KRISHI VIGYAN KENDRA, IDUKKI

ANNUAL REPORT- 2021

(FOR THE PERIOD FROM 01 January, 2021 TO 31 December, 2021

ICAR – Krishi Vigyan Kendra,
Bapooji Sevak Samaj,
Pethotty P.O., Santhanpara,
Idukki (Dt.), Pin-685619, Kerala.
Phone: 04868 – 247541, 247715.
E-mail: kvk.Idukki@icar.gov.in, kvksanthanpara@gmail.com
Website URL: www.kvkidukki.org

PART I - GENERALINFORMATION ABOUT THE KVK

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

KVK Address	Telephone		E mail	Web Address
ICAR - KrishiVigyan Kendra, BapoojiSevakSamaj, Pethotty P.O., Santhanpara, Idukki (Dt.), Pin-685619, Kerala.	Office 04868 – 247541, 247715.	Fax Nil	kvk.Idukki@icar.gov.in	**www.kvkidukki.org**

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

Address	Telephone		E mail	Web Address
	Office	Fax		
BapoojiSevakSamaj, Kakkattu, Meenadom P.O., Pampady, Kottayam (Dt.), Pin-686 516, Kerala.	0481-2506271 +91 9446826019	04868-247048	bkvkchairperson@gmail.com	www.kvkidukki.org

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. R. Marimuthu, Senior Scientist& Head	-	8157895397	kvksanthanpara@gmail.com

1.4. Year of sanction:1995

1.5. Staff position as on 31 December 2021

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M/F	Discipline	Highest Qualification (for PC, SMS and Prog. Asstt.)	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
1	Head/Senior Scientist	Dr. R. Marimuthu	Senior Scientist& Head	M	Agronomy	Doctorate in Agriculture - Agronomy	37400-67000	50720	17-01-2019	Permanent	OBC
2	Scientist/SMS	Dr. S. Jayababu	Subject Matter Specialist	M	Animal Science	B.V. Sc. & AH	15600-39100	21000	19-06-1995	Permanent	Others
3	Scientist/SMS	Manju Jincy Varghese	Subject Matter Specialist	F	Soil Science	M.Sc. Agriculture (Soil Science)	15600-39100	21000	10-01-2011	Permanent	Others
4	Scientist/SMS	K. Arunkumar	Subject Matter Specialist	M	Horticulture	Msc. Horticulture (Plantation, Spices, Medicinal and Aromatic crops)	15600-39100	21000	25-10-2021	Permanent	OBC
5	Scientist/SMS	Sudhakar Soundarajan	Subject Matter Specialist	M	Plant Protection	M.Sc. Agricultural Entomology, MBA	15600-39100	21000	27-01-2011	Permanent	OBC
6	Scientist/SMS	Ashiba A	Subject Matter Specialist	F	Agronomy	M.Sc. Agronomy	15600-39100	21000	07-01-2019	Permanent	OBC
7	Scientist/SMS	Preethu K. Paul	Subject Matter Specialist	F	Agri. Extension	M.Sc. Agricultural Extension	15600-39100	21000	07-01-2019	Permanent	Others
8	Programme Assistant	Vacant	Programme Assistant	F	Vacant	-	9300-34800	13500	-	-	-
9	Programme Assistant (Computer)	Biju Narayanan	Programme Assistant	M	Computer Application	M.C.A., PGDCA	9300-34800	13500	01-10-2007	Permanent	OBC
10	Programme Assistant	Rachel Skariakutty	Programme Assistant	F	Rural Craft	M.A. Sociology (P.G. Diploma in Rural Development)	9300-34800	13500	05-06-1995	Permanent	Others
11	Assistant	Shaji. K. Kakkattu	Assistant	M	-	-	9300-34800	13500	05-06-1995	Permanent	Others
12	Jr. Stenographer	Daisy Daniel	Jr. Stenographer	F	-	-	5200-20200	7100	05-06-1995	Permanent	Others
13	Driver - 1	P. Nandagopal	Driver	M	-	-	5200-20200	7200	05-06-1995	Permanent	OBC
14	Driver - 2	Ayans K Shibu	Driver	-	-	-	5200-20200	7200	25-10-2021	-	OBC
15	SS-1	P. Sabu	Skilled Supporting Staff-1	M	-	-	5200-20200	7000	05-06-1995	Permanent	Others
16	SS-2	K.T. Mathew	Skilled Supporting Staff-2	M	-	-	5200-20200	7000	05-06-1995	Permanent	Others

1.6. Total land with KVK (in ha): 3.24 ha

S. No.	Item	Area (ha)
1	Under Buildings	0.075 ha
2.	Under Demonstration Units	0.087 ha
3.	Under Crops	2.06 ha
4.	Orchard/Agro-forestry	0.0 ha
5.	Others	1.01 ha

1.7. Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	2002	740	47,85,208.10	-	-	-
2.	Farmers Hostel	NA	-	-	-	-	-	*Master Plan & Estimate submitted. Sanction pending.*
3.	Staff Quarters	NA	-	-	-	-	-	-
	1							
	2							
	3							
	4							
	5							
	6							
4.	Demonstration Units							
	1. Duck cum fish culture unit.	RF	2009	50	7,000.00	-	-	-
	2. Mushroom unit	Grama Panchayath, Santhanpara	2002	10	85,000.00	-	-	-
	3. Spawn production unit	SHM	2009	10	3,00,000.00	-	-	-
	4. Mist Chamber	SHM	2009	96	2,72,832.00	-	-	-
	5. Rain Shelter	SHM	2009	50	1,04,091.00	-	-	-
	6. Bio-Hub	State Planning Board	2014	65	1,50,000.00	-	-	-
	7. Karshaka Seva Kendram	Department of Agriculture – Vegetable Scheme	2015	100	3,58,000.00	-	-	-
	8. Pheromone Trap Production Unit	RF	2014	10	65,000.00	-	-	-
	9. Pseudomonas Production Unit	Department of Agriculture – Vegetable Scheme	2015	25	50,000.00	-	-	-
	10. Trichoderma Production Unit	Department of Agriculture – Vegetable Scheme	2015	25	50,000.00	-	-	-
	11. EPN Production Unit	Department of Agriculture – Vegetable Scheme	2015	25	70,000.00	-	-	-
	12. Low cost mass multiplication centre	Department of Agriculture	2018	25	20,000.00	-	-	-
	13. Low cost VAM production Unit	Department of Agriculture	2018	10	20,000.00	-	-	-
5	Vermicompost	RF	2018	10	20,000.00	-	-	-

6	Fencing	NA	-	-	-	-	-	Urgent requirement as the area is constantly facing intuition of wild animals and other intruders
7	Rain Water harvesting system	NA	-	-	-	-	-	-
8	Threshing floor	NA	-	-	-	-	-	-
9	Mini Potato production unit	RF	2021	0.02	8000.00	-	-	-
10	Bio Unit Packaging Unit	RF	2021	150 sq. ft.	122820.00	-	-	-
11	Storage Shed	RF	2021	25 X 15 ft.	249537.00	-	-	-
12	IISR Black Pepper Column Method	RF	2021	150 Sq. m.	24950.00	-	-	-
13	Small cardamom varietal garden	RF	2021	50 Cents	55000.00	-	-	-
14	Poultry unit	RF	2021	900 Sq. ft.	282762.00	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Mahindra Bolero SLE	May - 2012	5,78,380.36	147076 Km	Good condition.
Honda Aviator	March - 2009	50,000.00	14130 Km	Running condition
Motor Bike (Suzuki Shogun)	January - 1995	37,972.78	8976 Km	Irreparable, to be condemned

C) Equipment & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Television	1995	20,894.00	Not working
GE OHP	1996	7,100.00	Good, but not in use
ZETT Slide Projector	1996	11,556.00	Not working
Sharp Video Player	1996	10,000.00	Not working
Pentax SLR Camera	1996	13,599.15	Not working
Ahuja Amplifier SSA 160 636956	2003	7,010.00	Good Condition
Ahuja Speaker, SRX50 DX	2003	1,825.00	Good Condition
Ahuja Mike SHM 1000 XLR	2003	2,295.00	Good Condition
Ahuja Mike ASMT 80 XLR	2003	1,470.00	Good Condition
Ahuja mike Stand DGV	2003	510.00	Good Condition
Ahuja Mike stand DGT	2003	295.00	Good Condition
Ahuja portable teaching wireless WA 320 AWL 321	2003	9,700.00	Good Condition
Honda generator Model EBK 2000 AC	2003	32,490.00	Good Condition
LPG Generator 5000 CLS	2011	100000.00	Good Condition
LCD Projector (EPSON_EBW8)	2010	55186.00	Good Condition
Liberty Show Juno 5 x 7 (MW) Screen	2010	5885.00	Good Condition
Kodak Knoma Camera	1995	1550.00	Obsolete
Tripod Screen 52x70 inch	1996	2029.50	In working condition
KEMI HOT PLATE with Energy Regulator	2006	5,400.00	Not working
Electronic Balance	2006	1,00,000.00	Under use but needs repair
Physical Balance	2006	8,991.00	Good
Spectrophotometer	2006	1,17,499.00	Not working
Electronic Automatic KEL PLUS model KES 12L (Nitrogen Analyzer)	2006	97,043.00	Not working
Conductivity Meter (PH Meter Utech 510)	2006	21,935.00	Not working
HOT AIR OVEN	2006	13,725.00	Not working
Water bath WDB2 350 x 400 100mm Size 12	2006	41,895.00	Not working
Flame Photometer	2006	45,000.00	Under use but needs repair
Conductivity Meter	2006	13,500.00	Not working and requires new
LG 280 Litre Fridge Model – GI 296 TM V-Guard Stabilizer	2006	250.00	Good

Mixer grinder 750 Watts	2006	4,500.00	Needs replacement
Online UPS System with Battery	2006	36,916.00	Needs replacement
Fume Cupboard KEMI	2006	2,68,192.00	Needs replacement
Laminar Flow Chamber	2000	50,000.00	Under use but needs repair
Refrigerator	2000	10,760.00	Under use but needs repair
Chemical Balance	2000	1,800.00	required new
Auto Clave	2000	19,000.00	required new
Step up Stabilizer	2008	4,595.00	Good
FACIT Typewriter (Malayalam)	1995	9,735.00	Obsolete
FACIT Typewriter (English)	1995	9429.00	Obsolete
Stencil Duplicator	1995	13,700.00	Obsolete
Ortem sewing machine	1995	2,300.00	Obsolete
Desktop Computer with Printer	2003	49,750.00	Obsolete
Photostat Machine	2003	80,000.00	Obsolete
Brush Cutter	2009	23,726.00	Good, needs servicing
Fax Machine	2009	15,000.00	Obsolete
Laptop Computer (DELL Studio 14 N)	2010	37,150.00	Good
Inkjet Printer (Epson TX 111 AIO)	2010	1,779.00	Good
Desktop Computers – 3 Nos. (Intel I5 Processor with 20" Monitor [1 no.], 24" Monitor [2 nos.], 600 VA UPS [2 NOS.], USB Speakers [3 nos.] & Other accessories)	2021	1,30,600.00	Good
HP Neverstop Laser (MFP 1200W) Printer	2021	18,800.00	Good
Western Digital 1 TB SSD (for backing up and transferring of CCTV Camera videos)	2021	10,000.00	Good
Computer Table 30/18 (6 nos.)	2021	15,000.00	Good
Revolving Chair (6 nos.)	2021	19,200.00	Good
Name Board	2021	13,210.00	Good
Wireless Modem	2021	3,000.00	Good
Atlantis Hot & Cool Water Purifier	2021	15,500.00	Good
Lokza Wireless door bell	2021	1,099.00	Good
Show case & Kitchen Show case lock fitting	2021	12,391.00	Good
Half door fitting	2021	4,200.00	Good
DAMU Scheme			
Furniture	2020	41450.00	Good
Desktop Computer – 1 No. with Original Microsoft Windows-10 (Intel I5 Processor with 20" Monitor & Other accessories)	2021	48,350.00	Good
HP Neverstop Laser (MFP 1000W) Printer	2021	13,500.00	Good
Web camera	2021	2,000.00	Good
Seagate External HDD (2 TB)	2021	6500.00	Good
Sand disk USB Flash drive 16 GB	2021	400.00	Good
Sand disk USB Flash drive 32 GB	2021	600.00	Good
CanoScan Lide 300 - Scanner	2021	4050.00	Good

1.8. Details of SAC meeting organized : 28.01.2021

PART II - DETAILS OF DISTRICT

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

S. No	Farming system/enterprise
1	Cardamom and Pepper based farming system in the High Ranges of the District
2	Paddy belts in specific locations
3	Homestead based farming
4	Coconut, Tea and coffee plantation
5	Vegetables (Bitter gourd & Cowpea)
6	Cool season vegetables in Devikulam Block
7	Banana cropping
8	Rubber- Pineapple as inter-crop
9	Dairy cattle, Poultry production & Management
10	Mixed Fodder Production

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

S. No	Agro-climatic Zone	Characteristics
1.	Zone-XIII	High Ranges
2.	Zone-VII	Malayoram
3.	High altitude zone-Vattavada & Kanthalloor	Climate suitable for cool season vegetables and temperate fruits

S. No	Agro ecological situation	Characteristics
1.	Agro Ecological Zone-1	Major part is mono-cropped with rubber, other areas-homestead farming is practiced with tapioca, banana and vegetables, altitude up to 500M above mean sea level, humid tropics spread over the zone. South West and North East monsoon are active and moderately distributed. South West monsoon with June maximum (South of 110 N latitude)
2.	Agro Ecological Zone-2	Major cropping Pattern-Pepper, Cardamom, Coffee, Areca nut, Cocoa and Rubber intercropped, altitude 500M above mean sea level, humid tropics spread over the zone. Steep slopes
3.	Agro Ecological Zone-3	High altitude zone-Vattavada & Kanthalloor. Cool season vegetables occupy major area. Potato, temperate fruits are grown in a small scale. Zone includes the only wheat-growing tract of Kerala. North-East monsoon is prominent.

