

KRISHI VIGYAN KENDRA – MYRADA

ERODE DISTRICT

TAMILNADU

ANNUAL REPORT

**Submitted to
ICAR – ATARI, ZONE X
HYDERABAD**

ANNUAL REPORT

1st January 2024 to 31st December 2024

1. GENERAL INFORMATION ABOUT THE KVK

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

Name of the KVK	:	KVK ERODE - MYRADA
Address	:	Krishi Vigyan Kendra 272, Perumal Nagar Puduvallampalayam Road Kalingiyam Post Gobichettipalayam Taluk Erode District – 638453 Tamilnadu
Phone No.	:	9486077454
Email ID	:	myradakvk@gmail.com ; KVK.Erode@icar.gov.in

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

Name of the Host Organization	:	MYRADA (Mysore Resettlement & Development Agency)
Status of Host Organization	:	Non-Governmental Organization
Address	:	MYRADA No.2 Service Road, Domlur Layout, Bangalore – 560 071
Phone No.	:	080 - 25353166, 25352028, 25354457
Fax No.	:	(91-80) 25350982
Email	:	myrada@myrada.org
Name of the Chairperson	:	Shri.Arvind G.Risbud, IAS., (Rtd)
Mobile No.	:	9449083166
Email	:	arvindrisbud@yahoo.com

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

Name of Senior Scientist & Head	:	Dr.P.Alagesan
Residential Address	:	Gobichettipalayam Post Erode District
Phone No.	:	Nil
Mobile No.	:	+919443897654
Email ID	:	P.Alagesan@icar.gov.in ; azhagujanani@yahoo.com

1.4. Year of sanction of the KVK (as per Official Order) : **1991**

1.5. Month and year of establishment: : **1st April 1992**

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

S. No.	Item	Area (ha)
1	Under Buildings	3 ha.
2.	Under Demonstration Units	1 ha.
3.	Under Crops	18 ha.
	Total	22 ha.

1.6. Infrastructural Development:**A) Buildings**

S. No.	Name of building	Source of funding	Stage					
			Completed			Incomplete		
			Completion Date	Plinth area (Sq. m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq. m)	Status of construction Completed
1.	Administrative Building	ICAR	8/20/1997	172	667821	-	-	Completed
2.	Farmers Hostel	ICAR	11/22/2011	300	3489820	-	-	Completed
3.	Staff Quarters for PC	ICAR	2/10/1993	87	199081	-	-	Completed
4.	Staff Quarters for SMS	ICAR	7/22/1998	396	1611956	-	-	Completed
5.	Vehicle Shed	ICAR	12/24/2010	46.45	198159	-	-	Completed
6.	Cattle and Poultry shed	ICAR	11/27/2012	111.50	797956	-	-	Completed
7.	Processing Unit	MYRADA	17/08/2015	60	33000	-	-	Completed
8.	Home Science Lab	MYRADA	3/25/2017	200	200000	-	-	Completed

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms covered as on 31.12.2024	Present status
Mahindra – Jeep	2017	7,99,671.00	259054	Running condition
Hero Honda Super splendor TN36M1042	2009	49,964.00	62478	Running condition
Hero Honda Super splendor TN36M1017	2009	49,964.00	66716	Running condition

C) Equipment & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Soil Test Lab equipment	2004	5,18,766.00	Good Condition
Xerox cum Printer	2004	75,000.00	Not in use
Canon Digital Camera	2005	9,495.00	Not in use
Kodak Digital Camera	2005	8,155.00	Not in use
Power weeder	2007	76,960.00	Good Condition
Rotary weeder & tiller	2007	99,996.00	Good Condition
Chisel Plough	2007	8000.00	Good Condition
LCD, Computer System& Printer	2007	1,00,000.00	Good Condition
Direct Paddy Seeder	2008	4,500.00	Good Condition
Rotovator	2008	76,960.00	Good Condition
Cono weeder	2009	3,400.00	Good Condition
Fax Machine	2009	15,000.00	Not in use
Tractor	2010	4,99,800.00	Good Condition
Plant health diagnostic equipment	2010	9,99,196.00	Good Condition
Coconut tree climber	2010	2,500	Good Condition
Zero Seed Drill	2010	47500.00	Good Condition
Eepabx system	2011	26,395.00	Not in use
Generator	2011	2,79,520.00	Good Condition
Power Tiller	2011	1,41,590.00	Good Condition
Maize Dehusker	2011	44,720.00	Good Condition
Groundnut Pod Stripper	2011	24,700.00	Good Condition
Laser guided land leveler	2011	3,60,000.00	Good Condition
Bud chipper (Sugarcane)	2011	6,656.00	Good Condition
Chaff cutter	2012	19,425.00	Good Condition
Tamarind Dehuller	2014	36,750.00	Good Condition
Millet Dehuller (Centrifugal)	2014	Kind	Good Condition
Millet Dehuller (CIAE)	2014	Kind	Good Condition
Millet Destoner cum Grader	2014	Kind	Good Condition
Pulverizer	2014	Kind	Good Condition
Millet Dehusker	2015	Kind	Good Condition
Millet Mill	2015	Kind	Good Condition
Packaging Machine-Polythene Bags	2015	Kind	Good Condition
Packaging Machine-Gunny Bags	2015	Kind	Good Condition
Flour Shifter	2015	Kind	Good Condition
Millet Pulverizer	2015	Kind	Good Condition
Mridaparikshak Soil Test Kit	2015	83,000.00	Good Condition
HP Pavilion Computer	2016	32,900.00	Good Condition
HP LaserJet Printer 1020+	2016	9,000.00	Good Condition
Canon Printer LBP2900	2016	8,900.00	Good Condition
UPS with Batteries	2016	74,000.00	Good Condition
External Hard Disc Drive	2017	9800.00	Good Condition

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
HP Scanner	2017	9,000.00	Good Condition
Podium (PAS)	2017	32,500.00	Good Condition
Photocopier with Tray	2017	54,224.00	Good Condition
Mridaparikshak Soil Test Kit	2017	86,000.00	Good Condition
Arecanut Dehusker	2018	52,000.00	Good Condition
Spiral Separator	2018	4,500.00	Good Condition
Tamarind dehuller cum Deseeder	2018	56,000.00	Good Condition
Egg Hatchery Machine (1000 eggs capacity)	2019	1,12,000.00	Good Condition
Micro-Tek UPS with Duro Power Battery (12V)	2019	36,000.00	Good Condition
Auto Clave with Laminar Air Flow (53 Liter)	2019	1,64,993.00	Good Condition
Mini Single Twist Rope Making Machine	2019	19,234.00	Good Condition
Double twist Rope Making Machine	2019	50,740.00	Good Condition
Pulverizer - Hammer Type (Feed Mixing)	2019	1,76,000.00	Good Condition
Fermenter (100 lit Capacity)	2020	7,24,520.00	Good Condition
Banana Fiber Extraction Machine	2020	1,25,000.00	Good Condition
Milk Processing Equipment (200 Liter/Hour)	2021	7,84,000.00	Good Condition
Whirlpool Fridge 185 liter	2021	16,600.00	Good Condition
Whirlpool Fridge 215 liter with stand	2021	20,200 .00	Good Condition
Steel Almirah 6 Feet	2021	14,600.00	Good Condition
Electronic Balance Weighing Machine	2021	21,240.00	Good Condition
Colony Counter	2021	30,680.00	Good Condition
Dell Desktop Computer & Dell Monitor 19.5"	2021	5,500.00	Good Condition
Printer - Canon LaserJet (MF244Dw)	2021	24,500.00	Good Condition
Bulk Milk Cooler BMC-500	2021	2,65,500 .00	Good Condition
Khova Machine - 130 Liters (Ghee processing)	2021	1,09,760 .00	Good Condition
Dairy Equipment: -			
Insulated Sintex Milk Can	2021	40,120.00	Good Condition
SS Milk Can (40 Liters Capacity)	2021	1,62,840.00	Good Condition
Milk Analyzer	2021	9,440.00	Good Condition
Butter Chumer	2021	7,080.00	Good Condition
Curd Chuming Machine	2021	7,080.00	Good Condition
Ice Box	2021	11,800.00	Good Condition
Freezer - 500 Liters (Blue Star)	2021	41,000.00	Good Condition
Freezer - 200 Liters (Blue Star)	2021	27,000.00	Good Condition
Can Brushers	2021	9,440.00	Good Condition
Cleaning Motor Assembly	2021	35,400.00	Good Condition
Cleaning Vessels - SS	2021	43,660.00	Good Condition
Banana Fiber Cutter	2021	38,704.00	Good Condition
Water Chiller Tub	2021	18,500.00	Good Condition
MS Display Shelf (W-15 Ft x H- 6 Ft)	2021	33,040.00	Good Condition
SS Milk Can (40 liters Capacity)	2021	67,966.00	Good Condition
Benchtop Incubator cum Orbital Shaker	2021	1,26,260.00	Good Condition
SMART SCS-300 Off Lie Cream Separator	2021	76,700.00	Good Condition

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Milk Analyzer – Eco-milk Ultra	2021	70,800.00	Good Condition
Insulated Tank	2021	1,06,200.00	Good Condition
100 liters SS Storage Tank	2021	29,500.00	Good Condition
Stabilizer - 5 KVA	2021	22,125.00	Good Condition
200 LPH Holding Coil with Accessories	2021	59,000.00	Good Condition
Moisture Analyzer	2022	88,500.00	Good Condition
Refractometer	2022	6,750.00	Good Condition
Pasta Making Machine including Mixer & Motor	2022	213580.00	Good Condition
SS Butter hurner - 20 Liter & Khoa Pan - 5 Liter	2022	57,750.00	Good Condition
Khoa Pan - 5 Liter	2022	9,975.00	Good Condition
Weighing Balance - 200 Kg	2022	22,420.00	Good Condition
Weighing Balance - 30 Kg	2022	15,340.00	Good Condition
Deep Freezer - 500 Liters Capacity	2022	53,100.00	Good Condition
SS Storage Tank - 100 Liters Capacity	2022	29,500.00	Good Condition
Vacuum Packing Machine (SMART)	2022	118,000.00	Good Condition
Refrigerator (Fridge) 30 Liters Capacity	2022	8,000.00	Good Condition
Agribot Drone with extra battery	2023	9,98,000.00	Running Condition
Laptop (Acer Aspire 3 – i5 with back bag	2023	47,000.00	Working Condition
Projector (BENQ-LW500)	2023	52,650.00	Working Condition
ICON Sofa Set	2023	33,300.00	Good Condition
HB Sofa Set	2023	66,352.00	Good Condition
Vehicle – KASA Smart – Two-Wheeler	2023	67,200.00	Running Condition
Digital Spectrophotometer "Labtronic" Make Model : LT-31	2024	48,790.00	Good condition
Auto Digital PH Meter "Labtronic" Make Model : LT-11	2024	8,000.00	Good condition
Samsung Interactive LH65WAC Display Monitor (S.No.: 6LECH8DX600018)	2024	1,00,000.00	Good condition
Wall Mount Rotatable Stand 14"- 25"	2024	13,500.00	Good condition
Khan Shaker "P-Lab" Make 12 Flask of 100 ML	2024	85,000.00	Good condition
2011-Bottle Top Dispenser without recirculation (Borosil) 5-50ML	2024	32,000.00	Good condition
Pocket PH Meter "Hanna" Make	2024	9,270.00	Good condition

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

S. No.	Date	No of Participants	Salient Recommendations
1.	29.11.2024	74	KVK to document the successful and impactful interventions in the district over the period of time
2.			KVK can organize skill training programme on bee box manufacturing and encourage the bee enterprises for employment generation among rural youths and entrepreneurs
3.			Share the feedback of technical interventions to the research system
4.			KVK to focus on value addition processing, micro irrigation and documenting of success stories in their future programmes
5.			KVK can organize awareness programme on drone pilot training for SHG members / rural youths
6.			Demonstrate winter jasmine (Co-1) through KVK's front line demonstration
7.			KVK brings out successful technologies every year which can be documented in the digital form for the wider dissemination
8.			KVK can demonstrate new sugarcane varieties (Co-16012, Co-18009 & Co-11015) through their technical programmes
9.			KVK promoted farmers/entrepreneurs can be linked with Sugarcane Breeding Institute (SBI), to produce quality sugarcane seedling and also to get market linkages
10.			KVK can include new variety (Nano) in the High-Density Planting System (HDPS) of demonstration in the upcoming years
11.			Training and demonstration can be organized by KVK on Boll Rot management and AI (Artificial Intelligence) based wireless traps technology for managing the boll worms
12.			KVK can promote instead of Maize silage, standardize different combination of fodder crops in collaboration with TANUVAS
13.			KVK can promote EVM (Ethno Veterinary Medicine) and Homeopathic medicines in livestock and poultry
14.			Create awareness on crop insurance scheme through KVK trainings and awareness programmes
15.			Create awareness on crop and life insurance schemes and centralized financial literacy through KVK extension activities
16.			KVK can support in identification and references of innovative farmer and entrepreneurs to AIR for documentation
17.			KVK can support for establishing vertical method of vegetable cultivation in Anganwadi centers
18.			KVK to explore the possibility of Stem propagation in banana
19.			KVK to bring a Common brand name for marketing their products through AESC (Agri Entrepreneurs Service Center) in digital platform
20.			KVK can explore possibilities for getting incubation center for honey bees for the promotion of enterprise
21.			KVK can explore the possibility for the establishment of honey cooperative society for marketing of honey and its value-added products
22.			KVK can take up refinement of this turmeric harvester in association with appropriate technical institutions

2. DETAILS OF DISTRICT (2024)

2.0. Operational jurisdiction of KVKs

District	New districts governed by the KVK after division of the district, if applicable	Taluks/Tehsils and/or Mandals under the KVKs jurisdiction
Erode	-	Anthiyur Taluk Bhavani Taluk Erode Taluk Gobichettipalayam Taluk Kodumudi Taluk Modakurichi Taluk Perundurai Taluk Sathyamangalam Taluk Talavadi Taluk Nambiyur taluk

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

S. No	Farming system/enterprise		
1	Command Area:	Rice – Sesame Sugarcane – Ratoon Turmeric – Rice Banana – Ratoon Groundnut – Rice – Maize	
2	Well Irrigated Area:	Turmeric – Maize / Chilies / Tomato Rice – Cotton	
3	Rainfed Area:	Maize/Sorghum – Pulses Redgram/castor – Fallow	

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

S. No	Agro-climatic Zone	Characteristics
1	Southern plateau and hills	The district comes under the agro-climatic zones of southern plateaus and hills. A major part of the district is covered with red soils. Alluvial soils are found in small patches along Noyyal and Bhavani rivers. The district forms part of Cauvery river basin and is blessed with a network of rivers viz., Bhavani, Noyyal, Amaravathi and their tributaries. The river Cauvery flows along the eastern border of the district. The normal rainfall of the district is 717 mm.

2.3. Soil types

S. No	Soil type	Characteristics	Area in ha
1	Red soil (Alfisol, Entisol, Ultisol)	<ul style="list-style-type: none"> Soil rich in iron and aluminum oxides Poor in water holding capacity Soil pH varies from 5.5 – 8.5 EC ranges from 0.050 to 0.250dSm⁻¹ Fertility rating – low nitrogen, medium phosphorus and high in potassium 	3, 42,800
2	Black soil (Vertisol, Entisol)	<ul style="list-style-type: none"> Black in colour Good in water holding capacity Soil pH varies from 7.5 – 8.7 EC ranges from 0.150 to 0.450dSm⁻¹ Fertility rating – low nitrogen, low phosphorus and medium in potassium 	1, 79,562
3	Alluvial soil	<ul style="list-style-type: none"> Medium in water holding capacity Soil pH varies from 6.5 – 8.0 EC ranges from 0.120 to 0.370dSm⁻¹ Fertility rating – low nitrogen, medium phosphorus and medium in potassium 	65,295
4	Forest soil	<ul style="list-style-type: none"> Rich in sesqui oxides 	2, 28,543

2.4. Area, Production and Productivity of major crops cultivated in the district (or the jurisdiction as the case may be) for 2024

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	Paddy	31062	131717.00	42.40
2	Ragi	3372	11291.00	23.48
3	Maize	15995	137434.00	75.92
4	Redgram	1332	1383.00	10.38
5	Blackgram	1307	1052.00	8.05
6	Greengram	642	500.00	7.79
7	Sugarcane	19644	2277849.00	1159.50
8	Groundnut	19745	34213.00	17.33
9	Sesame	3301	2581.00	7.81
10	Turmeric	4694	27821.00	59.24
11	Tapioca	6021	190318.00	316.09
12	Banana	20075	710750.00	354.05
13	Onion	2252	17999.00	79.92
14	Cotton	1581	2866.00	18.13
15	Coconut	17626	2587.00	14.68

2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)
		Maximum	Minimum	
January 2024	12.74	31.6	20.1	66.7
February 2024	5.52	32.9	23.4	64.3
March 2024	0	35.8	22.7	68.7
April 2024	9.46	38.4	26.2	63.2
May 2024	163.4	39.2	27.0	63.4
June 2024	55.28	34.2	21.4	65.6
July 2024	19.67	36.9	24.9	66.2
August 2024	111.23	34.7	25.1	66.3
September 2024	15.10	36.3	22.8	67.9
October 2024	172.50	35.4	20.8	73.8
November 2024	67	31.5	23.4	64.2
December 2024	58.70	28.4	21.5	62.1

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

Category	Population	Production (000 tones)	Productivity
Cattle	398572	212.402	2.32 lit/day
Crossbred	250385	175.057	3.026 lit/day
Indigenous	148187	37.345	1.091 lit/day
Buffalo	230004	102.302	2.11 lit/day
Sheep	560015	346 tons	-
Goats	562270	685.81 tons	-
Pigs	7288	-	-
Poultry	5180399	-	-
Desi	-	194.51 lakhs eggs	-
Improved	-	9376.49 lakhs eggs	-
Ducks	68193	-	-
Category	Area	Production (tones)	Productivity
Inland fish	-	520.16	-

