

ANNUAL REPORT 2016-17

(FOR THE PERIOD APRIL 2016 TO MARCH 2017)

ICAR - KRISHI VIGYAN KENDRA (IDUKKI)

PART I - GENERAL INFORMATION ABOUT THE KVK**1.1. Name and address of KVK with phone, fax and e-mail**

KVK Address	Telephone		E mail	Web Address
	Office	Fax		
ICAR - Krishi Vigyan Kendra, Bapooji Sevak Samaj, Pethotty P.O., Santhanpara, Idukki (Dt.), Pin-685619, Kerala.	04868 – 247541, 247715.	Nil	kvksanthanpara@gmail.com	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		
Bapooji Sevak Samaj, Kakkattu, Meenadam 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. Binu John Sam , Programme Coordinator i/c.	04868247048	+91 9061628822	binujohnsambkvk@gmail.com

1.4. Year of sanction: 1994.**1.5. Staff Position (as on 31st March 2016)**

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M/F	Discipline	Highest Qualification (for PC, SMS and Prog. Asst.)	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/OBC/Others)
1	Programme Coordinator	Vacant	Programme Coordinator	-	-	-	-	-	-	-	-
2	SMS	Dr. S. Jayababu	Subject Matter Specialist	M	Animal Science	B.V.Sc. & AH	15600-39100	21000	19-06-1995	Permanent	Others
3	SMS	Manju Jincy Varghese	Subject Matter Specialist	F	Soil Science	M.Sc. Agriculture (Soil Science)	15600-39100	21000	10-01-2011	Permanent	Others
4	SMS	Dr. Binu John Sam	Subject Matter Specialist	M	Horticulture	Ph.D. Horticulture	15600-39100	21000	17-01-2011	Permanent	Others
5	SMS	Sudhakar Soundarajan	Subject Matter Specialist	M	Plant Protection	M.Sc. Agricultural Entomology, MBA	15600-39100	21000	27-01-2011	Permanent	OBC
6	SMS	Vacant	Subject Matter Specialist	-	Agronomy	-	-	-	-	-	-
7	SMS	Vacant	Subject Matter Specialist	-	Agri. Extension	-	-	-	-	-	-
8	Programme Assistant (Lab Tech.) / T-4	Jayisy Joseph	Programme Assistant	F	Home Science	M. Sc. Home Science (Extension for Rural Development)	9300-34800	13500	20-06-1995	Permanent	Others
9	Programme Assistant (Computer) / T-4	Biju Narayanan	Programme Assistant	M	Computer Application	M.C.A., PGDCA	9300-34800	13500	01-10-2007	Permanent	OBC
10	Programme Assistant/ Farm Manager	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	P. Nandagopal	Driver	M	-	-	5200-20200	7200	05-06-1995	Permanent	OBC
14	Auxiliary Staff	K.T. Mathew	Peon/ Messenger	M	-	-	5200-20200	7000	05-06-1995	Permanent	Others

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15	Supporting Staff-1	K.O. Jose	Skilled Supporting Staff-1	M	-	-	5200-20200	7000	05-06-1995	Permanent	Others
16	Supporting Staff-2	P. Sabu	Skilled Supporting Staff-2	M	-	-	5200-20200	7000	05-06-1995	Permanent	Others

1.6. Total land with KVK (in ha) : 27.60 ha.

S. No.	Item	Area (ha)
1	Under Buildings	0.074 ha
2.	Under Demonstration Units	0.5 ha
3.	Under Crops	0.5 ha
4.	Orchard/Agro-forestry	0.5 ha
5.	Others	26.026 ha

1.7. Infrastructural Development:

A) Buildings

Sl. 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	-	-	-	-	-	-
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	-	-	-
5	Fencing	NA	-	-	-	-	-	Urgent requirement as the area is constantly facing intuition of wild animals and other intruders
6	Rain Water harvesting system	NA	-	-	-	-	-	-
7	Threshing floor	NA	-	-	-	-	-	-
8	Farm godown	NA	-	-	-	-	-	-
9	Vehicle garage							Urgently required

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Mahindra Bolero SLE	May - 2012	5,78,380.36	87660	Good condition.
Honda Aviator	March - 2009	50,000.00	12146	Running condition
Motor Bike (Suzuki Shogun)	January - 1995	37,972.78	8864	Not in use.