2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
1.	Manakkattu series	Clayey very deep, developed from gneissic parent material	NA
2.	Cheenikuzhy series	Fine loamy texture	NA
3.	Thommankuthu series	Clayey texture	NA
4.	Venmani series	Clayey texture	NA
5.	Marayoor series	Clay loam to clayey texture	NA
6.	Pampadumpara series	Clayey texture	NA

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

S. No	Crop	Area (ha)	Production (Metric tons)	Productivity (kg /ha)
1	Cardamom	31165	16505	530
2	Pepper	43790	18726	428
3	Banana	7535	67469	8954
4	Rice	695	1631	2347
5	Coconut	16122	63 million nuts	3907
6	Tapioca	6998	297870	42565
7	Coffee	12717	8310	653
8	Tea	40590	44991	2048

** Directorate of Economics and Statistics, Department of Agriculture and Coop*

2.5. Weather data

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
January 2021	17	29.00	21.00	70
February 2021	28	32.00	20.00	69
March 2021	49	35.60	22.50	68
April 2021	122	35.60	24.40	73
May 2021	179	34.40	24.40	77
June 2021	407	33.33	23.43	82
July 2021	572	32.03	22.94	85
August 2021	352	32.32	22.65	84
September 2021	227	32.40	22.87	83
October 2021	269	31.45	24.87	84
November 2021	163	29.43	22.03	82
December 2021	59	29.90	20.84	75

** Source: IMD, Trivandrum*

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

Category	Population	Production	Productivity
Cattle			
Crossbred	97395	164559.858 ton (Milk) & 10.276827 MT (meat)	3.26 ton (milk)
Indigenous	7155	4309 ton (milk)	2.89 l/day
Buffalo	5471	7779 ton (milk) & 4285.62 MT (meat)	2.7 ton
Sheep			
Crossbred	9	-	-
Indigenous	-	-	-
Goats	102432	17298 ton (Milk) & 11892.10 MT (meat)	-
Pigs			
Crossbred	14670	23436.5 MT (Meat)	-
Indigenous	-	-	-
Rabbits	9980	-	-
Poultry			
Hens	698787	758.82198 in lakh nos (Egg)	-
Desi	60848	398 in lakh (Egg)&5840462MT meat	-
Improved	130924	-	-
Ducks	20087	-	-
Turkey and others	16456	-	

Category	Area	Production	Productivity
Fish	-	-	-
Marine	-	-	-
Inland	-	-	-
Prawn	-	-	-
Scampi	-	-	-
Shrimp	-	-	-

** Source of Data: - District Animal Husbandry Office, Thodupuzha, Idukki*

2.7 District profile maintained in the KVK has been **Updated** for 2021: Yes

2.8 Details of Operational area / Villages

Sl. No.	Taluk	Name of the block	Name of the village	How long the village is covered under operational area of the KVK (specify the years)	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1	Devikulam	Devikulam	Vattavada	3	Potato	Late blight caused significant loss in production	Bio intensive pest management
					Big onion	Lack of high yielding varieties , Incidence of more pest and diseases, Premature bolting, Bulb splitting	Variety Evaluation
					Strawberry	Fruit distortion/Malformed, Shriveled fruits, Snail and Slug damaged fruits	Bio intensive pest management, Integrated Nutrient management

					Carrot	Severely affected by root knot nematodes	Bio intensive pest management
					Garlic	Rubberisation and high incidence of pest and disease due to application of high dose of nitrogen fertilizer	Integrated Nutrient management
					Poultry	Low of protein source, Inadequate composition of feed, Poor growth performance, Low egg production	Scientific management of livestock and poultry
2	Udumbanchola	Udumbanchola, Nedumkandam, Devikulam	Udumbanchola	**3**	Black Pepper	Low recovery of planting material due to disease in nursery, Quick wilt disease infestation in the field, Inadequate knowledge on soil test based nutrient management, Secondary and micronutrient deficiency disorder, Poor berry settings and less yield	
					Paddy	Phosphate induced Zinc deficiency, Sterile spikelet's, Low yield	Integrated Nutrient management
					Small cardamom	Withering of plants, Lodging symptoms, Toxicity of Fe and AL, Severely affected by root grub	Integrated Nutrient management, Bio intensive pest management
					Duck	Shortage of broiler duck meat in festival season	Integrated Farming System
					Dairy cattle	Low milk yield**,** Low composition in milk	Scientific management of livestock and poultry
					Fish	Non availability of fresh fish, Availability of Chemically preserved fish	Varietal Introductio n

2.9 Priority thrust areas

S. No	Thrust area
1	Varietal Evaluation
2	Varietal Introduction
3	Productivity improvement
4	Integrated Nutrient Management

5	Bio intensive Pest Management
6	Feed management
7	Nutrition management
8	Integrated Farming System
9	Scientific management of livestock and poultry

PART III - TECHNICAL ACHIEVEMENTS

3.A. Target and Achievements of mandatory activities

OFT				FLD			
1				2			
OFTs (No.)		Farmers (No.)		FLDs (No.)		Farmers (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
4	4	20	20	11	11	65	65

Training (Farmers/farm women)				Training (Rural youth)			
3				4			
Courses (No.)		Participants (No.)		Programmes (No.)		Participants (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
67	94	1642	4899	10	15	100	346

Training (Extension personnel)				Training (sponsored)			
5				6			
Courses (No.)		Participants (No.)		Programmes (No.)		Participants (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
9	25	226	949	-	2	-	103

Training (Vocational)				Extension Programmes			
7				8			
Courses (No.)		Participants (No.)		Programmes (No.)		Participants (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
-	1	-	15	1686	20542	11359	27942

Seed Production (Q)		Planting material (Nos.)	
9		10	
Target	Achievement	Target	Achievement
-	-	12000	31912

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
11		12	
Target	Achievement	Target	Achievement
1200	54	6500	32539

Soil, water, plant and manure analysis (including mobile kits)				Mobile agro advisories provided			
13				14			
Samples (No.)		Farmers (No.)		Messages including text, voice (No.)		Farmers (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
300	388	200	255	10	22	10000	53241

3.B1. Abstract of interventions undertaken

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products No.	Kg
1	Varietal evaluation	Cassava	Lack of high yielding varieties, high cynogen content	Assessment of cassava varieties in high range	-	2	-	-	6	-	1400	-	-	57.5
2	Varietal evaluation	Yard long Bean	Lack of high yielding varieties, more incidence of pest and diseases	Assessment of Yard long Bean Varieties in Idukki district.	-	2	-	-	7	0.095	-	-	-	-
3	Productivity Improvement	Small cardamom	Lack of knowledge on disposal of cardamom stem, natural composting is time consuming	Assessment of different decomposing cultures in compostin g of agricultural wastes.	-	2	-	-	11	-	-	-	12	241
4	Scientific management of livestock	Dairy cattle	Severe ecto-parasitic infestation, lack of knowledge of EVM	Assessment of EVM preparations for control of ecto parasites in dairy cattle.	-	1	-	-	8	-	-	-	-	-
5	Varietal Introduction				Demonstration of paddy variety Manuratna in high ranges	2	-	-	8	0.35	-	-	-	243
6	Integrated nutrient management				Demonstration of Zinc Bio fortification in Rice	2	-	-	15	-	-	-	-	850
7	Integrated nutrient management				Demonstration of INM in cabbage	1	-	-	8	-	-	-	-	937

8	Varietal Introduction				Demonstration of new whole pod pea variety- Arka Apoorva	1	-	-	6	0.025	-	-	-	185
9	Integrated pest management				AESA based IPM in strawberry	3	-	-	8	-	-	-	1500	91
10	Integrated nutrient management				Demonstration of IISR PGPR consortium for growth promotion in black pepper	3	-	-	7	-	-	-	50	852
11	Varietal introduction				GAP in Aswathy variety of Ginger	2	-	-	17	0.25	1276	-	-	184
12	Integrated nutrient management				Demonstration of customized fertilizer in Tapioca	2	-	-	11	-	2088	-	-	375
13	Integrated pest management				Bio intensive pest, drought management and deterring crop raiding wild elephants in small cardamom	2	-	-	8	-	-	--	-	149
14	Scientific management of livestock				Demonstration of estrous synchronization in cattle by using progesterone vaginal sponge	3	-	-	14	-	-	-	-	-
15	Scientific management of poultry				Popularization of Ethno veterinary medicine (EVM) for prevention of Ranikhet disease	3	-	-	3	-	-	-	-	-

3.B2. Details of technology used during reporting period

S. No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
1	Assessment of cassava varieties in high range	CTCRI & KAU	Tapioca	5	-	2	6
2	Assessment of Yard long Bean Varieties in Idukki district.	KAU & IIHR	Yard long bean	5	-	2	7
3	Assessment of different composting cultures in composting of agricultural wastes	IIHR, NCOF & KAU	Composting	5	-	2	11
4	Assessment of EVM preparations for control of ecto parasites in dairy cattle	TANUVAS, KAU, KVASU	Dairy cattle	5	-	1	8
5	Demonstration of paddy variety 'Manuratna' in high range	KAU	Paddy	0	5	2	8
6	Demonstration of new whole pod edible dual purpose pea variety of Arka Apoorva	IIHR	Garden pea	0	5	1	6
7	Demonstration of IISR PGPR consortium for growth promotion in Black pepper	IISR	Black pepper	0	5	3	7
8	Integrated nutrient management in cabbage	IIHR	Cabbage	0	5	1	8
9	Demonstration of customized fertilizer-I in Tapioca	CTCRI	Tapioca	0	5	2	11
10	GAP in Aswathy variety of Ginger	KAU	Ginger	0	5	2	17
11.	Bio intensive intervention of pest, drought management and deterring crop raiding wild elephants in small cardamom	NBAIR, IISR	Small cardamom	0	5	2	8
12.	AESA based integrated pest management in strawberry	NIPHM	Strawberry	0	5	3	8
13.	Popularization of Ethno veterinary medicine (EVM) for prevention of Ranikhet disease	VVTRC-TANUVAS	Poultry	0	5	3	3
14	Demonstration of estrous synchronization in cattle by using progesterone vaginal sponge	TANUVAS	Dairy Cattle	0	5	3	14

3.B2 contd..

No. of farmers covered															
OFT				FLD				Training				Others (Specify)			
General		SC/ST		General		SC/ST		General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
5	0	0	0	0	0	0	0	50	0	0	0	25	9	0	0
0	5	0	0	0	0	0	0	25	12	0	0	16	9	0	0
1	4	0	0	0	0	0	0	35	235	0	0	76	25	0	0
0	5	0	0	0	0	0	0	29	19	0	0	25	16	0	0
0	0	0	0	2	3	0	0	35	15	0	0	19	12	0	0
0	0	0	0	3	2	0	0	19	21	0	0	19	4	16	24
0	0	0	0	4	1	0	0	1268	26	0	0	45	12	0	0
0	0	0	0	0	0	1	4	0	21	26	12	12	29	30	26
0	0	0	0	5	0	0	0	26	12	0	0	126	119	0	0
0	0	0	0	4	1	0	0	42	28	0	0	36	21	5	9
0	0	0	0	4	1	0	0	21	18	5	1	36	15	0	0
0	0	0	0	5	0	0	0	25	12	5	2	49	15	2	0
0	0	0	0	0	2	0	8	15	16	25	14	15	12	12	14
0	0	0	0	4	1	0	0	14	12	5	4	39	30	5	0

PART IV - On Farm Trial

4.A1. Abstract on the number of technologies assessed in respect of crops

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management										
Varietal Evaluation					1				1	2
Integrated Pest Management										
Integrated Crop Management										
Integrated Disease Management										
Small Scale Income Generation Enterprises										
Weed Management										
Resource Conservation Technology				1						1
Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique										
Cropping Systems										
Farm Mechanization										
Mushroom cultivation										
others										
Total				**1**	**1**				**1**	**3**

4.A2. Abstract on the number of technologies refined in respect of crops: Nil

4.A3. Abstract on the number of technologies assessed in respect of livestock

Thematic areas	Cattle	Poultry	Piggery	Rabbit	Fisheries	TOTAL
Evaluation of Breeds						
Nutrition Management						
Disease of Management	1					1
Value Addition						
Production and Management						
Feed and Fodder						
Small Scale income generating enterprises						
Dairy						
Others (Pl. specify)						
TOTAL	**1**					**1**

4.A4. Abstract on the number of technologies refined in respect of livestock ; Nil

4.B. Achievements on technologies Assessed and Refined

4.B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technologies	No. of trials	Number of farmers / locations	Area in ha (Per trial covering all Technological Options in a farm)
Integrated Nutrient Management					
Varietal Evaluation	Cassava	Assessment of cassava varieties in high range	05	05	1.00
	Yard long bean	Assessment of Yard long Bean Varieties in Idukki district.	05	05	0.20
Integrated Pest Management					
Integrated Crop Management					
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology	Small cardamom	Assessment of different decomposing cultures in composting of agricultural wastes.	05	05	0.10
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
Total			**15**	**15**	**1.30**

4.B.2. Technologies Refined under various Crops : Nil

4.B.3. Technologies assessed under Livestock

Thematic areas	Name of the livestock	Name of the technologies	No. of trials	No. of farmers/locations
Evaluation of breeds				
Nutrition management				
Disease management	Cattle	Assessment of EVM preparations for control of ecto parasites in dairy cattle	05	05
Processing and Value addition				
Production and management				
Feed and fodder management				
Small scale income generating enterprises				
Others, pl. specify				
Total			**05**	**05**

4.B.4. Technologies Refined under Livestock and other enterprises: Nil

4.B.5. T**echnologies assessed under various enterprises by KVKs: Nil**

4.B.6.T**echnologies assessed under various enterprises for women empowerment: Nil**

4.C1. Results of Technologies Assessed

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Source of technology	Yield	Unit of yield	Observations other than yield	Gross Return Rs. / unit	Net Return Rs. / unit	BC Ratio (Gross income/ Gross Cost)
1	2	3	4	5	6	7	8	9	10	11	12	13
Cassava	Irrigated	Lack of High yielding varieties. High Cyanogen content.	Assessment of cassava varieties in high range.	5	TO-1: (Farmer's practice)	-	288	q/ha	Number of Tubers /plant (No)-4 Weight of tubers/plant(Kg)-3.6	432000	188000	1.77
					TO-2: Sree Pavithra	CTCRI	640	q/ha	Number of Tubers /plant (No)- 7 Weight of tubers/plant(Kg)-8	960000	704000	3.75
					TO-3: Vellayani Hraswa	KAU	480	q/ha	Number of Tubers /plant (No)- 6 Weight of tubers/plant(Kg)-6	720000	465000	2.82
					TO-4: KAU Uthama	KAU	400	q/ha	Number of Tubers /plant (No)- 6 Weight of tubers/plant(Kg)-5	600000	350000	2.40
Yard long Bean	Irrigated	Lack of high yielding varieties. More incidence of pest and disease	Assessment of Yard long Bean varieties in Idukki district.	05	TO-1: (Farmers practice)	-	130	q/ha	Length of Pod(cm)- 32 Seeds per pod (no)- 18	111000	22000	1.2
					TO-2: Arka Mangala	IIHR	210	q/ha	Length of Pod(cm)- 39.4 Seeds per pod (no)- 20	195500	110500	2.3

					TO-3: Manjari	KAU-2018	230	q/ha	Length of Pod(cm)- 42.1 Seeds per pod (no)- 24	205000	123000	2.5
Organic farming	Homestead	Lack of Knowledge on disposal of cardamom stem Natural composting is time consuming	Assessment of different decomposing cultures in composting of agricultural wastes	05	TO-1: (Farmers practice)	-	0.22	t/ha	Decomposition days-91 Volume reduction-22.5	1100	301	1.37
					TO-2: Arka microbial decomposer	IIHR	0.30	t/ha	Decomposition days-74 Volume reduction-21	1500	764	2.03
					TO-3: NCOF-waste decomposer	NCOF,UP	0.45	t/ha	Decomposition days-60 Volume reduction-20	2250	1550	3.21
					TO-4: Composting inoculum	KAU	0.35	t/ha	Decomposition days-67 Volume reduction-21.2	1750	1033	2.44
Cattle	homestead	Severe ecto parasitic infestation in dairy cattle. Lack of knowledge on the usage of EVM.	Assessment of EVM preparations for control of ecto parasites in dairy cattle.		TO-1: (Chemical ecto parisicide)	KAU-2010	-	-	Parasitic intensity (%)- 50 Reduction in infestation (%)- 70	35000	8000	1.29
					TO-2: Herbal preparation of crushed garlic and neem oil	KVASU-2013	-	-	Parasitic intensity (%)- 40 Reduction in infestation (%)- 60	152800	65800	1.75
					TO-3: Preparation of Aloe vera, Tulasi, sweet Flag, Pepper, turmeric	TANUVAS-2015	-	-	Parasitic intensity (%)- 30 Reduction in infestation (%)- 90	330000	150000	1.83

4. C2. Feedback on technologies assessed

Name of technology assessed	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Assessment of cassava varieties in high range.	Varieties were found good in cooking quality and taste so consumer preferences were more. The only constraints of the variety is susceptibility to mosaic in high ranges.	Farmers could find difficult to collect the planting materials from mosaic affected plant
Assessment of Yard long Bean varieties in Idukki district.	Manjeri variety was found better in flowering, fruiting as well as yield. The variety seed was found costly as compared to other varieties	Farmers could find it difficult to purchase the seed due to high cost.
Assessment of different decomposing cultures in composting of agricultural wastes	NCOF waste decomposer could decompose the substrate at much faster rate than other also it is cost effective.	
Assessment of EVM preparations for control of ecto parasites in dairy cattle.	Farmer friendly technology.	-

4.C3. Details of Successfully completed / concluded technology assessment (support with necessary summary of data and photographs)

1. Title of Technology Assessed: Assessment of Cassava Varieties in high range.

2. Performance of the Technology on specific indicators: Sree Pavithra was found better in terms of cooking quality, taste thus high consumer preferences.

