.)	BCR	Marketability
Farmers practice	45,000	97,700	52,700	2.17	Good
NLR 34449	48,750	1,11,010	62,260	2.28	Moderate
TKM 13	46,250	1,20,585	74,335	2.61	Good

Description of the results:

This trial was conducted to assess the performance of suitable Paddy varieties with farmers existing variety during Samba season 2019 (September 2019 to 1st December 2019). The results showed that Paddy variety TKM 13 is better in production related parameters and recorded highest straw yield (5.25 t/ha) compared to other two varieties. In this trail, the TO3 recorded the highest net return of Rs.74335 with the BCR of 2.61 than TO2 (net return Rs.62260 and BCR 2.28) and farmers practicing existing variety.

The performance of the TO3 was very good in terms of higher productive tillers (63/hill), less Green horn pillar incidence (11%), moderate PDI of blast (12%) and good straw quality followed by TO2 and farmers existing variety. The grain yield was 14 percentage higher in TKM 13 variety followed by NLR 34449 over Co 43.Market preference is good for TKM 13 variety than NLR 34449.

Constraints faced: Nil

9. Feedback of the farmers involved:

- The growth and yield of TKM 13 variety and its straw quality is best than other two varieties which is very suitable for Samba season.
- TKM 13 has less pest and disease problems compared to NLR 34449 and CO-43.
- The merchants interested in buying TKM 13 Paddy.
- NLR 34449 has low cooking quality than TKM 13 and not delicious when compared to TKM 13 and CO-43

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

The incidence of BLB and sheath blight diseases is very less in TKM 13 Paddy variety. This variety is good for Samba season.

2. OFT on Assessment of Suitable Bio fortified Paddy varieties for Ariyalur District

- 1. Thematic area: Varietal Introduction
- 2. Title: Assessment of Suitable of Bio fortified Paddy varieties for Ariyalur District
- 3. Scientists involved: SMS (Agronomy), SMS (Home Science)

4. Details of farming situation:

This study was carried out through On-Farm Testing during Samba season of 2019 at Kodali Karuppur village of T.Palur block in Ariyalur district. The objective is to assess the suitability of Bio fortified Paddy variety compared to the farmers practicing existing variety. The Bio fortified Paddy variety nursery were raised during 2^{nd} week of September and transplanted 1^{st} week of October 2019. Five farmers each having one acre of wet land with good fertile clay soil and the pH range of the soil was 6.5 - 7.5. All other package of practices were uniformly adopted.

5. Problem definition / description:

- Low Zinc content (10-13 ppm) in existing Paddy variety
- Lack of awareness of bio fortified crop varieties.

6. Technology Assessed:

	TO1	TO2		
Varietal Character	Farmers Practice Variety CO-43	Cultivation of DRR Dhan - 45		
	(TNAU 1982)	(IIRR, 2015)		
Duration	135 days	125 -130 days		
Average Yield	4.8 t/ha	5 t/ha		
Grain Type	Medium slender	Medium slender		
Zinc value	13.5 ppm	22.6 ppm		

7. Critical inputs given:

Name of critical input	Quantity/Trial (0.4ha)	Value (Rs.)			
DRR Dhan 45 Paddy seed	12 kg @ Rs.50/kg	600			
Pseudomonas fluorescens	1 kg @ Rs.120/kg	120			
Soil sample analysis	1 sample @ R.100/sample	100			
Field board	1 No @ Rs.400/ No	400			
Total 1,220					
Area – 2 ha. Rs.1,220 * 5 = Rs.6,100					

8. Results:

Table 1: Yield and yield contributing characters of Bio fortified variety DRR Dhan 45 and Co 43.

Technology Option	No. of trials	No. of plants/sq.m	No. of productive tillers/hill	Onion incidence (%)	PDI of BLB	PDI of false smut	Grain Yield (q/ha)
Technology 1		26	46	18	16	12	45.7
(Farmers Practice)	5						
Technology	5	19	55	4	8	10	46.5
2(DRR Dhan - 45)							

Table 2: Economics of different Paddy varieties assessed

Technology option	Gross Cost (Rs.)	Gross Income (Rs.)	Net Income (Rs.)	BCR	Marketability
Farmers	55750	102060	46310	1.83	Good
practice					
DRR Dhan 45	48750	106080	57330	2.18	Good

Description of the results:

This trial was conducted to assess the suitability of Bio fortified Paddy variety with farmers existing variety during Samba season 2019 (September 2019 to 1st week of January 2019). The results showed that the Bio fortified Paddy variety DRR Dhan 45 is good in production related parameters followed by farmers existing variety C0-43. In this trial, TO2 recorded the highest net return of Rs. 57330/ha with BCR of 2.18 than TO1 (Rs. 46310 and 1.83 respectively). The performance of the TO2 showed very high tolerance to onion gallmidge (only 4% incidence) than farmers existing variety (18%) and good resistance to Bacterial leaf blight disease (8% incidence) than farmers existing variety (16%). The grain yield was 19 percentage higher in DRR Dhan 45 Paddy variety than farmers existing variety co43.

Constraints faced: Nil

9. Feedback of the farmers involved:

- The growth of DRR Dhan 45 variety and plant health is very good than existing variety Co43.
- Very low incidence of Onion gallmidge than other local variety which causes reduced cost of cultivation in terms of spraying scheduled pesticide.
- Cooking quality is very good (highly tasty) and good keeping quality.

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

- DRR Dhan 45 Bio fortified Paddy variety is more suitable for Ariyalur district.
- Suggested for cultivation throughout the district for own consumption to secure the nutritional requirements particularly Zinc which is highly required for body immune system.

3. OFT on Assessment of Management Strategies to Contain Blast disease in Paddy

- 1. Thematic area: Integrated Disease Management
- 2. Title: Assessment of Management Strategies to Contain Blast disease in Paddy
- 3. Scientists involved: SMS (Plant Protection), SMS (Agronomy), SMS (Agrl. Extn)

4. Details of farming situation:

The study was carried out through On Farm Testing during Samba season of 2019 at Kodali Karuppur Village in Ariyalur district with an objective to assess the management strategies of Paddy blast under irrigated condition. During the last two years it was observed that the incidence of blast disease was the major problem and farmers encountered the yield loss. In this area, Paddy crop sown during second week of October and harvested during 1st week January. Totally three farmers each having one acre of Paddy was selected and compared farmers practice with the recommended package of practices. Application of Carbendazim and Mancozeb was the practice followed by farmers.

5. Problem definition / description:

- Appearance of eye shaped spots on leaves and it later affects boot leaf.
- Blast disease incidence at tillering and grain filling stage.
- Yield reduction to the tune of 26% recorded in the proposed area.

6. Technology Assessed:

TO1	TO2	TO3		
Farmers Practice	IARI, 2012	TNAU, 2012		
Application of Carbendazim and	Seed treatment with bio	Seed treatment with bio		
Mancozeb at the rate of 2g/lit of	fungicide like <i>T.viride</i>	fungicide <i>T.viride</i> @10g/kg		
water twice at tillering and pre	@10g/kg of seed and 75	seed and basal application of		
flowering stage.	kg/ha of neem cake as basal	1 Pseudomonas fluorescens at		
	application. Liquid	the rate of 2.5 kg enriched in		
	Pseudomonas spray @2ml/lit	70 kg Farm Yard manure/ha.		
	of water twice at 45 th and 72 nd	Foliar spraying of		
	days after transplanting	Pseudomonas (Powder form)		
		@4g/lit. of water at 45 th day		
		after transplanting		

7. Critical inputs given:

Name of critical input	Quantity/Trial (0.4ha)	Value (Rs.)			
Liquid Pseudomonas	1.5 lit @ Rs.200/litre	300			
Pseudomonas fluorescens talc	1.5 kg @ Rs.100/kg	150			
based					
Neem Cake	30 kg @ Rs.45/kg	1350			
Field board	1 No @ Rs.400/ No	400			
Total 2200					
Area – 2 ha. Rs.2200 * 5 = Rs.11,000					

8. Results:

Table 1: Yield and yield contributing parameters of Paddy due to the different blast containing measures

Technology Option	No. of trials	No. of productive tillers / plant	PDI of Blast	Yield (q/ha)	Straw yield (t/ha.)
Technology 1		47	24	50.5	5.25
(Farmer Practice)					
Technology 2 (IARI,	5	60	14	56.8	5.55
2012)	5				
Technology 3 (TNAU, 2012)		54	18	54.5	5.31

Table 2 : Economics of different Paddy varieties assessed

Technology option	Gross cost (Rs.)	Gross Income (Rs.)	Net Income (Rs.)	BCR
Technology 1	54,760	95,950	41,190	1.75
(Farmer Practice)				
Technology 2	57,840	1,07,920	50,080	1.87
(IARI, 2012)				
Technology 3	56,926	1,03,550	46,624	1.82
(TNAU, 2012)				

Description of the results:

The results of after trial showed that the TO2 i.e., seed treatment with *T.viride*, basal application of neem cake @250 kg/ha. and foliar spray of liquid *Pseudomonas* @2ml/lit. of water on 45^{th} and 72^{nd} days after transplanting showed its superiority in containing blast disease with present disease index of 14 while it was 18 and 24 in the case of TO3 and Farmer practice respectively. Correspondingly there was the difference in yield of both the grain (56.8 q/ha.) and straw (5.55 t/ha.) and it was followed by TO3 as it recorded 54.5 q/ha. of grain and 5.31 t/ha. of straw. It is concluded that TO2 i.e. spray of liquid *Pseudomonas* is adjudged as superior in controlling blast disease in paddy as it recorded the BCR of 1 : 1.87 while it was 1: 1.75 in the case of farmer practice.

9. Feedback of the farmers involved:

- We could see the less disease problem in liquid *Pseudomonas* sprayed field.
- The technology is simple, easy to do, easily available at cheap rate.

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

Liquid Pseudomonas works well in controlling blast disease in paddy.

4. OFT on Assessment of Marigold varieties for higher yield

- 1. Thematic area: Varietal Introduction
- 2. Title: Assessment of Marigold varieties for higher yield
- 3. Scientists involved: SMS (Horticulture) and SMS (Plant Protection)

4. Details of farming situation:

An On Farm Testing was carried out during the Rabi summer season of 2019 at Kuvagam village in Ariyalur district with an objective to assess the performance of Marigold varieties for higher yield under irrigated conditions. Marigold crop grows well in soil pH of 7.0 to 7.5. During the trial period a temperature range of 20°C to 33°C was observed in Marigold field. The soil of the experimental site was red loamy in its texture with a soil pH of 7.2. The cuttings of Marigold were purchased from ICAR-IIHR, Hesarghata, Bangalore and planted during the 1st week of February, 2020 and harvested during 2nd week of April, 2020.

5. Problem definition / description:

- Low yield in existing variety Victor-2 (20 t/ha).
- Short petiole, small flower size and dull yellow colour.
- Lack of awareness on newly released public sector varieties.

6. Technology Assessed:

	TO1	TO2	TO3
Varietal	Farmers Practice	Cultivation of	Cultivation of
Character	Cultivation of Local	Arka Bangara	Arka Agni
	Variety	(IIHR, Bangalore)	(IIHR, Bangalore)
Duration	85 days	85-90 days	85 days
Average Yield	25t/ha	25 – 30 t/ha	30 t/ha

7. Critical inputs given:

Name of critical input	Quantity/Trial (0.4ha)	Value (Rs.)		
Arka Bangara Rooted cuttings	320 Nos. @ Rs.2.5/cuttings	800		
Arka Agni Rooted cuttings	320 Nos. @ Rs. 2.5/cuttings	800		
Pseudomonas fluorescens	1 kg @ Rs.120/kg	120		
Soil sample analysis	1 sample @ R.100/sample	100		
Field board	1 No @ Rs.400/ No	400		
	Total	2,220		
Area – 2 ha. Rs.2,220 * 3 = Rs.6,660				

8. Results:

Table 1: Yield economic and yield contributing characters of different Marigold varieties and performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Flower borer incidence %
Technology 1 (Farmers		201.3	15
Practice)	2		
Technology 2(Arka Bangara 2)	5	251.3	11.5
Technology 3(Arka Agni)		231.2	12

Technology option	Gross Cost (Rs.)	Gross Income (Rs.)	Net Income (Rs.)	BCR	Marketability
Technology 1	91,496	2,01,333	1,09,836	2.2	Good
(Farmers					
Practice)					
Technology	96,770	2,51,333	1,54,560	2.6	Excellent
2(Arka					
Bangara 2)					
Technology	96,696	2,31,200	1,34,500	2.39	Good
3(Arka Agni)					

Table 2: Economics of different marigold varieties assessed

Description of the results:

The trial has been conducted to check the performance of ICAR IIHR released varieties with farmer's cultivation of private hybrids during Rabi summer 2020 (February, 2020 to April, 2020). The results showed that Arka Bangara-2 is better in yield and production related parameters like Flower borer incidence and market preference. Arka Bangara 2 recorded the flower yield of 251.3 q/ha and it was followed by Arka Agni 231.2 q/ha and it was followed by farmers practice 201.3 q/ha. The market preference is excellence for Arka bangara-2 flower as its color and size are better than the other varieties. The Arka bangara-2 flower is bright yellow color and the Arka Agni flower color is yellowish red and farmers practice Victor 2 flower color. In this trial, the Arka bangara-2 variety recorded the highest net return of Rs.1,54,560 with the BCR of 1:2.6 than Arka Agni and farmers practice. So, the performance of Arka bangara-2 was good. Incidence of flower borer was very less (11.5%) in Arka bangara-2 compared to Arka Agni and the variety cultivated by the farmers.

Constraints faced:

- The fluctuation of the market price for Marigold flowers from Rs.10 to Rs.50/kg is the only constraints in the cultivation of Marigold.
- The timely availability of planting materials is also difficult.

9. Feedback of the farmers involved:

- Market preference is higher for the yellow colour flower of Arka bangara-2 variety and it was less for yellowish red colour flower variety Arka Agni.
- Higher yield is observed in Arka bangara-2 than other two varieties.

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

- Consumers prefer the yellow colour Marigold varieties Arka bangara-2.
- Flower borer pest incidence is less in Arka bangara-2 variety of Marigold (11.5%).

5. OFT on Assessment of suitable Tuberose varieties for higher yield

1. Thematic area: Varietal evaluation

- 2. Title: Assessment of suitable Tuberose varieties for higher yield
- 3. Scientists involved: SMS (Horticulture) and SMS (Plant Protection)

4. Details of farming situation:

An on farm testing was carried out during the Kharif season of the year 2020 at Devamangalam village in Ariyalur district with an objective to assess the performance of high yielding varieties of Tuberose under irrigated conditions. Tuberose crop grows well in soil pH of 6.0 to 7.5. During the trial period a temperature range of 20°C to 38°C was observed in Tuberose field. The soil of the experimental site was red loamy in its texture with a soil pH of 7.2. The bulbs of tuberose were purchased from ICAR-IIHR, Hesarghata, Bangalore sown during the 1st week of september, 2019 and harvested during 1st week of March, 2020.

5. Problem definition / description:

Low yield with existing varieties (10 t/ha) and heavy incidence of Nematode and thereby yield reduction. Rotting of bulb due to basal rot disease and leaf drying and death of plants by leaf spot is noticed. There is a scope for increasing the tuberose yield by conducting this OFT to assess the two high yielding varieties.

Farmers practice	TO 1	ТО 2
Cultivation of local variety	Cultivation of Arka Prajwal	Cultivation of Arka Nirantra

6. Technology Assessed:

Name of critical input	Quantity/Trial	Value (Rs.)		
Arka Nirantra bulb	50kg. @ Rs.50/kg	2,500		
Arka Prajwal bulb	50kg. @ Rs.50/kg	2,500		
T.viride	500g@ Rs.120/kg	60		
Pseudomonas fluorescence	500g @ Rs.120/kg	60		
Field Board	1 No. @Rs400/No	400		
	Total	5,520		
Rs.5,520 x 3 trials = Rs.16,560				

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

9. Results:

Table 1: Yield and yield contributing characters of different treatments assessed

Technology Option	No. of trials	Yield q/ha
Farmers' Practice		79.3
TO 1	3	104.6
TO 2		89.8

Table 2: Economics of different treatments assessed

Technology	Gross Cost(Rs.)	Gross	Net	BCR	Marketability
Option		mcomc(RS.)	medine(RS.)		
FP	102360	237840	135480	2.32	Good
TO 1	104150	313500	209350	3.01	Good
TO 2	99740	269250	169510	2.70	Good

Description of the results:

The technological package included in TO1 contributed better yield than the TO2 and FP. The higher yield of 104.6 q/ha was recorded in TO1 where ever it was 897.5 q/ha only in the case of farmers practice. BC ratio was also the highest (3.01) in the case of TO1 and it was followed by TO2 (2.70)

Constraints faced: Nil

9. Feed back of the farmers involved:

- The higher yield of tuberose in Prajwal and low nematode problem in Nirantara.
- Reduced the purchase of excess chemical which leads to reduction in cost of cultivation.
- The flower quality is better than our regular practice adopted in field in prajwal than Arka Nirantara and local.

10. Feed back to the scientist who developed the technology - Nil

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6.OFT on Assessment of disease resistant high yielding paddy varieties in samba season

- 1. Thematic area: Varietal Evaluation
- 2. Title: Assessment of disease resistant high yielding paddy varieties in Samba season
- 3. Scientists involved: SMS (Plant Protection)

4. Details of farming situation:

This comparative study was carried out through On-Farm Testing during Samba season of 2019 – 20 at K. Mettutheru village of Thirumanur block in Ariyalur district with an objective to assess the disease resistant Paddy varieties for high yielding during Samba season as compared to the farmers practicing existing variety (Co-43). The Paddy nursery was raised during 1st week of September 2020 and transplanting was done during 4th week of September 2020. Five farmers each having one acre of wet land was selected and compared with the farmers existing variety with recommended package of practices. All the trail fields have clay loamy soil with good fertility and the pH of the soil range from 6.5 to 7.5.

5. Problem definition / description:

- Heavy incidence of BLB (22%), blast (35%), leaf spot (27%) and stem borer (25%)
- Increasing soil salinity (pH upto 8) leads to reduction in yield upto 15-20%.