2.7. Details of Adopted Villages (2024)

S. No.	Taluk/ Mandal	Name of the block	Name of the village	Year of adoption	Major crops & enterprises	Major problem identified	Identified Thrust Areas
KVK adopted villages							
1.	Gobi	Gobi	Nagadev ampalaya m	2018	Traditional Paddy	<ul style="list-style-type: none"> Lack of awareness about organic nutrient management practices 	OFT/ Training / Experience sharing
2.	Anhiyur	Anthiyur	Tamaraik arai	2022	Millets	<ul style="list-style-type: none"> Low yield 	Introduction of new variety
3.	Anthiyur	Anthiyur	Kongada i	2022	Finger millet	<ul style="list-style-type: none"> Poor yield 	INM
4.	Anthiyur	Anthiyur	Madam	2023	Little Millet	<ul style="list-style-type: none"> Lack of awareness on high yielding varieties 	Varietal introduction
5.	Gobi	Gobi	Siruvalur	2023	Groundnut	<ul style="list-style-type: none"> Mid season drought 	Drought management techniques
6.	TN Palayam	TN Palayam	Perumug ai	2022	Groundnut	<ul style="list-style-type: none"> Lack of awareness on high yielding varieties 	Varietal introduction
7.	Chennim alai	Chennimalai	Vellode	2021	Paddy	<ul style="list-style-type: none"> Low yield due to micro nutrient deficiency 	INM
8.	Bhavani	Bhavani	Perunthal ayur	2022	Sugarcane	<ul style="list-style-type: none"> Lack of quality seedlings 	Mechanization
9.	Perundur ai	Perundurai	Veerasan gali	2021	Groundnut	<ul style="list-style-type: none"> Yield loss due to Root rot incidence 	Integrated Disease management
10.	Sathy	Sathyamang alam	Ukkaram	2022	Banana	<ul style="list-style-type: none"> Low yield due to Pseudostem weevil infestation 	Integrated Pests Management
11.	Anthiyur	Anthiyur	Koochik allur	2017	Cotton	<ul style="list-style-type: none"> Yield loss due to boll rot incidence 	Integrated Disease Management
12.	Anthiyur	Anthiyur	Annamar palayam	2021	Chillies	<ul style="list-style-type: none"> Low yield due to soil borne disease incidence 	Integrated Disease Management
13.	Gobi	TN Palayam	Kallipatti	2017	Paddy	<ul style="list-style-type: none"> Yield loss due to false smut incidence 	Integrated Disease Management
14.	Bhavani	Ammamet	Ramachi palayam	2017	Groundnut	<ul style="list-style-type: none"> Yield loss due to Root rot incidence 	Integrated Disease Management
15.	Gobi	Gobichettipa layam	Thonerai yankadu	2021	Tapioca	<ul style="list-style-type: none"> Yield loss due to cassava mealy bug infestation 	Integrated Pests Management
16.	Gobi	Gobi	Koogalur	2019	Paddy	<ul style="list-style-type: none"> Lack of awareness about potash releasing bacteria 	OFT/ Training / Experience sharing
17.	Anthiyur	Ammamet	Ramachi palayam	2017	Cotton	<ul style="list-style-type: none"> Yield reduction due to nutrient deficiency 	OFT/ Training / Experience sharing
18.	Gobi	Gobi	Vaikkalp udhur	2019	Paddy	<ul style="list-style-type: none"> Yield reduction due to micronutrient deficiency 	FLD, Training and Field day
19.	Gobi	Gobi	Nanjai Gobi	2021	Paddy	<ul style="list-style-type: none"> Yield loss due to nutrient deficiency in <i>Samba</i> Paddy 	FLD, Training and Field day

S. No.	Taluk/ Mandal	Name of the block	Name of the village	Year of adoption	Major crops & enterprises	Major problem identified	Identified Thrust Areas
20.	Gobi	T.N.Palayam	Kodiveri	2018	Cotton	<ul style="list-style-type: none"> Yield reduction due to nutrient deficiency 	FLD, Training and Field day
21.	Sathy	Sathy	K.N.Pala yam	2021	Jasmine	<ul style="list-style-type: none"> Yield loss due to nutrient deficiency 	FLD, Training and Field day
22.	Anthiyur	Anthiyur	Hosur	2019	Ragi	<ul style="list-style-type: none"> Lack of knowledge about organic nutrient management practices 	FLD, Training and Field day
23.	Chennim alai	Chennimalai	Vellode	2022	Shredder cum pulvaraizer	<ul style="list-style-type: none"> Lack of mechanization in coconut cultivation for waste decomposition. 	FLD, Training, Method Demonstration and field day
24.	Perundur ai	Perundurai	Pola naickan palayam	2020	Mechanizati on in Ground nut	<ul style="list-style-type: none"> Lack of mechanization in Groundnut cultivation 	FLD, Training, Method Demonstration and field day
25.	Gobi	Gobi	Pariyur Nanjago undam palayam	2023	Agriculture Drone	<ul style="list-style-type: none"> Lack of Awareness about Drone Spraying 	FLD, Training, Method Demonstration and field day
26.	Gobi	T.N.palayam	Kodivory	2020	Fruits	<ul style="list-style-type: none"> No skilling in value addition of fruits 	EDP on Demonstration of nutraceuticals fruit products , Method demonstration
27.	Gobi	T.N.Palayam	Kallipatti	2020	Green leafy vegetables	<ul style="list-style-type: none"> No skilling on Value addition in Green leafy vegetables 	EDP on micro nutrient rich health mix preparation technology, Method demonstration
28.	Nambiyu r	Nambiyur	Kuruman thur	2019	Vegetables and Greens	<ul style="list-style-type: none"> Lack of Knowledge on Scientific layout of Nutrition Garden Prevalence of malnutrition among children in Anganwadis 	FLD, Training Field Day
29.	Anthiyur	Anthiyur	Hosur,	2022	Millets	<ul style="list-style-type: none"> Lack of knowledge on value addition in millets 	Training and method demonstration
30.	Anthiyur	Anthiyur	Hosur,	2023	Livestock	<ul style="list-style-type: none"> Lack of knowledge on value addition in cow-based products 	Skill training and method demonstration
31.	Gobichet tipalaya m	Nambiyur	Kosanam	2017	Goat	<ul style="list-style-type: none"> Wound and ectoparasite 	Disease Management
32.	Sathyam anagalam	Sathyamang alam	Sathumu gai	2017	Goat	<ul style="list-style-type: none"> Mortality in kids 	Nutritional Management
33.	Gobichet tipalaya m	TN Palayam	Kallipatti	2018	Cattle	<ul style="list-style-type: none"> Low milk yield 	Nutritional and production management
34.	Gobichet tipalaya m	Gobichettipa layam	Kollappa lur	2018	Cattle	<ul style="list-style-type: none"> Ectoparasite infestation 	Disease Management

S. No.	Taluk/ Mandal	Name of the block	Name of the village	Year of adoption	Major crops & enterprises	Major problem identified	Identified Thrust Areas
DFI villages							
1	Gobi	TN Palayam	Singiripa layam	2019	Paddy	<ul style="list-style-type: none"> Low yield due to micro nutrient deficiency 	Varietal introduction & INM
2	Gobi	TN Palayam	Singiripa layam	2019	Sugarcane	<ul style="list-style-type: none"> Micro nutrient deficiency 	INM
3	Gobi	T.N.Palayam	Singiripa layam	2017	Paddy	<ul style="list-style-type: none"> Yield reduction due to micronutrient deficiency 	OFT/ Training / Experience sharing
4	Gobi	T.N.Palayam	Singiripa layam	2017	Paddy, Banana	<ul style="list-style-type: none"> Lack of knowledge about soil sampling techniques 	Method Demonstration
5	Gobi	TN Palayam	Kodiveri	2022	Fish De scaling Machine	<ul style="list-style-type: none"> More labor cost involved to fish cleaning 	FLD, Training, Method Demonstration and field day
6	Gobi	T.N.Palayam	Singiripa layam	2019	Fruits	<ul style="list-style-type: none"> Lack of skill in value addition in fruits 	EDP training and Method Demonstration
7	Anthiyur	Anthiyur	Koochik allur	2017	Cotton	<ul style="list-style-type: none"> Yield loss due to boll rot incidence 	Integrated Disease Management
8	Anthiyur	Anthiyur	Kochikal lur	2018	poultry	<ul style="list-style-type: none"> Low productivity 	Varietal introduction

2.8. Priority/thrust areas

Crop/Enterprise	Thrust area
Paddy, Ragi, Cotton, Jasmine	Integrated Nutrient Management
Paddy	Varietal introduction, INM, IPDM
Millets	Varietal introduction & ICM
Oilseeds	Drought management techniques
Sugarcane	Quality seedling production
Pulses	Integrated crop management
Farm machineries	Demonstration on Shredder cum Pulverizer
Farm machineries	Demonstration on Mechanization in Groundnut
Farm machineries	Popularization of Drone technology
Farm machineries	Demonstration on Fish De scaling Machine
Paddy, Cotton and Groundnut	Integrated Disease Management
Banana and Tapioca	Integrated Pests Management
Fruits (Banana, Fig, amla and cherries)	Value addition and Entrepreneurship Development
Green leafy Vegetables	Value addition and Entrepreneurship Development
Vegetables and greens	Women and child Development through Nutrition garden
Cattle	Nutritional and production management
Goat	Nutritional and Disease management
Poultry	Varietal introduction

3. SALIENT ACHIEVEMENTS

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

S. No	Activity	Target	Achievement
1.	Technologies Assessed and refined (No.)	26	26
2.	On-farm trials conducted (No.)	13	13
3.	Frontline demonstrations conducted (No.)	28	27
4.	Farmers trained (in Lakh)	0.015	0.044
5.	Extension Personnel trained (No.)	381	656
6.	Participants in extension activities (in Lakh)	0.124	0.480
7.	Production and distribution of Seed (in Quintal)	23	53.98
8.	Planting material produced and distributed (in Lakh)	142000	36000
9.	Live-stock strains and finger lings produced and distributed (in Lakh)	1500	1000
10.	Soil samples tested by Mini Soil Testing Kit (No)	100	50
11.	Soil samples tested by Traditional Laboratory (No)	400	1340
12.	Water, plant, manure, and other samples tested (No.)	550	1132
13.	Mobile Agro-advisory provided to farmers (No.)	100 Nos. (650000)	93 Nos. (456270)
14.	No. of Soil Health Cards issued by Mini Soil Testing Kits (No.)	100	50
15.	No. of Soil Health Cards issued by Traditional Laboratory (No.)	400	1340

Salient Achievements by KVK during the year 2024

- KVK established decentralised micro nutrient production unit, during the reporting period **8355 Kgs of Banana special and 2924 Kgs of Vegetable special** produced and supplied by covering 2110 farmers in Erode District.
- KVK supported **512 rural youths** through ARYA programme – Desi bird production, bio input production, vermicompost production, value addition in banana and honey enterprises.
- KVK received 1 National Level Awards, KVK promoted 3 **farmers & entrepreneurs and 1 FPO Awards received** for their contribution in the field of agriculture, entrepreneurship activities and innovations
- Integrated Banana grower's federation was initiated with support of KVK and TNAU in order to promote Sustainable Banana cultivation by adopting IFS concept and value addition in Banana. **362 farmers enrolled** in the federation from Erode and nearby districts. Totally 16 branded value-added products are produced with the technical support of KVK.
- With the support of NABARD, integrated tribal development project is carried out in 4 tribal villages of Bargur hills, Anthiyur Block. **330 acres were established with spices and fruits crops** viz., Coffee, Cinnamon, Nutmeg, Clove, all spices, Pepper, Tamarind, Citrus and Silver oak and for 10 landless families supported with Buffalo rearing to improve their livelihood.
- **Eco / Agro tourism** established at Arepalayam campus with support of NABARD in order to create awareness on conservation of Biodiversity through eco-tourism.

4. TECHNICAL ACHIEVEMENTS

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

OFT (Technology Assessment)

No. of OFTs		Number of technologies		Number of locations (Villages)		Total no. of Trials / Replications / Beneficiaries	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
13	13	26	26	13	13	34	34

FLD (crop/enterprise/CFLDs)

No of Demonstrations		Area in ha		Number of Farmers / Beneficiaries / Replications	
Targets	Achievement	Targets	Achievement	Targets	Achievement
28	27	29	27	235	230

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

Number of Courses			Number of Participants	
Clientele	Targets	Achievement	Targets	Achievement
Farmers and Farm Women	71	116	1585	4474
Rural youth	25	13	570	498
Extn. Functionaries	10	19	381	656

Extension Activities

Number of activities		Number of participants	
Targets	Achievement	Targets	Achievement
1379	588	12480	58606

Seed Production (q)

Target	Achievement	Distributed to no. of farmers
23	5398	352

Planting material (Nos.)

Target	Achievement	Distributed to no. of farmers
142000	36000	465

Technology Assessments (OFTs) in Detail

OFT-1:

1. Thematic area : Integrated Crop Management
2. Title : Assess the performance of Drought management techniques in Groundnut for higher productivity
3. Scientists involved : SMS (Agronomy)
4. Details of farming situation : Rainfed

5. Problem definition / description:

Groundnut is the major oilseed crop cultivated in Erode district over 20,000ha, of which 60% of area is comes under rainfed situation. Continuous cultivation of same and old variety, which is not tolerant to drought especially in the mid-season to lateral drought leads to yield reduction. The farmers are not aware of the latest drought tolerant techniques released by research system.

6. Technology Assessed:

T. O. 1	Seed treatment and foliar application of PPFM Spray
T. O. 2	Seed treatment with Vithaiamirtham and Foliar application of KCl
Farmers Practice	No practices

7. Critical inputs given:

Critical Input	Quantity	Value (Rs. /farmer)
PPFM	1 litre	500.00
Vithai amirtham	1 litre	500.00

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C	Pods / plant
Farmers Practice (No practices)	3	19.25	42125	1.95	26
Technology 1(PPFM – Seed treatment and foliar application)		22.40	62180	2.44	34
Technology 2(Vithai amirtham seed treatment)		21.87	59289	2.36	33

The Trial on “Assess the performance t of drought management techniques in groundnut for higher productivity” was taken up in 3 farmers field at Siruvalur village of Gobi Block during kharif 2023. The farmers were trained on integrated crop management in groundnut cultivation and seed treatment techniques with different cultures. The selected farmers were provided with PPFM and vithai amirtham before initiation of trials.

The results indicated that, the highest number of pods was recorded in TO1 (PPFM) applied plot followed by 33 pods recorded in TO 2 (Vithai amirtham) applied field and 26 pods / plant recorded in farmers practice. The highest yield of 22.40 quintal pod yield was recorded in TO 1 and this was 16.62 percent yield increase over farmers practicing variety whereas TO 2 recorded the yield of 21.87 quintal/ha and this was 13.61 per cent yield increase over farmers practices.

The highest benefit cost ratio of 2.44 observed in TO 1 followed by 2.36 in TO 2. From the result, it concluded that seed treatment and foliar application of PPFM and vithai amirtham is recommended for rainfed situation in Erode district.

9. Constraints: Nil

10. Feedback of the farmers involved:

PPFM application enhances the drought period more than 10 days leads to enhanced pod formation and yield.

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

Encourage more production of PPFM and ensure timely availability through line departments for wider adoption of the technology.

OFT-2:

- 1. Thematic area** : **Varietal Evaluation**
- 2. Title** : **Assess the performance in Turmeric new varieties**
- 3. Scientists involved** : **SMS Horticulture**

4. Details of farming situation:

The farmers selected from Avaiyar palayam and Vellan kovil villages from Gobichettipalayam block of Erode District. The Turmeric crops are cultivated with the assured irrigation systems by the selected farmers. The Turmeric was cultivated under the red soils. The showing was completed Kharif season i.e., by second fortnight of May 2019 by using rhizomes. The trial was focused on assessment of different varieties of turmeric in Erode district climatic condition. The trial farmers were linked with FPO and farmers club for seed rhizome supply for further area expansion. During the cropping period the block received a cumulative rainfall of 614 mm with 42 rainy days.

5. Problem definition / description:

Turmeric is an important commercial crop in Erode district with the coverage of more than 10,000 ha area. The farmers are continuously cultivating same turmeric variety viz. Erode local, which leads to yield reduction and provides low curcumin content and fetched low market price. Since it is long duration varieties are required more inputs like water, inputs and labour cost. The farmers expect the variety, which area suitable, high productivity and resistant to rhizome rot diseases. Based on that, KVK conducted On-Farm Trail on “Assess performance of Turmeric varieties in the District.

6. Technology Assessed

- Technology Option 1** : BSR-3 released by TNAU, Coimbatore
- Technology Option 2** : IISR Pradeepa: released from IISR, Calicut
- Technology Option 3** : Erode local

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

Sl. No	Critical inputs	Quantity (In Kg.)	Value (Rs)	The farmers supported with Rs. 22500.00 worth disease-free rhizomes and Turmeric booster.
1.	Rhizomes	1000	20000.00	
2.	IISR turmeric special	10	2500.00	

Curcumin content:

<i>Technology Option</i>	Curcumin content
Technology Option 1: BSR-3	3.43
Technology Option 2: Prathiba	3.41
Farmer practices: Erode Local	2.936

Table: Performance of the technology

<i>Technology Option</i>	<i>No. of trials</i>	<i>Yield (t/ha)</i>	<i>Net Returns (Rs. In lakhs/ha)</i>	<i>BC ratio</i>	<i>Disease incidence</i>	<i>Tiller / clump</i>
Technology Option 1: BSR-3	3	29.94	2.91	2.56	9	3
Technology Option 2: Pradeepa		26.91	2.70	2.44	8	3
Farmer practices: Erode Local		21.26	1.1	1.70	9	2

9. Constraints:

During the season, we are not able to supply the seed materials to the farmers.

10. Feedback of the farmers involved:

The variety BSR-3 recorded better yield than the other two varieties. The rhizome rot disease incidence was observed less in BSR-3 variety. Since this variety thrives well in any kind of climatic condition, it was recommended that, this variety is suggested to cultivate in other places of Erode district

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

It is new variety and suitable to Erode district (Hilly region) Agro climatic condition. The research institution can support KVK for seed production, and it will help to meet the demand of farmers need.