3.Specific Feedback from farmers: The variety was found susceptible to mosaic virus disease

4.Specific Feedback from Extension personnel and other stakeholders: The variety should be widely popularized in the district

5. Feedback to Research System based on results and feedback received: High incidence of mosaic virus.

6. Feedback on usefulness and constraints of technology: Nil

2. Title of Technology Assessed: Assessment of different decomposing cultures in composting of agricultural wastes

2. Performance of the Technology on specific indicators: the inoculum could accelerate the rate of decomposition.

3.Specific Feedback from farmers: The farmers could easily decompose the dried leaves of cardamom plantation.

4.Specific Feedback from Extension personnel and other stakeholders: The technology is highly beneficial in cardamom plantation.

5. Feedback to Research System based on results and feedback received: The NCOF technology is cost effective and user friendly.

6. Feedback on usefulness and constraints of technology: The technology could reduce the days of decomposition.

3. Title of Technology Assessed: Assessment of Yard Long Bean Varieties in Idukki district

2. Performance of the Technology on specific indicators: Pod length, Crispiness, yield, green pod was specific characters as compared to local

3.Specific Feedback from farmers: continuous flowering and fruiting and could fetch better price.

4.Specific Feedback from Extension personnel and other stakeholders: Better returns from the market.

5. Feedback to Research System based on results and feedback received: Farmers acceptance, market preference was better

6. Feedback on usefulness and constraints of technology: stingless nature of the pod.

4.Title of Technology Assessed; Assessment of EVM preparations for control of ecto parasites in dairy cattle.

2. Performance of the Technology on specific indicators: Technology was found effective in control of parasitic infection.

3.Specific Feedback from farmers: the organic combination was easy for preparation and usage.

4.Specific Feedback from Extension personnel and other stakeholders: the technology was well adapted by farmers.

5. Feedback to Research System based on results and feedback received : the technology is well adapted in hilly tract among ruminants.

6. Feedback on usefulness and constraints of technology: user friendly technology

4.D1. Results of Technologies Refined: Nil

4. D2. Feedback on technologies refined: Nil

4.D.2. Details of Technologies refined: Nil

PART V - FRONTLINE DEMONSTRATIONS

5.A. Summary of FLDs implemented

Sl. No.	Category	Farming Situation	Season	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		Farmers (No.)		Farmers (No.)	
									Proposed	Actual	SC/ ST	Others	Small / Marginal	Others
	Oilseeds													
	Pulses													
	Cereals	Rain fed	Rabi	Paddy	Manuratna	-	Varietal introduction	Demonstration of paddy variety Manuratna	1	1	0	5	0	0
		Irrigated	Kharif	Paddy	Sreya	-	INM	Demonstration of Zinc Biofortification in Rice	2	2	0	10	0	0
	Millets													
	Vegetables	Irrigated	Rabi	Cabbage	-	Cuisor	INM	Demonstration of INM	1	1	05	0	0	0
		irrigated	Rabi	Garden pea	Arka Apoorva	-	Varietal introduction	Demonstration of new whole pod pea variety- Arka Apoorva	0.75	0.75	0	5	0	0
	Flowers													
	Ornamental													
	Fruit	Irrigated	Kharif	Strawberry	Red Charley	-	IPM	AESA based IPM	2	2	0	5	0	0
	Spices and condiments	Irrigated	Kharif	Black Pepper	Karimunda	-	INM	Demonstration of IISR PGPR consortium	1	1	0	5	0	0
		irrigated	Summer	Ginger	Aswathy	-	ICM	GAP in Aswathy variety	0.2	0.2	0	5	0	0

								of Ginger						
		irrigated	Kharif	Small Cardamom	Njallani	-	IPM	Bio intensive pest management in small cardamom	2	2	0	5	0	0
	Commercial													
	Medicinal and aromatic													
	Fodder													
	Plantation													
	Fibre													
	Dairy	Intensive system	Year round	Dairy cattle	Cross bread	Cross breed + HF	Disease management	Demonstration of progesterone vaginal sponge	5 units	5 units	0	5	0	0
	Poultry	Backyard	Year round	Poultry	poultry	Backyard	Disease management	Popularisation of EVM	10 units	10 units	8	2	0	0
	Rabbitry													
	Piggery													
	Sheep and goat													
	Duckery													
	Common carps													
	Mussels													
	Ornamental fishes													
	Oyster mushroom													

	Button mushroom													
	Vermicompost													
	Sericulture													
	Apiculture													
	Implements													
	Others (Tuber crops)	Rain fed	Rabi	Tapioca	Sree Pavithra	-	INM	Customized fertilizer demonstration @ 41 g/plant	1	1	0	5	0	0

5.A. 1. Soil fertility status of FLDs plots, if analysed

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
	Oilseeds												
	Pulses												
	Cereals	Rain fed	Rabi	Paddy	Manuratna	-	Varietal introduction	Demonstration of paddy variety Manuratna	Rabi	H	H	L	Paddy
		irrigated	Kharif	Paddy	Sreya	-	INM	Demonstration of Zinc biofortification in Rice	Kharif	H	H	l	Paddy
	Millets												
	Vegetables	Irrigated	Rabi	Cabbage	-	Cuisor	INM	Demonstration of INM	Rabi	H	H	M	French bean
		irrigated	Rabi	Garden pea	Arka Apoorva	-	Varietal introduction	Demonstration of new whole pod pea variety- Arka Apoorva	Rabi	H	H	M	vegetables
	Flowers												

	Ornamental												
	Fruit	Irrigated	Kharif	Strawberry	Red Charley	-	IPM	AESA based IPM	Kharif	H	M	L	Cabbage
	Spices and condiments	Irrigated	Kharif	Black Pepper	Karimunda	-	INM	Demonstration of IISR PGPR consortium	Kharif	H	M	L	Perennial
		irrigated	Summer	Ginger	Aswathy	-	ICM	GAP in Aswathy variety of Ginger	Summer	H	H	M	vegetables
		irrigated	Kharif	Small Cardamom	Njallani	-	IPM	Bio intensive pest management in small cardamom	Kharif	H	H	L	Perennial
	Commercial												
	Medicinal and aromatic												
	Fodder												
	Plantation												
	Fibre												
	Others (tuber crops)	Rainfed	Rabi	Tapioca	Sree Pavithra	-	INM	Customized fertilizer demonstration @ 41 g/plant	Rabi	H	H	M	vegetables

5.B. Results of FLDs

5.B.1. Crops

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	Economics of demonstration (Rs./ha)			Economics of check (Rs./ha)		
							Demo			Check		Gross Return	Net Return	BCR	Gross Return	Net Return	BCR
							H	L	A								
Oilseeds																	
Pulses																	

Cereals	Demonstration of paddy variety Manuratna	Manuratna	-	Rainfed	05	1	62	58	60	45	33.33	217000	128350	2.45	147000	68440	1.87
	Demonstration of Zinc Biofortification in Rice	Sreya	-	Irrigated	10	2	68	59	63.5	48	32.2	210300	125300	2.47	161700	66700	1.70
Millets																	
Cabbage	Demonstration of INM	-	Cuisor	irrigated	05	1	560	548	554	340	62.9	330000	213000	2.82	204000	96500	1.9
Garden Pea	Demonstration of new whole pod pea variety-Arka Apoorva	Arka Apoorva -		irrigated	05	0.75	82	70	76	63	20.6	166439	89739	2.17	127049	42350	1.5
Flowers																	
Ornamental																	
Fruit	AESA based IPM	Red charley	-	irrigated	05	2	98.5	91.0	94.75	73.5	28.9	965000	381500	1.65	704000	156000	1.2
Spices and condiments	Demonstration of IISR PGPR consortium	Karimunda	-	irrigated	05	1	7.5	7.0	7.25	6.0	20.8	243750	153688	2.70	204750	104790	2.04
	GAP in Aswathy variety of Ginger	Aswathy	-	irrigated	05	0.20	145	132	138.5	92.7	49.4	362750	205250	2.30	213210	98910	1.86
	Bio intensive pest management in small cardamom	Njallani	-	irrigated	05	2	12.0	10.1	11.05	7.9	39.8	1480000	790000	2.14	350000	300000	1.54
Commercial																	
Fibre crops like cotton																	
Medicinal and aromatic																	
Fodder																	
Plantation																	
Fibre																	
Others (Tuber crops)	Customized fertilizer demonstration @ 41 g/plant	Sree pavithra	-	Rainfed	05	1	380	210	295	185	59.4	737500	272500	2.12	462500	188000	1.7

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST
H – Highest Yield, L – Lowest Yield A – Average Yield

Data on additional parameters other than yield (viz., reduction of percentage in weed/pest/diseases etc.)

	Data on other parameters in relation to technology demonstrated

	Parameter with unit	Demo	Check
1.	Number of Productive tillers (No)	30	22
	Test weight (g)	22.5	29.5
2.	Number of productive tillers/hill (No)	25	23
	Number of panicles per plant (No)	20	15
3.	Average weight of head per plant (Kg)	3.8	1.9
	Head size (cm)	18	14.5
4.	Duration of Flowering (Days)	72	68
	Pod weight /plant (g)	0.31	0.20
5.	Incidence of pest and disease (%)	17	45
	Beneficial insects (%)	35	0
6.	Number of spikes/vine (No)	1000	550
	Number of berries/spike (No)	82	44
7.	Plant Height (cm)	41.2	31.3
	Number of tillers/plant (No)	11	8
8.	Incidence of pest and disease (%)	20	40
	Animal raiding (%)	14	42
9.	Weight of tubers/plant (Kg)	9	5
	Reduction in deficiency Symptoms (%)	20	0

5. B2. Feedback on technologies demonstrated

Name of technology demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Demonstration of paddy variety Manuratna	Resistance to water stress, pest and disease	Nil
Demonstration of Zinc Biofortification in Rice	Nutrient uptake increased. Grain filling, number of productive tillers were more	Nil
Demonstration of INM in Cabbage	Nutrient uptake increased.	Nil
Demonstration of new whole pod pea variety-Arka Apoorva	Non fibrous pod	Nil
AESA based IPM in Strawberry		Nil
Demonstration of IISR PGPR consortium		Nil
GAP in Aswathy variety of Ginger	High yield, tolerance to pest and disease	Nil
Bio intensive pest management in small cardamom		Nil
Customized fertilizer demonstration @ 41 g/plant	Nutrient uptake increased	Nil

5.B.3. Livestock and related enterprises

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Name of the parameter with unit	Yield (kg/animal)				% Increase	*Economics of demonstration Rs./unit)			*Economics of check (Rs./unit)		
						Demo			Check if any		Gross Return	Net Return	** BCR	Gross Return	Net Return	** BCR
						H	L	A								

Dairy	Demonstration on estrous synchronization in cattle	Cross bred Jersey &HF	5	5	Consumption rate (%)	90	50	70	30	133	124527.00	59277.00	1.90	109825.00	45060.00	1.69
Poultry	Popularization of EVM for prevention of Ranikhet disease	Backyard poultry	10	10	Disease incidence (%)	30	10	20	40	55	28000	17000	2.54	10900	5700	2.09
Rabbitry																
Pigerry																
Sheep and goat																
Duckery																
Others (pl.specify)																

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= Gross Return/Gross Cost

Data on additional parameters other than yield (viz., reduction of percentage diseases, increase in conceiving rate, inter-calving period etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check if any**
Showing Heat (Days)	**2**	**0**
AI done (No)	**2**	**6**
Mortality (%)	**0**	**10**
Feather Pecking(%)	**0**	**30**

5. B4. Feedback on livestock technologies demonstrated

Name of livestock technology demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Demonstration on estrous synchronization in cattle	Progesterone coated vaginal sponge result in induction of ovulatory heat within short time. Technical hands needed.	Nil
Popularization of EVM for prevention of Ranikhet disease	Very effective in high ranges, farmers friendly technology.	Nil

5.B.5. Fisheries: Nil
5. B6. Feedback on fisheries technologies demonstrated: Nil
5.B.7. Other enterprises: Nil

5.B.9. Farm implements and machinery: Nil

5. B10. Feedback on farm implements demonstrated: Nil

5.B.6.Extension and Training activities under FLD

Sl. No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	10	263	-
2	Farmers Training	19	2150	-
3	Media coverage	5	mass	-
4	Training for extension functionaries	0	0	-
5	Others (Please specify) Extension Activities	122	1009	-

PART VI – DEMONSTRATIONS ON CROP HYBRIDS

Demonstration details on crop hybrids : Nil

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)			*Economics of check (Rs./ha)		
					Demo			Check		Gross Return	Net Return	** BCR	Gross Return	Net Return	** BCR
					H	L	A								
Cereals															
Bajra															
Maize															
Paddy															
Sorghum															
Wheat															
Others (pl.specify)															
Total															
Oilseeds															
Castor															
Mustard															
Safflower															
Sesame															
Sunflower															
Groundnut															
Soybean															
Others (pl.specify)															
Total															
Pulses															
Greengram															
Blackgram															
Bengalgram															
Redgram															
Others (pl.specify)															
Total															
Vegetable crops															
Bottle gourd															
Capsicum															
Others (pl.specify)															
Total															
Cucumber															
Tomato															
Brinjal															
Okra															
Onion															
Potato															
Field bean															
Others (pl.specify)															
Total															
Commercial crops															
Sugarcane															
Coconut															

Others (pl.specify)															
Total															
Fodder crops															
Maize (Fodder)															
Sorghum (Fodder)															
Others (pl.specify)															
Total															