	TO1	TO2	TO3
Varietal Character	Cultivation of ADT 54 (TNAU 2018)	Cultivation of NLR 34449 (ARS, Nellore, 2010)	Cultivation of BPT5204
Duration	125 days	125 days	130 days
Average Yield	4.8 t/ha	6.2 t/ha	5.5t/ha
Grain Type	Medium slender fine grain	Fine grain	Medium Slender
Resistant to	Lodging and Moderate resistant to Blast, Brown spot & Leaf blight	Blast	

6. Technology Assessed:

7. Critical inputs given:

Name of critical input	Quantity/Trial (0.4ha)	Value (Rs.)		
NLR 34449 Paddy seed	12 kg @ Rs.30/kg	360		
ADt 54 Paddy seed	12 kg @ Rs.30/kg	360		
Pseudomonas fluorescens	1 kg @ Rs.120/kg	120		
Field board	1 No @ Rs.400/ No	400		
	Total	1,240		
Rs.1,240 * 5 = Rs.6,200				

8. Results:

Technology Option	No. of trials	No. of plants/sq.m	No. of productive tillers/hill	PDI of blast	Yield (q/ha)	Straw yield (t/ha)
Technology 1 (ADT 54)		24	48	12	51.0	6.17
Technology 2 (NLR 34449)	5	18	63	10	52.8	5.85
Technology 1 (Farmers' Practice)		19	42	22	47.1	5.42

Table 1: Yield and yield contributing characters of different varieties assessed

Table 2: Economics of different Paddy varieties assessed

Technology option	Gross Cost (Rs.)	Gross Income (Rs.)	Net Income (Rs.)	BCR	Marketability
ADT 54	46,250	1,10,585	62280	2.35	Good
NLR 34449	48,800	1,20,585	74335	2.52	Good
Farmers	45,000	97,700	52,700	2.17	Moderate
practice					

Description of the results:

The results of the OFT reveals that the NLR 34449 was effective disease resistant variety compared than ADT 54 and BPT. The performance of the TO2 was very good in terms of higher productive tillers (63/hill), moderate PDI of blast (10%) and good straw quality followed by TO1 and farmers existing variety. The grain yield was higher than ADT54 variety

Constraints faced: Nil

9. Feedback of the farmers involved:

- 1. The NLR 34499 less disease problem compared than ADT 54 and BPT
- 2. Marketability is good medium slender by size on paddy

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

The incidence of BLB and sheath blight diseases is very less in NLR 34499 Paddy variety.

This variety is good for Samba season.

7. OFT on Assessment of Technologies for management of sucking pest in Chilli

- 1. Thematic area : Integrated Pest Management
- 2. Title: Assessment of technologies for management of sucking pest in chilli
- **3.** Scientist involved: SMS (Plant protection), SMS (Horticulture) & SMS (Agri. Extn.)

4. Details of farming situation:

The study was carried out through on farm testing during kharif season of 2020 at Veerakan village in Ariyalur district with an objective to assess the technology for sucking pest management in Chilli under Irrigated condition as compared to the farmers practice. For ideal growth and yield of Chilli it need a diverse set of climatic conditions at every stage of growth such as seed germination, flowering, fruiting, etc. Chilli crop variety US 344 was sown during 1st week of July and harvested during 1st week of December, 2020. Three farmers each having one acre of Chilli was selected and (Farmers practice) with recommended package of practices. The entire harvest is being done as green Chilli.

5. Problem definition / description:

The major problems faced by the farmers are Thrips, fruit borer and flower dropping. The average damage due to Thrips is 16-23 %. Due to the incidence of Thrips the approximate yield loss is 15 %.

Farmers practice		TO 1	ТО 2
Spraying	of	Application of neem cake	• Seed treatment with
insecticide		@250 kg/ha.	Imidacloprid 70%
		• Intercrop with Sesbania	WS@12g/kg
		rostrata to provide barrier	Border crop with Maize
		which regulate the thrips	• Blue sticky trap@12/ha
		• Yellow sticky trap @12/ha.	• Foliar application of Neem oil
		• Spraying of Emamectin	1%@1000 ml/ha + adjuvant
		Benzoate 5SG@200g/ha.	1 ml/lit

6. Technology Assessed:

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

Name of critical input	Quantity/Trial	Value (Rs.)				
Blue sticky trap 12 No./ha	5Nos	225				
Maize seed	1kg	200				
Neemcake	150	3750				
Yellow sticky trap	5 Nos	225				
Neem oil	1 litre	350				
	Total	4,750				
Rs.4,750 x 3 trials = Rs.14,250						

9. Results:

Table 1: Yield and yield contributing characters of different treatments assessed

Technology Option	No. of trials	Thrips (%)	Number of fruits/plant	Yield q/ha
Farmers' Practice		18	30	165.0
TO 1	3	10	38	201.0
TO 2		11	36	188.0

Technology Option	Gross Cost(Rs.)	Gross Income(Rs.)	Net Income(Rs.)	BCR	Marketability
Farmer Practice	84,350	2,47,500	1,54,284	2.83	Moderate
TO 1	87,250	3,01,500	1,75,720	3.01	Good
TO 2	86,850	2,82,000	1,81,075	3.08	Good

Table 2: Economics of different treatments assessed

Description of the results:

A study for assessment of technologies for sucking pest management in Chilli was conducted in Veerakan village. The technological package included in TO1 contributed better to control of sucking pests in Chilli such as thrips (10%) than the TO2. The higher yield of 201.0 q/ha was recorded in TO1 where ever it was 165.0 q/ha only in the case of farmers practice. BC ratio was also the highest (3.08) in the case of TO2 and it was followed by TO1 (3.01)

Constraints faced: Nil

9. Feed back of the farmers involved:

- The sucking pest incidence is very less and get better yield of chilli by use of recommended technologies than the alternate technologies.
- Reduced the purchase of excess chemical which leads to reduction in cost of cultivation.
- The fruit quality is better than our regular practice adopted in field in recommended technology than alternate technologies and farmer's practices.

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

The performance of recommended practice gives better control of sucking pest in Chilli crop than recommended practice.

<u>8. OFT on Assessment of black soldier fly (BSF) larvae has alternate protein source in poultry feed</u>

1. Thematic area: Nutritional management in Poultry

2. **Title:** Assessment of black soldier fly (BSF) larvae has alternate protein source in poultry feed

3. Scientists involved: SMS (Animal Science) and SMS (Plant Protection)

4. Details of farming situation:

This comparative study was carried out through On-Farm Testing at Devamangalam village of Jayakondam block in Ariyalur district with an objective to assess black soldier fly larvae has alternate protein source in poultry feed as compared to the farmers practicing existing fish meal and soyabean meal. The BSF larvae was purchased and raised during 1st week of June 2019 and given to the farmers at two weeks of age at 3rd week of June. Three farmers each having 500 desi birds was selected and compared with

the farmers existing practice of fish meal with recommended package of practices. All the trail farms have good management practices like regular vaccination and deworming.

5. Problem definition / description:

Backyard poultry as become popular in Tamil Nadu. Rearing backyard chicken as become livelihood of many farmers and eggs produced from them are used by the farmer's own use or for sale. Feeding these chickens properly with all nutrient content is a bring problem among farmers. Though many recommendations are there for the use of formulated desi chicken feed or commercial feeds, no farmers are following this effectively. Most of the farmers use locally available feeds like sorghum, maize and rice to feed the birds. Many farmers fail to feed good protein rich source like fish meal in feed due to its high cost. Hence an alternate cheap protein source has to be assessed in poultry feed.

6. Technology Assessed:

Poultry is by far the largest livestock group. Lack of proper protein source in conventional poultry feed for desi birds and high-cost involvement of using animal protein source like fish meal leads to costlier management practices in case of desi birds where growth span is around to 4-6 months. Besides using insects as feedstuff, they also can be used directly to treat organic waste associated problems, which is produced in large amounts and may represent an environmental burden. The potential of insect meal for use as feedstuffs may also have beneficial environmental effects like insect requires less energy and an insignificant amount of land area, which results in a lower environmental footprint. Therefore, the use of non pest insects like black soldier fly (BSF) grown on farms and household wastes can be a good alternate of protein source for fish meal and soyabean meal used by the desi bird farmers

Name of critical input	Qty. per trial	Cost per Trial (Rs.)			
BSF larvae	2000 @Rs.3	6000			
Barrel (250 lit.) and	1 No.	1500			
accessories	@Rs.1500				
Field Board	1 No. @Rs500/No	500			
	Total	8000			
Rs.8,000x 3 trials = Rs.24,000					

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

8. Results:

Technology Option	No. of trials	Yield (g/ 6months)	Net Returns (Rs./batch)	B:C	Data on Other performance indicators*
Farmers Practice		850 g	1,48,750	3.75	
Technology 1(BSF	2	1150g	2,01,250	4.57	
Larvae, NBAIR,	5				
2017)					

Table 1: Performance of the technology

Table 2: Economics of different treatments assessed

Technology Option	Gross Cost(Rs.)	Gross Income(Rs.)	Net Income(Rs.)	BCR	Marketability
Farmers practice	54,090	2,02,840	1,48,750	3.75	Good
TO 1 (BSF Larvae)	56,367	2,57,617	2,01,250	4.57	Excellent

Description of the results:

The study for assessment of technology on use of BSF larvae as alternate protein source in conventional poultry feed was conducted in Devamangalam village. The feeding of BSF larvae to desi birds showed better body weight gain (200 gms) than the farmer practice. Though the cost of rearing BSF larvae is more (4%) compared to farmer practice, the body weight gain and BC ratio in TO1 showed better results than farmer practice.

9. Constraints: Lack of timely availability of BSF larvae due to COVID -19 lockdown

10. Feedback of the farmers involved:

- Good conversation of household wastes and farm wastes
- High palatability in desi birds
- On an average of 200g increased body weight gain in 6 months compared to conventional feeds
- Low survivability of instar larvae especially 1 week old larvae
- Poor growth and egg laying capacity of adult BSF flies hence required a small shed for multiplication

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

- The technology as dual advantage of waste management and waste to feed concept
- However, the protocol and management of instar larvae should to standardized for hot climatic conditions

9. OFT on Assessment of the performance of Oyster mushroom varieties

- 1. Thematic area: Varietal Introduction
- 2. Title: Assessing the performance of Oyster mushroom varieties
- 3. Scientists involved: SMS (Home Science), SMS (Plant Protection)

4. Details of farming situation:

This comparative study was carried out through On-Farm Testing at Periyakrishnapuram village of Andimadam block in Ariyalur district with an objective to assess the suitable Oyster mushroom varieties for high yielding as compared to the farmers practicing existing variety (*Pleurotus florida*). Paddy is cultivated in large area and hence Paddy straw is available abundantly. So to create entrepreneurship opportunity to the farm women and to make use of available resource mushroom cultivation is being promoted through the trials. Ariyalur district is suitable for mushroom cultivation, as most suitable temperature for the spread of the mycelium is 24-25°C and 16-18°C for the formation of fruit bodies. In Paddy straw, mushroom can be grown around 35°C. Totally three women farmers were selected and the trial has been conducted comparing existing variety (*Pleurotus florida*) with APK 1 and Arka OM1. 2kg spawn of each variety has been provided and used paddy straw as substrate for the trial.

5. Problem definition / description:

- Less yield (200 g / kg substrate)
- Short shelf life (one day at ambient condition)
- Lack of entrepreneurship opportunity for farm women

6. Technology Assessed:

	T01	TO2	TO3	
Varietal Character	Farmers Practice Variety <i>Pleurotus</i> <i>florida</i> – PF, (TNAU, 1987)	Cultivation of APK 1 (TNAU, 1995)	Cultivation of Arka OM1 (IIHR, Bengaluru 2011)	
Duration	2 months	20-25 days	20-23 days	
(Total Production cycle)				
Average Yield	1.250 kg/bed	1.650 kg/bed	1.650 kg/bed	
Color	White	Pink	Pink	
Shelf life	24 hours	72 hours	72 hours	

7. Critical inputs given:

Name of critical input	Quantity/Trial	Value (Rs.)			
APK 1	2kg@ Rs.257/kg	514			
Arka OM1	2 kg @ Rs.112/kg	224			
Polythene bag	1.5kg @ Rs.177/kg	266			
Field board	1 No @ Rs.400/board	400			
	Total	1,404			
Rs.1,404 * 3 = Rs.4,212					

8. Results:

Table 1: Yield and yield contributing characters of different varieties assessed

Technology Option	No. of trials	Bud formation	Harvest	Yield / bag	No. of harvest	Shelf Life
Farmers Practice		18 th day	21 st day	1 kg	4 harvest	2 days
(Pleurotus florida)						
Technology 1	2	11 th day	14 th day	0.750 kg	4 harvest	3 days
(APK 1)	3	-	-	_		
Technology 2		11 th day	14 th day	0.650 kg	4 harvest	3 days
(Arka OM 1)		-				-

Table 2: Economics of different Mushroom varieties assessed

Technology option	Gross Cost (Rs.)	Gross Income (Rs.)	Net Income (Rs.)	BCR	Consumer Preference
Farmers Practice (<i>Pleurotus florida</i>)	100	312.5	212.5	3.13	High
Technology 1 (APK 1)	119	187.5	68.5	1.58	Medium
Technology 2 (Arka OM 1)	97	162.5	65.5	1.68	Medium

Description of the results:

This trial was conducted to assess the performance of suitable Oyster Mushroom varieties with farmers existing variety. The results shown that bud formation in APK 1 and Arka OM1 was found on 11^{th} day and sprouting found on 14^{th} day and total production cycle is 20 - 25 days. The yield per bag was 750g in APK 1 and 650 g in Arka OM1 respectively. The shelf life of both the varieties was long (3 days) than PF but the cooking time is high for pink varieties as its fiber content is high. In pink varieties, the sprouted mushrooms were light in weight whereas in PF variety sprouted mushrooms gain more weight i.e the moisture content is less in pink varieties so that shelf life is also high. Consumer preference for pink varieties is comparatively less than PF variety as it consumes more time for cooking and cooked mushroom is bit harder than PF. Color does not plays major role in consumer preference. There is no major difference found in taste of all these three varieties.

It is also found that after drying 1 kg of fresh mushroom of these 3 varieties we get only 90g mushroom powder in PF variety whereas 300g mushroom powder from pink varieties. Thus it is suitable for value addition.

The BCR for PF was found higher than pink varieties i.e. 1:3 whereas 1:1.58 in APK 1 and 1:1.68 Arka OM1 respectively.

Constraints faced: Nil in farming situation but few spawn bags were contaminated during transport.

9. Feedback of the farmers involved:

- Low bio efficiency
- Not feasible economically as spawn cost is high.
- Pink varieties consumes more time for cooking
- Among 4 harvests/bag in pink varieties, only in 1st harvest the sprouts were big in size and in the remaining 3 harvests sprouts found small in size.

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

The shelf life of APK 1 and ArkaOM1 are good and are suitable for value addition. The spawn cost is high and yield is less which is not feasible economically. Consumer preference is less as it consumes more time for cooking and hardness.

<u>10. OFT on Assessment the effectiveness of Technology delivery mechanism in terms of knowledge gain and symbolic adoption among farmers</u>

1. Thematic area: ICT

2. Title: Assessing the Effectiveness of Technology delivery mechanism in terms of knowledge gain and Symbolic adoption among farmers

3. Scientists involved: SMS (Agricultural Extension) & Senior Scientist & Head

4. Details of farming situation:

The survey was conducted on DFI village of Puliyankuzhi. Farmers of this region are more experienced in farming. Most of the lands are under irrigated condition utilized for cultivation of groundnut during kharif and rabi season. Sizeable members of the farmers using smart phones for their communication both common and agricultural messages.

5. Problem definition / description:

- · Lack of awareness on latest technologies and marketing information.
- · Availability of services and their sources were not known to farmers
- Limited access or availability of technological advisories on time.

Based on the problems, three groups of beneficiaries were selected having 20 members in each group. Pre test and Post test were conducted for these groups to identify the knowledge and adoption level. The technological options tried to deliver the technologies are as follows:

6. Technology Assessed:

Technology option	Technology
Technology option 1	Technology transfer through Method demonstrations
Technology option 2	Technology transfer through film shows (Video)
Farmer Practice	Technology transfer through whatsapp messages

7. Critical inputs given:

S.No.	Inputs	Quantity (Nos.)	Value (Rs.)
1	Method demonstration	20	5000
	1.Seed treatment with Trichoderma viride		
	2. Foliar Spraying of Groundnut rich		
	3. Setting of pheromone trap		
2	Video	20	
3	whatsapp message	20	

8. Results:

Table 1: The gain in Knowledge (%) as assessed by pre and post test are presented here

Name of the	Class	Technology Option 1 Method demonstratio			n 1 – ation	Tech	Technology option 2 – Video				Farmer Practice– mKisan & whatsApp			
technologies	Class	No. of Participants - 20				No. o	f Parti	cipant	ts - 20	No. of Participants - 20				
_		Pre-t	test	Post-	Test	Pre	-test	Post	-Test	Pre-	test	Post	-Test	
		knowl	edge	know	ledge	know	ledge	know	vledge	know	ledge	know	ledge	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Groundnut	L	13	65	9	45	12	60	4	20	13	65	4	20	
Production	М	5	25	7	35	7	35	11	55	4	20	10	50	
Techniques	Н	2	10	4	20	1	5	5	25	3	15	6	30	

(1-5 Mark – Low, 6-10 Mark – Medium, 11-15 Mark – High)

The adoption percentage of different technologies delivered through method demonstration, video and mkisan & are depicted below:

S No.	Name of the	Class	Tech Opt Mo demor	nology ion 1 – ethod nstration	Technole 2 - Y	ogy option Video	Farmer mK wha	Practice – isan & itsApp		
5.110	Technologies	Class	Ν	No. of		No. of Participants		No. of		
			Participants - 20		Participants - 20		- 20		Participants - 20	
			Ade	Adoption		ption	Ade	option		
			No.	%	No.	%	No.	%		
1	Seed treatment	L	6	30	2	10	8	40		
	with	М	11	55	12	60	10	50		

	Trichoderma	Н	3	15	6	30	2	
	viride							10
2	Foliar Spraying	L	9	45	4	20	10	50
	of Groundnut	М	8	40	12	60	7	35
	rich	Н	3	15	4	20	3	15
3	Application of	L	2	10	2	10	4	20
	recommended	М	12	60	10	50	11	55
	manures &	Н	6	30	8	40	5	
	fertilizers							25
4	Gypsum	L	1	5	0	0	4	20
	application	М	8	40	9	45	12	60
		Н	11	55	11	55	4	20
5	Setting of	L	5	25	4	20	6	30
	pheromone trap	М	13	65	12	60	9	45
		Н	2	10	4	20	5	25
6	Post harvest	L	9	45	4	20	11	55
	Management	М	6	30	10	50	7	35
		Н	5	25	6	30	2	10
7	Value Addition	L	12	60	7	35	14	70
		М	5	25	9	45	5	25
		Н	3	15	4	20	1	5

Table : Performance of the technology

Technology		Average						
mechanism	1	2 3 4 5 6 7						%
By Method demonstration	15	10	30	55	10	25	15	22.85
By Video	30	20	40	55	20	30	20	30.71
By whatsapp message	10	15	25	20	25	10	5	15.71

8. Description of the results:

Pre Test Knowledge level

By conducting this Pre Test, Method demonstration group revealed that 10 % of the farmers noticed high level knowledge, 25% of the farmers having medium level and 65% of famers had low level of knowledge. By conducting Pre Test for video group, it is revealed that the knowledge level results 5 % of the farmers noticed high level knowledge, 35 % of the farmers having medium level and 60 % of famers had low level of knowledge. Farmer practice (whatsapp message) group noticed that 15 % of the farmers having high level knowledge, 20 % of the farmers having medium level and 65 % of famers obtained low level of knowledge.