OFT-3:

1. **Thematic area** : **Nutrient management**
2. **Title** : **Assess the performance of different organic growth promoters on yield enhancement in finger millet**
3. **Scientists involved** : **SMS (Agronomy)**
4. **Details of farming situation:** **Rainfed**

5. Problem definition / description:

Finger millet is the major millet crop cultivated over 4000 ha in Erode district as a rainfed crop. The farmers are adopting their age-old practices or even no practices for millet crops which drastically reduces the yield. The momentum gain for organic millet products among the consumers whereas the farmers are not aware of the alternate organic practices for enhancing the yield of ragi crop. KVK designed the OFT using the available organic practices technology for enhancing the yield of finger millet.

6. Technology Assessed:

T. O. 1	Foliar application of NCOF bio enhancer NCOF, 2023
T. O. 2	Foliar application of TNAU Panchakavya TNAU, 2022
Farmers Practice	No foliar application

7. Critical inputs given:

Critical Input	Quantity	Value (Rs. /farmer)
NCOF Bio enhancer	1 litre	350.00
TNAU Panchakavya	1 litre	425.00

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

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C	Plant height (cm)
Farmers Practice (No Foliar application)	3	18.47	16287.00	1.72	103.6
Technology 1(Foliar application of NCOF Bio enhancer)		20.57	26811.00	2.31	114.8
Technology 2(Foliar application of TNAU Panchakavya)		20.28	25944	2.25	115.3

The trial on “The performance of different organic growth promoters on yield enhancement in finger millet” was taken up in 3 farmers field at Bargur hills, Anthiyur block of Erode district during Kharif 2024. The farmers were trained on different organic growth promoters and its usage in finger millet crop. The farmers were provided with biofertilizers and organic growth promoters like Bio enhancer and Panchakavya. The trial field is regularly monitored by KVK scientist and provided appropriate technical guidance for obtaining maximum yield.

The results indicated that, the highest plant height of 115.3 cm was recorded in TO 2 which is on par with TO1 adopted field. The highest yield of 20.57 quintal grain yield was recorded in Bio enhancer applied field and this was on par with Panchakavya applied field of 20.28 qtl/ha. The highest test weight of 2.98 gram was recorded in TO 1 adopted field and 2.96 gram recorded in TO 2 adopted field. +

The results indicated that, the highest net return of Rs.26,811/ ha was observed in the Technological option 1 (Bio enhancer) applied field followed by Rs. 25,944.00 / ha observed in TO 2 (Panchakavya) applied field. The highest BCR of 2.31 recorded in TO 1 followed by 2.25 and 1.72 in TO 2 and farmers practices adopted field respectively.

9. **Constraints:** Nil

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

Easy to adopt both the technology and ensure the availability of the products through CSC in the hilly regions for proper adoption.

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

Bio enhancer is not available in all the areas and the scientist are requested to produce more and ensure the availability in all the districts for wider adoption of technology

OFT-4:

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

4. Details of farming situation:

The trial was laid out during Kharif season 2024 at Singiripalayam village of T.N.Palayam block, Erode district and sowing was taken up in the month of June 2024 under irrigated farming situations. The soil of the trial plots is red clay loamy soil in nature with the available soil nutrient level of 181.3 kg, 8.5 kg and 281.5 kg/ha of available Nitrogen, Phosphorus, Potassium respectively.

5. Problem definition / description

Paddy is an important cereal crop cultivated over 30000 ha in Erode District. Indiscriminate use of fertilizers leads to a multi nutrient deficiency leads to a declining number of productive tillers and results in poor yield. With this background, KVK conducted trial on T NAU rice reap foliar spraying in Paddy to overcome the problem and to provide appropriate technical solution by this trial to Paddy farmers.

6. Technology Assessed:

- Farmer Practice : Soil application of NPK alone
 Technology Option-1 : Foliar spray of TNAU rice reap @ 6.0 kg/acre at Booting stage and 10 days after first spray
 Technology Option-2 : Foliar spray of Potassium Nitrate 1.5% at booting stage

7. Critical inputs given:

Sl.No	Critical inputs	Quantity	Value (Rs)
1	TNAU Rice reap	12 kg	4000.00
2	PAU Potassium Nitrate	12 kg	3000.00

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

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio
<i>Farmers Practice:</i> Soil application of NPK alone	3	40.5	33750.00	1.77
<i>Technology 1 :</i> Foliar spray of TNAU rice reap @ 6.0 kg/acre at Booting stage and 10 days after first spray		46.4	42500.00	2.09
<i>Technology 2 :</i> Foliar spray of Potassium Nitrate 1.5% at Booting stage		43.8	38550.00	1.99

Description of the results:

The on-farm trial “Assessment of TNAU Rice Reap for Higher yield in Paddy” was taken up during the Kharif season 2024 in 3 farmers’ field at Singiripalayam village of T.N.Palayam block, Erode district. Before implementation of the trial, the farmers trained on nutrient management in Paddy and importance of crop booster for improving grain yield. The farmers provided with TNAU rice reap and PAU Potassium nitrate. The scientists from KVK provided regular advisory services for efficient implementation of the trial.

The trial indicated that, Foliar spraying with TNAU rice reap @ 6.0 kg/acre at Booting stage and 10 days after first spray significantly reduces nutrient deficiency and thereby increasing grain yield of Paddy. Foliar spraying of TNAU rice reap (Technology Option 1) recorded yield of 46.4 q/ha and 40.5 q/ha yield recorded in farmers practice with the yield increase of 15 percent.

The highest Net returns (Rs.42,500/ha) and benefit cost ratio of 2.09 was recorded in Technology Option 1 whereas Rs. 33,750 /ha Net returns and 1.77 BCR recorded in farmers practice. Based on the above results, Foliar spraying of TNAU rice reap promotes crop growth and improves grain yield of Paddy.

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

Farmers actively involved in the trial and expressed that, foliar spraying of TNAU rice reap gives quick recovery for nutrients requirement, produces more numbers of productive tillers which leads to higher grain yield.

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

Foliar spraying of TNAU rice reap can be popularized through various awareness and extension programme for the wider dissemination and large-scale adoption.

OFT- 5:

- 1. Thematic area** : **Crop Production and Management**
- 2. Title** : **Assessment of organic nutrient management practices in Traditional Paddy (Thooyamalli) cultivation**
- 3. Scientists involved** : **SMS (Soil Science)**

4. Details of farming situation:

The trial was laid out during Rabi season 2024 at Nagadevamapalayam village of Gobi block, Erode district and transplanting was taken up in the month of October 2024 under irrigated farming situations. The soil of the trial plots is red clay loamy soil in nature with the available soil nutrient level of 165.4 kg, 8.4 kg and 298.0 kg/ha of available Nitrogen, Phosphorus, Potassium respectively.

5. Problem definition / description

Traditional paddy is cultivated over 300 ha area in Erode district. Farmers are getting low yield in traditional paddy cultivation due to non-adoption of proper organic based nutrient management practices. With this background, KVK conducted trial on organic nutrient management in Traditional Paddy to overcome the problem and to provide appropriate technical solution by this trial to Traditional Paddy farmers.

6. Technology Assessed:

Farmer Practice : Chemical fertilizers

Technology Option-1 : Soil application of Azospirillum @ 2.5 kg/ha mixed with 25 kg FYM before sowing; Basal application of Vermicompost 1000 kg/ha & Neem seed cake @150 kg/ha; Top dressing @ 60 kg/ha on 30 DAT, Groundnut cake @ 100 kg/ha, Top dressing @ 25 kg/ha on 30 DAT; Foliar spraying of Panchagavya 3 % during tillering and Booting stage; Soil application of Amirthakaraisal @ 25 lit/ha on 15 DAT; Vermi wash (10%) sprayings at 15 DAT, 35 DAT and Flowering Stage

Technology Option-2 : Seedling root dipping with Azospirillum and Phosphobacteria @ 600 g/ha seedlings; Soil application of Vermicompost @ 2 t/ha at last ploughing; Azospirillum and Phosphorus solubilizing bacteria @ 2-3 kg/ha mixed with 25 kg Vermicompost @ 2 t/ha at just before planting; Application of Azolla @ 1t/ha 7-10 DAP, Blue green algae @ 10 kg/ha 10 DAP incorporate after 3 weeks

7. Critical inputs given:

Sl.No	Critical inputs	Quantity	Value (Rs)
1	Biofertilizers	6 kg	1800.00
2	Vermicompost	500 kg	4000.00
3	Azolla	10 kg	1000.00

8. Results:

Table : Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio
Farmers Practice: Chemical fertilizers	3	38.5	51250.00	2.02
Technology 1: TNAU		45.0	67500.00	2.50
Technology 2 : IIRR		42.5	59750.00	2.28

Description of the results:

The on-farm trial “Assessment of organic nutrient management practices in Traditional Paddy (Thooyamalli) cultivation” was taken up during the Rabi season 2024 in 3 farmers’ field at Nagadevampalayam village of Gobi block, Erode district. Before implementation of the trial, the farmers trained on organic nutrient management in Traditional Paddy. The farmers provided with biofertilizers, vermicompost, Panchagavya & Azolla. The scientists from KVK provided regular advisory services for efficient implementation of the trial.

The trial indicated that, Technology Option 1 – TNAU technology adopted Traditional Paddy (Thooyamalli) recorded yield of 45.0 q/ha and 38.5 q/ha yield recorded in farmers practice with the yield increase of 17 percent.

The highest Net returns (Rs.67500 /ha) and benefit cost ratio of 2.50 was recorded in Technology Option 1 whereas Rs. 51,250 /ha Net returns and 2.02 BCR recorded in farmers practice. Based on the above results, TNAU package of organic nutrient management in Traditional Paddy promotes crop growth and improves grain yield.

9. Constraints: Nil

10. Feedback of the farmers involved:

Farmers actively involved in the trial and expressed that, TNAU technology package on organic nutrient management in Traditional Paddy produces more numbers of productive tillers which leads to higher grain yield of Thooyamalli Paddy.

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

Organic nutrient management practices in Traditional Paddy can be popularized through various awareness and extension programme for the wider dissemination and large-scale adoption in Erode District.

OFT-6:

1. **Thematic area** : **Crop Production and Management**
2. **Title** : **Assessment of potash releasing bacteria for maximizing yield in Paddy**
3. **Scientists involved** : **SMS (Soil Science)**

4. Details of farming situation:

The trial was laid out during Kharif season 2024 at Koogalur village of Gobi block, Erode district and sowing was taken up in the month of October 2024 under irrigated farming situations. The soil of the trial plots are red clay loamy soil in nature with the available soil nutrient level of 161.0 kg, 8.6 kg and 289.5 kg/ha of available Nitrogen, Phosphorus, Potassium respectively.

5. Problem definition / description

Paddy is cultivated over 30000 ha in Erode district. Application of inorganic potash fertilizers leads to poor K availability in soil and uptake in plants resulting in poor K use efficiency and affects crop growth & yield. With this background, KVK conducted trial on Potash bacteria to overcome the problem and to provide appropriate technical solution by this trial to Paddy farmers.

6. Technology Assessed:

Farmer Practice : Soil application of MOP fertilizers

Technology Option-1 : Seed treatment with *Paenibacillus mucilaginous* (KRB-9) @ 250ml/ha; Soil application of 500ml/ha 25kg of FYM and 25kg of sand and broadcast uniformly before transplanting; Seedling root dip @ 250ml/ha

Technology Option-2 : Seed treatment of Bio Potash – *Frateuria aurantia* @ 125 ml/ha; Soil application @ 500ml/ha; Seedling root dip @ 375 ml/ha

7. Critical inputs given:

Sl.No	Critical inputs	Quantity	Value (Rs)
1	<i>Paenibacillus mucilaginous</i>	10 litres	3000.00
2	<i>Frateuria aurantia</i>	10 litres	3000.00

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

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio
<i>Farmers Practice:</i> Soil application of MOP fertilizers	3	40.0	29500.00	1.69
<i>Technology 1 : Paenibacillus mucilaginous</i>		44.2	41360.00	2.08
<i>Technology 2 : Frateuria aurantia</i>		43.8	40640.00	2.06

Description of the results:

The on-farm trial “**Assessment of potash releasing bacteria for maximizing yield in Paddy**” was taken up during the Kharif season 2024 in 3 farmers’ field at Koogalur village of Gobi block, Erode district. Before implementation of the trial, the farmers trained on potash releasing bacteria application in Paddy. The farmers provided with *Paenibacillus mucilaginous* and *Frateuria aurantia*. The scientists from KVK provided regular advisory services for efficient implementation of the trial.

The trial indicated that, Seed treatment with *Paenibacillus mucilaginous* (KRB-9) @ 250ml/ha; Soil application of 500ml/ha 25kg of FYM and 25kg of sand and broadcast uniformly before transplanting; Seedling root dip @ 250ml/ha significantly increases soil available potassium and thereby increasing grain yield of Paddy. *Paenibacillus mucilaginous* (KRB-9) (Technology Option 1) recorded yield of 44.2 q/ha and 40.0 q/ha yield recorded in farmers practice with the yield increase of 11 percent.

The highest Net returns (Rs.41,360 /ha) and benefit cost ratio of 2.08 was recorded in Technology Option 1 whereas Rs. 29,500 /ha Net returns and 1.69 BCR recorded in farmers practice. Based on the above results, potash releasing bacteria *Paenibacillus mucilaginous* enhances soil available K and improves grain yield of Paddy.

9. Constraints: Nil

10. Feedback of the farmers involved:

Farmers actively involved in the trial and expressed that, *Paenibacillus mucilaginous* potash bacteria resulted in increasing crop growth and produces more productive tillers in Paddy.

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

Potash releasing bacteria *Paenibacillus mucilaginous* increases the soil available K and thereby increased yield by 8-12%.

OFT-7:

1. **Thematic area** : **Crop Production and Management**
2. **Title** : **Assessment of Integrated Nutrient Management practices in Cotton**
3. **Scientists involved** : **SMS (Soil Science)**

4. Details of farming situation:

The trial was laid out during Rabi season 2024 at Ramachipalayam village of Ammapet block, Erode district and sowing was taken up in the month of October 2024 under irrigated farming situations. The soil of the trial plots are red sandy loam soil in nature with the available soil nutrient level of 168.0 kg, 11.0 kg and 295.5 kg/ha of available Nitrogen, Phosphorus, Potassium respectively.

5. Problem definition / description

Cotton is a major fibre / commercial crop cultivated in Erode District around 1000 ha. Farmers are not adopting balanced fertilizer application which includes micronutrient application in cotton. Micronutrients spraying is essential to get better yield of the crop. With this background, KVK conducted this trial to benefit the farmers to get better yield in Cotton.

6. Technology Assessed:

Farmer Practice : Soil application of DAP @ 150 kg/ha & Complex fertilizer (17:17:17) + MOP @ 100 kg each/ha

Technology Option-1 : Soil application of FYM @ 12.5 t/ha, biofertilizers - Azospirillum, Phosphobacteria each @ 2 kg/ha, Soil test based NPK (100% P as basal, split dose of N & K at basal, 45 & 65 days after sowing), Soil application of TNAU MN mixture @ 15 kg/ha as EFYM, Foliar spray of Cotton plus @ 5 kg/ha at flowering & boll formation stage

Technology Option-2 : Soil application of FYM @ 12.5 t/ha, biofertilizers -Azospirillum, Phosphobacteria each @ 2 kg/ha Soil test based NPK (100% P as basal, split dose of N & K at 30, 60, 90 days after sowing) Application of MN @ 10 kg ZnSO₄, 10 kg MnSO₄ and 3 kg Borax/ha with 75 % through soil application and 25 % through foliar spray

7. Critical inputs given:

Sl.No	Critical inputs	Quantity	Value (Rs)
1	Cotton Plus	15 kg	4000.00
2	Biofertilizers	9 kg	2520.00
3	Micronutrient mixture	18 kg	1800.00

8. Results:

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio
<i>Farmers Practice:</i> Soil application of DAP @ 150 kg/ha & Complex fertilizer (17:17:17) + MOP @ 100 kg each/ha	3	20.0	73000	1.82
<i>Technology 1 :</i> SA of FYM @ 12.5 t/ha, biofertilizers - Azospirillum, Phosphobacteria each @ 2 kg/ha, Soil test based NPK (100% P as basal, split dose of N & K at basal, 45 & 65 DAS), Soil application of TNAU MN mixture @ 15 kg/ha as EFYM, Foliar spray of Cotton plus @ 5 kg/ha		23.0	97500	2.14
<i>Technology 2 :</i> Soil test based NPK (100% P as basal, split dose of N & K at 30, 60, 90 days after sowing) Application of MN @ 10 kg ZnSO ₄ , 10 kg MnSO ₄ and 3 kg Borax/ha with 75 % through soil application and 25 % through foliar spray		22.5	91000	2.03

Description of the results:

The on-farm trial “Assessment of Integrated Nutrient Management practices in Cotton” was taken up during the Kharif season 2023 in 3 farmers’ field at Ramachipalayam village of Ammapet block, Erode district. Before implementation of the trial, the farmers trained on nutrient management in Cotton and importance of integrated nutrient management practices for improving crop yield. The farmers provided with micronutrient mixture, cotton plus and biofertilizers. The scientists from KVK provided regular advisory services for efficient implementation of the trial.

The trial indicated that, Technology Option 1: Soil application of FYM @ 12.5 t/ha, biofertilizers - Azospirillum, Phosphobacteria each @ 2 kg/ha, Soil test based NPK (100% P as basal, split dose of N & K at basal, 45 & 65 DAS), Soil application of TNAU MN mixture @ 15 kg/ha as EFYM, Foliar spray of Cotton plus @ 5 kg/ha significantly reduces multi nutrient deficiencies and thereby increasing the crop yield. Technology Option 1 recorded yield of 23 q/ha and 20 q/ha yield recorded in farmers practice with the yield increase of 15 percent. The highest Net returns (Rs.97,500/ha) and benefit cost ratio of 2.14 was recorded in Technology Option 1 whereas Rs. 73000 /ha Net returns and 1.82 BCR recorded in farmers practice.