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
A.V. aids (Specify)			
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, SRX50DX	2003	1,825.00	Good Condition
Ahuja Mike SHM 1000XLR	2003	2,295.00	Not in use
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
Soil Science Lab Equipments (Specify)			
KEMI HOT PLATE with Energy Regulator	2006	5,400.00	Bad
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	Under use but needs repair
Electronic Automatic KEL PLUS model KES 12L (Nitrogen Analyzer)	2006	97,043.00	Under use but needs repair
Conductivity Meter (PH Meter Utech 510)	2006	21,935.00	Under use but needs repair
HOT AIR OVEN	2006	13,725.00	Good
Water bath WDB2 350 x 400 100mm Size 12	2006	41,895.00	Good
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	Bad and requires new
Online UPS System with Battery	2006	36,916.00	Needs repair
Fume Cupboard KEMI	2006	2,68,192.00	Good
Bio-control Lab Equipments			
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	Bad and required new
Auto Clave	2000	19,000.00	Bad and required new
Step up Stabilizer	2008	4,595.00	Good
Other Equipments			
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.
Computer with Printer	2003	49,750.00	Obsolete, needs to be replaced by a laptop & printer
Photostat Machine	2003	80,000.00	Bad and outdated machine, urgently requires a new machine
Brush Cutter	2009	23,726.00	Good, needs servicing
Fax Machine	2009	15,000.00	Needs servicing

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Laptop Computer (DELL Studio 14 N)	2010	37,150.00	Good
Inkjet Printer (Epson TX 111 AIO)	2010	1,779.00	Good

1.8. Details SAC meeting conducted in 2016-17

Sl. No.	Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
1	30/01/2017	22	6	<ul style="list-style-type: none"> • Need for taking all the technologies to the doorsteps of farmers. • Plan and involves the partners to utilize the infrastructure and other facilities of KVK to the maximum. • Have partnership with all production organizations of this district. • Steps to improve soil Fertility management & INM to make sure the progressive farmers to adopt soil testing, soil conservation measures and also soil tested based recommendations. • Package of practices of all crops will be concentrated more in future. • In forthcoming action plan of KVK highlight and prior importance for Drought management. • Location specific crop cultivation has to be practiced. • Tuber and Pulses should be given priority. • Fertiliser recommendation and soil health status has to be given priority for all crop cultivation. • Bio hub activities should be spread to all other KVK's • Marketing outlet for seedlings should be made in outer area. • Pesticide residue lab should be made available in KVK campus. • Honeybee and Strawberry should be concentrated more in KVK. • Farmer innovations have to be identified. • Concentrate more on dry flower as well as fresh flower. • More training programmes should be conducted and their follow up has to be practiced. • Season wise crop insurance scheme has to be concentrated for all crops. • Lead bank has to be link with all crops training programmes. • Concentrate more revenue training programmes. 	All these recommendations shall be prioritized and taken up during the next Financial Year based on availability of funds.

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	Tea plantation
5	Vegetables (Bitter gourd & Cowpea)
6	Cool season vegetables in Devikulam Block
7	Banana cropping
8	Rubber as mono-crop
9	Dairy cattle & Poultry production Management

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 11° 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.	Cheenkuzhy 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	32723	7232	250
2	Pepper	87274	30919	354
3	Banana	2665	23265	8730
4	Rice	1819	4744	2608
5	Coconut	17012	80 million nuts	5209 (Numbers/ha)
6	Tapioca	6223	240290	37883
7	Coffee	12915	8150	616
8	Tea	24648	44192	1514

Source of Data: - Economics and Statistics Department, Kerala State.

2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)
		Maximum	Minimum	
April 2016	123.4	31.1	20.4	92.4
May 2016	13.2	29.8	21.0	91.4
June 2016	99.5	27.6	17.8	95.4
July 2016	92.3	24.7	17.9	99.0
August 2016	111.7	22.5	17.5	99.4
September 2016	85.2	26.7	17.2	95.5
October 2016	65.1	26.7	17.5	94.5
November 2016	24.5	26.6	15.6	94.3
December 2016	1.4	25.4	15.4	90.1
January 2017	1.2	24.3	12.4	90.4
February 2017	2.1	25.8	13.3	90.1
March 2017	2.4	28.9	17.4	91.0

Source of Data: - Indian Cardamom Research Institute, Myladumpara, Idukki.