Post Test Knowledge level

By conducting this Post Test, Method demonstration group revealed that 20 % of the farmers noticed high level knowledge, 35 % of the farmers having medium level and 45% of famers had low level of knowledge. The video group revealed that the knowledge level results 25 % of the farmers noticed high level knowledge, 55 % of the farmers having medium level and 20 % of famers had low level of knowledge. Technology option 3(whatsapp message) noticed that 30% of the farmers having high level knowledge, 50 % of the farmers having medium level and 20% of famers had low level of knowledge. The Pre Test and Post Test was analysed based on the score rated Low as 1-5 mark, Medium as 6-10 mark and High as 11-15 mark.

Adoption level

The adoption level of seven different technologies delivered through three different technology delivery mechanisms reveals that technology delivered by video mode scores high adoption percentage for all the seven technologies and the average arrived was 30.71%. It is followed by method demonstration (22.85 %) and whatsapp messages (15.71 %). The high adoption percentage was one is the fact that the farmers could retained the video in their mobiles and practicing the same in their field. The method demonstration to the stimulate the sense organ and improving skill also whereas the whatsapp message recorded the adoption percentage of only 15.71 % as the farmers could not recall the message and face difficulty in adopting the technologies.

Constraint faced: The farmers need technology along with inputs. whatsapp message could not include all the technology in groundnut crop.

9. Feedback of the farmers involved:

Video messages are better source of information as it could be any time retrieved and used.

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

The OFT results concluded that the technologies can be very well delivered through video mode. The video messages should be pin pointed and short and to be delivered at appropriate time..

<u>11. OFT on Assessment of Effectiveness of Different Training tools interms of knowledge gain among the rural youth</u>

- 1. Thematic area: ICT
- **2. Title:** Assessment of Effectiveness of Different Training tools in terms of knowledge gain among the rural youth
- 3. Scientists involved: SMS (Agricultural Extension)

4. Details of farming situation:

The OFT was conducted on DFI village of Veerakkan. Farmers of this region are

more experienced in Cashewnut farming. Most of the lands are under rain fed condition.

5. Problem definition / description:

- Unreach of technologies to the individual farmers' in time, especially during COVID 19 like situation.
- Limited services of extension system interms of trainings and demonstration in class room due to Covid -19 threats
- Less usage of smart phones for agriculture

Based on the problems, three groups of beneficiaries were selected having 20 members of each group. Pre test and Post test conducted for these groups to identify the knowledge and adoption level. The technological options tried to deliver the technologies are as follows:

6. Technology Assessed:

Technology option	Technology
Technology option 1	Technology transfer through Zoom meeting
Technology option 2	Technology transfer through youtube video
Farmer Practice	Technology transfer through messages (whatsApp)

7. Critical inputs given:

S.No.	Inputs	Quantity (Nos.)	Internet charge Value (Rs.)
1	Zoom Meeting – Training on Cashew Production Technology	20	4000
2	Video	20	4000
3	WhatsApp Message	20	4000

8. Results:

Table 1: The gain in Knowledge (%) as assessed by pre and post test are presented here

NT		Techr Z	nology oom N	or Optio Meeting	n 1 – g	Technology option 2 – Video				Farmer Practice– WhatsApp			
Name of the	Class	No. of	[?] Parti	cipant	s - 20	No. o	f Parti	cipant	ts - 20	No. of	f Parti	cipant	s - 20
technologies		Pre-	test	Post-	Test	Pre	-test	Post	-Test	Pre-	test	Post	-Test
		knowl	edge	know	ledge	know	ledge	know	vledge	know	ledge	know	ledge
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Cashewnut	L	9	45	4	20	10	50	2	10	9	45	5	25
Production	Μ	7	35	10	50	7	35	11	55	7	35	9	45
Technology	Н	4	20	6	30	3	15	7	35	4	20	6	30

(1-5 Mark – Low, 6-10 Mark – Medium, 11-15 Mark – High)

8. Description of the results:

Pre Test Knowledge level

By conducting this Pre test, zoom meeting group revealed that 20 % of the farmers noticed high level knowledge, 35% of the farmers having medium level and 45% of famers had low level of knowledge. By conducting Pre test for video group, it is revealed that the knowledge level results 15 % of the farmers noticed high level knowledge, 35 % of the farmers having medium level and 50 % of famers had low level of knowledge. Farmer practice (whatsapp) group noticed that 20% of the farmers having high level knowledge, 35 % of the farmers having high level knowledge, 35 % of the farmers having high level knowledge, 35 % of the farmers having high level knowledge.

Post Test Knowledge level

By conducting this Post Test, zoom meeting group revealed that 30 % of the farmers noticed high level knowledge, 50 % of the farmers having medium level and 20 % of famers had low level of knowledge. The video group revealed that 35 % of the farmers noticed high level knowledge, 55 % of the farmers having medium level and 10 % of famers had low level of knowledge. Technology option group 3(whatsapp message) noticed that 30% of the farmers having high level knowledge, 45 % of the farmers having medium level and 25% of famers having high level of knowledge. The Pre Test and Post Test was analysed based on the score rated Low as 1-5 mark, Medium as 6-10 mark and High as 11-15 mark.

Constraint faced: The farmers faced internet connectivity problem in attending training programme. The farmers face difficulties in joining and rejoining in zoom meeting as they are not this kinds of trainings

9. Feedback of the farmers involved:

Video messages are better source of information as it could be any time retrieved and used.

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

The OFT results concluded that the technologies can be very well delivered through video mode, the video messages should be pin pointed short, précised and to be delivered at need based.

Technology	1
Сгор	Paddy
Thematic area	Varietal Introduction
Technology	Demonstration of ICM in paddy ADT54 with Panipipe
demonstrated	technology
Season and year	Samba,2020

<u>6. Frontline Demonstrations in Detail</u> Details of FLDs implemented during the reporting period

Farming Situation	The demonstration was conducted through Frontline Demonstration during samba season of 2020 at Venmankondan village of T.Palur block in Ariyalur District with an objective to demonstrate paddy variety ADT 53 with Panipipe technology during samba season as compared to the farmers practicing existing variety(BPT 5204) with conventional irrigation method. The paddy nursery was raised during 4 th week of September 2020. Ten farmers each having 0.4 ha of wet land was selected and compared with the farming existing variety with conventional irrigation method. All the demo fields have clay loamy soil with good fertility and the pH of the soil range from 7 to 7.5
Source of Fund	KVK, Main
No. of	1 (Venmankondan)
locations(Villages)	
No. of demonstration	10
No. of SC/ST farmers	2 SC Farmer and 2 women farmers
and women farmers	
Area proposed (ha)	4 ha
Actual area (ha)	4 ha
Justification for	Nil
shortfall if any	
Feedback from	1. The growth and yield of ADT 53 paddy variety and its straw
farmers	quality is better than existing variety which is very suitable for
	samba season
	2. At the stage of harvest, there is no lodging in ADt53 variety
	against existing variety even in high rainfall received
	3. AD1 53 has less pest and disease problems compared to BP1
	5204 existing variety
Feedback of the	The incidence of BLB and stem borer infestation is very less in
scientist	ADT53. This non – lodging paddy variety is good for samba season
Extension activities	Group meeting – 1
on the FLD	Method demonstration – 2
	Training – 3
	Training on extension functionaries - 1
	Field visit – 7
	Field day - 1

Technology	2
Сгор	Maize
Thematic area	ICM
Technology	Demonstration of ICM in Maize with TNAU – FAW
demonstrated	management capsules
Season and year	Rabi,2020

Farming Situation	The demonstration was conducted through Frontline Demonstration during rabi season of 2020 at Mallur village of Thirumanur block in Ariyalur District with an objective to demonstrate ICM techniques with TNAU –FAW management capsules in maize crop during rabi season as compared to the farmers existing practices. The maize sowing was taken during 2 nd week of September 2020. The farmers each having 0.4 ha of garden land was selected and compared with
	farmers existing practices. All the demo fields have block soil with good fertility and the soil ph of $7 - 7.5$.
Source of Fund	KVK, Main
No. of	1 (Mallur)
locations(Villages)	
No. of	10
demonstration	
No. of SC/ST	2 SC Farmer and 1 women farmers
farmers and	
women farmers	
Area proposed	4 ha
(ha)	
Actual area (ha)	4 ha
Justification for	Nil
shortfall if any	
Feedback from	1. The given ICM and TNAU – FAW capsules were works good
farmers	against Fall Army Worm and gives better yield compared to
	existing practices
	2. The FAW intestation was controlled since early stage of crop and viald loss reduced to below 10 percent and the ICM practices.
	balanced the 10 percent loss from $F\Delta W$ infestation
Feedback of the	The infestation of FAW by adoption of TNAU cansules was very less
scientist	and damageable. This ICM practices and FAW management capsules
Sciencist	are good for maize cultivars of the district
Extension	Group meeting – 1
activities on the	Method demonstration -2
FLD	Farmers Training – 2
	Field visit – 4
	Field day - 1

Technology	3
Сгор	Castor & Red gram
Thematic area	Mixed cropping
Technology	Demonstration of mixed cropping of castor with redgram to
demonstrated	augment rainfed farm income
Season and year	Rabi,2020
Farming Situation	The demonstration was conducted through Frontline Demonstration
	during rabi summer season of 2020 at Mannuzhi village of Ariyalur
	block in Ariyalur District with an objective to demonstrate to mixed
	cropping of castor and redgram for augument rainfed farm income. The
	sowing of castor and redgram was taken as 1:1 ratio during 2 nd week
	of September 2020. Ten farmers each having 0.4 ha of garden land was

	selected and compared with farmers existing maize cultivation. All the
	demo fields have black cotton soil with good soil fertility and the pH of
	the soil ranges from 7 to 7.5.
Source of Fund	KVK, Main
No. of	1 (Mannuzhi)
locations(Villages)	
No. of	10
demonstration	
No. of SC/ST	1 SC Farmer and 1 women farmers
farmers and	
women farmers	
Area proposed	4 ha
(ha)	
Actual area (ha)	4 ha
Justification for	Nil
shortfall if any	
Feedback from	1. This mixed cropping system for dry land mode is gives better
farmers	income than existing maize cultivation
	2. Though this system double the income were getting from two
	different crops and the plant protection aspect cost has reduced than
	existing maize cultivation
	3. This mixed cropping system is good for rainfed farming and best
	alternate cropping system for maize cultivators(FAW infestation)
Feedback of the	This mixed cropping system is more suitable for rainfed areas for
scientist	augment the better income against maize cultivation
Extension	Group meeting – 1
activities on the	Method demonstration – 1
FLD	Farmers Training – 2
	Field visit – 5
	Field day - 1

Technology	4
Сгор	Fodder Sorghum
Thematic area	Varietal Introduction
Technology	Demonstration of multicut fodder sorghum CSV 33 MF
demonstrated	
Season and year	Kharif,2020
Farming Situation	The demonstration was conducted through Frontline Demonstration during kharif season of 2020 at veerakkan village of sendurai block in Ariyalur District with an objective to demonstrate CSV 33MF fodder sorghum with farmers existing multicut fodder sorghum variety (COFS 29). The sowing of CSV 33 MF was taken during 2 nd week of September 2020. Ten farmers each having 0.4 ha of garden land was selected and compared with farmers existing fodder sorghum
	variety(COFS29). All the demo fields have red loamy soil with good soil fertility and the pH of soil ranges from 6.5 - 7.5.
Source of Fund	KVK, Main
No. of	1 (Veerakkan)
locations(Villages)	

No. of	10
demonstration	
No. of SC/ST	5 SC Farmer and 2 women farmers
farmers and	
women farmers	
Area proposed	4 ha
(ha)	
Actual area (ha)	4 ha
Justification for	Nil
shortfall if any	
Feedback from	1. The CSV 33 MF multicut fodder variety shows more number of
farmers	tillers per hill which gives more green fodder than existing fodder
	variety COFS 29
	2. The growth and green fodder yield is higher than existing variety
	3. The crop is very tendur in nature and there is no wastage when
	feeding against existing variety
Feedback of the	1. The CSV 33MF multicut fodder variety is more suitable for large
scientist	scale dairy growers to self-sustain in feed.
	2. The digestibility animal health and milk yield is good than existing
	fodder variety
	3. The multicut fodder sorghum CSV 33MF variety is more suitable
	for each season of the year.
Extension	Group meeting – 1
activities on the	Method demonstration – 1
FLD	Farmers Training – 2
	Field visit – 4
	Field day - 1

Technology	5
Сгор	Vegetable
Thematic area	ICM
Technology	Demonstration of ICM in Watermelon
demonstrated	
Season and year	Rabi, 2020
Farming Situation	The demonstration was conducted through Frontline Demonstration during Rabi season of 2019-20 at Melanikuzhi village of Jayankondam block in Ariyalur District with an objective to demonstrate the ICM practices in watermelon with TNAU technologies during Rabi season as compared to the farmers practice. The conventional irrigation method was followed in both the practices. The sowing of watermelon was done during the 1 st week of December, 2019 and harvesting done in the 1 st week of February, 2020. Five farmers each having 0.4 ha of Irrigated land was selected and compared with the existing farmers practice. All the demo fields have sandy loam soil with good fertility and the pH of the soil range from 7.2 to 7.5
Source of Fund	KVK, Main
No. of locations	1 (Melanikuzhi)
(Villages)	

No. of demonstration	5
No. of SC/ST farmers	-
and women farmers	
Area proposed (ha)	2 ha
Actual area (ha)	2 ha
Justification for	Nil
shortfall if any	
Feedback from	1. The growth and yield of watermelon crop is better in ICM
farmers	practice followed field.
	2. The incidence of Anthracnose disease is very less in all the
	stages of the crop.
	3. In ICM field there was less pest and disease problems compared
	to our existing field.
Feedback of the	The incidence of Anthracnose disease and fruit fly infestation is
scientist	very less in ICM practice followed fields. The watermelon fruit
	quality is good.
Extension activities	Group meeting – 1
on the FLD	Method demonstration – 1
	Training – 2
	Training on extension functionaries – 1
	Field visit – 6
	Field day – 1

Technology	6
Сгор	Vegetable
Thematic area	Resource Conservation
Technology	Demonstration of Soil Moisture Indicating tool for scheduling
demonstrated	of irrigation in brinjal
Season and year	Kharif, 2019-20
Farming Situation	The demonstration was conducted through Frontline Demonstration during Kharif season of 2019-20 at venmankondan village of T.Palur block in Ariyalur District with an objective to demonstrate the Resource conservation practices in brinjal with SBI, Coimbatore technologies of Soil Moisture Indicating tool for scheduling of irrigation in brinjal during Kharif and Rabi season as compared to the farmers practice of flood irrigation. The conventional irrigation method of flood irrigation is followed by the farmers practice. The sowing of brinjal seed was done during the 1 st week of August and the transplanting was done during the 1 st week of September, 2019 and harvesting done in the 1 st week of February, 2020. Five farmers each having 0.4 ha of Irrigated land was selected and compared with the existing farmers practice. All the demo fields have Red sandy loam soil with good drainage facility and the soil was well fertile with a pH of the soil ranging from 7.0 to 7.3
Source of Fund	KVK, Main
No. of	1 (Venmankondan)
locations(Villages)	
No. of demonstration	5