9. Constraints: Nil

10. Feedback of the farmers involved:

Farmers actively involved in the trial and expressed that, integrated nutrient management practices adopted field gives better yield than farmers practice.

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

Integrated nutrient management practices in Cotton can be popularized through various awareness and extension programme for the wider dissemination and large-scale adoption.

OFT -8:

- 1. Thematic area :** Integrated Pests Management
- 2. Title :** Assess the performance of IPM Practices for Pseudo stem weevil management in Banana
- 3. Scientists involved :** SMS (Plant Protection)

4. Details of farming situation:

The trial was laid out during Kharif 2024 in the farmers field under irrigated farming situations at Ukkaram village of Sathymangalam Block. The soil of the trial plots was red soil in nature and adopted the spraying of fungicides frequently for managing the pest incidence which reduced the yield of the crop.

5. Problem definition / description:

Banana is being cultivated around 17000 ha in Erode District. While cultivating the crop farmers are facing the pests and disease incidence, namely pseudostem weevil, fusarium wilt and rhizome rot incidence which plays a major role. The farmers are advocating the practices of spraying the fungicides (or) insecticides frequently in the indiscriminate way. Since, the occurrence of the pseudostem weevil is more and management strategies are need of an hour. Hence, KVK has proposed this intervention on management of pseudostem weevil incidence of ICAR CTCRI technology and TNAU technology for the benefit of the banana growing farmers

6. Technology Assessed:

- Farmer Practice :** Soil drenching with system insecticides
- Technology Option-1 :** Stem injecting of bio molecules (Nanma) 10 to 15 ml has to be injected 5 cm below the infested region of the banana stem @8 lit/ha - **ICAR CTCRI, 2019**
- Technology Option-2 :** Trap the adult weevils - Pseudo stem chopped into small pieces and kept near infested clump at 100/ha with Swabbing the cut surface of the traps with *Beauveria bassiana* @ 20g/ trap ICAR NRCB, 2018

7. Critical inputs given:

Sl.No	Critical inputs	Quantity (Numbers)	Value (Rs)	The farmers supported with Nanma Bio formulation and <i>Beauveria bassiana</i> for worth of Rs. 10,000.00
1	Nanma Bio formulation (250 ml)	10 Nos.	Rs 5,000.00	
2	<i>Beauveria Bassiana</i> (1 Kg)	10 Kgs	Rs. 5,000.00	

8. Results:

Table: Performance of the technology

Technology Option	No.of trials	Yield q/ ha	Net Returns (Rs. /ha)	B:C ratio	Pests Infestation Percentage
Farmers Practice: Soil drenching with system insecticides	5	177.38	95,437.50	1.58	16.23
Technology 1: Stem injecting of bio molecules (Nanma) 10 to 15 ml has to be injected 5 cm below the infested region of the banana stem @8 lit/ha – ICAR CTCRI, 2019		190.99	1,33,848.80	1.83	9.48
Technology 2: Trap the adult weevils - Pseudo stem chopped into small pieces and kept near infested clump at 100/ha with Swabbing the cut surface of the traps with <i>Beauveria bassiana</i> @ 20g/ trap ICAR NRCB 2018		193.63	1,60,119.20	2.00	7.64

Description of the results:

The results revealed that the trapping of adult pseudostem weevil and swabbing of *Beauveria bassiana* recorded an yield of 193.63 q/ha with the pests infestation percentage of 7.64 whereas the stem injection of nanma bio formulation yielded 190.99 q/ha with the pests infestation percentage of 9.48. In farmers practices the yield observed was 177.38 q/ha and pest infestation percentage were 16.23. The result indicated that swabbing of *Beauveria bassiana* @ 20g / trap manages the pseudostem weevil infestation in Banana crop

9. Constraints: Nil

10. Feedback of the farmers involved:

Based on the result farmers felt that trapping of pseudostem weevil by using *Beauveria bassiana* would manage the pest incidence in Banana crop through this biological method. Further farmers also felt that we will adopt this technology and share them to other fellow farmers in that region.

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

Based on the result it was understand biological methods would manage the pseudostem weevil in Banana crop. Further awareness has to be created to the extension functionaries of State Department of Horticulture on the usage and application of the *Beauveria bassiana* for wide spread adoption of technology.

OFT-9:

- 1. Thematic area** : **Integrated Disease Management**
- 2. Title** : **Assess the performance of management practices for Boll rot in Cotton**
- 3. Scientists involved** : **SMS (Plant Protection)**
- 4. Details of farming situation** :

The farmers selected from Koochikallur village of Anthiyur Block. Cotton crops are being cultivated around 300 ha in the district. Sowing of cotton seed in Rabi season 2024. During the season the block receives a cumulative rainfall of 298.7 mm with 22 rainy days.

5. Problem definition / description:

Cotton is a commercial fibre crop being cultivated around 300 ha in the district throughout the year. During cultivation of cotton crop farmers are facing pink boll worm, boll rot, anthracnose and sucking pests incidence which leads to reduction in yield. Farmers are advocating the practice of spraying pesticide which is not an environmentally safe. Since the boll rot disease is a major cause so management strategies is need of an hour. Hence, KVK has proposed this intervention TNAU technology and CICR technology for the benefit of cotton growing farmers

6. Technology Assessed:

- Farmer Practice** : Spraying of fungicides
- Technology Option 1:** Adopt optimum spacing. Apply the recommended doses of fertilizers. Spray Copper oxy chloride @ 1000 g/acre or Carbendazim @ 200 g /acre or Mancozeb @ 800 g / acre – TNAU 2020
- Technology option 2:** Avoid late sowing, Adopt wider spacing. Spraying of Carbendazim 50% WP 2gm (or) Propiconazole 25%EC 1ml / litre ICAR CICR, 2022

7. Critical inputs given:

Sl.No	Critical inputs	Quantity (Numbers)	Value (Rs)	The farmers supported with the fungicides with the worth of Rs. 11,000.00
1.	Propiconazole	2.5 liters	2,000.00	
2	Copper hydroxide	2.0 Kg	5,000.00	
3	Mancozeb	2.0 Kg	4000.00	

8. Results:

Table: Performance of the technology

Technology Option	No.of trials	Yield q/ ha	Net Returns (Rs. /ha)	B:C ratio	Disease Incidence Percentage
Farmers Practice: Spraying of fungicides	5	14.30	38,348.00	1.61	16.28
Technology 1 Adopt optimum spacing. Apply the recommended doses of fertilizers. Spray Copper oxy chloride @ 1000 g/acre or Carbendazim @ 200 g /acre or Mancozeb @ 800 g / acre – TNAU 2020		17.14	50,963.00	1.83	8.23
Technology 2: Avoid late sowing, Adopt wider spacing. Spraying of Carbendazim 50% WP 2gm (or) Propiconazole 25% EC 1ml / litre ICAR CICR, 2022		18.30	56,418.00	1.90	7.15

Description of the results:

The results reveals that the disease management modules from ICAR, CICR, Nagpur performed well in terms of yield 18.30 q/ha. with a disease incidence percentage of 7.15, whereas in disease management modules of TNAU Coimbatore yielded 17.14 q/ha with disease infestation percentage of 8.23, In farmer practices the yield recorded was 14.30 q/ha with disease infestation percentage of 16.28 respectively.

9. Constraints: Nil

10. Feedback of the farmers involved:

Farmers actively participated and expressed that the disease management modules would manage the boll rot disease in cotton crop. Farmers expressed that they will share the technology to the other fellow farmers.

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

Since the disease management modules manages the boll rot disease and the technology can be made available to the farmers and suggested to include in the crop production package.

OFT -10:

- 1. Thematic area :** Integrated Disease Management
- 2. Title :** Assess the performance of microbial consortia for the management of soil borne disease in Chillies
- 3. Scientists involved :** SMS (Plant Protection)

4. Details of farming situation:

The trial was laid out during Kharif 2024 in the farmers field under irrigated farming situations at Annumarpalayam village of Anthiyur Block. The soil of the trial plots was red soil in nature and adopted the spraying of fungicides frequently for managing the soil borne disease incidence which reduced the yield of the crop.

5. Problem definition / description:

Chillies is being cultivated around 5000 ha in Erode District. While cultivating the crop farmers are facing the disease incidence, namely soil borne disease, thrips and anthracnose disease incidence which plays a major role. The farmers are advocating the practices of spraying the fungicides (or) insecticides frequently in the indiscriminate way. Since, the occurrence of the soil borne disease is more and management strategies are need of an hour. Hence, KVK has proposed this intervention on management of soil disease of ICAR IIHR microbial consortia technology and TNAU technology for the benefit of the farming communities.

6. Technology Assessed:

- Farmer Practice :** Spraying of Propiconazole 500 ml/ha
- Technology Option-1 :** TNAU microbial consortia (*Bacillus subtilis*, *Trichoderma asperellum* and *Purpureocillium lilacinum*)- Seed treatment, soil application and root dipping – TNAU 2020
- Technology Option-2 :** Arka microbial consortium - Seed treatment @ 20 g / 100 g of seeds, soil application and root dipping 20 g / lit. ICAR IIHR, 2020

7. Critical inputs given:

Sl.No	Critical inputs	Quantity (Numbers)	Value (Rs)	The farmers supported with IIHR Microbial consortium and <i>Bacillus subtilis</i> , <i>Trichoderma asperellum</i> and <i>Purpureocillium lilacinum</i> worth of Rs. 12,000.00
1	IIHR Microbial Consortia	30 Kgs	7,000.00	
2	<i>Bacillus subtilis</i> and <i>Trichoderma asperellum</i> and <i>Purpureocillium lilacinum</i>	20 Kgs	5,000.00	

8. Results:

Table: Performance of the technology

Technology Option	No.of trials	Yield q/ ha	Net Returns (Rs. /ha)	B:C ratio	Disease Incidence Percentage
Farmers Practice: Spraying of Propiconazole 500 ml/ha	3	145.32	53,652.00	2.14	14.78
Technology 1: TNAU microbial consortia (<i>Bacillus subtilis</i> , <i>Trichoderma asperellum</i> and <i>Purpureocillium lilacinum</i>)- Seed treatment, soil application and root dipping – TNAU 2020		200.10	63,332.00	2.37	6.37
Technology 2: Arka microbial consortium - Seed treatment @ 20 g / 100 g of seeds, soil application and root dipping 20 g / lit. ICAR IIHR, 2020		183.57	59,128.00	2.31	8.34

Description of the results:

The results revealed that the application of *Bacillus subtilis* and *Trichoderma asperellum* and *Purpureocillium lilacinum* recorded an yield of 200.10 q/ha with the disease incidence percentage of 6.37 whereas the microbial consortia from ICAR IIHR yielded 183.57 q/ha with the disease incidence percentage of 8.34. In farmers practices the yield observed was 145.32 q/ha and disease incidence percentage was 14.78. The result indicated by combination of *Bacillus subtilis*, *Trichoderma asperellum* and *Purpureocillium lilacinum* would manage the soil borne disease through the microbial consortia methods in chillies.

9. Constraints: Nil

10. Feedback of the farmers involved:

Based on the result farmers felt combination of *Bacillus subtilis*, *Trichoderma asperellum* and *Purpureocillium lilacinum* would manage the disease incidence in chillies crop through this method. Further farmers also felt that we will adopt this technology and share them to other fellow farmers in that region.

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

Based on the result it was understand combination of microbes methods would manage the soil borne disease in chillies crop. Further awareness has to be created to the extension functionaries of State Department of Horticulture on the usage and application of the product for wide spread adoption of technology.

OFT – 11:

- 1. Thematic area :** Integrated Disease Management
- 2. Title :** Assess the management module for root rot disease in Groundnut Crop
- 3. Scientists involved :** SMS (Plant Protection)

4. Details of farming situation:

The trial was laid out during Rabi 2023 in the farmers field under irrigated farming situations at Veerasangali village of Perundurai Block. The soil of the trial plots was red soil in nature and adopted the spraying of fungicides frequently for managing the soil borne disease incidence which reduced the yield of the crop.

5. Problem definition / description:

Groundnut is being cultivated around 30000 ha in Erode District. While cultivating the crop farmers are facing the pests and disease incidence, namely leaf miner, root rot, early and late leaf spot disease incidence which plays a major role. The farmers are advocating the practices of spraying the fungicides (or) insecticides frequently in the indiscriminate way. Since, the occurrence of the root rot disease is more and management strategies are need of an hour. Hence, KVK has proposed this intervention on management of soil disease of DGR and TNAU technology for the benefit of the farming communities.

6. Technology Assessed:

- Farmer Practice :** Application of fungicides
- Technology Option-1 :** Seed treatment with carbendazim @ 2 g / kg Soil application of *T. viride* @ 2.5 kg/ha mixed with 50 kg FYM basally and on 40 DAS. – TNAU 2020
- Technology Option-2 :** Seed treatment with tebuconazole @1.5g/kg and PGPR @625 g/kg of seed – DGR 2018

7. Critical inputs given:

Sl.No	Critical inputs	Quantity (Numbers)	Value (Rs)	The farmers supported with Carbendazim and Tebuconazole fungicides for the worth of Rs. 8,000.00
1	Carbendazim	5.0 Kgs	3,000.00	
2	Tebuconazole	7.0 Kgs	5,000.00	

8. Results:

Table: Performance of the technology

Technology Option	No.of trials	Yield q/ ha	Net Returns (Rs. /ha)	B:C ratio	Disease Incidence Percentage
Farmers Practice: Application of fungicides	5	16.87	31,376.40	1.72	15.78
Technology 1: Seed treatment with carbendazim @ 2 g / kg Soil application of <i>T. viride</i> @ 2.5 kg/ha mixed with 50 kg FYM basally and on 40 DAS. – TNAU 2020		19.25	42,503.90	1.97	7.49
Technology 2: Seed treatment with tebuconazole @ 1.5g/kg and PGPR @ 625 g/kg of seed – DGR 2018		18.15	37,875.40	1.92	8.58

Description of the results:

The results revealed that the seed treatment with carbendazim recorded an yield of 19.25 q/ha with the disease incidence percentage of 7.49 whereas the spraying of tebuconazole treatment yielded 18.15 q/ha with the disease incidence percentage of 8.58. In farmers practices the yield observed was 16.87 q/ha and disease incidence percentage was 15.78. The result indicated by seed treatment in groundnut crop manages the root rot incidence and fetches the better yield.

9. Constraints: Nil

10. Feedback of the farmers involved:

Based on the result farmers felt that seed treatment practices would manages the root rot incidence in groundnut crop. Further farmers also felt that we will adopt this technology and share them to other fellow farmers in that region.

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

Based on the result it was understand that seed treatment practices manages the root rot diseases. Further awareness has to be created to the extension functionaries of State Department of Agriculture on the usage and application of the product for wide spread adoption of technology.

OFT-12:

1. **Thematic area** : **Livestock Management**
2. **Title** : **Assessment of cumbar Napier fodder variety in Erode district**
3. **Scientists involved** : **SMS -Animal Science**

4. **Details of farming situation:**

The trial was laid out in Areypalayam and Talavadi village of Erode district. Livestock rearing are major livelihood activity in this region. Most of the farmers depend mainly on open grazing system.

5. **Problem definition / description:**

Erode district faces a significant challenge of increasing fodder shortage, particularly during the lean season, directly impacting livestock health and productivity. This scarcity leads to a decline in milk quality as animals are deprived of essential nutrients found in green fodder, resulting in reduced fat content and overall nutritional value.

6. **Technology Assessed:**

Farmer Practice : CO4
Technology Option-1 : KAU –Susithira
Technology Option-2 : TNAU- CO5

7. **Critical inputs given:**

Sl.No	Critical inputs	Quantity (Bottle)	Value (Rs)
1	Susithira Setts	4500	4500
2	CO5 Setts	4500	4500

8. **Results:**

Table: Performance of the technology

Technology Option	No. of trials	Yield (q/ha)	Net Returns (Rs./ha)	B:C ratio
Farmer Practice- CO 4	3	330	45,000	3.14
Technology 1 KAU- Susithira		310	40,000	2.82
Technology 2 TNAU- CO5		390	58,000	3.9

Description of the results:

The on-farm trial on “Assessment of cumbar napier fodder in Erode district” was taken up in 3 farmer’s field at Sathyamangalam block, Erode district. Before implementation of the trial, the farmers were trained on various aspects of scientific livestock rearing, importance of nutritional & disease management. The farmers were given 1500 setts of fodder for the trial for a period of 4 months. The scientists from KVK provided regular advisory services time to time for efficient implementation of the trial.

The trial indicated that, CO5 (To2) showed better yield compared to that of farmer practice and To1. The trial revealed that there was 18% increase in yield in CO5 compared to CO4 and Susithira. The BC ratio was also better in case of To2

9. Constraints faced: NIL

10. Feedback of the farmers involved:

The farmers felt that, using CO5 showed better yield and feeding them to livestock showed improved the weight gain and performance providing additional income to them.

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

The performance of CO5 is better compared to Susithira and CO 4 and gave better results and cost effective

OFT-13:

1. **Thematic area** : **Livestock Disease Management**
2. **Title** : **Assessment of wound healer in goats**
3. **Scientists involved** : **SMS -Animal Science**

4. Details of farming situation:

The trial was laid out in Nambiyur block of Erode district. Small ruminants rearing are major livelihood activity in this region. Most of the farmers depend mainly on open grazing system.

5. Problem definition / description:

Since the small ruminants are grazed in open grazing. Wound and maggot infestations are occurs and are difficult to treat. High mortality in small ruminants was observed due to secondary infection. Further many commercially used medicine showed resistance and delay in wound healing

6. Technology Assessed:

- Farmer Practice : Tumeric + Neem Oil (EVM)
- Technology Option-1 : TANUVAS -Nano Heal Cream
- Technology Option-2 : CIRG- Healex-FR

7. Critical inputs given:

Sl.No	Critical inputs	Quantity (Bottle)	Value (Rs)
1	Nano Heal Cream	12	3120
2	Healex-FR	12	3600

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

Technology Option	No. of trials	Body weight (Kg)	Net Returns (Rs./ha)	B:C ratio
Farmers Practice (Tumeric + Neem oil)	3	18	8100	2.72
Technology 1 TANUVAS- Nano heal cream		27	12150	3.23
Technology 2 CIRG		24	10800	2.97

Description of the results:

The on-farm trial on “Assessment of wound healer in goats” was taken up in 3 farmer’s field at Nambiyur block, Erode district. Before implementation of the trial, the farmers were trained on various aspects of scientific goat rearing, importance of nutritional & disease management. The farmers were given 4 bottles of each inputs for the trail for a period of 4 months. The scientists from KVK provided regular advisory services time to time for efficient implementation of the trial.