H-High L-Low, A-Average

*Please ensure that the name of the hybrid is correct pertaining to the crop specified

Feedback on crop hybrids demonstrated: Nil

Name of crop hybrid demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption

PART VII. TRAINING

7.A.. Training of Farmers and Farm Women including sponsored training programmes (On campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies	2	36	3	39	0	0	0	36	3	39
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation	1	10	5	15	0	0	0	10	5	15
Seed production										
Nursery management										
Integrated Crop Management	2	28	11	41	0	0	0	28	11	41
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs										
Others (Natural farming)	1	34	0	34	0	0	0	34	0	34
Horticulture										
a) Vegetable Crops										

Production of low value and high volume crop										
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables	1	16	5	21	0	0	0	16	5	21
Grading and standardization										
Protective cultivation										
Others (Organic farming)	1	20	0	20	0	0	0	20	0	20
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit	1	1	54	55	0	0	0	1	54	55
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post-harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										

Soil fertility management	2	24	40	64	0	0	0	24	40	64
Integrated water management										
Integrated nutrient management	1	28	3	31	0	0	0	28	3	31
Production and use of organic inputs										
Management of Problematic soils	1	27	4	31	0	0	0	27	4	31
Micro nutrient deficiency in crops										
Nutrient use efficiency	1	61	3	64	0	0	0	61	3	64
Balanced use of fertilizers	1	25	11	36	0	0	0	25	11	36
Soil and water testing	1	2	5	7	11	11	22	13	16	31
Others (pl.specify)										
Livestock Production and Management										
Dairy Management	1	57	8	65	2	0	2	59	8	67
Poultry Management	1	19	10	29	0	0	0	19	10	29
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology										
Production of quality animal products										
Others										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking	3	18	51	69	0	0	0	18	51	69
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										

Post-Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management	4	179	37	216	41	19	60	220	56	276
Integrated Disease Management	1	1425	0	1425	0	0	0	1425	0	1425
Bio-control of pests and diseases	6	533	27	560	2	2	4	535	29	564
Production of bio control agents and bio pesticides										
Others (Bee keeping)	1	39	2	41	0	0	0	39	2	41
Fisheries										
Integrated fish farming	1	32	5	37	0	0	0	32	5	37
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production	4	18	6	24	3	0	3	21	6	27
Apiculture										
Others (pl.specify)										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics	1	41	0	41	0	0	0	41	0	41

Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems	1	28	4	32	1	0	1	29	4	33
Others (Pl. specify)										
TOTAL	**42**	**2701**	**294**	**2995**	**60**	**32**	**92**	**2794**	**330**	**3124**

7.B Training of Farmers and Farm Women including sponsored training programmes (Off campus)

Area of training	**No. of Courses**	**No. of Participants**								
		General			**SC/ST**			**Grand Total**		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Crop Production										
Weed Management	1	27	4	31	0	0	0	27	4	31
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management	3	34	33	67	0	0	0	34	33	67
Soil and Water Conservation	2	81	20	101	0	0	0	81	20	101
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify)										
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop										
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl.specify)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										

Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post-harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management										
Integrated water management										
Integrated nutrient management	3	119	8	127	0	0	0	119	8	127
Production and use of organic inputs										
Management of Problematic soils	1	19	3	22	0	0	0	19	3	22
Micro nutrient deficiency in crops	1	8	3	11	0	0	0	8	3	11
Nutrient use efficiency	1	7	3	10	0	0	0	7	3	10
Balanced use of fertilizers	1	34	2	36	0	0	0	34	2	36
Soil and water testing	1	9	0	9	0	0	0	9	0	9
Others										
Livestock Production and Management										
Dairy Management	1	0	54	54	0	5	5	0	59	59

Poultry Management	2	19	24	43	0	0	0	19	24	43
Piggery Management										
Rabbit Management										
Animal Nutrition Management	4	20	71	91	3	10	13	23	81	114
Animal Disease Management										
Feed and Fodder technology	1	10	11	21	0	0	0	10	11	21
Production of quality animal products										
Others (pl.specify)										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking	1	3	12	15	0	0	0	3	12	15
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post-Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management	12	240	3	243	94	27	121	334	30	364
Integrated Disease Management	1	92	0	92	0	0	0	92	0	92
Bio-control of pests and diseases	2	118	13	131	0	0	0	118	13	131
Production of bio control agents and bio pesticides										
Others (pl.specify)										
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										

Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										

Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production	5	0	41	41	2	32	34	2	73	75
Apiculture										
Others (pl.specify)										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics	1	49	13	62	0	0	0	49	13	62
Formation and Management of SHGs	2	73	4	77	16	0	16	89	4	93
Mobilization of social capital										
Entrepreneurial development of farmers/youths	4	87	34	121	0	0	0	87	34	121
Others (Crop Insurance)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	**50**	**1049**	**356**	**1405**	**115**	**74**	**189**	**1164**	**545**	**1709**

7.C.Training for Rural Youths including sponsored training programmes (on campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	1	1	3	0	0	0	0	1	1	3
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs	2	128	12	140	0	0	0	128	12	140
Planting material production										
Vermi-culture										
Mushroom Production	3	5	6	11	5	2	7	10	8	18
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post-Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (Agricultural waste management)	1	1	3	4	0	0	0	1	3	4
TOTAL	**7**	**135**	**24**	**159**	**5**	**2**	**7**	**140**	**26**	**165**

7.D. Training for Rural Youths including sponsored training programmes (off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	1	34	7	41	0	0	0	34	7	41
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post-Harvest Technology										
Tailoring and Stitching										
Rural Crafts	6	0	16	16	1	82	83	1	98	99
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (Group dynamics)	1	37	3	40	0	0	0	37	3	40
TOTAL	**8**	**71**	**26**	**97**	**1**	**82**	**83**	**72**	**108**	**180**

7.E.Training programmes for Extension Personnel including sponsored training programmes (on campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	1	33	2	35	0	0	0	33	2	35
Integrated Pest Management	10	425	9	434	0	0	0	425	9	434
Integrated Nutrient management	4	132	5	137	0	0	0	132	5	137
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs	1	34	2	36	0	0	0	34	2	36
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application	8	267	12	279	0	0	0	267	12	279
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
Total	**24**	**891**	**30**	**921**	**0**	**0**	**0**	**891**	**30**	**921**

7.F. Training programmes for Extension Personnel including sponsored training programmes (off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers	1	27	1	28	0	0	0	27	1	28
Capacity building for ICT application										
Management in farm animals										

Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
Total	**1**	**27**	**1**	**28**	**0**	**0**	**0**	**27**	**1**	**28**

7.G. Sponsored training programmes conducted :

S. No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Increasing production and productivity of crops										
1.b.	Commercial production of vegetables										
2	**Production and value addition**										
2.a.	Fruit Plants										
2.b.	Ornamental plants										
2.c.	Spices crops										
3.	**Soil health and fertility management**	1	15	10	25	0	0	0	15	10	25
4	**Production of Inputs at site**										
5	**Methods of protective cultivation**										
6	**Others (pl.specify)**										
7	**Post-harvest technology and value addition**										
7.a.	Processing and value addition										
7.b.	Others (pl.specify)										
8	**Farm machinery**										
8.a.	Farm machinery, tools and implements										
8.b.	Others (pl.specify)										
9.	**Livestock and fisheries**										
10	**Livestock production and management**										
10.a.	Animal Nutrition Management										
10.b.	Animal Disease Management										
10.c	Fisheries Nutrition										
10.d	Fisheries Management										
10.e.	Others (pl.specify)										
11.	**Home Science**										
11.a.	Household nutritional security										
11.b.	Economic empowerment of women										
11.c.	Drudgery reduction of women										
11.d.	Others (pl.specify)										
12	**Agricultural Extension**					0	0	0			
12.a.	Capacity Building and Group Dynamics	1	74	4	78	0	0	0	74	4	78
12.b.	Others (pl.specify)										
	Total	**2**	**89**	**14**	**103**	**0**	**0**	**0**	**89**	**14**	**103**

Details of sponsoring agencies involved

1.

2.

3.

7.H. Details of Vocational Training Programmes carried out by KVKs for rural youth

S. No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										

1.a.	Commercial floriculture										
1.b.	Commercial fruit production										
1.c.	Commercial vegetable production										
1.d.	Integrated crop management										
1.e.	Organic farming										
1.f.	Others (pl.specify)										
2	**Post-harvest technology and value addition**										
2.a.	Value addition										
2.b.	Others (pl.specify)										
3.	**Livestock and fisheries**										
3.a.	Dairy farming										
3.b.	Composite fish culture										
3.c.	Sheep and goat rearing										
3.d.	Piggery										
3.e.	Poultry farming										
3.f.	Others (pl.specify)										
4.	**Income generation activities**										
4.a.	Vermi-composting										
4.b.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.										
4.c.	Repair and maintenance of farm machinery and implements										
4.d.	Rural Crafts										
4.e.	Seed production										
4.f.	Sericulture										
4.g.	Mushroom cultivation	1	0	15	15	0	0	0	0	15	15
4.h.	Nursery, grafting etc.										
4.i.	Tailoring, stitching, embroidery, dying etc.										
4.j.	Agril. para-workers, para-vet training										
4.k.	Others (pl.specify)										
5	**Agricultural Extension**										
5.a.	Capacity building and group dynamics										
5.b.	Others (pl.specify)										
	Grand Total	**1**	**0**	15	15	0	0	0	**0**	**15**	**15**

7.F. Details of Skill Training Programmes carried out by KVKs under ASCI

S. No.	Name of Job Role	Date of Start	Date of Close	Total Participants	No. of Participants									Date of Assessment	No of Participants passed assessment
					General			SC/ST			Grand Total				
					Male	Female	Total	Male	Female	Total	Male	Female	Total		
1	Beekeeper Batch 1	23.04.20	25.11.21	25	23	2	25	0	0	0	23	2	25	25.11.21	**25**
2.	Beekeeper Batch II	25.04.20	25.11.21	20	0	0	0	20	0	20	20	0	20	Not yet completed	-

PART VIII – EXTENSION ACTIVITIES

8.1. Extension Programmes (including extension activities undertaken in FLD programmes)

Nature of Extension Programme	No. of Programmes	No. of Participants (General)			No. of Participants SC / ST			No. of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Advisory services	17375	13656	2124	15780	535	452	987	375	233	608
Farmers visit to KVKs	2595	1310	204	1541	52	2	54	946	54	1000
Lectures delivered as resource persons	1	0	16	16	0	8	8	0	0	0
Diagnostic Visits	282	32	142	174	55	11	66	42	0	42
Field Days	10	191	37	228	0	25	25	7	3	10
Group discussions/ meetings	67	623	376	999	113	162	275	235	64	299
Kisan Gosthies										
Film Shows	19	462	66	528	83	36	119	161	10	171
Self-help group meetings	6	2301	22	2323	115	0	115	2	8	10
Mahila mandals meetings										
Kisan Melas										
Exhibitions										
Scientist visit to farmers fields	116	345	176	521	45	31	76	38	19	57
Soil health camps	2	55	5	60	10	7	17	1	1	2
Animal health camps	1	51	15	66	0	0	0	5	0	5
Plant health camps										
Farm Science Club meetings										
Ex-trainees Sammelans	1	0	10	10	0	8	8	0	2	2
Farmers seminars	8	163	19	182	114	23	137	38	02	40
Workshops	2	124	16	140	0	0	0	38	2	40
Method Demonstrations	41	234	131	365	23	11	34	2	2	4
Celebration of important days	13	381	295	676	8	17	25	12	23	35
Special day celebrations										
Exposure visits	1	1	3	4	0	0	0	3	0	3
Others, Please specify Bimonthly meetings	2	25	0	25	0	0	0	30	0	30
Total	**20542**	**19954**	**3657**	**23638**	**1153**	**793**	**1946**	**1935**	**423**	**2358**

8.2 Other extension activities like print and electronic media etc.

Sl. No.	Type of media/activity	Number of activities/Number
1	Popular articles	2
2	Newspaper coverage	19
3	Extension Literature	15
4	Radio Talks	2
5	TV Talks	6
6	CD/DVD/Video clips	0
7	Animal health camps (no. of animal treated)	1 (11 animals treated)
8	Others, please specify	0
	Total	45

PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIAL

9.A. Production of seeds by the KVKs: Nil

Crop category	Name of the crop	Name of the Variety	Quantity of seed (q)	Value (Rs)	Number of farmers to whom provided
Cereals (crop wise)					
Oilseeds					
Pulses					
Commercial crops					
Vegetables					
Flower crops					
Spices					
Fodder crop seeds					
Fiber crops					
Forest Species					
Others (specify)					
Total					

9.B. Production of hybrid seeds by the KVKs: Nil

Crop category	Name of crop	Name of the hybrid	Quantity of seed (q)	Value (Rs)	Number of farmers to whom provided
Total					

9.C. Production of planting material by the KVKs

Crop category	Name of the crop	Variety	Number	Value (Rs.)	Number of farmers to whom provided
Commercial					
Vegetable seedlings	Tomato	NS 526	2000	4000	40
	Cabbage	NS 183	2000	4000	32
	Carrot	Super Kuroda	2000	4000	52
	Beet root	Madhur	2000	4000	41
	Cucumber	NS 404	2000	4000	35
	Spinach	Palak F1	2000	4000	54
	Kale	Brassica Oleracea	2000	4000	48
	Cauliflower	NS 60 N	2000	4000	25
	Pole Beans	Super King	2000	4000	42
	Yard long Bean	Harry324	2000	4000	40
	Coriander	Surabhi	2000	4000	33
	Cow Pea	Arka IIHR	1800	3600	32

	Onion	Arka Kalyan	1500	3000	25
	Brinjal	Arka Harshita	2000	4000	40
	Capsicum	California wonder	2500	5000	38
Fruits	Water melon	NS 295	180	360	25
	Rambuttan	Local	50	1000	10
	Mangostin	Local	50	1000	5
	Pappaya	Red Lady	80	800	8
	Orange	Ornamenta	10	100	10
	Amla	Banarasi	5	100	5
	Pomegranate	Mrudul	10	200	5
Ornamental plants	Bougainvillea	Spectabilis Berberidifolia Campanulata	5	50	5
	Melastoma	Affine Malabathicum	4	40	4
	Begonia	Red			
	Orchid	Pink	5	500	5
	Anthurium	Red	5	250	5
	Balsom	Chinese	15	150	15
	Coleus	Yellow Violet	25	250	10
	Indoor plants	Uganio Ugaoo Money plant Shriram Areca	10	1000	10
Medicinal and Aromatic					
Plantation	Coconut	DXT Suguna Sukanya	3 2 3	900 600 900	1 2 1
Spices	Pepper	Panniyoor 1 Panniyoor 5 Karimunda Neelamundi Kottanaadan	200 250 200 250 250	2000 2500 2000 2500 2500	10 25 10 10 15
Tuber					
Fodder crop saplings					
Forest Species	Silver oak	Local	500	5000	10
Others(specify)	-	-	0	0	0
Total	**-**	**-**	**31912**	**84300**	**783**

9.D. Production of hybrid planting materials by the KVKs: NIL

Crop category	Name of the crop	Variety	Number	Value (Rs.)	Number of farmers to

					whom provided
Commercial					
Vegetable seedlings					
Fruits					
Ornamental plants					
Medicinal and Aromatic					
Plantation					
Spices					
Tuber					
Fodder crop saplings					
Forest Species					
Others(specify)					
Total					

9.E. Production of Bio-Products

Bio Products	**Name of the bio-product**	**Quantity (q)**	**Value (Rs.)**	**Number of farmers to whom provided**
Bio Fertilizers	Azospirillum, Phosphobacteria, Potash bacteria, Arka Microbial Consortium and Arka Decomposer, VAM	9023	2199000	1919
Bio-pesticide	EPN, Beauveria, Metarhizium and Paecilomyces	4237	827950	1724
Bio-fungicide	Trichoderma and Pseudomonas	15016	2402560	13690
Bio Agents	PPFM, *Bacillus subtilis* & *Bacillus megatherium*	2374	565580	1070
Others (specify)	Pheromone traps, Neem oil, Seaweeds & Yellow sticky traps	1534	223015	1491
Total		**32539**	**6221770**	**18518**

9.F. Production of livestock:

Particulars of Livestock	**Name of the breed**	**Number**	**Value (Rs.)**	**Number of farmers to whom provided**
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
Poultry				
Broilers				
Layers	Red Bro and B V 380	54	10260.00	14
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks	Vigova breed	3	1200.00	1
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl.specify)				
Fisheries				
Fingerlings				

Others (Pl. specify)				
Total		**57**	**11460.00**	**15**

10. A. Literature Developed/Published (with full title, author & reference)

(i) KVK Newsletter:
Date of start: 01.04.2021 Periodicity: yearly Copies printed in each issue: 500

(ii) Summary of Literature developed/published

Item	Number
Research papers- International	0
Research papers- National	2
Technical reports	0
Technical bulletins	2
Popular articles - English	1
Popular articles – Local language	1
Extension literature	15
Others if any	-

(iii) Details of Literature developed/published

1. Research articles in journals: Complete citation indicating authors, year of publication, title of publication, journal name, volume and page number in sequence.