and women farmers 2 ha Actual area proposed (ha) 2 ha Actual area (ha) 2 ha Justification for Shortfall if any In Feedback from farmers 1 The solw saving of irrigation water was done in all the stages of the crop. i.e, Only 8 time's irrigation was required instead of 15 times irrigation needed normally in farmer's practice of flood irrigation. Feedback of the scientist 3 refed compared to our existing flood irrigation. Feedback of the scientist This Soil Moisture Indicating tool can be recommended for scheduling of irrigation in vegetable for saving water. This tool is mainly useful to farmers who buy water for irrigation from the nearby farmers on cost basis @ Rs.100/hr. This technology reduced the 50% cost on irrigation. Extension activities on the FLD Group meeting -1 Method demonstration - 1 Training -2 Training on extension functionaries - 1 Field visit - 5 and Field day - 1 Thematic area ICM Technology 7 Crop Vegetable Thematic area ICM The demonstration of ICM in Drumstick Genonstrated Season and year	No. of SC/ST farmers	-
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during Kharif season of 2019-20 at Venmankondan village of T.Palur block in Ariyalur District with an objective to demonstrate the ICM practices in Drumstick with TNAU technologies during Rabi season as compared to the farmers practice. The conventional irrigation method was followed in both the practices. The sowing of Drumstick was done during the 1 st week of December, 2019 and harvesting done in the 1 st week of June, 2020. Five farmers each having 0.4 ha of Irrigated land was selected and compared with the existing farmers practice. All the demo fields have Alluvial soil with good fertility and the pH of the soil range from 7.5 to 8.0Source of FundKVK, MainNo. of locations(Villages)1No. of SC/ST farmers-	Farming Situation	The demonstration was conducted through Frontline Demonstration
T.Palur block in Ariyalur District with an objective to demonstrate the ICM practices in Drumstick with TNAU technologies during Rabi season as compared to the farmers practice. The conventional irrigation method was followed in both the practices. The sowing of Drumstick was done during the 1 st week of December, 2019 and harvesting done in the 1 st week of June, 2020. Five farmers each having 0.4 ha of Irrigated land was selected and compared with the existing farmers practice. All the demo fields have Alluvial soil with good fertility and the pH of the soil range from 7.5 to 8.0Source of FundKVK, MainNo. of locations(Villages)1 (venmankondan)No. of SC/ST farmers-		during Kharif season of 2019-20 at Venmankondan village of
the ICM practices in Drumstick with TNAU technologies during Rabi season as compared to the farmers practice. The conventional irrigation method was followed in both the practices. The sowing of Drumstick was done during the 1 st week of December, 2019 and harvesting done in the 1 st week of June, 2020. Five farmers each having 0.4 ha of Irrigated land was selected and compared with the existing farmers practice. All the demo fields have Alluvial soil with good fertility and the pH of the soil range from 7.5 to 8.0Source of FundKVK, MainNo. of locations(Villages)1 (venmankondan)No. of SC/ST farmers5		T.Palur block in Ariyalur District with an objective to demonstrate
Rabi season as compared to the farmers practice. The conventional irrigation method was followed in both the practices. The sowing of Drumstick was done during the 1 st week of December, 2019 and harvesting done in the 1 st week of June, 2020. Five farmers each having 0.4 ha of Irrigated land was selected and compared with the existing farmers practice. All the demo fields have Alluvial soil with good fertility and the pH of the soil range from 7.5 to 8.0Source of FundKVK, MainNo. of locations(Villages)1 (venmankondan)Source of SC/ST farmers5		the ICM practices in Drumstick with TNAU technologies during
irrigation method was followed in both the practices. The sowing of Drumstick was done during the 1 st week of December, 2019 and harvesting done in the 1 st week of June, 2020. Five farmers each having 0.4 ha of Irrigated land was selected and compared with the existing farmers practice. All the demo fields have Alluvial soil with good fertility and the pH of the soil range from 7.5 to 8.0Source of FundKVK, MainNo. of locations(Villages)1 (venmankondan)Source of SC/ST farmers5		Rabi season as compared to the farmers practice. The conventional
Drumstick was done during the 1st week of December, 2019 and harvesting done in the 1st week of June, 2020. Five farmers each having 0.4 ha of Irrigated land was selected and compared with the existing farmers practice. All the demo fields have Alluvial soil with good fertility and the pH of the soil range from 7.5 to 8.0Source of FundKVK, MainNo. of locations(Villages)1 (venmankondan)No. of demonstration5No. of SC/ST farmers-		irrigation method was followed in both the practices. The sowing of
harvesting done in the 1st week of June, 2020. Five farmers each having 0.4 ha of Irrigated land was selected and compared with the existing farmers practice. All the demo fields have Alluvial soil with good fertility and the pH of the soil range from 7.5 to 8.0Source of FundKVK, MainNo. of locations(Villages)1 (venmankondan)No. of demonstration5No. of SC/ST farmers-		Drumstick was done during the 1 st week of December, 2019 and
having 0.4 ha of Irrigated land was selected and compared with the existing farmers practice. All the demo fields have Alluvial soil with good fertility and the pH of the soil range from 7.5 to 8.0Source of FundKVK, MainNo. of locations(Villages)1 (venmankondan)No. of demonstration5No. of SC/ST farmers-		harvesting done in the 1 st week of June, 2020. Five farmers each
existing farmers practice. All the demo fields have Alluvial soil with good fertility and the pH of the soil range from 7.5 to 8.0 Source of Fund KVK, Main No. of 1 (venmankondan) locations(Villages) 5 No. of SC/ST farmers -		having 0.4 ha of Irrigated land was selected and compared with the
good fertility and the pH of the soil range from 7.5 to 8.0 Source of Fund KVK, Main No. of 1 (venmankondan) locations(Villages) 5 No. of SC/ST farmers -		existing farmers practice. All the demo fields have Alluvial soil with
Source of Fund KVK, Main No. of 1 (venmankondan) locations(Villages) - No. of demonstration 5 No. of SC/ST farmers -	Source of Fund	good fertility and the pH of the soil range from 7.5 to 8.0
No. of demonstration 5 No. of SC/ST farmers -	No. of	N V N, Walli 1 (venmankondan)
No. of demonstration 5 No. of SC/ST farmers -	locations(Villagos)	
No. of SC/ST farmers -	Nations (v mages)	
	No of domonstration	5
and women farmers	No. of demonstration	5
Area proposed (ha) 2 ha	No. of demonstration No. of SC/ST farmers and women farmers	5
	No. of demonstration No. of SC/ST farmers and women farmers Area proposed (ha)	5 - 2 ha
Actual area (ha)	No. of demonstration No. of SC/ST farmers and women farmers Area proposed (ha)	5 - 2 ha 2 ha

Justification	for	Nil
shortfall if any		
Feedback f	rom	1. The growth and yield of Drumstick crop is better in ICM
farmers		practice followed field.
		2. The incidence of leaf Webber pest was very less in all the
		stages of the crop.
		3. In ICM field there was less pest and disease problems
		compared to our existing field.
Feedback of	the	The incidence of leaf Webber pest and pod fly infestation is very
scientist		less in ICM practice followed fields. The Drumstick pod quality is
		good.
Extension activ	ities	Group meeting – 1
on the FLD		Method demonstration – 1
		Training – 2
		Training on extension functionaries - 1
		Field visit – 6
		Field day - 1

Technology	8
Сгор	Groundnut
Thematic area	IPDM
Technology	Demonstration of IPDM in irrigated Groundnut
demonstrated	
Season and year	Rabi, 2019-20
Farming Situation	The demonstration was conducted through Frontline Demonstration
	during Rabi season of 2019-20 at Venmankondan village of T.Palur
	block in Ariyalur District with an objective to demonstrate IPDM
	technology in irrigated Groundnut during Rabi season as compared
	to the farmers practice. The farmers are using existing Groundnut
	variety (VRI 2) with conventional irrigation method. The sowing of
	groundnut was done during 4 th week of November 2019. Five
	farmers each having 0.4 ha of Irrigated land was selected and
	compared with the farming existing practice. All the demo fields
	have sandy loamy soil with good drainage facility and the pH of the
	soil range from 7.6 to 8.1
Source of Fund	KVK, Main
No. of locations	1 (Venmankondan)
(Villages)	
No. of demonstration	5
No. of SC/ST farmers	1 SC Farmer and 1 women farmers
and women farmers	
Area proposed (ha)	2 ha
Actual area (ha)	2 ha
Justification for	Nil
shortfall if any	
Feedback from	1. The growth and yield of groundnut variety VRI 2 is good and its
farmers	haulm quality is better than existing practice.
	2. Even at the stage of harvest, there is was very less shedding of
	lowest leaf.

	3. In IPDM practiced field the incidence of pest and disease
	problems was less as compared to our existing field.
Feedback of the	The incidence of pest and disease problems was very less in IPDM
scientist	field. This IPDM practice is recommended for Rabi season
Extension activities	Group meeting – 2
on the FLD	Method demonstration -3
	Training – 2
	Training on extension functionaries - 1
	Field visit – 9
	Field day - 1

Technology	9
Enterprise	Dairy
Thematic area	Feed Management
Technology	Demonstration on Silage preparation from sugarcane trash
demonstrated	
Season and year	Rabi, 2020
Farming Situation	Owing to the seasonal nature of sugar production, sugar cane tops are available for use as fodder during only six months of the year. As fodder production from pasture is limited in Ariyalur, there has been an interest in the production of silage from cane tops for use during the intercrop period. Further the harvesting time (End of rabi) of sugarcane and starting of summer season (6 months later) makes it an ideal feed resource for silage making and use it as feed during summer.
Source of Fund	KVK Main
No. of	1 (Sembiakudi)
locations(Villages)	
No. of demonstration	10
No. of SC/ST farmers	2 SC farmers and 2 women farmer
and women farmers	
Area proposed (ha)	4 ha
Actual area (ha)	4 ha
Justification for	Nil
shortfall if any	
Feedback from	1. The technology was useful during summer season where green
farmers	fodder shortage is prevalent
	2. The palatability of the silage is however is not good and older
	cows takes more time for adjusting to the taste.
Feedback of the	• The burning of sugarcane trash is reduced considerably in the
scientist	demonstration farms.
	• The milk yield of the cows fed with sugarcane trash silage are
	better compared to those who were fed with only dry fodder like
	hay
Extension activities	• Farmers training – 1
on the FLD	• Method demonstration - 1
	• Media coverage – 1
	• Field visit -5

Technology	10
Enterprise	Goat
Thematic area	Health Management
Technology	Demonstration on heat box for goat kids
demonstrated	
Season and year	Rainy season, 2020
Farming Situation	Goat rearing is a popular livelihood for farmers in Tamil Nadu. Most of the farmers rear goats in free range system and semi-intensive system. Lack of proper shed and hygienic conditions especially during rainy season plays an important role in kids' mortality. Goat kids lack development of thermoregulatory mechanism during initial stages of growth making them prone for mortality due to cold conditions. Proper heat and keeping dry prevent many infectious diseases like navel ill and coccidiosis.
Source of Fund	KVK Main
No .of	1 (Kodalikaruppur)
locations(Villages)	
No .of	One group (10 farmers & farm women)
demonstration	
No. of SC/ST	2 women farmer
farmers and	
women farmers	
Area proposed	
(ha)	
Actual area (ha)	
Justification for	Nil
shortfall if any	
Feedback from	• The technology is good for medium- large scale goat farmers
farmers	around 25-50 goats
	• Initial cost of the equipment is high
Feedback of the	• The technology was of very useful during the implemented year
scientist	since off-season and heavy rainfall was noticed that year
Extension	• Farmers training – 1
activities on the	Method demonstration - 1
FLD	• Field visit -5

Technology	11
Enterprise	Fisheries
Thematic area	Varietal Introduction
Technology	Demonstration of Intensive culture of GIFT in fresh water ponds.
demonstrated	
Season and year	2019
Farming Situation	The inland fisheries are practiced all around the year and is the major farming activity in the implemented village. Three farmers each having 25 cents of farm fish pond was selected. All the trails' ponds used in the study were disinfected and pre-stocking measures were taken including assessment of water pH and TDS. The pH of the water ranges from 8.5 to 9.5 while TDS ranged from 800 to 1000.

Source of Fund	KVK Main
No. of	1 (Sembiyakudi)
locations(Villages)	
No. of	3
demonstration	
No. of SC/ST	
farmers and	
women farmers	
Area proposed	2 ha
(ha)	
Actual area (ha)	2 ha
Justification for	Nil
shortfall if any	
Feedback from	• The growth and yield of GIFT is better than conventional Indian
farmers	Major Carp
	• GIFT is resistant to sudden changes in water pH and hardness
	whereas IMC showed mortality during these changes
	• The growth period is less and two harvest can be made in year in case of GIFT
	• The GIFT market preference is low compared to conventional IMC's
Feedback of the	• More improved or hybrid carp varieties with less growth period and
scientist	disease resistance should to be developed to meet the increase demand of market
Extension	• Farmers training – 1
activities on the	• Method demonstration - 1
FLD	• Field visit -3

Technology	12
Crop	Mushroom
Thematic area	Value addition
Technology	Demonstration of mushroom pickle and mushroom soup mix
demonstrated	
Season and year	TNAU, 2013
Farming Situation	Oyster Mushroom is being cultivated by women entrepreneurs and selling fresh mushroom without any value addition which fetches less
	income. Also unsold mushrooms are getting spoiled as the shelf life of mushroom is less which leads to huge los
Source of Fund	KVK, Main
No. of	1 (Udayarpalayam)
locations(Villages)	
No. of	10
demonstration	
No. of SC/ST	3 SC Farmer and 7 women farmers
farmers and	
women farmers	
Area proposed	
(ha)	

Actual area (ha)	
Justification for	
shortfall if any	
Feedback from	Women entrepreneurs expressed their satisfaction for demonstrating
farmers	value addition in mushroom. They said that value addition in
	mushroom gives added income and generates employment to one
	woman farmer. They also felt happy that wastage of unsold mushrooms
	is reduced due to value addition.
Feedback of the	
scientist	
Extension	Group meeting – 1
activities on the	Method demonstration -3
FLD	Field visit – 4
	Field day - 1

Technology	13
Сгор	Vegetables and fruits
Thematic area	Nurtitional Management
Technology	Demonstration of Homestead Nutri garden in DFI Village
demonstrated	
Season and year	TNAU, 2011
Farming Situation	
Source of Fund	KVK, Main
No. of	1 (Veerakkan)
locations(Villages)	
No .of	10
demonstration	
No. of SC/ST	10 SC Women Farmer
farmers and	
women farmers	
Area proposed	0.4
(ha)	
Actual area (ha)	0.4
Justification for	
shortfall if any	
Feedback from	• Farmers say that per capita consumption rate has been increased
farmers	and nutritional security ensured. They also added that unutilized
	area and waste water have been utilized and market expenditures
	for purchase of vegetables curtailed.
	• Expressed their satisfaction in producing chemical free vegetables
	for their consumption.
Feedback of the	
scientist	
Extension	Group meeting – I
activities on the	Nietnod demonstration – 1
FLD	I raining - 1
	Field VISIT -5
	Field day - 1

Technology	14
Crop	All crops
Thematic area	Drudgery reduction
Technology	Demonstration on Drip Lateral Winder
demonstrated	
Season and year	Farmers Innovators Conclave, 2019
Farming Situation	
Source of Fund	KVK, Main
No. of	1 (Devamangalam)
locations(Villages)	
No. of	10
demonstration	
No. of SC/ST	10 women farmers
farmers and	
women farmers	
Area proposed	0.4
(ha)	
Actual area (ha)	0.4
Justification for	
shortfall if any	
Feedback from	Farmers expressed their satisfaction in terms of reduction in labor
farmers	wage (50 %), reduction in time consumption (40 %) and drudgery
	reduced in terms of musculo-skeletal disorder. They also felt happy
	that damage of drip lateral during improper manual rolling was
	reduced.
Feedback of the	Though this is the farmer innovation it works very well
scientist	
Extension activities	Group meeting – 1
on the FLD	Method demonstration – 2
	Field visit – 3

Technology	15
Сгор	Bhendi
Thematic area	Drudgery Reduction
Technology	Demonstration of Bhendi Ring Cutter
demonstrated	
Season and year	CSC & RI, 2011
Farming Situation	In Ariyalur district, under irrigated condition vegetables is being cultivated in 60 ha. And in operational village bhendi is cultivated in 12 ha. by 27 farmers in irrigated condition. Inconvenience is being faced by farmers during bhendi harvest by hand picking like cut in thumb finger, itching, etc., To address the problem, bhendi ring cutter was demonstrated in the operational village involving 10 farmers.
Source of Fund	KVK, Main
No. of	1 (Kodali Karuppur)
locations(Villages)	
No. of	10
demonstration	

No. of SC/ST	2 SC farmers 5 women farmers
farmers and	
women farmers	
Area proposed	4ha
(ha)	
Actual area (ha)	4 ha
Justification for	Nil
shortfall if any	
Feedback from	• Manual harvest using hands/fingers finds best if harvest done
farmers	immediately after irrigation.
	• Reduces drudgery such as thumb finger pain and shoulder pain
	while harvesting gourds using ring cutter and time efficiency also
	observed.
Feedback of the	The optimum moisture content in soil is essential for easy harvesting
scientist	It is also useful for the harvesting of gourds and flower crops like
	marigold.
Extension activities	Group meeting – 1
on the FLD	Method demonstration -2
	Field visit – 3

Technology	16
Сгор	Sugarcane
Thematic area	Value Addition
Technology	Demonstration on Liquid Jaggery production Technologies
demonstrated	
Season and year	SBI, 2015
Farming Situation	In Ariyalur district, Sugarcane is cultivated under irrigated condition
	in 7727 ha. And in operational village it is cultivated in 250 ha.
	Farmers are selling sugarcane as it is to sugarcane mill and few are
	value adding sugarcane juice into Jaggery. Nowadays more awareness
	found on public about health complications due to consuming white
	sugar. To replace white sugar with alternate sweetener sugarcane
	liquid Jaggery is demonstrated in the operational village
Source of Fund	KVK, Main
No. of	1 (K.Mettutheru)
locations(Villages)	
No. of	5
demonstration	
No. of SC/ST	5 women farmers
farmers and	
women farmers	
Area proposed (ha)	2ha
Actual area (ha)	2ha
Justification for	Nil
shortfall if any	
Feedback from	• Recovery percentage is high (22.75%) than farmer practice
farmers	(Jaggery) but the shelf life is bit lesser than farmers practice. Liquid
	jaggery is sweeter than cane sugar and jaggery.

Feedback of the	Due to its high cost consumer preference is less
scientist	
Extension activities	Group meeting – 1
on the FLD	Method demonstration -2
	Field visit – 3

Technology	17
Сгор	Paddy
Thematic area	ICT
Technology	Demonstration of Rice expert system as Android based Mobile
demonstrated	Арр
Season and year	Rabi and 2020
Farming Situation	Kodalikaruppur cluster comes under Cauvery delta zone. Temperature ranges from Maximum of 38°C and Minimum of 24°C. Land of Clay loam occurs in village. The texture is usually loamy, colour of the soil is black. The soils are of medium depth with good drainage, free from accumulation of salt, pH ranging from 6.5 to 7.5 and contain medium amounts of organic matter, nitrogen and phosphorus but with generally adequate amounts of potash and lime. The Average annual rainfall is 840 mm. Major rainfall received in North East Monsoon only.
Source of Fund	ICAR - Main
No. of	1
locations(Villages)	
No. of	10
demonstration	
No. of SC/ST	1 and 1
farmers and	
women farmers	
Area proposed (ha)	4ha
Actual area (ha)	4 ha
Justification for	Nil
shortfall if any	
Feedback from	The Rice Expert system app is very useful during the pandemic
farmers	situation of COVID 19 without expecting the experts physically
Feedback of the	The app should be updated every year for knowing new technology
scientist	and as per the new problem emerges
Extension activities	Group meeting – 1
on the FLD	Method demonstration – 1
	Field visit – 4
	Feedback collection - 1

Result :

T	Knowle	A dontion lovel (0/)	
rechnology	Pre	Post	Adoption level (%)
Rice Expert	20	72	43
System			

Technology	18		
Сгор	Vegetables		
Thematic area	Prevention Measures		
Technology	Demonstration on COVID 19 prevention measures among		
demonstrated	vegetable growers		
Season and year	Rabi and 2020		
Farming Situation	Karaikuruchi village comes under Cauvery delta zone.		
	Temperature ranges from Maximum of 38°C and Minimum of		
	24°C. Land of Clay loam occurs in village. The texture is usually		
	loamy, colour of the soil is black. The soils pH ranging from 6.5 to		
	7.5 .The major vegetable crops grown here are Brinjal, Bhendi,		
	Chilli. By less awareness about the seriousness of COVID -19		
	threats the labourers are not adopting SOP of COVID -19		
	procedure as outlined by GOI.		
Source of Fund	ICAR - Main		
No. of	1		
locations(Villages)			
No.of demonstration	10		
No. of SC/ST farmers	1 and 2		
and women farmers			
Area proposed (ha)	4ha		
Actual area (ha)	4 ha		
Justification for	Nil		
shortfall if any			
Feedback from	The COVID 19 prevention measures like mask wearing, hand		
farmers	sanitizing, work with social distance and ethno practices makes		
	comfortable to prevent COVID 19 infection and there is no lacuna		
	in farming operations.		
Feedback of the	The technology should be followed during pandemic situation in		
scientist	every year (if persists)		
Extension activities on	Group meeting – 1		
the FLD	Method demonstration -2		
	Field visit – 2		
	Feedback collection - 1		

Result :

Tashnalagu	Awareness level (%)		Adaption level (9/)	
rechnology	Pre	Post	Adoption level (%)	
COVID 19	8	64	72	
prevention				
technologies				

7. Technology Week Celebrations – Nil

Name of the staff	Title	Dates	Duration	Organized by
M.Thirumalaivasan	Importance of	15 th	1 day	IMTI, Trichy
	irrigation	September,		
	Management	2020		
S.Shobana	Geographical	5 th Sep,	1 day	MSME Intellectual
	Indication Vocalfor	2020		Property
	Local			FacilitationCentre,
				Madurai
S.Shobana	National level E-	23 rd July,	1 day	Mahila
	workshop on	2020		Mahavidyalaya,
	Immunity-A Global			Nagpur
	Culinary			
	Perspective			
S.Shobana	International	21 st July,	1 day	TNAU, Madurai
	Webinar on Public	2020		
	Health			
	Epidemiology –			
	Strategies for			
	Health and			
	Nutrition	41-		
S.Shobana	National Webinar	$15^{\rm m}$ July,	1 day	Avinashilingam
	on ICT on	2020		University,
	Community			Coimbatore
	Outreach			
S.Shobana	National Webinar	14 th July,	1 day	Rashtrasant
	on BreastCancer	2020		TukadojiMaharaj
	Awareness &			Nagpur University,
	Nutritional			Nagpur
	Considerations –			
	Need of an Hour	1.0.00	2.1	
M.Ashokkumar	Innovation	1.3.20 to	3 days	NIPM, Hyderabad
	approaches for IPM	03.03.20		
	technology			

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

9.Details of sponsored projects/programmes implemented by KVK

S.No	Title of the programme / project	Sponsoring agency	Objectives	Duration	Amount (Rs)
1.	Dairy and Vermi	SBI – RSETI,	To capacitate 70	10 days	82,000
	Compost Making	Ariyalur	women farmers to		
	(2 Datches)		socio-economically.		
2.	Poultry Rearing	SBI – RSETI,	To capacitate 35	10 days	38,200
		Ariyalur	landless women		
			farmers to empower		
			them socio-		
			economically		
			through backyard		
			poultry rearing at		
			DFI village.		