The trial indicated that, using wound healers regularly caused 25-35 % increase in body weight compared to goats which were only treated with EVM practices. It was observed that, mortality of small ruminants significantly decreased to 2-3 % compared to farmer practice.

The trial revealed that the goat gained additional 9 Kg in Technology option 1 and 6 Kg in Technology option 2 compared to farmer practice. The overall performance To1 in goats had good result than TO2 since the BC ratio is better in case of TO2 than TO1 and farmer practice

9. Constraints faced: NIL

10. Feedback of the farmers involved:

The farmers felt that, using wound healers regularly improved the weight gain and performance of the goat providing additional income to them.

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

The performance of wound healers in small ruminants compared conventional EVM gave better results and cost effective

Frontline Demonstrations in Detail

a. Follow-up of FLDs implemented during previous years

S. No	Crop / Enterprise	Thematic Area	Technology demonstrated as follow up from OFT	Feedback sent to research system	Details of popularization methods suggested to the Extension system	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
							No. of villages	No. of farmers	Area in ha
1	Finger millet	ICM	Co15	Submitted and KVK initiated seed production with department	Demonstration	22	1925	1600	1
2	Black gram	ICM	Variety along with IPNM practices	Submitted for ensuring the availability of quality seeds	Method demonstration	23	750	620	2
3	Sugarcane	ICM	CO 0212	Sett treatment device availability	Method demonstration	12	3200	2650	3
4	Cassava	ICM	Yethapur-2	Planting material produced with the support of extension system	Demonstration	32	650	400	28

b. Details of FLDs implemented during the reporting period

Sl. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Farming situation	Source of funds	No. of locations	No. of demo	No. of SC/ST farmers	Area (ha)		Justification for shortfall if any
										Proposed	Actual	
Oilseeds												
1	Groundnut	IDM	Demonstration on root rot management	Kharif	Irrigated	ICAR	1	10	-	4	4	-
Cereals												
2	Paddy	INM	Rice reap	Kharif	Irrigated	ICAR	1	5	-	2.0	2.0	-
3	Paddy	INM	Rice Bloom	Rabi	Irrigated	ICAR	1	5	-	2.0	2.0	-
4	Paddy	IDM	Demonstration of false smut management	Rabi	Irrigated	ICAR	1	10	-	4	4	-
Fruits												
5	Banana	INM	Arka Banana special	Kharif	Irrigated	ICAR	2	5		2	2	-
Millets												
6	Finger millet	Varietal demonstration	ICM in finger millet (ATL 1)	Kharif	Rainfed	ICAR	2	10	10	4	4	-
7	Little millet	Varietal demonstration	ICM in little millet (ATL 1)	Kharif	Rainfed	ICAR	1	10	10	4	4	-
8	Ragi	INM	Organic nutrient management practices	Kharif	Rainfed	ICAR	1	5	5	2.0	2.0	-
Flowers												
9	Jasmine	INM	Integrated nutrient management practices	Kharif	Irrigated	ICAR	1	5	-	2.0	2.0	-
Aromatic Crop												
10	Rosemary	ICM	TNAU , Ooty-1	Kharif	Rainfed	ICAR	2	5	-	2	2	-
Commercial Crop												
11	Cotton	INM	Integrated nutrient management practices	Kharif	Irrigated	ICAR	1	5	-	2.0	2.0	-
12	Sugarcane	ICM	Integrated crop management in sugarcane	Kharif	Irrigated	ICAR	1	4	-	2	2	-
Tuber Crop												
13	Tapioca	IPM	IPM for cassava mealy bug	Kharif 2024	Irrigated	ICAR	1	10	-	4	4	-
14	Tapioca	INM	TNAU YTP-2	Kharif	Irrigated	ICAR	2	5	-	2	2	-
15	Tapioca	ICM	Sree Reksha	Kharif	Irrigated	ICAR	2	5		2	2	

Sl. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Farming situation	Source of funds	No. of locations	No. of demo	No. of SC/ST farmers	Area (ha)		Justification for shortfall if any
										Proposed	Actual	
16	Elephant foot yam	ICM	Gajendra	Kharif	Irrigated	ICAR	2	5		2	2	
Farm Mechanization												
17	Coconut	Farm Machinery	Shredder cum Pulverizer	Rabi	Irrigated	CIAE	1	4	4	1	1	-
18	Groundnut	Farm Machinery	Seed drill, Harvester, Stripper	Rabi	Irrigated	TNAU	1	4	-	1	1	-
19	Paddy	Farm Machinery	Agriculture Drone	Rabi	Irrigated	KVK, Erode	1	10	-	1	1	-
20	Fisheries	Farm Machinery	Fish De Scaling Machine	Rabi	Inland Fishery	CIFT	1	4	-	1	1	-
Livestock												
21	Goat	Nutritional Management	Demonstration of Milk replacer	-	Intensive	ICAR	2	10	-	50 Animals		-
22	Cattle	Nutritional Management	Demonstration of TANUVAS mineral mixture	-	Intensive	ICAR	2	10	-	10 Animals		-
23	Cattle	Disease Management	Demonstration of nanomethicone spray	-	Extensive	ICAR	3	10	-	10 Animals		-
24	Poultry	Varietal Introduction	Demonstration of TANUVAS Aseel	-	Intensive	ICAR	4	5	-	250 Birds		-
Enterprise												
25	Fruits	Value addition	High value added fruit products with amla, citrus, banana and fig	-	-	ICAR	1	20	13	-	-	-
26	Green leafy vegetables	Value addition	Nutri mix contains Moringa leaves, chekruminias leaves, amla powder, carrot powder, brown rice and millets	-	-	ICAR	1	20	4	-	-	-
Women Empowerment												
27	Vegetables and Greens	Health and Nutrition	Nutrition garden established in Anganwadis for 2 cents with seasonal vegetables, greens, creepers and perennial crops	Throught year	-	ICAR	7	10	3	-	-	-

Performance of Frontline demonstrations

Frontline demonstrations on crops

Crop	Thematic Area	Technology demonstrated	Name of the Variety/ Hybrid		No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs. /ha)				Economics of check (Rs./ha)			
			Domo	Check			Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
							High	Low	Average										
Finger millet	Varietal demonstration	ICM in finger millet variety ATL 1	ATL 1	CO 15	10	4	24.06	21.56	22.88	20.46	12.00	19995	45679	25969	2.32	20530	40160	19880	1.98
Little millet	Varietal demonstration	ICM in little millet variety ATL 1	ATL 1	Local variety	10	4	17.80	15.90	16.76	13.78	22.00	17840	38937	21037	2.18	20040	31763	11843	1.59
Sugarcane	Integrated Crop Management	Integrated Crop Management	CO 11015	CO 86032	4	2	1267.8	1225.0	1247.8	1061.2	12	135000	303223	168223	2.25	138500	250382	111882	1.81
Paddy	INM	Demonstration of TNAU rice reap in Paddy	TPS 5	TPS 5	5	2.0	47.5	46.0	45.0	41.0	10	38500	81000	42500	2.10	41000	73800	32800	1.80
Paddy	INM	Demonstration of TNAU Rice Bloom for higher yield of Paddy	TPS 5	TPS 5	5	2.0	47.0	45.0	44.5	40.0	11	39700	80100	40400	2.02	41500	72000	30500	1.73
Tapioca (Cassava)	INM	YTP-2 released in 2020	YTP-2		5	2	462	442	452	338	33.72	124537	297858	3173321	2.39	118536	222520	103984	1.88
Rosemary	ICM	Ooty -1 Plants are bushy, Vigorous	Ooty -1		5	2	195	191	193	172	12.20	233750	479166	207083	2.05	255311	397133	136952	156
Banana	INM	Arka banana special	Red banana		5	2	328	310	319	273	16.84	200000	563850	363850	2.82	198650	464780	266130	2.34
Cassava	ICM	Setts, Arrka vegetable special	Sree Reksha		5	2	476	472	474	324	46.29	127120	307710	183173	2.47	118536	210600	92064	2.56
Elephant foot yam	ICM	Arka Vegetable special	Gajendra		5	2	252	210	231	187	23	165690	432440	266750	261	163650	140610	140610	1.86
Cotton	INM	Demonstration of integrated nutrient management practices in Cotton	Sunanatha	Sunantha	5	2.0	25.5	23.5	22.5	20.0	13	85000	180400	95400	2.12	87500	160000	72500	1.83
Jasmine	INM	Demonstration of INM in Jasmine	Jasminu sambac	Jasminum sambac	5	2.0	84.5	82.5	82.4	71.8	15	250600	795600	545000	3.17	265800	754700	488900	2.84
Ragi	INM	Demonstration of organic nutrient management practices in Ragi	ATL 1	ATL 1	5	2.0	29.0	27.5	27.5	23.8	16	21500	60500	39000	2.81	23200	50100	26900	2.16
Paddy	Integrated Disease Management	Demonstration of false smut management	ASD16	ASD16	10	4	45.17	42.13	44.67	40.89	9.0	35602.35	68590.89	32988.54	1.93	37500.43	65930.10	28429.67	1.76

Groundnut	Integrated Disease Management	Demonstration on root rot management	CO2	CO2	10	4	19.33	17.37	19.25	16.87	14.0	44625.40	85,129.20	40503.80	1.91	42973.21	75455.61	32482.40	1.76
Tapioca	Integrated Pest Management	Demonstration of IPM for cassava mealy bug	Mullavadi	Local	10	4	502.23	473.75	483.54	431.25	12.0	98562.00	209535.23	110973.23	2.13	93350.00	175285.82	81935.82	1.88
Vegetables and Greens	Health and Nutrition	Nutrition garden established in Anganwadis for 2 cents with seasonal vegetables, greens, creepers and perennial crops	-	-	10	-	-	-	416	-	-	4700	13700	9000	2.91	-	-	-	-

Frontline demonstrations on Livestock

Animal	Thematic Area	Technology demonstrated	Farming situation	No. of Farmers	No. of Village	Yield (Lit/animal)		% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo	Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Goat	Nutritional Management	Demonstration of Milk replacer	Extensive	10	2	13	10	30	3620	9470	5850	2.62	3525	8025	4500	2.28
Cattle	Nutritional Management	Demonstration of TANUVAS mineral mixture	Extensive	10	2	1780	1370	30	47040	71200	24160	1.51	41100	54800	13700	1.33
Cattle	Disease Management	Demonstration of nanomethicone spray	Extensive	10	3	2100	1450	45	50400	94000	43600	1.87	51000	84400	33400	1.65
Poultry	Varietal Introduction	Demonstration of TANUVAS Aseel	Intensive	5	4	2.5	1.8	39	650	1775	1125	2.73	760	1570	810	2.07

Enterprise

Enterprise	Thematic Area	Technology demonstrated	Farming situation	No. of Farmers	No. of Village	Yield (Kg)		% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo	Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Value addition	Value addition	High value added fruit products with amla, citrus, banana and fig	-	20	1	-	-	-	240	560	320	2.33	-	-	-	-
Value addition	Value addition	Nutri mix contains Moringa leaves, chekruminias leaves, amla powder, carrot powder, brown rice and millets	-	20	2	-	-	-	290	680	390	2.34	-	-	-	-

Frontline demonstrations on Farm Implements and Machinery

Name of the implement	Crop	Technology demonstrated	No. of Farmer	Area (ha)	Major parameters	Filed observation (output/man hour)		% change in major parameter	Labor reduction (man days)				Cost reduction (Rs./ha or Rs./Unit etc.)			
						Demo	Check		Land preparation	Sowing	Weeding	Total	Land preparation	Labour	Irrigation	Total
Shredder cum Pulverizer	Coconut	Shredder cum Pulverizer	4	1	Labour requirement in mandays / Ton	3.5	0.08	42.75	5500	12000	6500	2.18	480	550	70	1.15
Seed drill, Harvester, Stripper	Groundnut	Seed drill, Harvester, Stripper	4	1	Labour requirement in mandays / ha	24	51	-.52.94	36304	63217	26913	1.74	43627	51940	8313	1.19
Agriculture Drone	Paddy	Pesticide Spraying	4	1	Coverage in ha/ hr	1.6	0.4	300	1900	2900	1000	1.53	500	650	150	1.30
Fish De Scaling Machine	Fisheries	Fish De Scaling Machine	4	1	Covorage in kg/hr	25	20	25	3900	4600	700	1.18	3200	3600	400	1.13

Feedback from Farmers:

S. No	Feed Back
1	Finger millet: The farmers felt that, the high yielding variety ATL 1 along with ICM practices performed well and resistant to neck blast diseases. The new variety produces more productive tillers like 7 tillers per plant
2	Little millet: The new high yielding variety ATL 1 little millet along with seed treatment with bio fertilizer enhances the yield by 22 percent compared to the local traditional variety
3	Sugarcane: The farmers expressed that CO 11015 single bud seedlings performed well and application of sugarcane booster enhances the millable cane
4	Paddy: The farmers felt that, foliar spraying of TNAU Rice reap reduces nutrient deficiencies and thereby reduces purchase cost of different nutrient sources.
5	Paddy: Farmers expressed that, during <i>Samba</i> Paddy cultivation Rice bloom is essential for getting better yield of Paddy
6	Cotton: INM practices along with foliar spraying of Cotton plus reduces the nutrient deficiency and improves yield of cotton.
7	Jasmine: Farmers expressed that, they could save fertilizers purchase cost since, two splits fertilizer application is recommended for improving flower yield.
8	Ragi: Application of organic nutrient sources produces more grain yield 27.5 q/ha than farmers practice (23.8 q/ha)
9	Paddy: The farmers felt that, spraying of propiconazole as a precautionary method manages the disease and recorded the better yield
10	Tapioca: The integrated pests management modules reduces the pest infestation and recorded the better yield
11	Groundnut: Farmers expressed that the seed treatment would manage the root rot disease incidence and recorded the better yield
12	Shredder cum pulverizer Farmers appreciate the equipment has made composting much easier and faster. It efficiency break down coconut waste reducing our work load and improving decomposition
13	Mechanized in Groundnut Reduces Manual Labour and time
14	Agriculture Drone Reduces manual labour and helps in effective application /Spraying of chemicals It also saves time
15	Fish De scaling machine has made remove scale easier and faster. It removes Scales, saving time and effort. Ensures cleaner, higher quality Product.
16	Nutraceuticals fruit products are tastier and it would be healthier also. The EDP would benefit to get additional income for women.
17	Micro nutrient rich health mix is tastier than normal health mix since with enriched taste of carrot powder, green leafy vegetables like moringa and checkruminias and women SHGs would get additional income through EDP initiatives.
18	Anganwadi workers expressed that children are getting fresh, pest free vegetables and greens in their daily meals. The mother of the children motivated to establish nutrition garden in their houses too.
19	Cassava: Farmers expressed that YTP-2 variety, which is giving better yield, high starch content and resistant CMD and produced 469Q/hac
20	Rosemary: Farmers felt that Ooty -1 variety performed well and produced 191 q/ ha. and fetch good market price
21	Elephant foot yam: Farmers felt that Gajendra variety Performed well and giving better yield and bigger size of corms and fetched good market prices and produced 231 Q/ hac

S. No	Feed Back
22	Cassava: Sree Reksha : variety performed well in Chennampaatti area of Erode district and compared other ruling variety of Mulluvadi and harvested 474 Q/ hac
23	Banana : Farmers said that Arka banana special is performed well in all kind of banana variety, which provides shining effect to fruit, enhancing the yield potential , and fetching good market prices, and provides incremental income to the farmer about 18-20%
24	Goats: The kids fed with milk replacer showed 30% increase in body weight compared to that those fed by cow milk
25	Cattle: The milch cow supplement with mineral mixture showed 30% in milk yield compared those animal which are not supplemented
26	Cattle: The animals in which the nanomethicone spray was used showed better production and health status (40%) compared to those in which EVM practice was done
27	Poultry: The new TANUVAS aseel showed 39% increase in body weight at 4 months compared to native desi breeds

Feedback of the Scientist:

S. No	Feed Back
1	Finger millet: The demonstrated variety ATL 1 performed well in bargur hills with higher yield (12%) than the existing varieties. KVK is in the process of demonstrating 330 farmers' field through convergence activities.
2	Little millet: Introduction of high yielding variety in little millet ATL 1 recorded 22 percent higher yield than the traditional variety cultivated by farmers. KVK, Erode further planned to increase the area under new variety through convergence programme.
3	Sugarcane: Integrated crop management practices with quality disease free high yielding sugarcane variety (CO 11015) recorded the highest yield of 126.78 t/ ha than the existing variety. KVK trained nursery entrepreneurs linked with ICAR SBI for quality seedling production.
4	Paddy: Foliar spraying of TNAU rice reap @ 6 kg/acre at Booting stage and 10 days after first spray improves grain filling percentage and grain yield by 13 percent over farmers practice.
5	Paddy: For <i>Samba</i> Paddy cultivation, Foliar spraying of TNAU rice bloom@ 8 kg/ac at heading stage and grain filling stage produces more number of productive tillers and helps to produce more grain yield.
6	Cotton: Integrated nutrient management practices including micronutrients, biofertilizers with macronutrients rectifies nutrient deficiencies in Cotton and thereby increasing yield by 13 percent over farmers practice
7	Jasmine: INM practices with two equal split application of fertilizers after pruning enhances flower yield and quality of Jasmine
8	Ragi: Demonstration of organic nutrient management in Ragi produces more number of productive tillers (5-8) per plant which leads to increasing grain yield of Ragi
9	Paddy: As a preventive measure spraying of prpiconazole reduces the disease incide
10	Tapioca: The integrated pests management modules reduces the pests infestation and recorded the better yield and it can be adopted for spread of technology