1. Preethu K P, Manju J V and Marimuthu, R, (2020) IIHR vegetable special - A boon for vegetable growers in Idukki District*: Trends in Biosciences*. 13(12): 789-792.
2. Manju J V, Preethu K P and Marimuthu R, (20210. Effect of Integrated Nutrient Management on yield of Black pepper*: J Krishi Vigyan.*10(1): 73-76.

2. Technical Reports/ bulletins: Authors name, Title of the technical report, name of publishing KVK, number of pages.

1. Sudhakar S, R.Marimuthu , K.Dhanaphal ,T. Vengatashan , G.Sivakumar (2021) "Pink Pigmented Facultative Methylotrophic Bacteria (PPFMs) as Microbial Farmers in Small Cardamom Plantation".*24th Plantation Crop Symposium*, : 203.

2. Sudhakar S, R.Marimuthu , K.Dhanaphal ,T. Vengatashan , G.Sivakumar (2021) ""Entomopathogenic Nematode Ecology and Biological Control in Small Cardamom Plantation". ".*24th Plantation Crop Symposium*, : 189.

3. Popular articles: Authors name, Title of the article, date of publication, Name of the newspaper/magazine, page no.

1. Manju J V, Preethu K P and Marimuthu R, (2021) Soil test based fertilizer application in small cardamom for sustainable production*: Spice India*. 34(6): 14-16.
2. Preethu, K P, (2021). Improved Techniques-Tissue culture seedlings in ginger cultivation: *Karshaka Shree*. PP.38

4. Extension literature; Authors name, month and year of publication, Title of extension literature like folders, pamphlets etc., name of publishing KVK, number of pages.

1. Sudhakar Soundarajan, Preethu K Paul, Ashiba A, R. Marimuthu, October, 2021, Organic Pest and Disease Management in Small cardamom, BSS publication,12p.
2. Sudhakar Soundarajan, Preethu K Paul, Ashiba A, R. Marimuthu, October, 2021, Organic Pest and Disease Management in Black pepper, BSS publication, 11p.
3. Sudhakar Soundarajan, Preethu K Paul, R. Marimuthu, October, 2021, Scientific Beekeeping, BSS publication, 28p.
4. S Jayababu, Preethu K Paul, October, 2021, Goat Managemental Practices, BSS publication, 8p.
5. S Jayababu Preethu K Paul, 2021, Poultry Management, BSS publication, 8p.
6. Manju Jincy Varghese, Preethu K Paul, R. Marimuthu October, 2021, Soil health management, BSS publication, 4p
7. Manju Jincy Varghese, Preethu K Paul, R. Marimuthu October, 2021, Micronutrients and its importance, BSS publication, 4p

8. Ashiba A, Preethu K Paul, R. Marimuthu October, 2021, Cassava cultivation, BSS publication, 4p
9. Manju Jincy Varghese, Preethu K Paul, R. Marimuthu, October, 2021, Vermicomposting, BSS publication, 4p
10. Jayisy Joseph, Preethu K Paul, R. Marimuthu October, 2021, Organic vegetables for healthy generation, BSS publication, 4p
11. Manju Jincy Varghese, Preethu K Paul, R. Marimuthu, October, 2021, Farmers Bill 2020, BSS publication, 2p.
12. Preethu K Paul, R. Marimuthu, October, 2021, Package of Practices of Yard long bean, BSS publication, 4p.
13. Preethu K Paul, R. Marimuthu October, 2021, Package of Practices of Garden pea, BSS publication, 4p
14. Preethu K Paul, R. Marimuthu October, 2021, Package of Practices of Ginger, BSS publication, 4 p
15. Jayisy Joseph, Preethu K Paul, R. Marimuthu, October, 2021, Value added products of Pineapple, BSS publication, 4p

10.B. Details of Electronic Media Produced

S. No.	**Type of media**	**Title**	**Details**
1	CD / DVD	-	-
2	Mobile Apps	-	-
3	Social media groups with KVK as Admin	Karshaka Koottayma	WhatsApp group with 29 participants of Idukki cardamom growers started on 04.05.2017
		KVK IDK Cardamom group	WhatsApp group with 183 participants of Idukki cardamom growers started on 15.07.2019
		PKVY Group KVK Idukki	WhatsApp group with 50 participants of Idukki organic farmers started on 13.12.2019
		Naalikera Karshakar KVK Santhanpara	WhatsApp group with 43 participants of Idukki coconut growers started on 11.12.2019
		DAESI group 2020	WhatsApp group with 48 participants of Idukki Agri. Input dealers started on 10.01.2020
		KVK FLD & OFT Farmers	WhatsApp group with 25 participants of Idukki Agri. Input dealers started on 10.01.2020
		KVK-DAESI(20-21) group-I	WhatsApp group with 52 participants of Idukki Agri. Input dealers started on 15.09.2020
		KVK-DAESI(20-21) group-II	WhatsApp group with 54 participants of Idukki Agri. Input dealers started on 15.09.2020
		DAMU-ICAR, KVK, Idukki	WhatsApp group with 54 participants of Idukki Agri. Input dealers started on 27.07.2020
		NIPHM Insecticide course group	WhatsApp group with 61 participants of Idukki Agri. Input dealers started on 18.11.2020
		Vazhakrishi-ICAR, KVK, Idukki	WhatsApp group with 110 participants of Idukki Agri. Input dealers started on 28.07.2020
		Animal Husbandry -ICAR, KVK, Idukki	WhatsApp group with 25 participants of Idukki Agri. Input dealers started on 28.07.2020

		ICAR, KVK farmers group	WhatsApp group with 225 participants of Idukki Agri. Input dealers started on 18.05.2021
		ICAR-KVK Mannum Manasum	WhatsApp group with 51 participants of Idukki Agri. Input dealers started on 18.05.2021
		ICAR-KVK-ASCI Bee keeper	WhatsApp group with 25 participants of Idukki Agri. Input dealers started on 16.05.2021
4	Facebook account name	ICAR-KVK(BSS) Santhanpara	2.5k Friends
5	YouTube account name	ICAR-Krishi Vigyan Kendra BSS, Santhanpara, Idukki	You tube channel created on 15.12.2019
6	Others if any		

10.C. Success Stories / Case studies, if any (two/three-pages write-up on each case with suitable action photographs. The Success Stories / Case Studies need not be restricted to the reporting period).

Title 1: Demonstration of IISR- PGPR capsule for growth promotion in Black Pepper

1.Background

Black pepper (piper nigrum L.) commonly called as "black gold" on account of its economic importance is widely cultivated in Idukki district. Black pepper (piper nigrum L.) is the most important spice of the world referred as 'king of spices'. It is commonly called "Black gold" on account of its economic importance. But in India, especially Idukki the productivity of this spice is low owing to several contracts associated with soil health & management. High rainfall in the black pepper growing area made the soil less productive due to leading and erosion losses of nutrients & has effect on growth of the crop. Soil of Black pepper growing areas are low in PH, High Nitrogen, Phosphorus, & medium to low potassium. Black pepper requires porous friable soil , having good drainage & adequate water holding capacity, rich in humus & essential plant nutrients. In Kerala, Black pepper is cultivated in laterite soils, which is acidic, generally low in plant nutrients, low in CEC with weak retention capacity of basis applied as fertilizer. So secondary nutrient &micro nutrient deficiencies are frequent in these soils. Application of secondary micro nutrient is essential for growth of Black pepper. The present investigation was therefore undertaken to study the effect of ISSR IISR PGPR Capsule on yield of Black pepper.

Source of Technology: IISR

2.Intervention process

- Availability of all the basic input resources
- Awareness campaigns on the ill effects of chemical fertilizers
- Hands-on training on Integrated Nutrient Management
- Timely intervention on different stages of growth of Black Pepper
- Advisory services.
- Follow-up visits and technical support as and when required

3.Intervention Technology

- Created a platform, where farmers could understand the importance of PGPR application
- The technology was initiated in the year 2019-21 in the field of 5 progressive farmers.
- Between 2019-21, several trainings, related field demonstrations, field visits and farm tours were organized by the KVK to make the farmers aware, and give them confidence.
- Timely intervention, was provided not just for farming activities, but also for allied support inventory.

4.Impact - Horizontal Spread

KVK intervention to increase the adoption of IISR PGPR reaped successful results as the area under IISR PGPR has increased from 5ha to 20 ha after the demonstration. The number of farmers who expressed their willingness to adopt IISR PGPR has increased in the neighboring areas also through word to word publicity.

5. Impact- Vertical spread.

The impact of IISR PGPR in Black Pepper reflected in the production and productivity during the demonstration period. During 2019-21, the highest yield (2.5kg/vine), number of spikes/vine (188-215), length of spike (14.9-16.5), Number of berries/spike (81-85) respectively were obtained with application IISR PGPR capsule in Black Pepper. The use of microbial capsule increased the availability and absorption of all essential nutrients which led to more uptake and accumulation of nutrients in leaf also higher nutrient uptake by the plants. Increased number of leaves might have increased the photosynthetic activity resulting in higher accumulation of carbohydrates. Relatively higher carbohydrates could have promoted the growth rate and in turn increased yield. Higher yield response owing to application of organics ascribed to improved physical, chemical and biological properties of soil resulting in better supply of plant nutrients, which in turn led to good crop growth and yield.

6.Impact - Economic Gains

Higher net returns of Rs. **153688**/- was recorded during 2019 -20 respectively with the adoption IISR PGPR capsule application in Black pepper. The benefit-cost ratio was also higher (2.70) when compared to the BC ratio obtained through conventional practices (1.58).

Conclusion

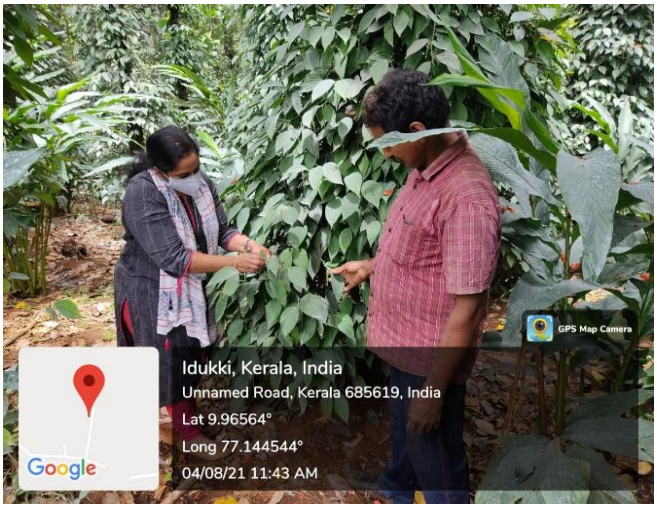
From the field investigations, it can be concluded that Black pepper responded favorably to IISR PGPR application. Higher yield and better B: C ratio was obtained in fields . Moreover, incidence of recurring problems like, spike shedding, Non uniform berry setting also decreased drastically. Application of IISR PGPR capsule positively influenced the yield attributes along with economics. Hence, application of IISR PGPR capsule has been found to be an ideal option to improve yield besides being economically competitive and productive under the soil and climatic conditions of Idukki district.

Steps for Scaling –up:

- Large Scale demonstrations in convergence with State Department of Agriculture will be conducted
- The KVK will ensure that the majority of the growers are benefited by such programmes.
- Inputs will be supplied to the marginal, financially weak and small growers on credit basis and that too at a subsidized rate.
- Farmers will be given trainings to produce Organic manures and fertilizers in their own fields.

Awareness campaign application of IISR- PGPR

Spraying of micronutrient mixture in demo plot



Field visit to IISR PGPR capsule applied Demo field

Observation recording in the demo plot

Title 2: Management of Phytophthora, Fusarium and Rhizome rot diseases in small cardamom using with ICAR-IIHR Arka Microbial Consortium Technology

Background

Arka Microbial Consortia (AMC) is a novel technology released from ICAR-IIHR, Bengaluru for plant nutrition and health management in horticultural crops. It is a consortium of 3 unique bacterial strains viz. Bacillus, Pseudomonas and Azotobacter. It can be applied either through soil and water. This synergistic effect of the formulated microbes can help in sustainable production of crops at a reasonable cost. This technology was introduced by ICAR-KVK, Santhanpara in IDUKKI district of Kerala for addressing the problems faced by small cardamom farmers of the district who were facing various problems like Azukhal disease and Rhizome rot. The technology gained popularity with the farmers and it is being followed by more than 5327 farmers of the district covering an area of 12452 ha and further popularized through FLDs and other extension activities

Interventions

Process:

The production and productivity of small cardamom (*Elettaria cardamomum*) is beset with many constraints and among them plant diseases play a major role. The pathogens such as *Phytophthora meadli , Pythium vexans, Rhizoctonia solani* were mainly responsible for causing an array of diseases in the past in the plantations. The development of plant disease requires suitable host tissue, a compatible pathogen, and prevalence of suitable microclimatic conditions. Rot diseases (Azhukal or capsule rot) caused by *Phytophthora meadii* and clump rot caused by *Pythium vexans* occur in a severe form during monsoon season and results in significant crop loss. The disease also occurs in nursery seedlings in the form of damping off or seedling rot. The incidence of capsule rot or clump rot has been reported as a severe problem in the cardamom plantations a decade ago and loses the yield of small cardamom 50 percent. On the infected leaves, water soaked lesions appear first followed by rotting and shredding of leaves along the veins. The infected capsules become dull greenish brown and decay. This emits a foul smell and subsequently shed. Application of different fungicides to manage these problems in soils, has only added to environmental hazards besides increasing the cost of cultivation.