3.	Rehabilitation of Migrant Labours through Agro and Allied Activities - A Covid-19 response	Irrigation Management and Training Institute, Trichy	To create awareness on agriculture and allied enterprise opportunities for migrant labors (small, medium and big farmers) due to Covid – 19 pandemic.	1 day	20,000
4.	Workshop on identification of Socio economic and technological gap in promotion of inland fisheries and biofloc technology in Ariyalur district	NABARD, Ariyalur	To identify technological gap in inland fishery and Biofloc technology and to suggest suitable measures for the policymakers by involving 50 pioneer fish farmers.	2 days	50,000
5.	Clean Milk Production	MANAGE, Hyderabad through ATMA, Ariyalur	To train 28 rural youths in Clean Milk Production to start their own enterprise and to develop master trainers. Also to facilitate market linkages	6 days	42,000
6.	Quality Seed Grower and Dairy Entrepreneur	National Skill Development Corporation, New Delhi	To skill 50 MNREGA workers in respective job role to promote them for seed production and to start dairy farming as an enterprise	25 days	4,88,500
7	Training on Cashew Production Technology	Directorate Cocoa and Cashewnut Development Board, Kochi	Three days training given to Cashew farmers on Cashew cultivation practices, pest management and value addition in Cashew.	3 days	90,000
8	Kisan mela on Fruits and Vegetables cultivation techniques	ATMA, Ariyalur	Kisan mela conducted on Fruits and Vegetables cultivation techniques	1 day	1,00,000
9	Training on Goat Rearing	MANAGE, Hyderabad through ATMA,	Skill training to rural youths given in Goat rearing	6 days	42,000
10	Farmers Field School	ATMA, Ariyalur	3 Farm Field School conducted in 3 blocks of Ariyalur district for 6 days in AESA techniques in vegetable cultivation	6 classes (covers entire crop duration)	87,000
				Total	10,39,700

10. Success stories

1. Success Story of Mr. E. Rahul in Biofloc fish rearing

1. Situation analysed /Problem Statement:

Mr. E. Rahul, 25 years old residing Silal, Udayarpalayam block, Ariyalur district. He finished his graduation in Mechanical Engineering and was working in a private company in Chennai. His annual salary was around Rs 1.2 lakhs. He quit the job due to personal reasons and started one biofloc fish farming unit of 4m diameter at his backyard. From this one biofloc unit, he could earn around Rs 1 lakh/ batch but due to lack of awareness on scientific practices and technical support he could not get the excepted income.

2. Plan, Implement and Support:

In 2020, he came aware about our KVK from friends, visited KVK and met Scientists. He explained about existing problem and got technical advices to develop the farm. After field visit to his farm, our scientist suggested technical and scientific advisories in water, biofloc and sludge management in biofloc system

As per our advice, the Biofloc unit was refurbished and water and biofloc management was done accordingly. Through our KVK, we have provided him GIFT fingerlings by FLD programme and we have also linked him to nearby Fisheries University for further technical support.

3. Output:

Biofloc fish rearing is potential area to be explored in Ariyalur district were consumption of fresh water fishes is high. This technique is also getting latest attention due to several advantages like less space requirement, faster growth and less mortality. Now Rahul is getting more income than his previous harvest after KVK intervention. He is growing GIFT and he is doing two harvests in a year. Around 400-425 Kg of fish is harvested per tank per harvest. Now he is having two biofloc unit and getting an annual income of Rs 2.5 lakh. Further he is also planning for 1 lakh litre capacity biofloc tank for next year. Apart from sale of fishes, he also assists in construction and fabrication of biofloc unit for new farmers. Till date he as constructed 9 nine biofloc units with net income of Rs. 10,000/unit. Additionally, he is also supplying fingerlings and giving paid training programme for Rs. 1000/training.

4. Outcome and Impact:

He is now supplying fingerlings and acting as a biofloc consultant. He is serving as a master trainer in biofloc training programme which is being conducted at our KVK. By his efforts and technical support of KVK, Ariyalur, 10 re-migrated workers (due to COVID -19

pandemic) converted into agripreneur with steady income of 1.2 lakhs per year and have vast scope to improve their income level by adding additional units of Biofloc fish rearing. He is earning a regular income of Rs.3.5 lakhs /annum now and serving as a role model for other emerging youth entrepreneurs.

2. Success Story of Mr. J. Dhinesh on Rabbit rearing

1. Situation analyzed/Problem Statement:

Mr. J. Dhinesh 23 years old completed 12th standard and would not able to complete BSc Math degree due to financial reasons. He initially started rearing two rabbits for pet purpose and it become his hobby to spend time with these rabbits apart from helping his father in agriculture. Later, as the number of rabbits increased, he started rearing his rabbit in cage system and selling the bunnies at regular intervals

2. Plan, Implement and Support:

Mr. J. Dhinesh became aware about KVK, Ariyalur through friends and Whatapps groups approached our KVK for fodder seeds and advisory services on rabbit rearing. He explained his constraints like increased mortality in adult rabbits, feed shortage and weaker bunnies. After field visit to his farm, Scientist suggested to change the structure and housing space of the rabbit farm and suggested feeding management practices for different age group of rabbits.

As per our advice, the rabbit shed was modified with enough housing space with good ventilation. Further feeding modification like inclusion of green fodder, tree fodder and concentrate feed with mineral mixture was followed by him. Through our KVK, we provide him marketing linkage and technical advisories during COVID lockdown period.

3. Output:

Rabbit rearing is now fetching him more income after implementing the modification suggested by our KVK. Apart selling rabbit for pet purpose, he is now selling hybrid giant rabbit variety for meat and breeding purpose. He is selling 2 month old bunnies for Rs 400-500 for pet purpose and hybrid meat varieties for Rs350/kg live weight. During COVID lockdown period he used the Whatsapp platform for selling rabbit meat by door to door delivery with Rs 5 extra charge for 1km distance.

Apart from regular sales of bunnies and adult rabbit for meat, he is also selling breeding pair for Rs 2000-3000 and cages for rabbit rearing at Rs 5000/unit.

4. Outcome/Impact:

He is now supplying breeding and adult rabbits to a large number of farmers and also helping them in marketing tie-ups. He is serving as a master trainer in rabbit training programme which is being conducted at our KVK. He is earning a regular income of Rs.15, 000- 20,000/ month now and serving as a role model for other youth entrepreneurship farmers.

3. Success Case of Mr.Ragunath on Genetic up gradation of Local Goat stocks with Tellichery breed

1. Situation analyzed/Problem Statement:

Mr.Ragunath, 27 years old BE graduate worked in a private company at Chennai for an income of Rs.25, 000/ month during 2016. But due to his interest in organic farming he quitted his job and returned to native place Thinakudi village of Jayankondam block of Ariyalur district to start organic farming in his 12 acres of land.

Initially to start organic farming he purchased 2 Cows and 5 Local goat breed in his village itself. But his goats kidding rate was less and milk yield for lactating mother is less leads to poor weight gain in kid.

2. Plan, Implement and Support:

In 2017, he visited our KVK to get advisories for organic farming. Later he joined as member in KVK rural youth group and started getting advices through youth WhatsApp group and in person regularly. He visited KVK farm and enquired about Tellicherry goat breed. Senior Scientist and Head explained that Tellicherry breed is grown in our KVK to promote the technology of genetic upgradation of local breed to earn more income in our Ariyalur district i.e crossing local breed and Tellicherry breed results in more weight gain in kid. He was also given advise for developing 10 cent mixed fodder model for feeding the goat. He registered for one male Tellicherry goat and purchased 1 year old 30 kg Tellicherry buck after a month. Meanwhile he selected 2 healthy female goats of "Kodi aadu" and "Palai aadu" breed for crossing.

3. Output:

The Kodi aadu crossed with Tellicherry breed gives birth to 2 - 3 kids. The lactation in mother kodi aadu was good due to good feed management like plenty of green fodder, concentrate feed and mineral mixture leading to increased milk yield in mother goat whereas in his earlier practice has no enough lactation was there due lack of green fodder and he fed kid with cow milk leading to weak kids. It is also found that crossed kid had good weight gain i.e. 10 months old kid weight gains upto 20-24 kg whereas in his local practice 10 months old kid has only 10 - 15 kg. Now he is having 30 goats in his farm.

It is also noticed that crossing Tellicherry with Palai Aadu is not profitable as such as crossing Tellicherry with Kodi aadu. The palatability of the meat obtained from this cross breed goats was good and hence the marketability is good. The price and demand of meat due to COVID lock down period also was high. Currently, the sales crossbred goats at for Rs 350/Kg live weight for meat purpose and Rs 450/Kg live weight for breeding purpose.

4. Outcome and Impact:

As an outcome, now Mr. K. Ragunath is earning a net income of Rs.45,000/month from selling these goats for both meat purpose and rearing purpose. His farm becomes model farm in Ariyalur district for this genetic upgradation of goat and also for organic farming.

About 60 farmers and farm women from various villages of Ariyalur district and 25 B.Sc Agri final year RAWE students from JSA Agriculture college, Thittakudi were visited his farm for learning purpose. 35 farmers were adopted and started this model for their improved economic status by goat farming

He is serving as master trainer for our KVK trainings on goat rearing and his success was disseminated through AIR, Karaikal, Trichy and DD Pothigai. He is also serving farmers over phone calls to different districts in Tamil Nadu.

4. Success Story of IFS Farmer Mr.K.Ashok Kumar

1. Situation analyzed/Problem Statement:

Mr.K.Ashok Kumar, S/o. Kangadurai 42 years old residing at Karaivetti village of Thirumanur block, Ariyalur district. He discontinued his studies after 10th standard and entered into farming along with his parent cultivating Paddy and Sugarcane in his 4 acre land. later, he worked as LIC agent for past 10 years. From the LIC occupation he could earn only Rs.1 lakh/year.

From his potential 4 acre land and available resources he could earn Rs.7 lakh / year but due to lack of awareness on scientific practices and latest technologies he lost an income of Rs.6 lakh every year.

2. Plan, Implement and Support:

In 2016, he came to know about KVK from friends, visited KVK and met Scientists. He was explained about existing resources and got technical advices to develop the farm. Seeing the potential of his land resources, Scientists suggested him to develop IFS model in his land. As per our advice, IFS model was developed in his farm including five different components viz., Fish, Goat, Cattle, Poultry, Paddy and Fodder. Through our KVK IFS demonstration he has also been provided with vermi bag and azolla sheet. Through FLD programme "Gift Thilapia" fish variety was introduced in this farm during 2018. Also mixed fodder plot was established to enrich the nutrition status of his animal components. With our guidance and linkage provided with Agricultural Engineering Department he installed solar water pumping system by availing Government subsidy.

Our KVK provided continuous handholding and technical support and Indian Bank, Ariyalur provided him credit linkage to establish his farm activities.

3. Output:

S.No.	Components	Expenditure	Gross income	Net income
		(Rs.)	(Rs.)	(Rs.)
i	Fish – 50 cent	Livestock waste	60,000	60,000
		utilized		
ii	Goat – 50Nos.	2,00,000	4,00,000	2,00,000
iii	Poultry – 6 batch	1,20,000	4,20,000	3,00,000
	(6000Nos.)			
iv	Cattle – 3Nos.	1,50,000	2,50,000	1,00,000
V	Paddy – 2ac	80,000	1,00,000	20,000
			Total	6,80,000

The output from IFS model is as follows

4. Outcome and Impact:

As an outcome, now Mr.K.Ashok Kumar is earning a net income of Rs.6.8lakhs/annum from IFS component in his 4 acres land. His farm becomes model IFS farm in Ariyalur district which was visited by District Collector, Ariyalur and Dr.A.Bhaskaran, Principle Scientist, ATARI, Hyderabad.

About 200 farmers and farm women were visited his farm from various villages f Ariyalur district. 28 farmers were adopted and started this model in small drum system.

He is serving as master trainer for our KVK trainings on IFS and his success was disseminated through AIR, Karaikal, Trichy, DD Pothigai and YouTube. Around 1, 05,000 people viewed his video in YouTube. His success story was published in TANUVAS magazine "Kalnadai Velanmai" in December 2019 issue. He is serving farmers over phone calls also belonging to different districts of Tamil Nadu includes Tanjore, Thiruvarur, Nagapattinam, Ariyalur, Trichy, Perambalur, Karaikal, Cuddalore, etc.,

1. Situation analyzed/Problem Statement:

Mrs.S.TamilSelvi 26 years old completed BE graduation and worked in a private company for a monthly income of Rs.20,000/month. She was unable to care her family properly as there were day and night shifts. Also she was not satisfied with her job as she could not meet out her family requirements.

2. Plan, Implement and Support:

Mrs.S.TamilSelvi approached our KVK seeing our advertisement in Famous Tamil Magazine "Pasumai Vikatan" for desi bird rearing training and attended training on Desi Bird Rearing on 24.02.2016. As a women farmer, she was much more interested in becoming an entrepreneur in Desi bird poultry farming. She started feeding his birds with locally available feed stocks to reduce the cost on feed. Previously she was rearing 20 mother Desi bird poultry birds, after seeing the demand of Desi bird chicks she has expanded her poultry rearing unit with 75 parent mother birds and 10 cocks .To utilize the eggs effectively for the production of chicks she has purchased one low cost hatchery unit from Mr.R.Suresh (An innovator developed by ICAR-KVK, Ariyalur Dt.) with a capacity of 120 eggs and one automatic hatchery unit with a capacity of 250 eggs.

3. Output:

Desi bird poultry farming is fetching more income to this women entrepreneur as the cost of a desi bird is fetching her Rs.800/bird which is 3 times more cost than the normal desi bird rearing and she is selling Desi bird chicks eggs @Rs.30/egg. A One day old chick cost is Rs.70/chick and one month old chick cost is Rs.170/chick. She is earning an income of Rs.36,000/month now from her desi bird chicks rearing.

Sl.No.	Particulars	Amount (Rs.)
А	Fixed cost	
1	Poultry shed (1 Nos.)	
	16 x 21 feet	30,000
2	Auto feeder (10 Nos.)	2,000
3	Auto drinker (10 Nos.)	2,000
4	Automatic Hatchery Unit (1 nos.)	47,000
	Low cost Hatchery Unit (1 nos.)	8,000
	Total	89,000
	10% depreciation /year (I)	8,900
5	Parent bird (100 birds)	80,000
	Depreciation per year (II)	12,000

	Fixed cost per year(I + II)	20,900
В	Expenditure	
1	Feed cost per year	60,000
	(2.5 kg feed/bird/month for 100 birds (250 kg feed/day)	
	@Rs.800/100 kg of feed)	
2	Vaccination and Ethno veterinary practices per year	2,000
3	Fixed cost per year	20,900
	Total Expenditure	82,900
С	Gross Income	
	Sale of 250 chicks per month @Rs.170/chicks	5,10,000
	Sale of 3,000 chicks per (year)	
D	Net Income (Gross Income – Expenditure)	4,27,100
	Benefit Cost Ratio (BCR)	1: 6.15

4. Outcome/Impact:

She is now supplying Desi bird chicks to a large number of farmers and farm women and helping them in marketing tie-ups also. She has also developed at least 25 women entrepreneurs like her in this poultry rearing job. She is serving as a master trainer in the poultry training programme which is being conducted at our KVK. She is earning an income of Rs.45,000/month now and serving as a role model for other women entrepreneurship farmers. Her low cost feed management and ethno veterinary practices are getting popular among the backyard poultry/native chicken growers in Ariyalur district. Her technology has spread through All India Radio, Karaikal at several occasions

Mrs.Tamil Selvi a Poultry Entrepreneur has received an honorarium award for successful women entrepreneurship activities from ICAR KVK, Ariyalur District given by the NABARD Manager in the programme of Mahila Kisan Celebration during March 2018. She also awarded as Best Women Entrepreneur during International Women day during March, 2019 by District Collector, Ariyalur.