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

Category	Population	Production	Productivity
Cattle			
<i>Crossbred</i>	160581	434938 ton (Milk) & 13090.87 MT (meat)	-
<i>Indigenous</i>	-	4309 ton (milk)	-
Buffalo	7677	4481 ton (milk) & 12385.62 MT (meat)	-
Sheep			
<i>Crossbred</i>	35	-	-
<i>Indigenous</i>	-	-	-
Goats	128474	11898 ton (Milk) & 8092.10 MT (meat)	-
Pigs			
<i>Crossbred</i>	14131	16136.5 MT (Meat)	-
<i>Indigenous</i>	-	-	-
Rabbits	29678	-	-
Poultry			
Hens	632001	9.64 crores (Egg)	-
<i>Desi</i>	-	238 crores (Egg)	-
<i>Improved</i>	-	7.25 crores (Egg) & 13119.8 MT (Meat)	-
Ducks	-	2.10 crores (Egg)	-
Turkey and others	-	-	-

Category	Area	Production	Productivity
Fish	-	-	-
<i>Marine</i>	-	-	-
<i>Inland</i>	-	-	-
Prawn	-	-	-
Scampi	-	-	-
Shrimp	-	-	-

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

2.7 District profile has been **Updated** for 2016-17 Yes / No: 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	Udumbanchola	Nedumkandam & Kattappana	Santhanpara, Rajakumary, Parathodu, Senapathy, Rajakkad & Vathikudy	2011-2016	Small cardamom Black pepper Cowpea, Tomato & Bitter gourd	Stem and Capsule borer, Root Grub Thrips Fusarium Foot rot, Quick wilt disease Downy mildew & Nematode	BIPM Crop Improvement BIPDM
2	Devikulam	Devikulam	Vattavada, Kannan Devan Hills, Marayoor, Mankulam, Anaviratty, Kanthaloore & Munnar	2012-2016	Cabbage Potato Carrot Straw berry Beans	Black rot Bacterial wilt Root weevil Powdery mildew White fly	BIPDM

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3	Peermade	Azhutha	Elappara Kokkayar Kumily Peermedu Periyar Upputhara & Vagamon	2010-2016	Tea Coffee & Vegetables	Powdery mildew, Leaf spot & Downy mildew	BIPDM
4	Devikulam	Adimali	Adimali	2 Years	Black Pepper, Cardamom, Banana, Vegetables, livestock & Poultry	Pest outbreak	Integrated Pest Management, Scientific management of livestock and poultry
5	Udumbanchola	Chinnakanal	Chinnakanal	2 Years	Cardamom	Indiscriminate use of chemical fertilizers	Integrated Nutrient Management, Scientific management of livestock and poultry
6	Udumbanchola	Santhanpara	Santhanpara	5 Years	Cardamom, Black Pepper, Banana livestock & Poultry	Indiscriminate use of PP Chemicals	Integrated Pest Management Scientific Disease Management in dairy cattle and Poultry
7	Udumbanchola	Rajakkad	Rajakkad	5 Years	Cardamom, Black Pepper, Banana, Vegetables livestock & Poultry	Indiscriminate use of chemical inputs	Integrated Crop Management, Scientific Disease Management in dairy cattle and Poultry
8	Udumbanchola	Nedumkandam	Nedumkandam	2 Years	Cardamom, Black Pepper, Banana livestock & Poultry	Indiscriminate use of chemical inputs	Integrated Crop Management, Scientific management of livestock and poultry
9	Udumbanchola	Santhanpara	Santhanpara	5 Years	Cardamom, Black Pepper, Banana, Vegetable livestock & Poultry	Indiscriminate use of chemical inputs	Integrated Crop Management, Fodder production and management Fodder production and management
10	Udumbanchola	Senapathy	Senapathy	3 Years	Cardamom, Black Pepper, Banana, Vegetables, Mushroom, livestock & Poultry	Indiscriminate use of chemical inputs	Integrated Crop Management, Scientific management of livestock and poultry, Fodder production and management

2.9 Priority thrust areas:

S. No.	Thrust area
1.	Integrated Nutrient Management in major crops
2.	IPDM in major Plantation and Vegetable crops
3.	Integrated sustainable farming system models
4.	Organic agriculture
5.	Scientific management of livestock and poultry
6.	Scientific Disease Management in dairy cattle and Poultry
7.	Fodder production and management
8.	Value addition of farm produce

PART III - TECHNICAL ACHIEVEMENTS**3.A. Details of target and achievements of mandatory activities**

OFT				FLD			
1				2			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
7	7	35	35	15	15	106	106

Training				Extension Programmes			
3				4			
Number of Courses		Number of Participants		Number of Programmes		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
135	112	3000	3769	500	436	100000	80334