Technology:

This technology was introduced by ICAR-KVK, Santhanpara in IDUUKI district of Kerala for addressing the problems faced by small cardamom farmers of the district who were facing various problems like Azukhal disease, Rhizome rot, Bacterial blight, dropping of capsules and death of roots due to a variety of factors like lack of nutrient uptake, Phytophthora and Clump rot infection. The Microbial consortium technology was taken up as an on-farm trial and FLDs. It was found that drenching of small cardamom plant with Mixing of 20 gm Arka Microbial Consortium per litre of water and drenching 5-6 litre of this solution per small cardamom plant during May-June , August-September and January months (Three times in a year performed significantly better in terms of reduction in Azukal, Clump rot and Nematodes.

Output and outcome:

Technology assessment and demonstration of the technology has shown that AMC applied small cardamom field were showing early initiation of new shoots during pre-monsoon showers, less nematode (5.8%), less Azukal disease incidence (6.2 %), less Rhizome rot disease incidence (4.3 %) and have also recorded higher dry cardamom yield of (1.85 q/ha) compared to farmers practice yield range of (1.32 q/ha) after 4 years of AMC application.

Impact

Horizontal Spread

The technology gained popularity with the farmers and it is being followed by more than 5000 farmers of the district covering an area of 12000 ha and further popularized through FLDs and other extension activities. After adoption of this technology it saves the cost of chemicals application Rs.4,500 per ha.

Economic gains:

The cost of application of AMC is Rs.4400/ha as compared to regular chemical application where it costs Rs.21000/ha. So, the reduction in cost of cultivation per ha is Rs.65, 000. The total net return gained per ha is Rs.279,000/- due to introduction of AMC technology. . The total economic benefits accrued since its release (2017) is estimated at Rs.27.84 crore during the period 2017 to 2021.

Employment Generation

To accelerate the adoption, KVK, Idukki has established AMC Production Unit at KVK premises with the financial support of Revolving fund and 14,846 kg of AMC has been produced and supplied to 5327 no. of farmers since 2017. So the AMC technology has spread to 12452 ha of the small cardamom plantation areas and the KVK is realizing Rs.11.50 lakhs sale annually.

AMC applied small cardamom field

Microbial Consortium applied small cardamom field visited by Dr.V.Venkatasubramanian, Director, ICAR-ATARI, Bengaluru

Capsule formed in AMC applied small cardamom field

Title 3: Strawberry: A Potential Crop for Doubling the Farmer's Income at Vattavada village in Idukki District, Kerala, South India.

Background

Strawberry (*Fragaria amanassa Duch*) is cultivated throughout the world, but it grows well in a cold and moist climate. The Kerala states provide ample opportunity for the successful cultivation of strawberry due to its mild and pleasant climatic conditions. The farmers of the region are not acutely aware of the economics for the cultivation of strawberry. Mr. Siva has been active in organic and diversified farming for about 10 years which eventually has given a financial triumph to his crop cultivation. After his initial bitter experiences with strawberry farming, Mr. Siva acquired the knowledge of cultivating strawberries through scientific techniques and earned tremendous success.

Interventions
Process:

Encouraged by the ICAR-Krishi Vigyan Kendra, Idukki to take up strawberry cultivation, as the area (Vattavada Village) was highly favorable for growing such a fruit crop, him desire and passion to become one of the progressive farmers of the area finally took off when he was selected as a beneficiary under SHM scheme during the year 2017-2018. At the beginning, the Department assisted her with 6000 nos. of strawberry runners, which he planted in the open field

Technology:

Front line demonstrated on AESA based strawberry cultivation in Vattavada.

Output and outcome:

Mr. Siva Sankar harvests the fruits twice in a month from Feb-July/Aug with the average yield being 200gms/plant/harvest season. (600 kg/harvest) Amounting Rs. 2, 40,000/- per season.

Impact
Horizontal Spread

Encouraged by the technical advice that she received from the KVK-IDUKKI, he is now planning to set up a Minimal Processing Unit in the area by forming one FEOs named Vattavada Strawberry Farmers Club. Besides the assistance that she received from the ATMA, Idukki.

Economic gains:

Currently, he cultivates the highly productive, hybrid Nebula variety of Strawberry saplings. From around 5000 strawberry plants, Mr. Siva generates a weekly income of Rs.25000. According to him strawberry is a crop with very high market potential and profitability

Employment Generation:

Mr. Siva Sankar received support from him family to extend their hands in managing this large scale cultivation. Excluding the expenditure and input support, Mr. Siva Sankar has made a profit of around Rs.2,90,000/- from him strawberry cultivation. Horticulture Revolution has brought a significance changes in the socio-economic conditions and living standard of many people directly and indirectly engaged in the cultivation of strawberry crop. Southern region has eminence potential to become the largest production hub of strawberry in the country.

Field visit to AESA Based pest management Demo field

Field visit to AESA Based pest management Demo field

AESA Based strawberry field visited by Dr.V.Venkatasubramanian, Director, ICAR-ATARI, Bengaluru

Title 4: Integrated nutrient Management in cabbage

1. Background

Cabbage (Brassica oleracea L. Capitata group) is a cool season crop which is becoming more popular because of ample marketing opportunities. However, productivity of Cabbage in Idukki district is much below the potential due to inadequate nutrient management strategies for infertile soils. There is increasing concern about use of synthetic chemical fertilizers and pesticides, which may be responsible for declining yields and deterioration of the soil condition. Decreasing yields over the years also indicate that indiscriminate use of synthetic and organic fertilizers may not be able to sustain vegetable production. Other than the above mentioned, the major problems faced by Cabbage farmers also includes Soil acidity and nutrient disorder makes the less marketability. In such a Scenario, KVK Santhanpara has decided to undertake a demonstration at Sandos colony by integrating organic manures and synthetic fertilizers which has the advantage of restoring soil fertility, sustaining productivity and increasing nutrient management.

Source of Technology: IIHR

2.Intervention process

- Accessibility to the technology and availability of all basic resources
- Training on INM in Cabbage.
- Timely intervention on different stages of growth of Cabbage
- Advisory services
- Follow-up visits and technical support as and when required.

3.Intervention Technology

- The technology was initiated during the years 2020-21 in the fields of 5 farmers
- Supply of adequate inputs and consultancy services
- Timely intervention, was provided not just for farming activities, but also for allied support inventory.

4.Impact - Horizontal Spread

Integrated nutrient management (INM) treatments significantly affected growth characteristics and yield attributes of cabbage. INM interaction affected dry matter of the crop and head weight in cabbage. Cabbage plants treated with the INM had higher head weights of 3.7 kg than the check with 2.28. Root volume in cabbage was also higher in treatments when compared to the farmers practice and soil acidity has decreased.

5.Impact - Vertical spread.

For cabbage, a highest yield of 548 q/ha was obtained during the year 2020-21, when the intervention was carried out. However, better dry matter accumulation, higher yield attributes, and yield of crops in 2020 were also likely in part due to climatic effects as air temperature during 2020 was more favorable for these cool season vegetable crops.

6.Impact - Economic Gains

Net returns, and the cost: benefit ratio were affected by INM treatments. A highest net returns (Rs. 211120·ha−1) and cost: benefit ratio of 2.79 was obtained, which was significantly higher than the check with 1.90.

Conclusion

There is concern that use of inorganic fertilizers alone cannot sustain high levels of productivity and cause deterioration of the soil and environment. The use of INM to improve plant nutrition may address these issues. The technologies of KAU and IIHR when used combination with inorganic fertilizers can have a profound impact on growth, yield and soil health of Cabbage.

Steps for Scaling – up:

- Large Scale demonstrations will be conducted in convergence with ATMA-Idukki.
- The KVK will ensure that the majority of the growers are benefited by such programmes.
- Trainings for popularizing such eco- friendly, bio control methods will be organized frequently
- Brochures and other literary works will be published to give the farmers a quick summary

Demo Plot of cabbage at nursery

Demonstration on application of Pseudomonas

Demonstration on spraying of IIHR Vegetable special

Title 5: Rebirth to paddy farming in Idukki district with high yielding variety Manuratna

1.Background

The agriculture in Kerala has undergone significant structural changes in the form of decline in the share of Gross State Domestic Product and commercialization of agriculture. The gross cropped area and the net sown area in the state have declined over a period of time. During 1999-2000, and 2017-18 districts like, Idukki, Ernakulum, Palakkad, Wayanad and Kannur districts have shown declining growth rate in area under paddy cultivation which is less than the state average. Idukki, known as the spice bowl of the state have shown declining trends in both area and production.

To bring about a change in this negative trend, and to create an awareness regarding the importance of paddy cultivation in maintaining ecological balance, KVK, Idukki has started a demonstration on cultivation of Manuratna variety of paddy in 20120-21. Manuratna, is developed by Agricultural Research station, Mannuthy. Manuratna with a better yield than Uma, Swetha and Karuna will help to bring back the lost glory of Idukki in rice cultivation

Source of Technology: Agricultural Research station, Mannuthy

2.Intervention process

- Accessibility to the technology and availability of all basic resources
- Timely intervention on different stages of growth of Rice
- Advisory services.
- Follow-up visits and technical support as and when required.

3.Intervention Technology

- The demonstration was initiated during the years 2020-21 in 1 ha of area with a broad vision to bring back the farmers to rice cultivation.
- In order to educate the farmers regarding the various requisites of rice production, KVK has conducted numerous trainings regarding the production practices of Manuratna variety

- ❖ Timely intervention, was provided not just for farming activities, but also for allied support inventory.

4.Impact - Horizontal Spread

After the demonstration, the number of farmers who are interested to take up rice farming has increased. This is evident from the increased requests for more trainings and planting materials.

5.Impact - Vertical spread.

During the period 1980-81 to 2011-12, Idukki, have lower negative cumulative growth rate in area compared to the state average. But through this demonstration farming, KVK was able to obtain a better grain yield of 5.98 t/ ha. This will surely prove to be an eye opener for the farmers, that paddy cultivation can also be profitable in their local conditions.

6.Impact - Economic Gains

On the basis of costs incurred and revenue generated an economic analysis was conducted and we obtained a Benefit Cost ratio of 2.39. The ratio point towards the popular myth that only cash crop cultivation is profitable.

Conclusion

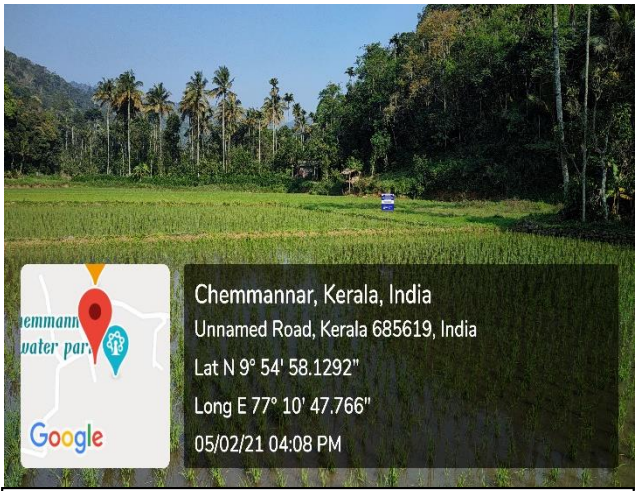
Manuratna variety of paddy when cultivated on 1ha of land was successful with good grain yield.

Steps for Scaling – up:

- ❖ Large Scale demonstrations will be conducted in convergence with line departments of Idukki.
- ❖ The KVK will ensure that the majority of the growers are benefited by such programmes.
- ❖ Trainings will be conducted to popularize paddy framing among the farmers.
- ❖ Brochures and other literary works will be published to give the farmers a quick summary.
- ❖ Feedback will be obtained and their constraints will be met on a timely basis.

Demonstration of application of micronutrient mixture KAU Sampoorna

Demonstration of application of Pseudomonas in Paddy



Demo plot of Manuratna variety of Paddy

Field Visit to FLD plot of Manuratna variety of Paddy

Title 6: Women entrepreneurship: A success

1.Back ground:

Rural women and housewives are the important target group that KVK is trying to educate. Often these women have productive skills that have never been realized or utilized. Normally housewives in their village spend majority of their time for cooking and taking care of children and they are not getting the opportunity for education or skill training. KVK works to change some of these traditional routines, so that women can make choices for themselves. Their potential can be developed through creating awareness, developing their functional capability, and organizing them in Self Help Groups. Over the years, KVK has trained a large number of housewives and organized them into Self Help Groups in neighboring villages. The organization of women's groups has exposed them to the outside world, given them confidence, given them support and a voice. Now, these women are working to improve skills and supplement their family income. The trainings organized by KVK create awareness and imparts knowledge on their rights, capacities, and skills required for day to day activities. This gives confidence especially they feel that they can work in groups to change their traditional role without affecting the family relations as it is an important part of our culture.The group of women attended the hands on training on mushroom production from KVK at their village. Based on the knowledge acquired, they started mushroom cultivation using the inputs received from the KVK as part of the training. After gaining experience in the field, they renovated an unused room of 300 m2 in their village. As paddy straw is easily available in their area, they used it for the mushroom bed preparation. The substrate is disinfected through steaming by aluminum vessel using locally available fire wood as fuel which ensures organic mushroom production. The purely organic produce is being sold as 'Organic mushroom'. By the sale of 3kg – 5kg fresh mushroom daily, they are realizing a net monthly income of Rs. 36,000/-

2.Intervention process

- To assess their educational needs and to provide essential training.
- To enhance their life-skills by extending life-skill education.
- Skill development vocational training.
- Motivation to start an enterprise.
- Technical guidance for starting the unit.
- Details about availability of raw materials.
- Advisory services.
- Follow-up visit.
- Technical back up in running the unit as when required.

3.Process Technology

- Creation of an environment where women can seek knowledge and information and there by empower them to play positive role in their own development and development of society.
- Enhancement of self-image and self- confidence of women and thereby enabling them to recognize their contribution to the economy as producers and workers, reinforcing their need for participating in skill development programmes.
- Provide women and adolescent girls with the necessary support structures and an informal learning environment to create opportunities for education.

4.Output and outcome

For providing employment to women around the Cluster village, we established a Mushroom production unit which gives employment to 15 women for the last 6 months. An average of Rs. 45,000/- is earning by these women every month which supplement their family income and improves their socio economic status in the community. This unit is initiated as part of the women empowerment programme linked with the women Self Help Groups namely Dhanya(SHG) functioning in the cluster villages around Udumbanchola.

5.Impact

Horizontal Spread.

This enterprise aimed at empowering women in Idukki district by providing skill development training to make them self-sufficiency and self-reliant. This enterprise will enable women deprived, poverty sticken, working as domestic servants,single parent and widows are being given opportunity to undergo free training and inturn they earn and live on their own.The entire family will be benefited, will support the beneficiary to establish small scale units.