6. Success Story of Kadaknath birds gave prosperous life to Mrs.R.Meena 1.Situation analyzed/Problem Statement:

Mrs.R.Meena belongs to Periyakrishnapuram village of Andimadam block of Ariyalur District aged about 25 years has completed B.Sc., (Nursing) graduation and worked as Nurse in a private hospital. She was getting Rs.8000/- as salary per month. There was the problem in her family as she has to go for day and night shifts leaving her husband and one year old kid. Due to her poor background she herself forced to go for a nurse job. At one point of time her husband left her end she was in the situation of living alone with the kid.

2. Plan, Implement and Support:

By the confidence and continuous mentoring support and inspiration given by the KVK, she entered into rearing of Kadaknath chicks during the year 2016. She started feeding his birds with locally available feed stocks to reduce the cost on feed. Previously she was rearing 20 mother Kadaknath poultry birds, after seeing the demand of Kadaknath chicks she has expanded her poultry rearing unit with 75 parent mother birds and 10 cocks .To utilize the eggs effectively for the production of chicks she has purchased one low cost hatchery unit from Mr. Suresh (An innovator developed by ICAR-KVK, Ariyalur Dt.) with a capacity of 120 eggs and one automatic hatchery unit with a capacity of 250 eggs.

3. Output:

Kadaknath poultry farming is fetching more income to this women entrepreneur as the cost of a kadaknath bird is fetching her Rs.800/bird which is 3 times more cost than the normal desi bird rearing and she is selling Kadaknath eggs @Rs.30/egg. A one day old chick cost is Rs.70/chick and one month old chick cost is Rs.170/chick. She is earning an income of Rs.45,000/month now from her kadaknath chicks rearing.

Sl.No.	Particulars	Amount (Rs.)
Α	Fixed cost	
1	Poultry shed (1 Nos.)	
	16 x 21 feet	30,000
2	Auto feeder (10 Nos.)	2,000
3	Auto drinker (10 Nos.)	2,000
4	Automatic Hatchery Unit (1 nos.)	47,000
	Low cost Hatchery Unit (1 nos.)	8,000
	Total	89,000
	10% depreciation /year (I)	8,900
5	Parent bird (100 birds)	80,000
	Depreciation per year (II)	12,000
	Fixed cost per year(I + II)	20,900
В	Expenditure	
1	Feed cost per year	60,000
	(2.5 kg feed/bird/month for 100 birds (250 kg	
	feed/day) @Rs.800/100 kg of feed)	
2	Vaccination and Ethno veterinary practices per year	2,000
3	Fixed cost per year	20,900
	Total Expenditure	82,900
С	Gross Income	
	Sale of 250 chicks per month @Rs.170/chicks	5,10,000
	Sale of 3,000 chicks per (year)	
D	Net Income (Gross Income – Expenditure)	4,27,100
	Benefit Cost Ratio (BCR)	1: 6.15

4. Outcome/Impact:

As a women farmer, she was much more interested in becoming an entrepreneur in Kadaknath poultry farming. She is now supplying Kadaknath chicks to a large number of farmers and farm women and helping them in marketing tie-ups also. She has also developed at least 25 women entrepreneurs like her in this poultry rearing job. She is serving as a master trainer in the poultry training programme which is being conducted at our KVK. She is earning an income of Rs.45,000/month now and serving as a role model for other women entrepreneurship farmers. Her low cost feed management and ethno veterinary practices is getting popular among the backyard poultry/native chicken growers in Ariyalur district

The District Development Manager from NABARD Bank has visited her poultry unit and has appreciated her innovative work as a woman Entrepreneur in promoting kadaknath chicks which is having high medicinal value for human being. The Joint Direct of Agriculture Mr. Udayakumar from Agricultural department has also visited her farm and he has given valuable suggestions. Her technologies and innovative marketing ideas attracting large number of rural women farmers. Many women farmers are attending the poultry rearing trainings from KVK and visiting her poultry unit. Her technology has spread through All India Radio, Karaikal at several occasions. She 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 she is having market tie-up with 25 women farmers belongs to Ariyalur District and 15 farmers from other districts. She is networking all his clients and farmers through the various WhatsApp group.

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

1. Rural Youth – Retired Youth (RY-RY model)

Our KVK has maintained the potential of rural youth and planned innovatively to bring them into mainstream of agriculture. We have formed Rural Youth Club and they were capacitated on various agricultural and allied aspects to enter into the income generating activities. As they are lack of financial resources and facing hardship in availing credit facilities, they struggled to start their ventures. Here our KVK think and act differently to bring resourceful and resource less persons in a common platform. We approached retired persons and we formed a club named "Retired Youth Club" which 60 persons are members currently. They are contributing money every month and the lumpsum amount collected will be disbursed to youth members to start their agricultural activities. Currently and amount of Rs.5,30,000 lakhs mobilised such a way to disbursed to 16 members. They were regularly repaying their loan with bank interest.

2. Abridging Resource less and Resourceful

This is and innovation of our KVK to bring uncultivated land into cultivation. The land owned are sometimes unable to do agriculture due to several reasons viz., over age. No follower (Son / Daughter), working abroad, etc. by having very close association with the farmers our KVK could identify such a resourceful (Land Water) persons and links them with potential youth members. The youth members are identified from our youth club, so far by this kind of linkage 42 ha. Uncultivated area brought under cultivation benefitting 10 farmers and youth members. They will pay the nominal lease to the land owners. Our KVK is technically supporting the youth besides availing them the land resource.

3. Technology delivery to the famer representatives

In Tamil Nadu Farmers Grievance day is the regular phenomenon in all the district and it is being conducted on last Friday of every month. Around 300 progressive farmers representing almost all parts of Ariyalur district and district and lock level officials are the partaken under the president ship of District Collector. Our KVK is utilizing this platform effectively to disseminate the technologies needed for the upcoming month. This 30 minutes programme consists of

- Powerpoint presentation,
- Exhibit of technological products,
- Method demonstration,
- Sharing of success of one farmer
- Information on KVK events for the ongoing month
- Release of booklets

4. Group approach

ICAR KVK took concerted effort in holding series of methodological approach to analyze the ground situation at each of its operational villages. To identify the problems for the crop production, animal production and the allied aspects that support the livelihood of farm families. It followed various specific methodologies as mentioned below.

Based on the data collection for baseline information CREED KVK planned its intervention plan through FLD, OFT, FFS, various trainings (on and off), etc.

a. WhatsApp: We have two WhatsApp groups administrated by our KVK. One groups is specially meant for Rural youth and the other group is for farmers. The Director of Extension Education, TNAU is also the admin of this group and Director, ICAR-ATARI, Hyderabad is also present in these groups.

The message are being regularly posted by our experts on different technologies needed as per the crop calendar. These groups facilitates the exchange of technologies, ideas, clarifications, marketing of technological inputs and products

b. Giochat programmes : This innovative ICT aided technology transfer mechanism is assisted by Reliance Foundation. In this programmes, the field staff take the photo of field problems viz., pest attach, disease incidence, micro nutrient deficiencies, etc. and sent to experts at our Kendra. Our expert teams views the photos on large screen like in Television and clarifies / suggest the suitable measures to the farmers over phone.

This kind of programmes aid in reach of more number of farmers in minimum time. During 2017-18 four such programmes and covered 86 farmers to solve 112 problems in various crops

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1	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
2	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
3	Paddy	Soaking the paddy seeds in diluted cows urine before sowing.	To improve the seed germination percentage and early vigour of the seedlings.
4	Paddy	Bunds are strengthened with weeds and stubbles collected from the fields, bunds are plastered with mud.	To prevent rat holes and their damage.
5	Paddy	Placing bird perches in the field to allow birds to sit and predate on the pests.	To control all kinds of larvae.
6	Paddy	Storing of grains on a mud pot of more than 6 feet height.	To control storage

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

			pests.
7	Paddy	Keeping neem leaves or pungam leaves in between gunny	To control storage
		bags.	pests.
8	Duck	Duck rearing in Paddy field	To increase soil
	rearing		fertility and
	_		collected pupae in
			summer season
9	Poultry	Use of Phyllanthus niruri, cumin seeds, garlic extract,	To contain ranikhet
		and turmeric is mixed with boiled rice and can be given	as prophylactic and
		as feed.	after disease
			outbreak.

13. a. Impact of KVK activities (Not to be restricted for reporting period).

Nome of specific	No. of participants	% of adoption	Change in income (Rs./ha.)	
toobnology/skill transforred			Before	After
technology/skill transferred			(Rs./Unit)	(Rs./Unit)
Varietal introduction CO(R) 50	68	70	14,790	24,600
Mechanization of Transplanting	55	70	33,569	48,880
in Paddy				
MN Mixture application	32	70	37,760	51,290
Introduction of Groundnut	52	60	37,014	53,458
variety VRI 2				
Introduction of Sesame variety	46	45	26,410	39,300
TMV 7				
2% DAP spray in pulses	65	50	24,700	31,200
Vegetable seedling production	57	75	1,14,350	1,44,500
through protray				
ICM in cashew	46	68	15,000	30,000
Management of shoot and fruit	26	45	62,300	86,400
borer in brinjal				
Hi-Tech Tuberose cultivation	22	32	7,25,000	1,05,000
Seed treatment with	70	37	38,014	64,488
Pseudomonas in paddy and				
groundnut				
Introduction of fodder CO (CN)	59	73	16,500	26,250
5 and CO(FS) 29				
Soil test based fertilizer	37	42	38,670	54,040
application				
Integrated feed management in	46	32	13,600/cow	21,200/cow
cattle			/lactation	/lactation
Integrated disease management	42	22	4,200/goat	7,410 /goat /
in sheep and goat			/sheep	sheep
Mixed fodder cultivation	29	15	36,000/acre	48,100/acre
Composite fish culture	30	17	85,000/ha.	1,75,000/ha.
Stunted earlings for seasonal	25	11	94,000/ha.	1,20,500/ha.
ponds				
Disease management in poultry	162	88	4,800/	6,300/
birds			20 birds	20 birds
Spraying of Pulse wonder	594	56	5,060/ha	62,160
Groundnut rich	786	52	23,626/ha	54,331/ha
Introduction of Bio fortified	41	22	18,600	21,400
paddy variety DRR Dhan 45				

NCOF Water decomposer	86	48	1,18,000	1,26,000
Paddy AWD Pani pipe	115	46	19,420	24,370
technology				
Azolla cultivation	110	56	14,800/cow	18,400/cow
			/lactation	/lactation
Insurance & Immunization for	40	45	-	30,000
Livestock				(if any death
				of dairy
				animal)
Composite fish culture	65	27	3,5000	42,000
Stunted yearlings for seasonal	45	24	37,000	48,300
ponds				

13. b. Impact of five select technologies assessed/demonstrated/popularized by the KVK in the district (in QRT format)

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 (ADT5)
- 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
- Foliar application of TNAU Pulse wonder, IPM practices

Parameter	Demo	Check
Output		
Additional cost (+) of technology / intervention or saving (-) in	1,500	
demo (Rs) over check		
Productivity (in q/ha) in demo	7.4	5.3
Additional yield over check (in q/ha)	2.1	
% increase in yield over check	26%	
Gross returns (in Rs/ha)	59,200	42,400
Net Returns (Rs / ha)	41,200	32,900
Additional Net Returns in demo (demo – check)	8,300	
B:C ratio	1.87	1.55

Outcome	
Area covered, spread in adopted villages (ha)	1,350 ha. in 58 villages
Economic impact of KVK interventions (Rs)	2,92,82,400 (8,300 X 3,528 ha.)
(Additional net returns in demo x no. of ha)	
Area spread in district through convergence (ha)	2,178 ha

Convergence: Promoted 60 Seed grower and supplied seeds to Department: 435.6 q/year Area increased from 1350 ha. to 4042 ha. in 8 years
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

Intervention/ activity

- Gap filling VRI 3 grafts
- Stem borer and TMB management
- Foliar sprays
- Pruning techniques

Parameter	Demo	Check
Output		
Additional cost (+) of technology / intervention or saving (-) in demo	6,100	
(Rs) over check		
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)	5,52,82,000 (6,550 X 8,440 ha,)
(Additional net returns in demo x no. of ha)	
Area spread in district through convergence (ha)	8,200 ha.

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

3. 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 (-)	42,500	
in demo (Rs) over check		
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)	4,23,50,000 (1,21,000 x 350 ha.)
(Additional net returns in demo x no. of ha)	
Area spread in district through convergence (ha)	322

Convergence: Micro irrigation extended to 280 ha

4. 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	5,100	
demo (Rs) over check		
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)	3,02,94,000 (11,220 X 2,700 ha.)
(Additional net returns in demo x no. of ha)	
Area spread in district through convergence (ha)	1920 ha.

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

1

5. 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	6,500	
demo (Rs) over check		
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)	80,93,060
(Additional net returns in demo x no. of ha)	(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%)

6. Low cost hatchery to augment chick production

Problem

- Low egg yield from desi birds (50-60/year) due to brooding nature
- 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	6,000	
demo (Rs) over check		
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)	81,74,000 (26,800 x 305 farmers)
(Additional net returns in demo x no. of farmer)	
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

7. 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 (-)	16,500	
in demo (Rs) over check		
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)	34,50,000 (1,15,000 x 30 ha.)
(Additional net returns in demo x no. of 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)

Villages	Crop/Enterprise	Technology	Treatment	% of Adoption
Throughout the District	Groundnut	Groundnut rich as foliar spray to improve the yield	KVK has recommended spraying of groundnut rich 5 kg/ha at the time of peak flowering stage 2 times for increasing the yield of groundnut by 18 percent.	52
Nagamangalam	Paddy COI 50	Varietal introduction COI 50	After seeing the performance of CO®50 over CR1009. The farmers were very much interested in cultivation of CO®50. With the advice of our Kendra and by the demand from the farmers. The state agricultural department has itself started distribution of CO®50 paddy seeds in their depots. Now, it is being spread not only our operational area of village but also in other blocks.	70
Sembiyakudi	Paddy	Mechanization of Transplanting in Paddy	Now, the farmers are carrying out transplanting operation in time at less cost.	70
Cholamadevi	All crops	MN Mixture application	Now the farmers have realized the importance of micro nutrients and started to regularly apply MN mixture through soil and foliar application.	60
Kasankottai	Groundnut	Introduction of Groundnut variety VRI 2	After the demonstration on VRI 2, farmers are harvesting 1000 kg/ac. And thereby the income level increased.	80
Puliyankuzhi	Sesame	Introduction of Sesame variety TMV 7	Now the farmers are familiarized in using certified seeds. They also harvest 15-20 % increased yield by cultivation of TMV 7 over the earlier varieties.	40
Devamangalam	Pulses	2% DAP spray in pulses	Farmers are regularly spraying 2% DAP at flowering and pod formation stage. So, they are obtaining bold grains and thereby increased yield.	70
Silal	Vegetables	Vegetable seedling production through protray	Now the farmers using good quality seedling raised in 77 portrays. So the initial establishment and yield is upto the expected level in all the transplanted vegetable like tomato, brinjal, chillies, etc.	45
Veerakkan	Cashew	ICM in cashew	The farmers are learned to manage the tea mosquito bug and	70

13.c. Cases of large scale adoption/impact of specific technologies

Villages	Crop/Enterprise	Technology	Treatment	% of Adoption
			stem borer by regular sprays and other management practices. Now the productivity has increased upto 250 kg/acre.	
Karaikuruchi	Brinjal	Management of shoot and fruit borer in brinjal	Now the farmers are familiarized in usage of pheromone trap and other bio control measures in management of brinjal shoot and fruit borer. Now the infestation is reduced to 10-15 %	45
Kuvagam	Tuberose	Hi-Tech Tuberose cultivation	Farmers are now adopting the new variety of hybrid namely Prajwal with soil mulching techniques and nematode management practices to get higher yield.	30
Kasankottai	Paddy and groundnut	Seed treatment with Pseudomonas in paddy and groundnut	Farmers are doing seed treatment with Pseudomonas with 10g/kg of seed as prophylactic measures and also the soil application of 1 kg /acre and thereby good control of seed borne and soil borne diseases and ensured.	40
Across the district	Fodder	Introduction of fodder CO (CN)4 and CO(FS) 29	The farmers are well aware of importance of green fodder in management of cattle and also to improve the milk productivity. Now farmers practicing the cultivation of fodder CO(CN)4 and CO (FS) 29 in at least 10 cents.	52
Kasankottai	Groundnut	Mechanization in Groundnut	Now, the farmers are carrying out sowing operation in time at less cost.	46
Across the district	Cattle	Integrated feed management in cattle	Judicious use of green fodder cereal, legume and green fodder crops and concentrated feed along with minerals enhances health of animals	59
Across the district	Cattle	Integrated disease management in sheep and goat	Ethno veterinary practices, animal health Camp	48
Across the district	Cattle	Mixed fodder cultivation	Judicious use of green fodder cereal, legume and green fodder crops and concentrated feed along with minerals enhances health of animals	39
Across the district	fish	Composite fish culture	Intensive fish culture like catla, mirgal and rogu	27
Across the	fish	Stunted	Useful technology for short water	24

Villages	Crop/Enterprise	Technology	Treatment	% of Adoption
district		yearlings for seasonal ponds	bodies	

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

1. <u>Impact of FOCT Training on developing self-employment through tree climbing at</u> <u>Ariyalur District</u>

Introduction

Krishi Vigyan Kendra designs different types of training courses for the farmers, farm women and rural youth. Training is an important aspect of the entrepreneurship development and it is considered as part of strategy for growth and development of an organization or individual. Basically, training is intended to help individuals to learn and to bring the desired standard of efficiency, condition and behavior.

The total population of Ariyalur District is 7,52,481 of these 3,51,270 are farmers. The youth members (19-35 years) constitutes 36% of the total population and about 30% of them are unemployed or underemployed. ICAR – Krishi Vigyan Kendra (KVK) hosted by CREED was started during March, 2009 at Ariyalur district. Since then the KVK marching towards empowerment of farming community by dissemination of various technologies related to agriculture and allied sector. Krishi Vigyan Kendra, Ariyalur has conducted training programmes to unemployed rural youth in collaboration with Coconut Development Board, Cochin. The name of the training was "Coconut Tree Climbing using climbing device" under friends of coconut trees (FOCT) concepts. The preferred age of the trainees was 18 to 45 years. In total 160 rural youth were trained during last three years from 2017-18 to 2019-20.

Coconut (Cocos nucifera L.) is an important and versatile tree crop with diverse end-uses, supporting livelihood of many farm households in the primary sector, grown in many states of India. But in recent days coconut farmers are facing serious problems in coconut harvesting due to the shortage of trained climbers to harvest the nuts and clean the trees annually. It costs high ranging from Rs.50 - 80 per tree for climbing and harvesting.

The present study was undertaken to assess the impact of FOCT trainings on income and employment generation to rural youth and its role on reducing problems in coconut harvesting.