S. No	Feed Back
11	Groundnut: The disease incidence modules reduces the disease and recorded the good yield and it can be disseminated for wide spread adoption of technology.
12	Shredder Cum Pulverizer has demonstrated substantial effectiveness in enhancing composting processes. Its high efficiency in reducing coconut waste to finer particles significantly accelerates decomposition, thereby reducing labor intensity .
13	Mechanization in groundnut processing has shown a marked reduction in manual labor and processing time , thereby improving overall productivity and sustainability in groundnut cultivation
14	Agricultural Drone technology ensures precise and uniform distribution, which not only improves the effectiveness of pest and nutrient management but also leads to substantial time savings, thereby increasing overall productivity in agricultural practices."
15	Fish De Scaling Machine helps to remove scales effectively ensures a cleaner product, which directly contributes to higher quality and improved hygiene standards, ultimately enhancing the overall marketability and consumer satisfaction
16	Cassava: YTP-2 variety performed well in the Gobichettipalayam area when compared to the existing variety of Mulluvadi. KVK planned an area expansion of Technology in other parts of the district
17	Rosemary: Ooty -1 variety performed well in Bargur hills compare to ruling variety Ooty local , For wider adoption, KVK plan to scaling up the technology in other parts of the hilly regions and other district
18	Elephant foot yam : Gajendra variety Performed well in Gobichettipalayam block area and compared with CO-1 variety, KVK planned to scaling the technology in other parts of district
19	Cassava : Sree Reksha : variety performed well in Chennampaatti area of Erode district and compared other ruling variety of Mulluvadi
20	Banana : Arka banana special is perfrmed well in all kind of banana variety, which provides shinning effect to fruit, enhancing the yield potential , and fetching good market prices, KVK planned to scaling up the technology in other parts of blocks
21	Goats: The kids fed with milk replacer showed 30% increase in body weight compared to that those fed by cow milk and has less mortality leading increased BC ratio
22	Cattle: The milk obtained from cow supplemented with mineral mixture showed 12% increase in fat and SNF content. Further the cattle also showed better reproductive performance compared to check
23	Cattle: Compared to other ecto-parasiticide used, nanomethicone spray showed less resistance and only problem is that the spray sometimes gets coagulate in the spray nozzle
24	Poultry: The TANUVAS Aseel showed better BC ratio and less early mortality compared to desi birds used by the farmers.
25	The nutraceuticals value added products in fruits is costlier than normal jam and squash by addition of high nutritive fruits like amla, fig and cherries
26	Less preference among children for the nutrimix when compared with elders since nutrimix contains dry powder of green leaves like moringa and checruminias.
27	The demonstration of Nutrition garden in Anganwadi supported the children with organic and fresh vegetables and greens in their daily diet

Extension activities on the FLD

Sl.No.	Activity	No. of activities organized	Number of participants
1	Field days	27	438
2	Farmers Training	31	652
3	Media coverage	14	-
4	Training for extension functionaries	3	184

Extension Studies

Study-1:

Exploring Banana Enterprises in Erode District – KVK Experiences...

INTRODUCTION

ICAR KVK, MYRADA experiences on end to end interventions in banana enterprise was explored in this Good Practices Note. Here Dr.P.Alagesan, Mr.S.Saravanakumar, Mr.P.Pachiappan and Mrs.M.Siva describes the KVK interventions in Banana cultivation and values addition and how it impacts on productivity enhancement and entrepreneurship promotion in the banana food and fibre based products.

SYNOPSIS

*Banana is the major fruit crop cultivated over 15000 ha in Erode district. Being a major crop cultivated in the district, ICAR KVK Erode focused on end-end interventions in banana cultivation for improving crop productivity and process in value chain activities. During the past five years (2017-2023), KVK has demonstrated various technologies through series of KVK technical interventions in the form of capacity building, on farm trials, front line demonstration, exposure visit and entrepreneurship promotion. KVK provided **73 skill training** on crop production, value addition and handicrafts making to the farmers, rural youths, extension functionaries and SHGs. On improving crop productivity, KVK initiated production of “**Banana Special**” Micro nutrient mixture with the support of ICAR-IIHR, Bangalore and **bio control production unit** for the benefit of farmers. For the past five years 57.62 tons of Banana special produced and supplied to the farmers for timely adoption of technology which rectified the micro nutrient deficiency and enhanced the yield by 15 - 18%.*

*In order to develop entrepreneurship in Banana based enterprises, KVK promoted entrepreneur making products in the area of **banana fibre** and **food-based products**. As a result, over **50 value added products in banana fibre** and **20 value added food products** developed by entrepreneurs with the support of KVK and other institution. Currently, 20% of the entrepreneur’s products are being exported to other countries lime lighting the potential of banana enterprise in future. The establishment of institutions at the grassroot level for banana enterprise ensures the development and sustainability of the enterprise.*

CONTEXT

Erode is one among the 38 districts in TamilNadu, the climatic condition prevailing in the district is suitable for cultivating variety of crops in the district. Banana is one among the fruit crop cultivated over 15000 ha area with the average productivity of 38MT/ha. The farmers are generally not aware of the recent method of crop management practices which helps in increasing the productivity. Harvested banana plants / pseudo stem is right now underutilized or not utilized properly but it gives the natural fibre in turn helps in protecting the environment.

There is a scope for increasing the production potential up to 60MT/ha and ambient demand for value added products in banana-based products in the global market. Krishi Vigyan Kendra, MYRADA (Mysore Resettlement And Development Agency) working in Erode district is attempted to explore the

avenues to increase the productivity in banana and enhance the natural fibre production through its technical activities over the period of the years.

ABOUT KVK

KVK play a vital role in conducting on farm testing to demonstrate location specific agricultural technologies. KVK conducts demonstrations to prove the potential of various crops at farmers' fields. In addition, conduct need based training programmes for the benefit of farmers and farmwomen, rural youths. KVK creates awareness about improved agricultural technologies through extension programmes. Critical and quality inputs like seeds, planting materials, organic products, bio fertilizers and livestock are produced by the KVK and made available to the farmers.

ICAR Krishi Vigyan Kendra (KVK), Erode managed by the renowned organization MYRADA has been serving to the farming community in Erode district since from 1991. MYRADA is pioneered in rural development, SHG movement, and participatory integrated watershed development activities and improving the livelihood status of the community in the unreached areas since from 1967. The strength and success of the KVK in reaching out to farmers is its participatory approach to work with community based organizations such as Self-Help Groups (SHGs), Joint Liability Groups (JLGs), Farmers Producer Organizations (FPOs), Community Managed Resource Centres (CMRCs) and AESC (Agri-Entrepreneurs Service Center). KVK, Erode pioneered in promotion of integrated farming system, soil and water conservation activities, crop diversification, livelihood promotion of tribals and hilly farmers, honey bee clusters and entrepreneurship promotion.

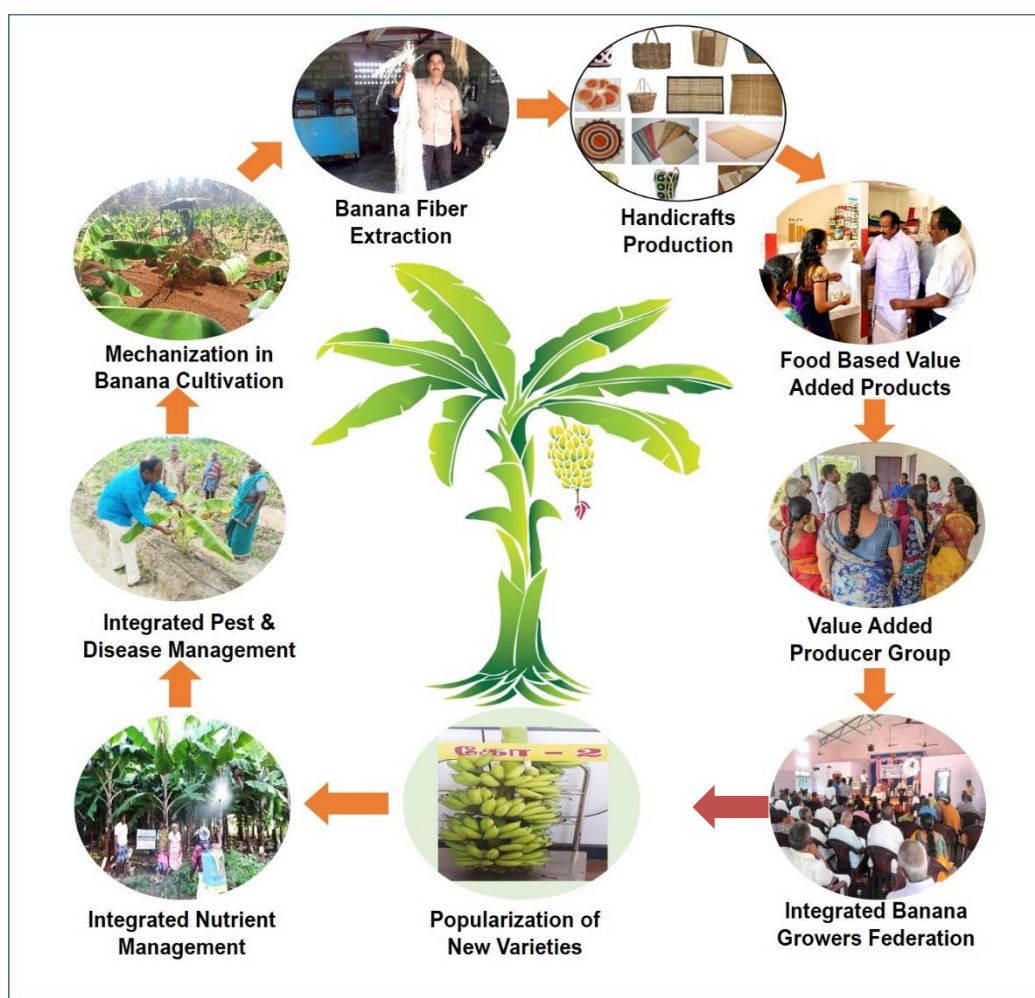
To increase the crop productivity and enhance value chain activities, ICAR KVK, Erode has been actively involved in providing “*end to end interventions in banana cultivation*”. The aim of these interventions is to increase the crop yields, and develop sustainable enterprises among youth and women.

GOOD AGRICULTURE PRACTICES IN BANANA ENTERPRISE:

- I. **Enhancing Agricultural Productivity:** KVK empowers farmers to optimize their yields by promoting cutting-edge agricultural practices like introducing **new crop varieties, precision nutrient management and effective pest and disease control strategies**. KVK identify and validate the most promising technologies from state and central research institutes through field testing, and then share these best practices with a wider audience through print and electronic media, ensuring maximum impact.

Sl.No.	Intervention	Technology popularized
1	Introduction of new varieties	• CO-2, CO-3, Udhayam
2	Weevil management	• Pseudo stem trap
3	Leafspot management and Erwinia Management	• Bio fungicide
4	Nematode management	• Bio nematicide
5	Nutrient management	• IIHR Arka Banana special – Micro nutrient mixture

II. End to end Intervention in Promotion of Banana Enterprise by KVK



i. Promotion of New Varieties:

The widespread cultivation of traditional banana varieties (Ney Poovan and Karpuravalli) had made crop vulnerable to Panama wilt disease, resulting in decreased yields. To address this challenge, KVK introduced and promoted three new varieties - Udhayam, CO-2 and CO-3 in 10 farmers' fields. This initiative has not only reduced the incidence of pests and diseases but also enhanced yields. To ensure the planting materials availability in Erode district, 5 farmers trained on suckers and mother plant production and distribution among the farming community. Currently, a total of 118 hectares of land are under cultivation with these new varieties in 240 farmer's field.

ii. Promotion of micronutrients:

On farm trial has been conducted during the year 2015-16 to assess the effectiveness of IIHR (Indian Institute of Horticultural Research) Arka Banana Special, a micronutrient technology developed by IIHR, Bangalore in 5 farmer's field. Since it was the innovative product of ICAR –IIHR, the farmers were not able to access the product in time. To ensure its availability, KVK Erode purchased the micronutrient technology from IIHR, Bangalore, to produce IIHR Arka Banana Special at KVK.

iii. Establishment of bio control units:

On farm trials conducted during the year 2015-16 in 10 farmers field to evaluate the efficacy of various bio control agents for controlling leaf spot, wilt, Erwinia rot and nematode infestations in banana plants. To ensure the availability of bio control agents throughout the year, KVK established decentralized Bio control Units at KVK and at village level, producing 75 quintals of high-quality bio-fungicides that empowered local banana growers to protect their crops and boost yields.

iv. Skill Building Programme

In order to convert the waste into wealth, harvested banana plants were utilized for the production of banana fiber-based products. KVK provided 15 skill training to rural youths on banana fibre based product preparation. Later, the volunteer youths were formers as SHG and involved in production of various banana fibre based products. KVK made an arrangement to the entrepreneurs to tie up with the National Research Centre for Banana (NRCB), Trichy, and Technology Business Incubator (TBI) at Tamil Nadu Agricultural University (TNAU), Coimbatore for product standardization since the KVK has no such facilities.

v. Formation of various groups

Two youth groups were formed in the Gobi and Bhavani clusters, focusing on banana fiber extraction, processing, rope making and handicraft production. Additionally, these groups produced and marketed by-products for textile, defence, and sanitary industries. Three trained SHGs at Sathyamangalam were involved in the production of handicrafts, including baskets, toys and yoga mats using banana fiber and bark.

vi. Promotion of Entrepreneurship

Furthermore, the KVK promoted entrepreneurship in the production of food-based value-added products in two clusters. Entrepreneurs were exposed to various national-level institutes actively involved in value addition in banana based products preparation and standardization, including National Research Centre for Banana (NRCB), National Institute of Food Technology Entrepreneurship and Management (NIFTEM), Central Food Technological Research Institute (CFTRI), and TamilNadu Agricultural University (TNAU) for product development and quality assurance.

Various uses of Banana and its products



OUTCOMES AND IMPACT

Good practices on banana cultivation and enterprise has yielded impressive results, with significant benefits to the farmers, entrepreneurs and the local community.

- The new varieties in banana reached 118 ha area by covering 240 farmers.
- For the past five years (2017-2023), KVK successfully produced 57.62 ton of IIHR Arka Banana Special micro nutrient and supplied to the farmers. 30 percent of the total banana cultivation area reached this micro nutrient technology (4610 ha) in Erode district.
- Decentralized bio input production unit established and produced 75 quintal of bio inputs reached 3750 ha area in the district.
- 73 skill training programmes conducted during the past five years on production, post-harvest management and value addition in banana based products. 2450 farmers, rural youth and womens participated and benefitted through this programmes.
- 350 rural youths and SHG members trained on value addition in Banana. As a result, 174 entrepreneurs developed in banana fibre production and value addition. Over 50 value added products in banana fibre and 20 value added food products are prepared and marketed their products through digital platform.
- Two rural youth groups and 3 SHGs involved in Banana fibre based products preparation. One federation covering 272 members involved in value added food product preparation and marketing. Value added food products developed a common brand name and marketed in the name of SBGF (Sustainable Banana Growers Federation)
- 174 rural youths and 3 SHG members covering 56 women involved in the production of value added food products in banana based products and banana fibre based products.

Further, KVK conducted extension study by using ex post facto research method to study the overall impact of KVK interventions in banana enterprise. 100 farmers selected from 4 blocks (Gobichettipalayam, TN Palayam, Anthiyur and Sathyamangalam) of Erode district. The overall impact of the interventions are hereunder

- 70% of farmers gained knowledge on banana specialization, enhancing their skills and expertise
- 9.8% increase in yield, resulting in higher profits for farmers
- Incremental income of Rs. 80,000 per hectare realized by farmers who adopted the integrated crop management practices
- 40 tons of banana fiber produced by the group members and entrepreneurs per year
- 15,000 liters of SAP water-based value-added products produced per year
- Established network with international market outlets in Japan, Sri Lanka, and other countries

Brand: TRUE GREEN FABRIC

Entrepreneur: V. Utharakkannan

Innovative Venture: Banana Fibre based Handicrafts
Achievements:

- Produces over 1000 kgs of fiber and 1000 mats per month
- Develops innovative automatic machine for extracting fiber at banana field with ARYA Scheme support
- Successfully markets products domestically and internationally
- Showcases products at 'One Station One Product' (OSOP) at Coimbatore Railway Junction, promoting marketing networking



Impact:

- Environment-friendly technologies adopted for value chain activities
- Increased production and sales of eco-friendly handicrafts
- Enhanced marketing opportunities through OSOP platform

Quote:

"I'm thrilled to have developed a sustainable business model that not only promotes eco-friendly products but also supports local communities. The ARYA Scheme has been instrumental in helping me achieve this success." - V. Utharakkannan, Founder, EPIC GREEN Pvt. Ltd

Brand: SP GRACE NATURAL

Entrepreneur: Mr. Prasath

Innovative Venture: Banana Fibre based fabric
Achievements:

- Developed innovative products from banana including rope, handicraft materials, and banana pith blocks
- Created bio growth promoter from crop sap water and cleaning materials for floor and cloth wash
- Achieved impressive production volumes:
 - + 16 tons/year of banana fibre extracted
 - + 6000 liters/year of SAP water-based value-added products
 - + 40,000 meters/year of mats produced and marketed by youths
 - + 2000 handicrafts/year produced and marketed
- Established a network with international market outlets in Japan and Sri Lanka



Impact:

Mr. Prasath's entrepreneurial venture has not only generated employment opportunities for local youths but has also promoted sustainable and eco-friendly products, contributing to the growth of the local economy.