6.Economic Gains.

They earn an average Income per month is Rs.45,000/-

Employment Generation.

This programme will empower women for their families wellbeing and for their sustainable living, every batch of women / youth- girls will in turn benefit by this programme and will take this as their profession and train other women community and develop their standard of living. Self-employment is the main source of income.So they are engaged more in self- employed manufacturing and trade activities compared to others.

Harvesting Mushrooms by SHG Members

Packaging of Mushrooms

Title 7: Skill development enterprise: A Success.

1.Background

Miss. Bincy Mathew, Puthenpurackal, Muttukaad in Idukki district. She was raised in a below middle class family. She is 7th failed disabled unemployed lady. But all these problems were silly as compared to her great dream. One year ago unfortunately, she got a chance to attend the vocational training on different topics such as Fabric designing, Dry flower making, Jewellery Making, Toys Making, Quilling Art and Home care product preparations conducted under KVK Rural craft discipline. She was inspired by the motivations she received from Mrs. Rachel Skaria, programme assistant of KVK (Rural craft discipline). Her promotion and support brought great changes in Miss. Bincy's life. The topics that impressed her was the Fabric designing and dry flower making. Motivated from the training, she started a Flower making unit and learn to make fabric designing to meet the modern trends of marketing. She has employed three ladies to work along with her.

They visited various forests, hills, valleys and farms and in the neighbouring state of Tamilnadu to collect raw materials like varieties of dried grasses, areca nut sheaths, palm leaves, corn husk and different types of cereals etc. They met the owners of farms and seek their permission to pick up their agricultural waste to make a different varieties of flowers. Now Miss. Bincy is an example how woman can effectively utilize their talents and leisure time for income generation. She has taken bulk orders from fancy stores, local markets and she has participated in flower shows and exhibitions, now she started online marketing. The main finishing touches is done by her and the rest of the work is done by the women working with her. She purchases the raw materials in bulk at a cheaper rate and the work place is her-own house. Therefore, the profit she gains is comparatively higher.

2.Intervention process

- 6 months vocational training.
- Motivation to start an enterprise.
- Technical guidance for starting the unit.
- Details about availability of raw materials given.
- Advisory services.
- Follow- up visits.
- Technical back up in running the unit as when required.

3.Intervention Technology.

To provide skill development vocational training to make her self- sufficient and self-reliant.

Impact

4.Horizontal Spread.

This enterprise will provide skill development for the women dwellers in identified area, families will be benefited directly and creating a ray of hope for better source of livelihood , and live a sustainable life with self – sufficiency and self –reliance.

5.Economic Gains.

She earn an average profit of Rs. 25000/- per month

6. Employment Generation

Motivated from the above mentioned Miss. Bincy's successful enterprise,10 rural women formed a self-help group under KVK Rural Craft discipline, they started designing, jewellery making and production of home care products on a commercial

basis. In addition to this unit, they are planning to start a small fancy store with loan availing from nearby Co-operative bank for self-sufficiency and self-employment. Also they generate employment opportunities for others.

Handicraft prepared by Mrs. Bincy Mathew

Preparation of different Handicraft products

Training on effective waste management in producing items

10.D. Give details of Innovative Methodology or Innovative Approach of Transfer of Technology developed and used during the year: Nil

10.E. Give details of Indigenous Technical Knowledge 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	Scientific Rationale
1	Dairy cattle	Cissus Quadrangularis (Pirandai)-200gm, Cumin seed-30gm, Small Onion-30gm,Ginger-30gm,Garlic-30gm,Pepper-30gm and Turmeric-30gm	Control of Bloat – Tympany in Ruminants especially Dairy cattle	Prevention and control Tympany in ruminants
2	Dairy cattle	Vayambu-20gm,Garlic-20gm and Turmeric-30gm	Control of Ecto parasites in Ruminants	Prevention and control of ecto parasitic infestation in ruminants

10 F. Technology Week celebration: : Nil

Period of observing Technology Week: From to

Total number of farmers visited :
Total number of agencies involved :
Number of demonstrations visited by the farmers within KVK campus :

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Gosthies			
Lectures organized			
Exhibition			
Film show			
Fair			
Farm Visit			
Diagnostic Practicals			
Supply of Literature (No.)			
Supply of Seed (q)			
Supply of Planting materials (No.)			
Bio Product supply (Kg)			
Bio Fertilizers (q)			
Supply of fingerlings			
Supply of Livestock specimen (No.)			
Total number of farmers visited the technology week			

10 E. Recognition and Awards: Please give details about National and State level recognition and awards

PART XI – SOIL AND WATER TEST

11.1 Soil and Water Testing Laboratory

A. Status of establishment of Lab :

1. Year of establishment :2007
2. List of equipment's purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost	Status
1.	LPG Cylinder	1	4600.00	working
2.	Water bath WDB-2 350'400'100mm 12 holes	1	4815.00	working
3.	Machinery for Homogensing (khan shaker) Model LKS2 platform size 75cmx43cmx10cm	1	20,880.00	Not working
4.	Rotary Shaker	1	16,200.00	Not working
5.	Machinery for drying (Hot air oxen) with digital temperature control, size 455'455'455'	1	13,725.00	Not working
6.	Conductivity meter (PH meter Eutech 510)	1	21,935.00	Not working
7.	Genesis 20 visible Spectrophotometer meter	1	1,12,499.00	Not working
8.	CITIZEN Physical Balance Model CTL-600	1	8,991.00	Not working
9.	Microprocessor based conductivity	1	13,500.00	Not working
10.	Micro Processor Based Flame Photometer with N, K &Ca FILTERS & Compressor	1	45,000.00	Not working
11.	Electronic Automatic KEL PLUS Micro processor Based Twelve Place Micro Block Digestion System	1	97,043.00	Not working
12.	Electronic Balance Model: CP 2245 Srl.No.18606016	1	1,00,000.00	Not working
13.	Hot plate	1	5,400.00	Not working
	Total	**13**	**252089.00**	

B. Details of samples analyzed since establishment of SWTL:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	35141	2882	30	**2072050**
Water Samples	0	0	0	**0**
Plant samples	0	0	0	**0**
Manure samples	0	0	0	**0**
Others (specify)	0	0	0	**0**
Total	**35141**	**2882**	**30**	**2072050**

C. Details of samples analyzed during 2021:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	388	255	15	174600
Water Samples	0	0	0	0
Plant samples	0	0	0	0
Manure samples	0	0	0	0
Others (specify)	0	0	0	0
Total	388	255	15	174600

11.2 Mobile Soil Testing Kit

A. Date of purchase and current status

Mobile Kits	Date of purchase	Current status
Two kits	21-06-2017	Working (No refilling Possible)

B. Details of soil samples analyzed during 2021 and since establishment with Mobile Soil Testing Kit:

	During 2020	During 2021	Cumulative progress (Total
Samples analyzed (No.)	491	388	879
Farmers benefited (No.)	486	255	741
Villages covered (No.)	20	15	35

11.3 Details of soil health cards issued based on SWTL & Mobile Soil Testing Kit:

Particulars	Date (s)	Villages (No.)	Farmers (No.)	Samples analyzed (No.)	Soil health cards issued (No.)
SWTL					
Mobile Soil Testing Kit	01-01-21 31-12-21	15	255	388	388

11.4 World Soil Health Day celebration

Sl. No.	Farmers participated (No.)	Soil health cards issued (No.)	VIPs (MP/ Minister/MLA attended (No.)	Other Public Representatives participated	Officials participat (No.)	Media coverage (No.)
1.	65	30	0	0	07	1

PART XII. IMPACT

12.A. Impact of KVK activities (Not 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)
Popularization of innovative approach to manage the deterring crop raiding wild elephants, monkeys and wild boars in hill agriculture at Idukki District, Kerala	210	80	2,75,600.00/ha	4,56200.00/ha
Doubling Income of Small Cardamom Farmer (Mr. Raju) of Idukki District, Kerala through Pollination Service by *Apis cerna indica* Colonies and Value Addition of bee products	1250	65	2,45,000.00/ha	5,21,000.00/ha
Biological Control of Cardamom Stem borer or Capsule borer or Panicle borer Management with different bio-pesticides and parasites	405	49	2,89,000.00/ha	3,49,000.00/ha
Empowering the livelihood of tribal farmers of Devikulam, Idukki in Kerala through small cardamom, Black pepper, ginger cultivation, Beekeeping and Poultry birds	100	71	1,99,000.00/ha	310,500.00,
Biological Control of Cardamom Root Grub Management with Entomo Pathogenic Nematodes (EPN)	11,000	98	3,88,000.00	5,16,000.00
Novel farming innovation for high production of black pepper through ICAR-IISR column method in Idukki	75	55	2,65,000.00	3,89,100.00
Bio-intensive root knot nematode management in carrot	311	89	1,15,000.00	2,10,000.00
Cardamom special	520	65	3,11,100/ha	4,52,000/ha
Pepper Special	415	45	36,522/ha	3,22,226/ha
Banana Special	230	39	5,82,100/ha	6,50,000/ha
Vegetable Special	200	55	3,65,000/ha	5,40,000/ha

NB: Should be based on actual study, questionnaire/group discussion etc. with ex-participants.

12.B. Cases of large scale adoption (Please furnish detailed information for each case with suitable photographs): Nil

12.C. Details of impact analysis of KVK activities carried out during the reporting period: Nil

PART XIII – LINKAGES

13A. Functional linkage with different organizations

Name of organization	Nature of linkage
ATMA	Group Meetings, Field Visits, Trainings, EAP and Demonstrations
Department Of Animal Husbandry	Field Visits, Trainings, Demonstrations
Department of Forestry	Tribal Development Projects, Trainings
Department of agriculture	Field Visits, Trainings, Demonstrations
VFPCK	Field Visits, Trainings
SFAC	Field Visits, Trainings
Coffee Board	Trainings, Field Visits and Demonstrations
Spices Board	Trainings, Field Visits
NABARD	FPO formation and related activities
Kerala state cooperative bank	Relation with Farmer club formation
MANAGE	DAESI programme
DIC	Trainings, Demonstrations
VHSC	Trainings
District Kudumbasree Mission	Group formation, Training and demonstrations

FAI	Workshop, Seminar and Soil Health campaign
NLC	Technology trial (Humic acid)
IFFCO	Soil Health awareness campaign
SPIC	Soil Health awareness campaign
Tribal Development Board	Training and technology sharing
Social Development Department	Training
Block and District panchayat	Training
NBAIR	Project implementation

NB The nature of linkage should be indicated in terms of joint diagnostic survey, joint implementation, participation in meeting, contribution received for infrastructural development, conducting training programmes and demonstration or any other

13B. List of special programmes undertaken by the KVK and operational now, which have been financed by State Govt./Other Agencies

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Insecticides Management for Inputs dealers	08/12/21	NIPHM	1,35,000.00
Diploma in Agricultural extension services for input dealers	May	MANAGE	1304623.00
Supply of Poultry Layer Birds	September 2021	NBAIR	75000.00

13C. Details of linkage with ATMA

Coordination activities between KVK and ATMA

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	**Meetings**	DMC Meetings, AMC and GB Meetings, Proposal finalization	3	6	-
02	**Research projects**				
03	**Training programmes**	Trainings	2	6	-
04	**Demonstrations**				
05	**Extension Programmes**				
	Kisan Mela				
	Technology Week				
	Exposure visit				
	Exhibition				
	Soil health camps				
	Animal Health Campaigns				
	Others (Pl. specify)				
06	**Publications**				
	Video Films				
	Books	Organic farming in small cardamom and Black pepper, beekeeping, Natural farming next farming situation	1	0	-
	Extension Literature				

	Pamphlets				
	Others (Pl. specify)				
07	**Other Activities** (Pl.specify)				
	Watershed approach				
	Integrated Farm Development				
	Agri-preneurs development				

13D. Give details of programmes implemented under National Horticultural Mission : Nil

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Constraints if any

13E. Nature of linkage with National Fisheries Development Board : Nil

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks

13F. Details of linkage with RKVY

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks
1.	Seed village programme on tuber crops	ICAR-CTCRI	8,35,000.00	8,35,000.00	-

13G. Kisan Mobile Advisory Services

Month	No of Advisories	Message type (Text/Voice)	SMS/voice calls sent (No.)						Total SMS/Voice calls sent (No.)	Farmers benefitted (No.)
			Crop	Livestock	Weather	Marketing	Awareness	Other enterprises		
January	1	Text	1	1	0	0	0	0	2	2530
February	4	Text	2	2	0	0	0	0	4	10730
March	0	-	0	0	0	0	0	0	0	0
April	1	Text	1	0	0	0	0	0	1	1960
May	3	Text	3	0	0	0	0	0	0	6028
June	2	Text	2	0	0	0	0	0	0	4382
July	0	-	0	0	0	0	0	0	0	0
August	2	Text	2	0	0	0	0	0	2	4806
September	3	Text	0	3	0	0	0	0	0	7209
October	2	Text	0	2	0	0	0	0	0	4806
November	0	-	0	0	0	0	0	0	0	0
December	4	Text	2	2	0	0	0	0	0	10790
Total	**22**		**13**	**10**	**0**	**0**	**0**	**0**	**9**	**53241**

PART XIV- PERFORMANCE OF INFRASTRUCTURE IN KVK

14A. Performance of demonstration units (other than instructional farm)

Sl. No.	Demo Unit	Year of establishment	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1	Small cardamom Nursery	2021	1	Different varieties of small cardamom	7000	-	2,10,000.00	-	Planting materials will be supply in the season
2	IISR-Black pepper-Column method	2021	0.12	Different varieties of black pepper	-	-	-	-	Black pepper s in clumping stage
3	Vermi compost	2018	0.20	-	-	-	-	-	-
4	VAM unit	2019	0.01	-	VAM	1889	143564.00	226680.00	-

14B. Performance of instructional farm (Crops) including seed production

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.	Cost of inputs	Gross income	
Cereals									
Pulses									
Oilseeds									
Fibers									
Spices & Plantation crops									
1. Small cardamom	05.06.2019	3No (Perennial)	2	Njallani, Thiruthali	Capsules	175	1,21,450.00	2,66,250.00	-
Floriculture									
Fruits									
Vegetables 1. Potato	05.09.2021	26.12.2021	0.02	Kufri Neelkanth, Kufri Karan, Kufri Surya	Tuber	200 Kg	8000.00	20000.00	-
Others (specify)									

14C. Performance of production Units (bio-agents / bio pesticides/ bio fertilizers etc.,)

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1.	Pseudomonas	7722	604840	634140	-
2.	Trichoderma	7625	576745	613921	-
3.	Beauveria	515	41200	36050	-
4.	Metarhizium	492	39360	34440	-

5.	EM Solution	896	89600	179200	-
6.	Microbial Consortium	1894	170460	208340	-
7.	Bacillus	390	19060	18140	-
8.	Neem oil	341	85250	34100	-
9.	Azospirillum	638	95700	95700	-
10	Phosphobacteria	634	93300	93300	-
11.	Potash bacteria	634	95100	95100	-
12	AMC	2380	297500	253200	-
13	Decomposer	1549	49410	87840	-
14.	EPN	780	327600	195000	-
15.	PPFM	1940	174600	291000	-
16.	Paecilomyces	1319	149850	164875	-
17	VAM	1889	147342	226680	-

14D. Performance of instructional farm (livestock and fisheries production)

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1	Poultry	Red BRO, BV 380	Layer	54	28000.00	39120.00	-
2	Duck	Vigova	Layer	20	6970.00	1200.00	-

14E. Utilization of hostel facilities: nil

Accommodation available (No. of beds)

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
January			
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			

14F. Database management

S. No	Database target	Database created
1	Farmers database (FLD, OFT, KMAS, Training)	Database for (2020-21)

14G. Details on Rain Water Harvesting Structure and micro-irrigation system : Nil

(a) Rain Water Harvesting Structure

	Expenditure (Rs.)	Details of infrastructure	Activities conducted	Quantity of water	Area irrigated /

Amount sanction (Rs.)		created / micro irrigation system etc.	No. of Training programmes	No. of Demonstration s	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)	harvested in '000 litres	utilization pattern

(b) Micro-irrigation systems

Amount sanction (Rs.)	Expenditure (Rs.)	Details of infrastructure created / micro irrigation system etc.	Activities conducted					Quantity of water harvested in '000 litres	Area irrigated / utilization pattern
			No. of Training programmes	No. of Demonstration s	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)		

PART XV – SPECIAL PROGRAMMES

15.1 Paramparagath Krishi Vikas Yojana (PKVY): Nil

Sl No.	Name of cluster village	Initial soil fertility status (Average of cluster village)				Facilities created for organic source of manure	Name of Crops cultivated	Variety	Organic inputs applied including bio-agents and botanicals treatment	Yield (q/ha)	Economics	
		Aval. N	Aval. P	Aval. K	OC %						Cost of cultivation (Rs/ha)	Net returns (Rs/ha)
1	1.											
	2.											
2	1.											
	2.											