Materials and Methods

By considering the problem of shortage of trained tree climbers, the Coconut Development Board, Cochin have introduced the training on climbing of coconut trees using a safe and easy to use climbing device. During 2017-18 to 2019-20 eight such a trainings programmes were conducted at Krishi Vigyan Kendra, Ariyalur District with the financial support of Coconut Development Board (CDB) to 160 coconut farmers or youth members to impart the skill of using palm climbing device and management of coconut plantations for sustainable yields. The knowledge of coconut palm management and associated pest and disease management was also taught to the trainees. The selection of unemployed youth were done through advertising in print and electronic media and also through oral information. For each training programme 20 trainees were admitted. Total 160 rural youth were trained for safe climbing of coconut trees using coconut tree climber and improved coconut cultivation practices. After successful completion of the training they were provided with a palm climbing device, free accidental insurance for one year and a certificate of completion so as to enable him to take this as his profession. These trainees were linked with Coconut Development

Board to get regular advices and schemes related to coconut farming. Out of 160 trainees 100 trainees were selected by using simple random sampling. The information pertaining to tree climber by traditional methods and advanced method of using climbing device was collected by using a well-structured pretested schedule. Adoption was operationalized here as a decision to make full use of coconut climbing device for harvesting of coconuts. Farmers adopt them either fully, partially or do not adopt at all. Score 3, 2 and 1 was given for fully, partial and non-adoption respectively. In order to interpret collected data and to draw meaningful conclusions, data were statistically analysed by using analytical statistics i.e. correlation.

Results and Discussion

Trainees adopted the coconut tree climbing device in two ways one is for harvesting their own coconuts and remaining one is as a profession for income generating purpose. The trainees expressed that the device is time saving, simple and safe and reduced the harvesting cost. The device was so designed to attract the youth and non-traditional coconut climbers to take up coconut harvesting as vocation. The small farmers with few number of coconut trees were very happy to harvest nuts by their own by using this simple device.

Table 1. Distribution of respondents according to extend of adoption of coconut tree climbing device at Ariyalur District.

(n=100)

		Extend of adoption						
S.No	Technology	Fully		Partially		Not adoption		
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	
1	Use of	52	52.00	38	38.00	10	10.00	
	coconut tree							
	climbing							
	device							

It could be seen from Table 1 that 52.00 percent of the trainees were fully adopted the coconut tree climbing device as an income generating activities by climbing others trees for wage. A person could climb 25 to 30 trees in a day and earned Rs.750 to 1000/day. About 38.00 percent of the trainees were partially adopted the device for climbing for wage, only 10.00 percent of the farmers were not adopted this device. About 80 percent of the trainees were adopted the coconut tree climbing

device for earning income and remaining 20 per cent of the trainees adopted the device for harvesting their own coconuts. This might be due to the fact that most of the rural youth trainees were enthusiastic in participation of trainings as it involves more practical exposures and easy to climb apart from ensuring safety. As Ariyalur district is having limited coconut plantations, the trained climbers preferred to go to the nearby districts also to climb the trees and get income. The problem of coconut growers in harvesting the nuts at high cost (Rs.50-80/tree) using the traditional climbers were solved to the maximum extend as they could use this trained climbers at Rs.25-30/tree.

Table 2.	Correlation analysis of profile characters and their extend of adoption of coconut tree
climbing	device

S.No.	Profile character	Correlation Co-efficient ('r' valve)
1	Age	-0.226 ^{NS}
2	Education	0.575**
3	Farm size	0.457**
4	Farming experience	-0.279*
5	Family type	0.047**
6	Annual income	-0.279*
7	Social participation	0.356**
8	Mass Media exposure	0.268*
9	Extension agency contact	0.330*
10	Training exposure	0.285*
11	Risk bearing ability	0.543**
12	Motivation orientation	0.648**

* = significant at 0.05 level of probability

** = significant at 0.01 level of probability

A perusal of data presented in table 2 revealed that, among the twelve profile characteristics of respondents studied, nine characteristics namely education, farm size, family type, social participation, mass media exposure, extension agency contact, training exposure, risk preference and motivation orientation were significantly correlated with adoption of coconut climbing device. However, age, farming experience and annual income were negatively correlated with adoption of coconut climbing device for nut harvest and crown cleaning.

Education and farm size paves the way to quench the need for information for adoption. Social participation act as supporting psychological variable to verify and clarify the misconception in adoption of the device. Mass media exposure, extension contact and training exposure facilitated quick acquisition of knowledge and better adoption. Social participation act as supporting psychological variable to verify and clarify the misconception in adoption of the device.

Table 3. Income and employment generation to youth members by coconut tree climber device

No. of persons involved in tree climbing as a profession	No. of trees being climbed / month / person	Cost/tree (Rs.)	Income generation/ Person (Rs.)	Employment generation /year (Mandays)
83	750	30	22,500	24,500

It was evident from Table 3 that among the methods of climbing, 83 youth members out of 160 persons trained were involved in tree climbing as a profession. Number of trees climbed / month by one person was 750 trees and thereby Rs.22,500 could be earned by a person per month. About 24,500 mandays of employment is being generated per year to the 83 tree climbers. This was mainly due to use of advance method of climber leads easy to climb the tree, without any life accidental risk by using coconut climber over other method of harvesting of coconuts. Whereas, manually climbing the tall trees, experienced body pain, muscles catch and with lot of risk while climbing and very difficult to meet out financial needs of a family with meager earnings. Hence the Friends of Coconut Trees trainings designed by the Coconut Development Board and imparted by different KVKs certainly could reduce the risk of tree climbing and body pain besides easing out to climb more number of trees per day. This could paved the way for increased income and the employment to the rural youth.

Conclusion

The study partially and fully has shown that ninety per cent of the trainees were adopted the coconut tree climbing device. Correlation analysis also indicated that education, farm size, family type, social participation, mass media exposure, extension agency contact, training exposure, risk preference and motivation orientation were significantly correlated with adoption of coconut climbing device. The study concludes that coconut climber equipment is a boon for the coconut harvesters, since it has reduced the drudgery in tree climbing and improved the climbing efficiency there by providing employment opportunity for rural youth, which has helped them to improve their livelihood. The FOCT training conducted by the ICAR KVK, Ariyalur paved the way for steady income and employment to the youth members.

2. <u>Impact Assessment of KVK's Interventions on Groundnut Cultivation with special</u> reference to IPDM practices in Ariyalur District

Introduction

Ariyalur district of Tamil Nadu is located in North eastern part of Tamil Nadu which has the potential of cultivating wet land, garden land and rainfed crops. Paddy is the major wet land cop while groundnut and Blackgram are the important garden land crops. Pearl millet, maize, cashew and cotton are the rainfed crops raised in red sandy loam and black cotton soils during north east monsoon season. The literacy level of farmers and the technical know-how on advanced crop production practices was poor due to the lack of resource centres like KVK or Regional Agricultural Stations

Groundnut is an important oilseed crop cultivated in an area of more than 17,500 ha in rabi season (November-December) under garden land condition mainly in five blocks of Ariyalur district viz., T.Palur, Jayankondam, Andimadam, Ariyalur and Sendurai with borewell irrigation. The important varieties under cultivation are Gujarat, VRI2, JL24 for domestic use and also for local

marketing. The groundnut farmers were less assured of their crop due to the socio factors viz., less affordability towards high cost of inputs, biotic and abiotic stresses, improper marketing structure etc.

CREED KVK focused its extension activities in the five blocks of Ariyalur from 2009-10 to 2017-18 to improve the knowledge level of farmers and adoption of advanced Integrated pest and disease management technologies pertaining to groundnut cultivation. The KVK demonstrated various IPM technologies through series of interventions in the farm of trainings, front line demonstrations, on farm trials, exposure visits, etc.

The present study was undertaken to ascertain the gain in knowledge level among the respondents and to study the adoption level of various interventions on groundnut and also to find out the reasons for non-adoption of certain technologies and to suggest suitable alternatives to enhance the income level out of Groundnut cultivation.

Materials and Methods

Though most of the interventions were carried out in five blocks, but only two blocks viz., T.Palur and Andimadam were selected for the study. For the selection of respondents, list of beneficiaries if various programmes of KVK during last five years (2013-14 to 2017-18) was prepared. Out of 1200 beneficiaries, only 100 farmers were selected by simple random sampling procedure from T.Palur and Andimadam with 50 farmers from each block.

A questionnaire was prepared and the data were collected through personal interviews with the respondents. The data collected were processed. Tabulated, classified and analysed interms of percentage, Totally 11 practices were selected as criteria to evaluate the farmers for extent of knowledge gained and adoption of groundnut integrated pest and disease management technologies as results of various intervention viz., trainings, method demonstrations, Front Line Demonstrations (FLDs), On Farm Trials (OFTs), diagnostic visits, advisory services, exposure visits, radio talks and popular articles.

Results and Discussion

Gain in knowledge

Most of the farmers were traditional in nature and has less access to resource centres like KVK before the inception of CREED KVK during 2009. It is presumed that the knowledge of farmers to a larger degree relies upon the extent of exposure given to them through tools like trainings, demonstrations, exposure visits, etc. The data presented in Table 1 reveals the increased knowledge gain on various technologies of IPM due to the series of intervention of KVK. The highest gain of 54 percent was observed in knowledge on seed treatment with *Trichoderma viride* @ 10g/kg. of seed to control the seed borne disease like root rot and stem rot. This could be due to the frequent trainings and demonstrations conducted by the KVK and because of the easiness of technology in seed treatment. This is in consonance with the findings of Changadeya et al., (2012). Installation of pheromone traps @5/ha for monitoring and trapping of *Sopdoptera litura* and *Helicoverpa armigera* recorded the knowledge gain to the tune of 46 per cent and it could be due to the trainings and method

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demonstration organized by KVK at the farmer's field under Farm Field School programme. It is also support the findings of Dubey et al. (2008). The beneficiary farmers realized the usefulness of the technology by seeing the performance of groundnut crop under IPM measures followed filed and by interaction with the successful farmers. Forty percent gain in knowledge was observed towards soil application of *Trichoderma viride* 10kh/ha. To avoid the soil borne diseases like dry root rot, stem rot, leaf spot and rust. Need based application of Imidacloprid 17.8% SL @120 ml/kg to groundnut field recorded the knowledge gain of 38 percent as it is very effective, cheaper and easily available. The least gain in knowledge was observed for crop rotation as the 32 percent of the farmers knew the crop rotation and the rest of the 20 percent of the respondents alone understand the need of crop rotation after KVK's intervention. The technologies viz., Installation of light trap @1 No./5 ha, collection and destruction of egg masses and spraying of Hexaconazole 5% EC in 15 days interval revealed 30 percent of knowledge of gain due to the interventions of KVK as the exposure to these technologies might be less.

Extent of Adoption

The data (Table 2) revealed that 56 percent of the farmers adopted seed treatment with Trichoderma viride @10g/kg of seed, 44 percent of the farmer installation of each pheromone traps @5/ha and 42 percent of the farmers adopted spraying of Hexaconazole 5% EC. The reason for higher adoption of these technologies could be the beneficial effect of these technologies to control seed borne diseases and pests and thereby increased level of income. Seed treatment, installation of pheromone trap and spraying of Hexaconazole technologies to control the pest and diseases resulted in high yield and hence the farmers is impressed upon this technology and its adoption was also high. Likewise, the sucking pest and leaf defoliated are the major pest in groundnut cultivation and by series of intervention of KVK the spray of Imidacloprid @ 125ml/ha and spraying of chloripyriphos 20% EC recorded higher adoption percentage of 30. Though the deep ploughing in summer is essential technique, 55 percent of the farmers were adopting this technology even before the KVK's intervention. It was noted that gain in knowledge about soil application of *T.viride* among the farmers was to an extent of 34 percent and its effects on control of soil borne disease like root rot, leaf spot and rust. Besides, it is effective, low cost and available throughout the year in KVK itself and it facilitated the farmers to use it regularly. About 12 percent of the farmers were taking collection and destruction of egg masses before KVK's influence as it was effective and easy for control of leaf eating caterpillar. The farmers used to take the samples like pest and disease to the nearby agro centre and the shopkeeper recommends chemicals but after KVK's intervention, the farmers were familiar in handling the IPM in groundnut.

Knowledge Acquisition Vs Extent of adoption

The gain in knowledge depends on various factors like easiness of technologies, educational background of the participating farmers, extension approaches handled in technology transfer, farmers' attitude, ability of extension personnel, teaching and learning situation etc. Likewise the

extent of adoption of a particular technology relies mainly on easiness and usefulness of the technology besides the socio economic status, access to the technological inputs and its low cost. This is in accordance with the findings of Alagukannan et al. (2015) in Banana cultivation at Tuticorin District. The present study on percentage gain in knowledge and percentage adoption could certainly generate some useful information for future line of study or the charges needed in existing system of cultivation of groundnut. About deep ploughing in summer season, 88 percent of the respondents gained knowledge on summer ploughing and it was adopted by 78 percent of the respondents. The similar trend was also noticed in the case of soil application of neem cake @ 250kg/ha. In contrary to that, crop rotation was known to the farmers to an extent of 52 percent after KVK trainings but its adoption was less (18%). This could be due to preference of the farmers to the groundnut in terms of income over the other crops. Similarly the gain in knowledge in respect of installation of light traps was 42% but only 12 percent of farmers used installation of light trap due to non availability of light traps in local and high cost. The other technologies like installation of pheromone trap, seed treatment with Trichoderma viride, spraying of Hexaconazole, Imidacloprid and Chloripyriphos exhibited the similar trend of comparatively higher level of acquisition of knowledge and also adoption among the participating farmers by the various interventions of KVK. In contrary to that the knowledge acquired by the beneficiary farmers was high but its adoption was less for the technologies viz., collection and destruction of egg masses of leaf eating caterpillar and soil application of *T.viride*. This implies that still more awareness on this technology has to be imparted to the farmers and easy availability of *T.viride* in right time should be ensured.

Conclusion and Recommendation

The findings of the present study reveals that the interventions of CREED KVK, certainly facilitated the knowledge acquisition by the farmers and adoption at higher level in groundnut cultivation with respect to the technologies viz., summer ploughing, soil application of neem cake, installation of pheromone trap, seed treatment with *T.viride*, soil application of *T.viride*, spraying of Hexaconazole, Imidaclorprid and Chloripyriphos to control various pests and diseases and to get higher yield. The present study also suggests the need of alternatives or timely availability of critical inputs like light traps could be ensured and some more awareness is required on use of light trap, crop rotation and collection and destruction of egg masses techniques. The extension system should be further invigorated using ICT tools to improve the knowledge acquisition and adoption of technologies in Groundnut cultivation at Ariyalur District.

Table 1. Gain in knowledge level with respect to IPDM practices in Groundnutcultivation due to the intervention of CREED KVK at Ariyalur District ofTamilnadu

		Knowledge Level			
Sl. No	IPM Technology	Before KVK intervention	After KVK intervention	Gain in knowledge (%)	
a. Cultu	iral practices				
1	Deep ploughing in summer to expose soil	60	88	28	
2	Soil application of Neem cake @200kg/ha	25	60	35	
3	Crop rotation	32	52	20	
b. Mech	nanical practices				
4	Installation of light traps 1 No./5 ha.	12	42	30	
5	Installation of each pheromone traps @5No./ha. For monitoring and trapping of S.litura and H.armigera	20	46	66	
6	Collection and destruction of egg masses of leaf eating caterpillar	8	38	30	
c. Biolo	gical control of pest and diseases				
7	Seed treatment with T.viride10g/kg of seed	24	78	54	
8	Soil application of T.viride @10 kg/ha	20	60	40	
d. Chen	nical control				
9	Two spray Hexzaconazole 5% EC @1500 ml/500 lit. of water at 15 days interval	45	75	30	
10	Need based application of Imidaclorprid 17.8@ SL @125ml/ha. For managing sucking pest of Groundnut	32	70	38	
11	Spraying of chloripyriphos 20%EC @1500ml/500 lit. of water for managing defoliators	48	80	32	

Table 2. Change in adoption level with respect to IPDM practices in Groundnut
cultivation due to the intervention of CREED KVK at Ariyalur District of
Tamilnadu

		Knowledge Level			
Sl. No	IPM Technology	Before KVK intervention After KVK	After KVK intervention	Gain in knowledge (%)	
a. Cultu	iral practices				
1	Deep ploughing in summer to expose soil	55	78	23	
2	Soil application of Neem cake @200kg/ha	22	40	18	
3	Crop rotation	3	56	18	
b. Mech	nanical practices				
4	Installation of light traps 1 No./5 ha.	10	22	12	
5	Installation of each pheromone traps @5No./ha. For monitoring and trapping of <i>S.litura and H.armigera</i>	18	62	44	
6	Collection and destruction of egg masses of leaf eating caterpillar	12	32	20	
c. Biolo	gical control of pest and diseases				
7	Seed treatment with T.viride10g/kg of seed	16	72	56	
8	Soil application of <i>T.viride</i> @10 kg/ha	22	56	34	
d. Chen	nical control				
9	Two spray Hexzaconazole 5% EC @1500 ml/500 lit. of water at 15 days interval	38	80	42	
10	Need based application of Imidaclorprid 17.8@ SL @125ml/ha. For managing sucking pest of Groundnut	35	65	30	
11	Spraying of chloripyriphos 20%EC @1500ml/500 lit. of water for managing defoliators	44	74	30	

3. Impact study on Mushroom cultivation for Micro Entrepreneurship development

Introduction

Cultivated mushrooms have now become popular all over the world. Mushroom cultivation can directly improve livelihoods through economic, nutritional and medicinal contributions. Mushroom is a popular food due to their special nutritive value and medicinal properties. Mushrooms are a good source of vitamin B, C and D, including niacin, riboflavin, thiamine, and folate, and various minerals including potassium, phosphorus, calcium, magnesium, iron and copper. They provide high quality fats and low in carbohydrates and cholesterol, which is ideal for reducing body weight. Mushroom cultivation can help reduce vulnerability to poverty and strengthens livelihoods through the generation of a fast yielding and nutritious source of food and a reliable source of income. It is an indoor crop, grown independent without sunlight and do not require fertile land and can be grown on small scale as it does not include any significant capital investment. Mushroom cultivation will improve the socio-economic condition of farmers, families and solve employment problems of both literate and illiterate of rural areas and semi-urban, especially women. Mushroom cultivation is a women friendly profession. Mushroom growing is an agricultural activity in which women can utilize their spare time and play a vital role without sacrificing their household responsibilities. Promotion of mushroom cultivation could relieve pressure on land, increase food and nutritional security and uplift the status of women through earning additional income and in household decision making as far as concerned

Mushroom substrate can be prepared from any clean agricultural waste material, and mushrooms can be produced in temporary clean shelters. They can be cultivated on a part-time basis, and require little maintenance. Mushroom cultivation activities can play an important role in supporting the local economy by contributing to subsistence food security, nutrition, and medicine; generating additional employment and income through local, regional and national trade; and offering opportunities for processing enterprises such as pickling and drying. Oyster as well as Button mushroom offers good potential for its cultivation in Ariyalur district. The demonstration and training conducted by Krishi Vigyan Kendra, Ariyalur. The trained people after getting proper know how and skill started its production. Apart from the trained trainees, a lot of other farmers and farm women started its cultivation by seeing their 88eighbor and fellow farmer nearby villages. But methods of mushroom cultivation of these two groups differ a lot and the difference were mainly due to proper training from KVK taken before mushroom cultivation was started. Keeping in view the increasing demand of mushroom due to globalization and opening of the economy, the present study was undertaken with the specific objective to assess the impact of training and demonstration on mushroom production as an enterprise/self-employment.