Quote:

"With KVK's support, I was able to unlock the potential of banana fibre and create a sustainable business model that benefits both people and the planet." - Mr. Prasath, Founder, SP GRACE NATURAL

❖ Challenges

- The expectations from the farmers on KVK is high in terms of technology dissemination for enhancing productivity by using different techniques, whereas KVK is not in a position to develop the varieties and technologies. Therefore KVK, partnered with various resource institutions like NRCB, IIHR, TNAU for promoting high yielding varieties and yield increasing technologies. KVK identified 5 progressive farmers and trained them as masters in production of mother plant materials in the recent varieties.
- KVK faced the challenges on ensuring the timely availability of inputs to the farmers. To access the inputs in time KVK made a tie up with IIHR for producing Arka Banana special micronutrient and bio inputs production. KVK established decentralized bio input production unit at KVK and also in the village level for continuous production and supply of the bio inputs in time.
- Networking the entrepreneurs and under one umbrella is a difficult process, KVK established Agri Entrepreneurs Service Centre (AESC), where all the entrepreneurs and SHGs involved in value addition in banana and fibre production enrolled as a member. KVK also promoted the federation for marketing the value added products in common brand name.

SUSTAINABILITY AND SCALING UP

To enhance and sustain banana productivity, KVK has promoted a range of institutions, including the Agri-Entrepreneurs Service Center (AESC), Community Managed Resource Center (CMRC), and Farmer Producer Organizations (FPOs). These decentralized units ensure a steady supply of micro nutrients and bio control products to farmers in the district and nearby. Technology expertise available with Erode KVK is shared with farmers in other districts having more than 10000 ha area under banana cultivation like Salem, Namakkal, Krishnagiri, Theni, Madurai, Cuddalore, Thirunelveli, Tuticorin and Palakkad, Idukki (Kerala), promoting regional development and growth

Furthermore, KVK has launched the Integrated Banana Growers Federation (IBGF), a networking platform that connects entrepreneurs involved in value-added banana-based food products. These products are marketed under the common brand name "B Fruit", enabling them to reach a wider consumer base in a shorter timeframe. KVK has empowered SHG members by training them in banana fibre extraction and handicraft production. These products are marketed as a cluster, providing a sustainable source of income for the enterprise. Technologies related to Banana fiber extraction and value added food products expertise to other countries (Japan, Malaysia, Sri Lanka and few European Countries)

To ensure the establishment and sustaining of enterprise is essential to build appropriate institutional arrangement at the grassroot level. This will help the entrepreneurs to network among themselves, help in managing their routine activities and resources convergence for their sustainable development.

LESSONS LEARNED

1. **Identify local strengths:** KVK Erode recognized the potential of banana cultivation in their region and built upon it. Similarly, others can identify their local strengths and resources in their area and develop initiatives around them.
2. **Diversify and add value:** By promoting value addition in banana by-products, KVK Erode demonstrated the importance of diversifying and adding value to existing crops.
3. **Entrepreneurship development:** in the initial stages, KVKs are focusing on promotion of entrepreneurs in value addition in food products. KVK, Erode focused on the underutilized or plant waste based products preparation. This will helps to farmers to maintain their farm in clean and entrepreneurs also got an opportunity to effectively utilize the plant wastes into valuable products. Other development interveners can aim to create entrepreneurs in their respective regions, leading to sustainable livelihoods and economic growth
4. **Market-oriented approach:** The success of KVK Erode's initiative is likely due to its market-oriented approach, where the focus was on developing products (food and fibre based products) that have a market demand.
5. **Capacity building and training:** Approaches like skill trainings, exposures and exhibitions were followed by KVK for providing adequate and appropriate technical backstopping at all stages in promoting enterprises.

6. **Linkages and collaborations:** The initiative's success might have been facilitated by linkages and collaborations with various stakeholders, such as farmers, entrepreneurs, and industry experts. Others can foster similar partnerships to leverage resources and expertise. By adopting these experiences, others can promote similar initiatives that encourages entrepreneurship, value addition, and rural development in their respective regions.

Technology Week Celebrations

Types of Activities	No. of Activities	Number of Participants	Related crop/livestock technology
Gosthies	4 Nos.	1674	World Soil Day, Swacchhta programme and Farmers Day
Lectures organized	32 Nos.	2011	Organic / Natural farming, Integrated farming system, Soil and Water conservation, Paddy, Rosemary, Turmeric, Banana, Bhendi, Groundnut, Cotton, Water management, Coconut Rugose Spiraling whitefly Management, Maize, Poultry, Value addition in Millets and Livestock disease management
Exhibition	14 Nos.	6746	Soil and water conservation, Integrated farming system, Value added products – Honey, Millets and value-added products, Farm machineries, Drone technology, Banana value added products
Film show	8 Nos.	1842	Organic farming / Natural farming, Beneficial insects in agriculture, Dairy based livelihood promotion
Farm Visit	9 Nos.	1064	Integrated farming system, Organic farming / Natural farming, Soil and water conservation, Drone Method, Vertical farming, Nutrition Garden, Composite fish culture, Vermi compost, Organic liquid manure
Diagnostic practical	4	216	Pest and disease identification
Distribution of Literature (No.)	8 Nos.	8000	Seed Treatment Procedure, Farm based enterprise & Economics, Booklet on Spices crops, Leaflet on Cotton – HDPS Techniques, Leaflet on Banana Value addition and business opportunities, Folder on Eco tourism, Booklet on Natural Farming, Post-harvest loss management in tomato
Total number of farmers visited the technology week	6 Nos.	6746	Farmers, Youths, Entrepreneurs and Extension Officials

Training/workshops/seminars etc. attended by KVK staff

Name of the staff	Title	Dates	Duration	Organized by
Mr.P.Pachiappan	Advance Training cum Exposure visit on Natural Farming for Master Trainers	25.02.2024 - 01.03.2024	6	MANAGE, Hyderabad
Dr.K.Karthik	Fodder Symposium 2024	28.02.2024	1	
Dr.P.Alagesan	Research - Extension Interface workshop	25 - 26.03.2024	2	TNAU Coimbatore
Mr.P.Pachiappan	Research - Extension Interface workshop	25 - 26.03.2024	2	TNAU Coimbatore
Mr.S.Saravanakumar	Capacity building on Compliances of FPO	15- 16.04.2024	2	NDDB, Bangalore
S.Saravanakumar	Millet cultivation in drylands	22.05.2024	1	IIMR
Dr.P.Alagesan & Mr.Saravanakumar	Research Extension Interface meeting	30.05.2024	1	TNAU Coimbatore
Mr.S.Saravanakumar	Regional consultation on Science of natural farming	14.06.2024	1	MoAFW at MANAGE, Hyderabad
All SMS	Natural Farming	25-26.6.2024	2	MANAGE, Hyderabad
Dr.K.Karthik	Dissemination of TANUVAS Technologies to KVK scientists of Tamilnadu and Puducherry to augment livestock and poultry production for the benefit of farming community	27- 28.09.2024	2 days	KVK Namakkal
Mr.S.Saravanakumar & Dr.K.Karthik	Business plan preparation for Fodder Plus FPO	02.12.2024 to 03.12.2024	2	NDDB, Bangalore

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

S #	Title of the Programme / Project	Sponsoring / Collaborating Agency	Objectives	Duration	Amount (Rs)
1.	Integrated Tribal Development Programme	NABARD Chennai	To increase the Tribal families' annual income through ITDP project implementation & prevented the migration to moving for employment	6 Years (24.03.2022 - 23.03.2028)	25,24,221
2.	Tribal community driven sustainable Eco-Tourism Project in Talavadi hills	NABARD Chennai	To promote awareness on conservation of bio-diversity through eco-tourism. To establish eco-friendly park for guiding visitor on recent development farm and forestry. To develop sustainable farm and forestry enterprises to support for the livelihood of hill dwellers.	2 Years (31.01.2022 – 30.01.2024)	5,00,000
3.	Krishi Mitra	SMFG – Fullerton India	Promotion of Organic farming	2024-25	19,00,000
4.	SCSP Special Programme	IIRR, Hyderabad	Capacity building for SC farmers	2024	5,00,000

Project Number: 1

Name of the Programme	Integrated Tribal Development Programme
Funding Agency	NABARD, Chennai
Objectives	To increase the Tribal families' annual income through ITDP project implementation & prevented the migration to moving for employment
Nature of Collaboration	Implementation of WADI and IGP activities for Tribal Family
Outcome of the Collaboration	WADI implemented for 300 tribal families in Bargur hilly regions

Project Number: 2

Name of the Programme	Tribal community driven sustainable Eco- Tourism Project in Talavadi hills
Funding Agency	NABARD Chennai
Objectives	<ul style="list-style-type: none"> • To promote awareness on conservation of bio-diversity through eco-tourism • To establish eco-friendly park for guiding visitor on recent development farm and forestry • To develop sustainable farm and forestry enterprises to support for the livelihood of hill dwellers
Nature of Collaboration	Tribal community driven sustainable Eco-Tourism Project
Outcome of the Collaboration	3 Tribal huts constructed, Tribal Information Centre work completed, Tribal traditional display materials work

Project Number: 3

Name of the Programme	Promotion and awareness of organic and homestead farming through Krishi Mitras
Funding Agency	Fullerton India, Mumbai
Objectives	To advance the livelihoods of the communities serve in, by enabling them to adopt Organic Farming in their homesteads and thus saving household expenditure as well as providing employment healthy living
Nature of Collaboration	Promotion and awareness of organic and homestead farming
Outcome of the Collaboration	Kitchen garden seeds distributed to 200 families; Tree plantation completed to schools and common places

Project Number: 4

Name of the Programme	SCSP Special Programme
Funding Agency	IIRR, Hyderabad
Objectives	To provide capacity building for SC farmers
Nature of Collaboration	Promotion and awareness on recent crop production techniques
Outcome of the Collaboration	Supported 60 SC farm families on providing bee boxes and its accessories; supported farm equipment

Success Stories

1. Short Duration Finger Millet Variety for Enhancing Productivity

Introduction

Finger millet is the major staple food for Western Ghats people especially in Erode District. Though it is cultivated in rainfed as well as irrigated conditions, 85% of the total area falls under rainfed situations in Erode district. The area under finger millet cultivation is drastically reduced from 12000 ha to 5000 ha over a decade of time (Anonymous, 2013). Traditionally, the farmers in Western Ghats region of TamilNadu are cultivating finger millet as one of the predominant crop in their land. The yield reduction was observed over the years due to the continuous cultivation of same variety over the years and non-adoption of integrated crop management practices. The farmers are not aware of the recently released varieties from state and central agricultural universities and research stations. To overcome these issues, ICAR KVK, MYRADA Erode district conducted frontline demonstration on integrated crop management practices in finger millet along with ICM practices during 2019-2022 in 40 selected farmer's field at Bargur and Talavadi hills of Erode district. The yield and economics of the introduced variety ML 365 found higher than the farmers practicing variety Co 15. The success of the demonstrations, leads to seed production and large scale distribution among the farmers through Farmers Producer Company in this region.

KVK Interventions

The demonstration was conducted in the KVK identified progressive and volunteer farmers field in Talavadi and Bargur hills of Erode district. Each demonstration was conducted in an area of 0.4 ha and adjacent to the farmers' fields in which the crop was cultivated with farmer's practice/variety. Improved crop management practices under frontline demonstrations were taken as mentioned in Table 1. The selected progressive farmers were trained on all scientific finger millet cultivation aspects before starting of frontline demonstrations. The farmers were provided with Quality seeds of ML 365, seed treatment biofertilizers and bio agents. The demonstrated fields were regularly monitored and periodically observed. At the time of harvest yield data were collected from both the demonstrations and farmers practice.

Table 1: Improved crop management practices demonstrated in Frontline Demonstrations

Sl.No	Intervention points	Recommended improved practices
1.	High yielding varieties	ML - 365
2.	Seed treatment	Treat the seeds with pseudomonas fluorescens @ 10 gram/kg seed. Followed by the seeds are treated with 600 gram of Azospirillum culture
3.	Spacing	22.5 x 10 cm
4.	Manures and fertilizers	12.5 ton FYM, 40:20:20 kg (N:P:K) / ha
5.	Weeding	Hand weeding on 15 and 30 days after sowing
6.	Irrigation	Critical stages: Tillering and pre - flowering

Outcome & Impact

The performance of ML-365 was superior in number of tillers, test weight, grain and straw yield over farmers practice in both the years. Results were elicited with year wise obtained by growing ML-365 in Talavadi region. The average number of tillers recorded of 8.44 in demonstrated field with the test weight of 3.10 gram which is higher than the check of 26.73 and 8.01 percent respectively. Similarly, the farmers harvested an average grain yield of 2666.75 kg/ha with a yield advantage of 23.17 percent over the existing variety cultivated by the farmers.

The economic feasibility of the improved crop management practices over farmers practice was calculated depending on the prevailing prices of inputs and output cost. It was found that the average cost of cultivation for ML-365 under improved crop management practices was Rs. 17400.00 and an average cost of Rs. 17200 /ha in farmers practice. The additional cost incurred in the improved crop management practices was mainly due to the new variety seed cost and seed treatment practices carried out by farmers. The demonstrated field recorded the higher mean gross return of Rs.43500.00/ha and the net return of Rs. 26200.00/ha with the high benefit cost ratio of 2.42. These results are clearly indicated that the adoption of improved package of practices was enhancing the finger millet production and economic returns in Western Ghats of Erode district.

Based on the findings, it is concluded that the adoption of improved crop management practices along with new variety ML-365 performed superior than the existing variety in both the years. Yield potential of the finger millet is increased over 23.17 percent. It is also found that conducting large scale demonstrations and ensuring the critical inputs like seeds and bio-fertilizers in time for adoption of technologies plays a crucial role in enhancing finger millet production.



Training and Input distribution to



Diagnostic field visit



Training to farmers



Diagnostic field visit

2. Maximizing cotton yields with High Density Planting System in Erode District

Introduction:

Cotton (scientific name: *Gossypium spp.*) is a flowering plant that belongs to the Malvaceae family. It is cultivated primarily for its fiber, which is used in the textile industry, and its seeds, which are used to produce cottonseed oil. Cotton plants are known for their soft, fluffy fibers, which grow around the seeds and are harvested to produce cotton fabric. There are four main species of cotton cultivated worldwide: *Gossypium hirsutum* (upland cotton), *Gossypium barbadense* (Sea Island cotton), *Gossypium herbaceum* (Asian cotton), and *Gossypium arboreum* (tree cotton). Among these, *Gossypium hirsutum* is the most commonly grown species, especially in countries like India, China, and the United States.

India is the largest producer of cotton in the world, contributing significantly to the global cotton supply. Cotton farming is not only a major economic activity but also plays a key role in the livelihoods of millions of farmers across the country. India cultivates cotton in over 12 million hectares, making it the largest cotton-growing country. The country produces approximately 30 million bales (170 kg each) of cotton annually. India's cotton productivity has been steadily improving with the adoption of better farming practices, high-yielding cotton varieties, and advanced irrigation techniques. Despite facing challenges like water scarcity and pests, the country's cotton production remains robust.

In Tamil Nadu, cotton is an important crop grown in several districts, including Erode, Coimbatore, and Dharmapuri. The state contributes a significant portion to India's total cotton production, with around 2-3 lakh bales produced annually. Tamil Nadu's cotton productivity is also steadily improving with the use of modern farming techniques and better seed varieties. Cotton farming in the state is mainly concentrated in the rainfed areas, with well-irrigated fields also becoming common.

Erode, located in Tamil Nadu, is one of the key districts for cotton farming. It has favorable conditions for cotton cultivation, especially in terms of soil and irrigation. Farmers in Erode typically cultivate cotton in smaller landholdings, with the area under cotton cultivation covering around 10,000 - 15,000 hectares. Cotton productivity in Erode is increasing as farmers adopt improved agricultural practices and technologies.

KVK Interventions

KVK implemented NFSM special project cotton during 2024-25 to adaptation of High-density planting system and Extra Long Stable cotton cultivation technology in Erode district around 100 acres in Winter cotton season (Aug-Feb). NFSM special project cotton was funded by ICAR-CICR. KVK identified around 94 innovative farmers over 30 villages/clusters from Anthiyur, Bhavani and Ammapet block of Erode District. HDPS and ELS is technology in cotton cultivation in recent years. The selected progressive farmers trained on improved crop management practices on HDPS and ELS cultivation and supported with cotton seeds and inputs especially IPM kits and Micronutrients. From sowing to harvest, KVK, CICR scientists and YPs made periodical visit to provide technical advisory services for getting optimum yield. KVK conducted periodical training programmes on Canopy, Nutrient, Pest and Disease Management with Subject Matter Specialists throughout the season. Field day, workshop and Kisan mela conducted by KVK to encourage the farmers to adopt this technology.

Outcome and Impact

Mrs. Vijaya is a small farmer from Gettisamudram village of Anthiyur block in Erode district. The farmer has 2-acre field with shallow soil under irrigation conditions. Out of this, 1 acre is dedicated to the HDPS system using the RCH 929 BGII hybrid. By adopting the HDPS intervention, the farmer achieved a bonus seed cotton yield of 2.2 quintals per acre, which is higher than the conventional method with a spacing of 120x60 cm. Percentage increase in seed cotton yield over practice is 32.8. An additional income of Rs.43,090/acre was realized in HDPS Technology.