15.2 District Agriculture Meteorological Unit (DAMU): Nil

	Agro advisories			Farmers awareness programmes	
Sl No.	No of Agro advisories generated	No of farmers registered for agro advisories	No of farmers benefitted	No of programmes	No of farmers benefitted
1					

15.3 Fertilizer awareness programme organised

State	Name of KVK	Details of Activities/programme Organised	Number of Chief Guests	No. of Farmers attended program	Total participants
Kerala	KVK, Idukki	Fertilizer awareness Campaign	4	101	105

15.4 Seed Hub: Nil

Crops	*Variety*	*Year of release*	*Production*				*No of farmers benefited/Sold to no. of farmers*	*Quantity seed sold (q)*
			Target (q)	*Area (ha.)*	*Actual Production (q)*	*Category (FS/CS)*		

15.5 CFLD on Oilseeds: Nil

Sl.No.	Crop	Varieties demonstrated and check	Allocated		Implemented	
			Area (ha)	Demos (No.)	Area (ha)	Demos (No.)
	Total					

15.6 CFLDs on Pulses: Nil

Sl.No.	Crop	Varieties demonstrated and check	Allocated		Implemented	
			Area (ha)	Demos (No.)	Area (ha)	Demos (No.)
	Total					

15.7 Krishi Kalyan Abhiyan (Aspirational districts): Nil

Type of Activity	Date(s) conducted	No. of farmers (General)			No. of farmers SC / ST			No. of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total

15.8 Micro-Irrigation: Nil

Type of Activity	Date(s) conducted	No. of farmers (General)			No. of farmers SC / ST			No. of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total

15.9 Tribal Sub-Plan (TSP)

Farmer Training	Women Farmer Training	Rural Youths	Extension Personnel	OFT (No of Techno	Number of farmers involved	Particip ants in	Production of	Production of	Production of	Testing of

No. of Trainings/Demos	No. of Farmers	No. of Trainings/Demos	No. of Women Farmers	No. of Trainings/Demos	No. of Youths	No. of Trainings/Demos	No. of Ext. Person	logiess)	On-farm trials	Frontline demos	Mobile agro-advisory to farmers	extension activities (No.)	seed (q)	Planting material (Number in lakh)	Live stock strains (Number in lakh)	fingerlings (Number in lakh)	Soil, water, plant, manures samples (Number)
7	100	7	28	7	31	1	06	0	0	1	100	100	0	0	0	0	0

15.10 SCSP: Nil

Farmer Training		Women Farmer Training		Rural Youths		Extension Personnel		OFT (No of Technologiess)	Number of farmers involved			Participants in extension activities (No.)	Production of seed (q)	Production of Planting material (Number in lakh)	Production of Live stock strains (Number in lakh)	Production of fingerlings (Number in lakh)	Testing of Soil, water, plant, manures samples (Number)
No. of Trainings/Demos	No. of Farmers	No. of Trainings/Demos	No. of Women Farmers	No. of Trainings/Demos	No. of Youths	No. of Trainings/Demos	No. of Ext. Person		On-farm trials	Frontline demos	Mobile agro-advisory to farmers						

15.11 NARI: Nil

Activity	Achievement	
	Number of activity	No. of farmers/ beneficiaries
OFTs – Nutritional Garden (activity in no. of Unit)		
OFTs – Bio-fortified Crops (activity in no. of Unit)		
OFTs – Value addition (activity in no. of Unit/Enterprise)		
OFTs - Other Enterprises (activity in no. of Unit/Enterprise) (activity in no. of Unit/Enterprise)		
FLDs – Nutritional Garden (activity in no. of Unit)		
FLDs – Bio-fortified Crops (activity in no. of Unit)		
FLDs – Value addition (activity in no. of Unit/Enterprise)		
FLD- Other Enterprises (activity in no. of Unit/Enterprise) (activity in no. of Unit/Enterprise)		
Trainings		
Extension Activities		

15.12 KVK Portal

No. of Events added by KVKs	No. of Facilities added by KVKs	Filled Report on Package of Practices (Y/N)				Filled Profile Report (Y/N)							
		Crop	Livestock	Fisheries	Horticulture	Employees	Posts	Finance	Soil Health Cards	Appliances	Crops	Resources	Fish
552	3	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	N

15.13 KSHAMTA: Nil

Number of Adopted Villages	No. of Activities		No. of farmers benefited	
	Demo	Training	Demo	Training

15.14 DFI

Sl. No.	District	Taluks	Villages	Farmers (No.)	Average Benchmark Income (Rs/year)	Crops/ enterprises	KVK Interventions	Additional Net Income generated due to KVK interventions (Rs/year)	Total income of farmer (Rs/year)
1	Idukki	Udumbanchola	Udumbanchola	120	235595.00	Cardamom, Fruits/ Vegetables, Dairy	GAP in cardamom, Apiculture, Mushroom, Value addition, Hygienic milk production	276965.00	512560.00
2.	Idukki	Devikulam	Vattavada	50	45840.00	Strawberry, carrot, vegetables, Passion fruit, Poultry	Value addition, GAP in carrot, nutrient management, IPDM, poultry management	116993.00	162833.00

PART XVI - FARMERS FEEDBACK ON ASSESSED/DEMONSTRATED TECHNOLOGIES OF CROPS / LIVESTOCK

16.1 Farmers feedback on performance of crop varieties/hybrids

Sl. No.	Crop varieties/hybrids assessed/ demonstrated	Farmer's feedback
1	Potato- Kufri Karan	Kufri Karan, tolerant variety late blight – reduced the amount of fungicidal usage among farmers
2	Small cardamom - IISR Kodagu Sugasini	This variety is performing best in the climatic conditions as this variety is tolerant against drought and reduced incidence of pest and disease incidence
3	Manuratna	High yielding nature of the variety makes the farmer more profitable in paddy cultivation. Farmers could reduce the cost in plant protection since the variety has resistance to pest attack. Cooking quality is good

16.2 Farmers feedback on performance of agronomic practices

Sl. No.	Agronomic practices	Farmer's feedback
1	Precision farming in strawberry cultivation	Mulching practiced in strawberry increased the water use efficiency, reduced pest, disease and weed population

16.3 Farmers feedback on performance of pest and disease management in crops

Sl. No.	Pest and disease management in crops	Farmer's feedback
1.	IPDM in small cardamom	Scientifically pest and disease management method are giving good results when compared with the traditional methods of control
2.	GAP in Black pepper	Pesticide residual free black pepper can be produced by employing GAP
3.	Organic vegetable cultivation	Demand of consumption of pesticide free vegetables was increased from the homesteads itself
4.	AESA based strawberry cultivation	AESA based technology was accepted and spread among the co-farmers
5.	AESA based Cool season vegetables cultivation	AESA based technology was accepted and spread among the co-farmers

16.4 Farmers feedback on performance of farm machinery technologies

Sl. No.	Farm machinery technologies	Farmer's feedback
1	Paddy trans planter	Farmers are happy in transplanting the paddy seedlings due to labor shortage

16.5 Farmers feedback on performance of livestock and fisheries technologies

Sl. No.	Livestock/fisheries technologies	Farmer's feedback
1	Control of Bloat – Tympany in Ruminants especially Dairy cattle by using Cissus Quadrangularis (Pirandai)-200gm,Cumin seed-30 gm, small Onion-30gm,Ginger-30gm,Garlic-30gm,Pepper-30gm and Turmeric-30gm Grind all the ingredients mix with water and drench orally for 2 days for control of tympany.	Well adapted effective farmer friendly technology

2	Control of Ecto parasites in Ruminants especially Dairy cattle & Goats by using Vayambu-20gm,Garlic-20gm and Turmeric-30gm Grind all the ingredients mix with water and apply over the animal skin for control of ecto parasites.	Well adapted for high ranges as well as farmer friendly technology with no side effects.

PART XVII - FINANCIAL PERFORMANCE

17A. Details of KVK Bank accounts

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
With Host Institute	State Bank of India	Rajakumary	70453	Bapooji Sevak Samaj Krishi Vigyan Kendra	57060836995	6850002932	SBIN0070453
With KVK	State Bank of India	Rajakumary	70453	Bapooji Krishi Vigyan Kendra (Revolving Fund)	67155078042	6850002932	SBIN0070453

17B. Utilization of KVK funds during the year 2020-21 (Rs. in lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	163.57	163.57	163.57
2	**Traveling allowances**	1.0	1.0	1.0
3				**Contingencies**
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	4.23	4.23	4.23
B	POL, repair of vehicles, tractor and equipments	1.20	1.20	1.226
C	Meals/refreshment for trainees (ceiling up to Rs.40/day/trainee be maintained)	1.0	1.0	1.0
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	0.6	0.6	0.6
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	2.45	2.45	2.45
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	0.82	0.82	0.82
G	Training of extension functionaries	0.25	0.25	0.25
H	Extension Activities	0.25	0.25	0.25
I	Farmers Field School	0.30	0.30	0.30
J	Maintenance of buildings	0.60	0.60	0.60
K	Establishment of Soil, Plant & Water Testing Laboratory	0.25	0.25	0.25
L	Nutri garden	0.25	0.25	0.25
M	Video Production	0.30	0.30	0.30
J	Library	0.05	0.05	0.05
TOTAL (A)		**177.12**	**177.12**	**177.14**

B. Non-Recurring Contingencies				
1	**Works**	0	0	0
2	**Equipment including SWTL & Furniture**	2.43	2.43	2.43
3	**Vehicle** (Four wheeler/Two wheeler, please specify)	0	0	0
4	**Library** (Purchase of assets like books & journals)	0	0	0
TOTAL (B)		2.43	2.43	2.43
C. REVOLVING FUND		0	0	0
GRAND TOTAL (A+B+C)		**179.55**	**179.55**	**179.57**

17C. Status of revolving fund (Rs. in lakh) for the last three years

Year	Opening balance as on 1st January	Income during the year	Expenditure during the year	Net balance in hand as on 31st December of each year
January to December 2019	1482646	4639886	4468127	1654405
January to December 2020	1654405	8524647	5783480	4395572
January to December 2021	4395572	7136936	6585586	4946922

18. Details of HRD activities attended by KVK staff

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Preethu K Paul	Subject Matter Specialist (Agricultural Extension)	GAP in Israel and its application in Indian economy	Online- NITI Ayog, GOI	12.01.2021
Preethu K Paul	Subject Matter Specialist (Agricultural Extension)	PMFME ODOP HRD training for District level EDP trainers	NIFTEM, Sonipat	10.03.2021 - 19-03.2021
Manju Jincy Varghese	Subject Matter Specialist (Soil Science)	Capacity development programme on virtual farmers field school	ATARI VIII, UAHS,SAHIMOGA	14.06.2021
Sudhakar. S	Subject Matter Specialist (Plant Protection)	Capacity development programme on virtual farmers field school	ATARI VIII, UAHS,SAHIMOGA	14.06.2021
Ashiba A	Subject Matter Specialist (Agronomy)	Capacity development programme on virtual farmers field school	ATARI VIII, UAHS,SAHIMOGA	14.06.2021
Preethu K Paul	Subject Matter Specialist (Agricultural Extension)	Capacity development programme on virtual farmers field school	ATARI VIII, UAHS,SAHIMOGA	14.06.2021
Manju Jincy Varghese	Subject Matter Specialist (Soil Science)	Agri-export management	Manage, Hyderabad	15.06.2021-0-17.06.2021
Preethu K Paul	Subject Matter Specialist (Agricultural Extension)	Leadership development of rural youth: Opportunities and adventures	COA, Udaipur	22.06.2021
Preethu K Paul	Subject Matter Specialist (Agricultural Extension)	Sustainable integrated cropping and farming system models with special reference to banana for enhanced income of farmers	NRCB, Tiruchirapalli	07.07.2021

Dr .S. Jayababu	Subject Matter Specialist (Animal Husbandry)	Livestock entrepreneurship development through dairy farming	KVK Karnool	08.08.2021
Dr .S. Jayababu	Subject Matter Specialist (Animal Husbandry)	National workshop on challenges and opportunities in tree ranging and captive elephant management	College of vetinery science, Ayodhya, UP	11.08.2021
Preethu K Paul	Subject Matter Specialist (Agricultural Extension)	Road map for KVK to enhance mushroom production and consumption	IIHR Bangalore	09.08.2021-11.08.2021
Rachel Skariakutty	Programme Assistant(Rural Craft)	Road map for KVK to enhance mushroom production and consumption	IIHR Bangalore	09.08.2021-11.08.2021
Sudhakar. S	Subject Matter Specialist (Plant Protection)	Hi-tech potato cultivation	ICATR-CPRI, Modipuram	11.11.2021-13.11.2021
Preethu K Paul	Subject Matter Specialist (Agricultural Extension)	Agrobiodiversity conservation and use for climate resilience and livelihood improvement of small holder framers.	ICAR-VPKAS, Almora	23.12.2021

19. **Please include any other important and relevant information which has not been reflected above (write in detail). :**

19.A. FPO Formation

Adimali Block	Application for registration with all relevant documents submitted at Assistant registrar of cooperative society, Adimali
Devikulam Block	Application for registration with all relevant documents submitted at Assistant registrar of cooperative society, Adimali