Methodology

A complete list of 305 respondents was randomly prepared who have under gone through training and demonstration on mushroom production technique from Krishi Vigyan Kendra, Ariyalur districts from 2014- 15 to 2019-20. A questionnaire was framed covering background information. In order to assess the knowledge gained by the trainees and effectiveness of training, a pre-test before training and post evaluation after training was conducted to know the level of knowledge of participants about species, pest and disease infestation in mushrooms as well as their storage process and value addition etc. To test the knowledge of trainees, a set of 10 questions related to mushroom production, nutritive value, value added products prepared from mushroom, its picking and storage method etc. were prepared and the suggestions from the trainees were also recorded for further improvement in the next training programme. Change in perception level was calculated from the difference of scores obtained in pre and post knowledge test of the trainees. The data were tabulated and statistically analyzed using frequency, percentages and ranking.

Results & Discussion

Training courses aim at enhancing adoption and diffusion of innovations. Some of the outcomes envisaged for any training programme were gain in knowledge, gain in skill acquired and ultimately in more adoption and integration among farming community. An important indicator of the impact of training programme is the extent, to which they have adopted the package of practice of mushroom cultivation technology. Krishi Vigyan Kendra, Ariyalur has been giving long and short duration training on Mushroom production both to farmers, rural youth and rural women. Mushroom production has become one of few enterprises which rural women of both district has adopted in big way both at household level and as commercial enterprise as a source of income generation after the proper dissemination of technology through KVK.

Change in perception level of respondents (N=305)

Change in perception level of respondents before and after training was shown in Table 1. They develop a favourable attitude towards mushroom production after training. In pretest before training, the knowledge of respondents about mushroom spawn production was zero and 1.75 per cent regarding methods of compost making to 32.0 percent in case of awareness of loans, schemes and subsides provided by public or private institutions for establishment of mushroom production unit as revealed by Table 2. Post training score of various practices ranged from 58.00 per cent in case of mushroom spawn production to 100 per cent in case of profitability in mushroom cultivation. It was thus noticed that pre-training knowledge score was not much satisfactory for all the aspects of training programme. However, the knowledge score gained by respondents after training was more satisfactory in all aspects. The reason behind the satisfactory change in perception level might be due to well educational background, keen interest of participants and methods followed for technology transfer to the trainees.

S.No.	Particulars	Pre-test Knowledge before training (%)	Post-test Knowledge after training (%)	Change in perception level (%)
1	Knowledge of Species of Mushroom	8.5	90.25	81.75
	and Identification of edible mushroom			
2	Nutritive and medicinal value of	5.5	80	74.5
	mushroom			
3	Materials and Techniques used for	8	81.75	73.75
	different types of mushroom production			
4	Methods of compost making	1.75	64.5	62.75
5	Pest and disease infestation in	5	78.75	73.75
	mushroom			
6	Profitability in mushroom cultivation	22.5	100	77.5

Table 1: Change in perception level of respondents for mushroom production (N=200)

7	Harvesting and storage process	7.5	89	81.5
8	Mushroom spawn production	0	58	58
9	Value added products of mushroom	10.25	86	75.75
10	Awareness of loans, schemes and subsides provided by public or private institutions for establishment of mushroom production unit	32	98.25	66.25

Level of adoption

A total of 305 farmers and farm women participated in the training for mushroom production in the year 2014-15 to 2019-20. Out of 305 farmers and farm women, only 122 farmers adopted Mushroom cultivation (Table 2).

Year	Number of training	Number of participants of training	Number of participants adopting mushroom production	Percent adoption
2014-15	1	26	8	30.76
2015-16	3	61	21	34.42
2016-17	4	73	28	38.00
2017-18	3	40	21	52.50
2018-19	4	60	23	38.33
2019-20	3	45	21	46.66
Total	18	305	122	Avg: 40.11

Table 2. Impact of training programme of Mushroom cultivation farming

The average rate of adoption from the year of 2014-15 to 2019-20 was 40.11%. The highest rate of adoption was noticed in the year of 2017-18 (52.50%), where as the lowest rate of adoption was noticed in the year of 2014-15 (30.76%) (Table.2). The low adoption of mushroom production in the year of 2014-15 may be due to hesitation on adoption of new technology as the mushroom production level and lack of availability of spawn and marketing. In consequent years, the adoption level increased on seeing of neighbour farms of benefited farmers.

Conclusion

Training and demonstration are integral part of KVK extension system. Krishi Vigyan Kendra playing an important role in encouraging rural farmers and farm women to take up simple and quick income generating enterprises from where they can earn additional income. The trainee respondents were inspired greatly by the easy method of mushroom production. The mushrooms were included in their daily diet and supplemented additional nutrition to them. The perception levels of the respondents about mushroom and its production after the training have changed. The reason behind the satisfactory change in perception level is due to well educational background, keen interest of participants and methods followed for technology transfer to the trainees. It also provided an opportunity to strengthen the link between farmers and scientists which helped in technology dissemination and overall development of weaker section. The regular supply of quality spawn is the

single most important intervention that needs to be addressed for mushroom entrepreneurship to flourish.

14. 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	Conducting Farmers Training, Sponsored training	
	Centre for Banana (NRCB),	programmes, exposure visits, disseminating NRCB	
	Trichy	varieties and technologies through OFTs' and	
		FLDs', member of SAC, serves as a resource person	
		for training programmes.	
2	ICAR - Sugarcane Breeding	Disseminating SBI released varieties, technologies	
	Institute (SBI), Coimbatore	at Ariyalur district through OFTs, FLDs, Exposure	
		visits	
3	ICAR - Indian Institute of	Introduction of IIHR newly released	
	Horticultural Research,	varieties, technologies through demonstration,	
	Bangalore	exposure visits and trainings	
4	ICAR – Directorate of	Obtaining new technologies for Cashew and	
	Cashew Research (DCR),	exposure visits	
	Puthur		
5	Directorate of Groundnut	Popularization of new varieties through CFLD	
	Research, Junagadh,		
	Gujarat		
6	ICFR –IFGTB	Conducting sponsored mela, trainings and	
		obtaining technologies	
7	IICPT, 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	Introducing new varieties through OFT, FLDs,

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

With other KVKs

S.No	Name of Organization	Nature of linkage
1	KVK, Karur	Exposure visits, serve as resource person, cross
2	KVK, Perambalur	learning, supply of inputs, obtaining
3	KVK, Trichy	technologies
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	Scientist from VUTRC, Perambalur
	Research Centre (VUTRC),	Serves as resource person, SAC Members,
	Perambalur	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	
2	Department of	Collection of District Profile on Horticultural crop	
	Horticulture	production, NADP training programme, Precision	
		farming training programme, facilitating farmers to	
		avail schemes	

3	Agricultural Engineering	Trainings on mechanization, facilitating farmers to
	Department	avail subsidy and to hire farm machineries
4	Department of Animal	Azolla seed supply for Free Goat and Dairy animal
	Husbandry	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	Supply of tree saplings, Tree mela
	Forestry	

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	Long duration skill training programmes to rural
	Corporation (NSDC) and ASCI	youth
2	SBI – Rural Self	Conducting vocational trainings, exposure
	Employment Training	visits, women SHG, credit
	Institute (RSETI)	linkages
3	Mahalir Thittam (Women	Capacity building programmes to SHG
	Development Corporation)	members, Community resource persons
4	National Commission for	Workshop to empower farm women for livelihood
	Women, New Delhi	security

Development Boards

S.No	Name of Organization	Nature of linkage
1	Directorate of Cashewnut and Cocoa	Organizing seminars and trainings
	Development (DCCD), Kochi	
2	Cotton Corporation of India (CCI)	Trainings and demonstrations on IPM and
		ICM in cotton
3	Coconut Development Board (CDB),	Conducting sponsored skill trainings,
	Chennai	seminars in recent coconut cultivation
		technologies and value addition

Science & Technology organizations

S.No	Name of Organization	Nature of linkage
1	Department of Biotechnology, GoI	Special Projects to empower SC/ST
2	Department of Science and	farmers of Ariyalur district
	Technology (DST), New Delhi	
3	MSSRF, Chennai	Inputs for Policy Formulations

CSR Companies

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

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
3	JP Trust	students
4	CREATE	
5	OSAI	

Technology Dissemination through mass media

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

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

S.No.	Date	Name and designation of	Purpose	Comments
		the visitor		
1	25.2.2020 Mr. Robert Leo,		To visit organic	Appreciated about
		Deputy Director,	farms established	the programme
		Keystone Foundation,	under PKVY	implementation in
		Kothagiri, Nilgiris	scheme as the	small farmers'
			Regional Council	fields
2	26.9.2020	Mr. M.Subbiah,	To visit KVK	Appreciated the
		Director of seeds certification	organic farm	KVK farm
		and organic Farming,		maintenance by
		Coimbatore		organic ways
3	09.11.2020	Mr. A. Durairaj,	To visit the	Highly satisfied
		Director, SBI – RSETI,	facilities available	with the facilities
		Ariyalur	at KVK to conduct	available at our
			capacity building	KVK
			programmes	
4	10.11.2020	Mr.G. Muralidharan,	For the conduct of	Overwhelmed by
		Chief Engineer / Director	training on	the method
		General, Irrigation	entrepreneurial	demonstrations
		Management Training	activities for the	given while
		Institute, Thuvakudi, Tichy	migrant workers	conducting training
			due to COVID 19	programme
			lockdown	~ -

16. Important Visitors to KVKs during 2020 (with photographs)

PHOTOS

Photos on performance of technologies in OFTs and FLDs, Trainings, Extension Programmes, Other Extension Activities, Important Visitors, Awards and Recognitions (KVK, Staff, Farmers) *etc*.

Jpeg/png format with good resolution for printing (300 dpi, RGB/CMYK) Title must have the KVK Name, activity (OFT/Training/Visitor/award *etc.*) and short description

The relevant photographs are attached in Jpeg format separately.

Annexure -1

Minutes of Eighth SAC meeting

Minutes of Eight Scientific Advisory Committee Meeting on 23.03.2021

Eight Scientific Advisory Committee meeting of ICAR Krishi Vigyan Kendra, Ariyalur was held at the premises of ICAR KVK, Ariyalur District on 23.03.2021 by 10.00 am. Among 28 SAC members, twenty four 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, finally chairman briefed all the suggestions given by Scientific Advisory Committee members and gave assurance to execute the suggestions given.

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

- Indicating KVK working villages in the District map and also ensure the KVK visibility all along the District by various activities of KVK.
- To improve KVK RF (About 1.5 lakh/ac./year.)
- SAC recommendation should be reflected in Action Plan 2021-2022.
- Kalnadai Corner KVK app should be reached to all farmers of the district.
- To submit the details of news on AIR app installed farmers

2. Director of Extension Education, TNAU, Coimbatore

- Choose climate resilient crops to adapt to the changing climatic conditions.
- More concentration should be given on water management practices.
- Introduce less water requiring and more drought tolerant crop varieties both in agriculture and horticulture areas.
- Promote crops that having good market potential.
- Promotion of FPO.
- Proper planning and execution of agri and allied activities in DFI villages.
- Increase IFS farming system approach in district.
- Adoption of cluster based crop. Eg: Moringa and Onion
- Scientist should update knowledge on recent technologies then and there.
- Formation of Farmer Interest Groups.
- Value addition in minor millets.
- Promote commercial crops like Tapioca and Finger millet.
- Promotion of women Entrepreneur in value addition.

3. Principal Scientist, NRCB, Trichy

- Promote Banana based IFS system.
- Submit feedback of Cauvery samba to NRCB.

- Promote and supply Banana Sakthi micronutrient among Banana growers.
- Arrange trainings for women entrepreneurs in Banana value addition at NRCB campus (2-3 days).
- Promote NRCB app for Nematode problems during the training programme

4. Director, TRRI, Aduthurai

- Promotion of traditional paddy varieties like Mapillai Samba and Kavuni types.
- Promotion of drought tolerant cashew variety.
- Government barren lands may be converted into water storing bodies

5. Professor and Head, CRS, Veppanthattai, Perambalur District

- Introduce new Cotton variety CO17 suitable for mechanized cultivation.
- Conduct method demonstration in HDP in Cotton cultivation.
- Conduct demonstration on rain hose technologies in Groundnut and Onion

6. Joint Director of Agriculture, Ariyalur District

- Promotion of traditional Paddy varieties and minor millets.
- To arrange market facilities for horticulture crop through e-trade promotion and Uzhavan app.
- Promotion of IFS.
- Training on cultivation of crops under rainfed condition and as per soil suitability.

7. Assistant Professor and Head, VUTRC, Perambalur

• Arrange the training on Livestock at VUTRC, Perambalur to the needy farmers

8. Assistant Professor, RRS, Virudhachalam

- Use social media to promote the new technologies among the farmers
- Promote seed production in Groundnut along with RRS seed hub project
- Promote and recommend single dose herbicide (Pendimathalin + Imazethapyr) @1.25 lit/ac. for Groundnut crop.
- Promote groundnut rich booster.
- Disseminate IFS technologies among the farmers
- Promote CO5 fodder single bud slips

9. DDM, NABARD, Perambalur

- Conduct CAT programme on recent technologies
- Use NABSKILL portal for conduct of training
- Initiate SHG in value addition in Millet

10. Director, SBI - RSETI, Ariyalur District

• The same collaboration may be extended in conduct of training in all agri aspects with SBI-RSETI.

11. Sericulture, Ariyalur

• Give training on Sericulture to all block farmers.

- Awareness creation on importance of Calf rearing.
- Awareness camp on Ticks management.
- Take steps for negative energy balance management in Dairy.
- 4. Awareness camp on deworming and heifer calf management

13. RAMCO Cements, Ariyalur

- Arrange trainings to farmers to disseminate recent agriculture technology
- Disseminate recent agriculture technology in the service villages of cement factories at Sendurai block.
- Make an assessment of land belongs to temples and government porambokes to bring into effective use for raising fodder

14. Mr.Sudhakar, Farmer, Cholamadevi

• Farm machineries should be give at subsidy basis for rental to farmers.

15. Mr.Azhagu, Kottiyal

• Give more trainings for farm women

16. Mrs.Sujatha, Udayarpalayam

- Give more training on Mushroom value addition.
- Take steps to disseminate Mushroom species for waste management by quick decomposition of waste

17. Mrs. Tamil Selvi, Jayankondam

- Give special trainings on poultry parent stock maintenance.
- Facilitate transport for marketing of chicks.

18. Mr.Ashok Kumar, Karaivetti

• Promote IFS to farmers using low cost technologies

19. Mr.Chinnappa, Devamangalam

• Promotion of Organic farming among farmers.

Mr.Ramesh, Cholamadevi

- Conduct soil health camp and create awareness on soil fertility management.
- Promote IFS farmers.
- Promotion of KVK activities through local channel to reach KVK among all the farmers in the District.

Sl.No.	Name	Designation and Department	Remarks
1	Dr.V.Nadanasabapathy	Chairman	Direct
	1 5	ICAR-CREED KVK	
2	Dr.A.Bhaskaran	Principal Scientist	Virtual
		ICAR-ATARI, Hyderabad	
3	Dr.M.Jawaharlal	Director of Extension Education	Virtual
		TNAU, Coimbatore	
4	Dr.V.Ambetkar	Director	Direct
		TRRI, Aduthurai	
5	Mr.R.Palanisamy	Joint Director of Agriculture	Direct
		Ariyalur	
6	Dr.C.Karpagam	Principal Scientist	Direct
		NRCB, Trichy	
7	Mr.L.S.Naveenkumar	District Development Manager	Direct
		NABARD, Perambalur	D
8	Dr.R.Ravıkumar	Assistant Professor and Head	Direct
0	Du Como and to an an	VUIRC, Perambalur	V
9	Dr.Somasundaram	CDS Vernorthettei Derembelur Dt	virtual
10	Mr ADurairai	Director	Direct
10	MI.ADulallaj	SBI DSETI Ariyahır	Direct
11	Dr T Parthiban	Assistant Professor	Direct
11		RRS Virudhachalam	Direct
12	Mr S Shanmugasundaram	Assistant Horticulture Officer	Direct
		Department of Horticulture, T.Palur	
13	Mr.Silambarasan	Assistant Engineer	Direct
		Department of Agrl. Engg. Ariyalur	
14	Dr.S.Vasuki	Veterinary Assistant Surgeon	Direct
		Department of Animal Husbandry	
		Ariyalur	
15	Mr.V.Jothi	Inspector	Direct
		Department of Sericulture, Ariyalur	
16	Mr.K.Anandasubramanian	Development Manager	Direct
		RAMCO Cements, Ariyalur	
17	Mrs.R.Sujatha	Farm women,	Direct
10		Udayarpalayam, Ariyalur Dt.	D
18	Mrs. I. Aalgu	Farm women, Kottiyal, Ariyalur Dt.	Direct
19	Mr.G.Ashok Kumar	Farmer,Karaivetti, Ariyalur Dt.	Direct
20	Mr.K.Chinnappan	Farmer	Direct
		Devamangalam, Ariyalur Dt.	
21	Mrs.R.Tamil Selvi	Farm women, Jayankondam	Direct
22	Mr.V.Sudhakar	Farmer, Cholamadevi	Direct
23	Mr.D.Ramesh	Farmer, Cholamadevi	Direct
24	Dr.G.Alagukannan	Senior Scientist and Head	Direct
		ICAR-CREED KVK. Arivalur Dt	
23 24	Mr.D.Ramesh Dr.G.Alagukannan	Farmer, Cholamadevi Senior Scientist and Head ICAR-CREED KVK, Ariyalur Dt.	Direct Direct

List of Participants