Ms.Vijaya, Adopted HDPS cotton technology



HDPS Field- Vegetative stage



Dr.Sankaranarayanan, CICR Scientist Explain about HDPS technology to the farmers



Mr.Srinivasan, SMS Plant protection, Diagnosis the PBW infection during joint visit with State Agri. Dept Officials



IPM Kit Distribution during Kisan Mela

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

Challenges	Innovative methodology adopted	Output	Outcome
Poor quality and unhealthy seedlings	Organic liquid seed coating Formulation	Developed innovative seed coating formulation for all crops. Test verified at TNAU, Coimbatore	Uniform vigour and growth of seedlings. 3000 healthy seedlings produced and supplied to the farmers.
Wilt, root rot and Blight diseases	Bio fungicide- Salute	Developed innovative bio fungicide formulation for all crops. Test verified at National Research Center for Pomegranate	Bio fungicide- Salute controls wilt, root rot and blight diseases of all crops. KVK assessed and demonstrated this technology for Banana leaf spot and wilt diseases. This technology popularized over 1000 acres of area in Erode District
Conservation of eco system	Agro eco-tourism	Developed live demonstration units, learning by doing agricultural practices	Conservation and preservation of eco system and cultures in the Talavadi hills
Dissemination of latest technologies	Development of Krishi Mitra	Developed 13 Krishi Mitras and 52 Animal Health Promoters	Provided technology based and season-based information to the farming community in appropriate time.
Feed and fodder management	Farmer Producer Organization	FPO promoted exclusively for deed and fodder management	Provided silage and TMR feed to the livestock growers in time. Network created among the livestock-based institutions
Excess/ less usage of water, fertilizers and other inputs Unaware about weather based agro- advisories management practices	IoT based soil and weather station for prospective agricultural use	Established IoT based automatic soil and weather station at 2 farmers field of Erode district.	Provides real time weather data based on the micro climatic condition availed in 2-3 km radius in each village. Farmers can irrigate his farm from anywhere anytime through his mobile WhatsApp group created in each village by involving 713 farmers to provide medium range weather forecast data and weather based agro advisories to carry out their agricultural activities

Details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photographs)

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1	Coconut	Pine apple extract with sugar solutions kept in coconut farm @ 12/ha	To manage the red palm weevil
2	Sugarcane	Spraying of egg solution over sugarcane seedlings	Prevent the seedlings from rabbit damage
3	Brinjal	Neem and camphor extract (Cow urine, turmeric powder, neem oil, champhor, calcium powder)	To manage the fruit and shoot borer damage
4	Cotton	Vegal karaisal is an extract of plant leaves (Lantana camara, aloe vera, mint)	To manage the sucking pest in cotton
5	Dairy Animal	Extraction of jack leaves, vilvam leaves, neem leaves and park	Treatment for Foot and mouth disease
6	Poultry	Cut piece of small onion mixed with keelanelli leaves given oral	Treatment for ranikhet disease
7	All Crops	5 kg of curry leaf mixed with 25 liters of water and kept it for 15 days fermentation	To manage iron deficiency
8	All crops	Foliar application of BSF manure extraction	To rectify the micronutrient deficiency and uniform growth
9	Groundnut	Application of Lantana leaf extract @250 ml / tank	To manage the sucking pest in groundnut
10	Sugarcane	Application of earth worm Luke water on the chip buds	To enhance the germination percent

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

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs. /Unit)	After (Rs. /Unit)
Vegetable special	679	86	Rs.40000/ha	Rs.47000/ha
Banana special	5116	92	Rs.2.25 lakhs/ha	Rs.3.2 lakhs/ha
Bee keeping	1347	68	Nil	Rs.10000 /year
Decentralized bio input product	57	87	Nil	Rs.15400 to Rs.17250/month
Mushroom cultivation	76	76	Rs.2000/month	Rs.10,000 to Rs.12,000/month
Processing and value addition of farm products (Millet, Fruits & Vegetables)	116	72	Rs.10000 – 15000/month	Rs.40000 – 48000/month
Desi bird rearing	92	95	Rs.2000/month	Rs.15,000 – Rs.20,000/month
Mixed fodder	180	87	Nil	Rs.1,30,000/year
Turmeric assaying unit (Curcumin analysis)	725	47	Rs.120000 / year / acre	Rs.150000 / year / acre
Vermi compost	54	78	Nil	Rs.8000/month

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs. /Unit)	After (Rs. /Unit)
Seed production in groundnut	75	40	Rs. 40000/ha	Rs. 64000 / ha
Decentralized nursery	25	40	Rs. 12000 / month	Rs. 30000 / month

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

S. No.	Name of specific technology / skill transferred	Source of technology	No. of Farmers	Extent (ha)	Increase in net return Rs / ha	Economic Impact / benefit (Rs) (5x6)	KVK Intervention OFTs/FLDs/ Trainings	Convergence / Partners involved in up scaling of technology	Remarks
1	High Yielding Variety in Blackgram (VBN-8)	TNAU	2100	800	17,500.00	1,40,00,000.00	<ul style="list-style-type: none"> • CFLD – 225 Demo • Trainings – 20 • Field Day – 9 • Literature Published – 10 	Department of Agriculture and FPOs	<ul style="list-style-type: none"> • Increasing the yield by 17.50 percent • KVK promoted Farmers Group involved in seed production and supplied 210 qtl Seeds to State Department of agriculture in the past 3 years
2	Sugarcane seedling production	SBI & TNAU, Coimbatore	3500	2000	25,500.00	5,10,00,000.00	<ul style="list-style-type: none"> • OFT -3 FLD - 12 • Trainings – 18 • Field days- 15 • Literature Published – 5 	Department of Agriculture, Sugar mills	<ul style="list-style-type: none"> • 22% yield increased was noticed • Trained entrepreneurs involved in quality seedling production with the quantity of 25 lakh seedlings / year
3	French Beans	IIHR, Bangalore	2175	1680	32,000	5,37,60,000	<ul style="list-style-type: none"> • OFT – 2 • FLD – 6 • Training – 32 • Field Day – 6 • Impact Study – 1 • Case Study - 4 	HRS, Ooty, Department of Horticulture and FPO	<ul style="list-style-type: none"> • 17.50 % yield increased was noticed • 30% area increased in hilly regions of Erode District

S. No.	Name of specific technology / skill transferred	Source of technology	No. of Farmers	Extent (ha)	Increase in net return Rs / ha	Economic Impact / benefit (Rs) (5x6)	KVK Intervention OFTs/FLDs/ Trainings	Convergence / Partners involved in up scaling of technology	Remarks
4	Turmeric	IISR, Calicut	674	1230	28,000	3,44,40,000	<ul style="list-style-type: none"> • OFT – 2 • FLD – 5 • Training – 18 • Seminar - 3 • Field Day – 5 • Success Stories - 2 	Department of Horticulture and FPO	<ul style="list-style-type: none"> • 15.25 % yield increased was noticed • 18% area increased in Erode District • Established 2 curcumin assaying laboratory • Formed Farmers Producer Organization • 100 acres have been converted in to organic farming practices
5	Cassava	TNAU, Coimbatore	110	250	52,000	1,30,00,000	<ul style="list-style-type: none"> • OFT – 2 • FLD – 4 • Training – 12 • Field Day – 4 • Success Stories - 1 	Department of Horticulture	<ul style="list-style-type: none"> • 18.50 % yield increased was noticed in YTP-2 variety • 5% area increased in hilly regions of Erode District

Box item for APR 2024

1. Title: Women empowerment through Value addition in Banana flower

Mrs.Savitha, 42 years lives in Vellotamparappu village in Erode District. She belongs to farm families and grows Banana in 3 acres. She attended skill training in value addition Banana and started production of unique products in banana flower with quality packing.



Contact Number:09994936354

2. Achievement:

- Attended value addition training in Banana value addition and digital marketing at KVK
- She produces 540 Kgs of value added products in a month in banana flowers like, Banana flower malt, thokku, idli powder, vadai mix and Vadagam
- KVK supported for packing material and processing equipments
- She get monthly income of Rs.84,500/- and her B:C:Ratio of the enterprise is 2.23
- She provides employment opportunities for 7 women on regular basis for 10 days/month
- Participated in stalls, agri expo in colleges and universities and research institutes.
- Experiences were documented in MYRADA Annual Report 2023 – 2024
- Marketing through AESC, Face book, Instagram and You Tube
- Website developed: www.thebananaplus.com
- Recently active in digital marketing

3. Photographs



Title: Sustainable Banana cultivation and value addition

Name of the Farmer : **Mr. C. Shanmuga sundaram**
Contact details : **S/o Chenniappan,
Thulasiammal Pannai, Chiththode
Erode District – 638 102.
TamilNadu**
Phone number : **09443229098**
E mail: : **bananaforest@gmail.com**



I'm extremely happy and proud to say that, KVK, MYRADA, Erode district turned my dreams into the real picture in terms of scientific validation of my innovations like sustainable banana cultivation through Banana Forest and vegetable cultivation through vertical farming system. With the guidance of KVK, established Sustainable Banana Growers Federation (SBGF) with 250 members focusing on banana cultivation value addition in banana and fibre based products preparation and marketing. Create employment opportunity to 3 SHGs covering 42 women members. The extended support from KVK, Erode, turned me as an entrepreneur cum mentor in banana field and earning Rs.1, 00, 000.00 / month.



One-page report on skilling - outcome of skilling - entrepreneurship development programmes conducted, enterprises established, handholding by KVK - outcome in terms of income, employment generated etc.

Passion with Professionalism - ARYA Youth in Banana Fibre Enterprise

Introduction

Mr.V.Uthirakkannan who is a Degree holder in apparel designing management, has attended youth training at KVK on Banana fibre extraction. With skills obtained from KVK, he started the enterprise as an individual enterprise in production of natural fiber products making unit. Then he initiated ARYA value addition Bhavani Cluster with technical backstopping of Erode KVK by his fellow youth farmers in his block. He is an innovative minded youth and urging for novel business venture in banana, now involved in production of banana fibre and bark-based handicrafts and marketing in domestic and foreign level. He has environment friendly technologies in managing the value chain activities of banana fibre extraction and production of handicrafts.

KVK intervention:

- KVK imparted skill training on banana extraction and value addition under ARYA in 2019
- Attended Import and export training program through online webinar, initiated for export orders with the support of KVK.
- KVK made referral services to NRCB, TNAU for technical upgradation.
- KVK facilitated to join in TNAU, TBI & Madurai MABIF
- KVK supported to attend two-day event on “PM Kisan Samman Sammelan 2022 on 17th October at Indian Agricultural Research Institute, New Delhi
- Financial Support Received Rs.5,00,000/- from ARYA Banana value addition group under ARYA scheme and Rs. 2,40,000. from RKVY, AOP scheme

Outcome:

- Motivated 10 youths in the group and supported them to earn Rs.35,000/- per month
- Provided employment opportunities for 60 women in 3 SHGs and provided 120 mandays per individual in a year @Rs.250/day
- Produced 1000 kgs of fibre and 100 bark bundles for value added products of 500 kgs in a month.
- Guiding young entrepreneurs for their development with technical supports.
- Developed innovative automatic machine for extracting fibre and separates fibre, pith and sap water with the support of ARYA Scheme. Steps initiated to get patent right for the automatic machine.
- Products displayed at One Station One Product’ (OSOP) to promote marketing networking for products at Coimbatore Railway Junction.
- Supplying raw materials for a product of DRDO.
- Exhibition opportunities to get linkages at 53rd IHGF Delhi Fair, at Noida
- Participated in 4th AYURYOG Expo Fair and displayed products like Banana fiber yoga mats, Natural dye yoga mats and others product related to banana fibers and received marketing promotion

- ARYA group signed MoU with Thangam Naturals for extraction of dye from Banana trees. In order solve environmental pollution, developing yoga mats with natural dye materials, and colors like Rose, Red, Brown, and Orange etc.,

Way Forward:

Initiated the process of fabricating automatic machine where the machine can be fitted in Tractor and can be operated in the banana field to separate fibre, pith and sap water in the field itself so that transport problem could be solved in banana fiber production process,



One case of successful technology application and dissemination: a technology which has passed through OFT, FLD, Trainings, Mainstream Extension (State Department of Agriculture), large scale adoption by farmers (in terms of area, additional income, input savings, saving of natural resources *etc.*)

Promotion of Elephant foot yam variety (Gajendra) – a Boon to Yam Growers

Introduction:

Elephant foot yam (***Amorphophalluscomplanatus* Blume**) also known and belongs **Araceae** family. Elephant foot yam is one of horticulture important commercial crops cultivated over 300 ha of land with an average production of 4800 t with average productivity of 16 t/ha in Erode district. This is the major crop in the block of Anthiyur, Gobichettipalayam, Sathyamanglam and Ammapettai of Erode. Elephant foot yam is a profitable stem tuber crop and cultivated as main crop and intercrop with Turmeric and Banana. The crop is gaining popularity due to its shade tolerance, easiness in cultivation, high productivity, less incidence of pests and diseases, steady demand and reasonably good price. Tubers are mainly used as vegetable after thorough cooking. Chips are made of starch-rich tubers. Tender stem and leaves are also used for vegetable purpose. Tubers contain 18.0% starch, 1-5% protein and up to 2 % fat. Leaves contain 2-3 % protein, 3 % carbohydrates and 4-7 % crude fibre. In general, the yield of Yam is getting reduced year by year, due to lack of newly released variety and not available good quality seed material, the existing varieties yield potential have come down and new varieties not spread among most of the farmers, fluctuating cost of tubers. Due to the above reason, farmers are finding alternate variety in the district for replacing old varieties.



KVK Interventions

- KVK conducted On farm test with variety during 2023-24 at 5 locations with covering 5 farmers to identify the suitable variety for the prevailing agro climatic condition of Erode district.
- Gajendra variety released from CTCRI, Thiruvanthapuram found more suitable to this region, which matures in 270-300 days, and the realized yield 41t/ha.
- Medium tall (78 cm), Medium canopy spread (123 cm diameter), Light green petiole with green ornamentations and having petiole girth 13 cm, Globose corm shape with brown tuber skin colour and cream tuber flesh colour and Very good cooking quality and suitable to irrigation conditions and with partial irrigation under rainfed conditions, main crop as well as inter crop, when compared to other local varieties.



- The selected progressive farmers trained on improved crop management practices on Elephant foot Yam cultivation and supported with seed corms. From sowing to harvest, KVK scientists made periodical visit to provide technical advisory services for getting optimum yield.

Year of interventions	KVK interventions	Farmers benefited
2023	OFT Training, Demonstration, Exposure, Seed multiplication	10
2024		49
2025		132

- IIHR arka vegetable special were provided to the trial farmers to increase the Corm yield

Dr. Muthuraj, Principal Scientist and Dr. D Jaganathan, senior scientist from CTCRI, Thiruvanthapuram visited the field to know about its surveillance during the cropping period, based on its performance, KVK demonstrated the same variety in the subsequent year in different blocks of Erode district with the support of line departments.

Outcome and Impact

- KVK identified Gajendra suitable variety for the Erode district climatic conditions
- 17.45% yield increase was recorded than the existing varieties
- An additional income of Rs. 56719 / Ha was realized in Gajendra variety
- Currently 225 ha areas covered by this variety in Erode district.

Mr. Mariappan from Thalaikompuudur village Gobi block has produced 8-ton corms /acre/year by adopting this Gajendra variety and earned Rs. 240000.00/year (crom). He supplied 3000 Kgs of corms to Neighbouring farmers in the district.

Linkages

Functional linkage with different organizations

Name of organization	Nature of linkage
National Institutes:	
NABARD, Chennai	● Promotion of FPOs, Skill Training, Demonstration
MANAGE, Hyderabad	● Capacity building programme to Input Dealers
NDDB, Anand	● Skill training, Demonstration
NIPHM, Hyderabad	● Training and demonstration
NFDB, Hyderabad	● Training and demonstration
Universities, Research and Educational Institutions:	
TNAU, Coimbatore	● Technical support and Students Placement
TANUVAS, Chennai	● Capacity building and Technical support
ICAR – IISR, Calicut	● Demonstration and exposure programme
ICAR – IIHR, Bangalore	● Technological products and Seed material
ICAR – IIRR, Hyderabad	● Capacity building programme
ICAR – SBI, Coimbatore	● Demonstration & Exposure programme
ICAR – CIFT, Cochin	● Capacity building and demonstration
ICAR – CICR, Coimbatore	● Demonstration & Exposure programme
ICAR – CIAE, Coimbatore	● Demonstration & Exposure programme
ICAR – IISWC, Ooty	● Exposure programme, Training programme
ICAR – NRCB, Trichy	● Technology demonstration and extension
ICAR - CPCRI, Kasaragod	● Capacity building and Technical support
ICAR – CTCRI, Trivandrum	● Technology demonstration
ICAR – CIPM, Trichy	● Technological products
ICAR – CPRS, Ooty	● Exposure programme
ICAR – NIANP, Bangalore	● Technological products
NBAIR, Bangalore	● Demonstration and Technological products
State Department:	
Department of Agriculture, Erode & Other Districts	● ATMA programme and Capacity building
Department of Horticulture, Erode	● Capacity building
Department of Agri business & Marketing, Erode	● Skill training programme
Department of Animal Husbandry, Erode	● Camps & Campaign
TNSRLM, Chennai	● Skill training programme
Colleges and Schools	
Kumaraguru Agriculture College, Appakkudal	● Students Placement and RAWE Programme
JKKM Agriculture College, TN Palayam	● Students Placement and RAWE Programme
PKR Arts College for Women, Gobi	● Training, Demonstration & Awareness Programme
Gobi Arts & Science College, Gobi	● Capacity building programme and exposure
Bannariamman Rural Foundation, Sathy	● Capacity building programme and exposure
School Students – within the district	● Exposure, Training and Demonstrations
Print & Electronic Medias:	
All India Radio, Doordarshan and Channels, News Papers, Monthly Magazines, Journals, etc.	Announcements, Articles, Screening of KVK's Technical Programme, documentation and video coverage

AWARDS and RECOGNITIONS

KVK, KVK Staff, KVK Contact Farmers etc. at district, state, national and international level supported by copies of certificates and photographs

Sl. No.	Name of the Award	Category	Name of the Awardee
KVK			
1	Best Language Film (Tamil) Award received from MANAGE, Hyderabad	National	KVK
KVK Farmer & Entrepreneurs			
1	National Best Agri Startup Award received from MANAGE, Hyderabad	National	Mrs.E.Kavitha
2	District Millionaire Farmer of India Award from Krishi Jagran & Mahindra Tractors	National	Mrs.Kalavathi Sundararajan
3	Farm Innovator Award from TNAU Coimbatore	State	Mr.Shanmugasundaram
FPOs (Farmers Producers Organization)			
1	Best FPO Award received from National Research Centre for Banana, Tiruchirappalli	National	Kazhani FPO



Best Language Film (Tamil) Award



National Best Agri Startup Award



District Millionaire Farmer of India Award



Best FPO Award

Important Visitors to KVKs during 2024

Dr.Shaik N.Meera,
Director,
ICAR, ATARI, Hyderabad



Dr.Sai Krishna,
Chief Executive Officer,
NSFI, New Delhi



Shri. Raja Gopal Sunkara I.A.S
District Collector
Erode



Shri.S. Sivanantham IAS.,
Sub-Collector
Gobichettipalayam