Seed Production (Qtl.)			Planting materials (Nos.)		
5			6		
Target	Achievement		Target	Achievement	
0.5	Nil		1000	Nil	

Livestock, poultry strains and fingerlings (No.)		Bio-products		
7		8		
Target	Achievement	Target	Achievement	
200	200 birds	Metarhizium	200 L	145
		<i>Bacillus thuringiensis</i>	100 L	69
		Beauveria	1000 L	448
		Lecanicillium	500 L	64
		Yellow sticky trap	2000 Nos.	5590
		Blue sticky trap	1000 Nos.	10
		Neem oil	500 L	995
		Trichoderma	1000 L	1384
		Pseudomonas	1000 L	1074
		<i>Bacillus subtilus</i>	100 L	24

3.B1. Abstract of interventions undertaken based on thrust areas identified for the district as given in SI.No.2.7

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions									Supply of bio products				
				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 plantin g materials (No.)	Sup ply of lives tock (No.)	No.	Kg			
1	Crop Improvement	Black pepper	Chengannoor is highly susceptible to quick wilt & heavy dosage of fungicides	Assessment of suitable Black Pepper Foot rot (Quick wilt) resistant variety for Idukki District	-	5	0	0	0	0	0	0	0	0	0	<i>Trichoderma harzianum</i>	50 kg
																Potassium phosphonate	7.5 L
2	Bio-Intensive Pest Management	Small Cardamom	Heavy infestation of stem and capsule borer leading to heavy usage of PPC	Assessment of different bio-pesticides and parasites against cardamom stem and capsule borer, <i>Conogethes punctiferalis</i>	-	5	0	0	0	0	0	0	0	0	0	<i>Bacillus thuringiensis</i>	10 kg
																<i>Beauveria bassiana</i>	20 kg
																<i>Apanteles</i>	20000
																<i>Friona</i>	20000

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3	Bio-Intensive Disease Management	Cowpea	Heavy dosage of fungicides are applied for the control of cowpea anthracnose	Biological control of cowpea anthracnose disease, <i>Colletotrichum destructivum</i>	-	5	0	0	0	0	0	0	0	<i>Pichia guilliermondii</i>	12.5 L
														<i>Hanseniaspora uvarum</i>	12.5 L
														<i>Trichoderma harzianum</i>	12.5 Kg
4	IDM	Small Cardamom	<i>Fusarium oxysporum</i> diseases are often severe and wide spread and lead to crop losses in small cardamom are root tip rot and leaf yellowing pseudostem rot, panicle blight and rhizome rot.	-	Integrated Management for fusarium disease in small cardamom plantations	10	0	0	0	0	0	0	0	Trichoderma	50 L
														Pseudomonas	50 L
5	Integrated Nutrient Management	Bitter gourd	Micronutrient deficiency	Assessment of the effect of zinc and Boron on the yield of bitter gourd in comparison with vegetable top-up	-	1	0	0	FAS-8 FV- 3	0	0	0	-	-	-
6	Varietal Evaluation	Salad Cucumber	Non popularity of exotic vegetables and public sector varieties	Assessment of varieties of Salad cucumber (<i>Brassica oleracea</i> var. <i>italica</i>) in polyhouse for high ranges	-	0	0	0	FAS-10 FV- 3	0.05	0	0	-	-	-
7	Varietal Evaluation	Cassava	Non-availability of mosaic resistant varieties	Assessment of different varieties of tapioca for resistance of cassava mosaic virus disease in high ranges	-	1	0	0	FAS-6 FV- 4	0	0	0	-	-	-
8	INM	Cardamom	Unscientific Nutrient Management	-	Integrated Nutrient Management in Cardamom	5	0	0	FAS-7 FV- 6	0	0	0	-	-	-
9	Open precision farming	Bitter gourd	Inefficient water and fertilizer use.	-	Demonstration of open precision farming in bitter gourd	0	2	0	FAS-5 FV- 6	0.08	0	0	-	-	50
10	Open precision farming	Strawberry	Inefficient water and fertilizer use Fruit damage	-	Demonstration of low cost open precision farming in Strawberry (<i>Fragaria ananassa</i>)	0	0	0	FAS-5 FV- 2	0	0	0	-	-	-
11	Crop diversification	Amorphophallus	Non-availability of acrid free variety	-	Demonstration of Acrid free variety Gajendra of Amorphophallus in high ranges	0	0	0	FAS-8 FV- 3	0	50 kg	0	-	-	-

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12	Crop diversification	Cassava	Non-availability of potassium efficient variety of Tapioca	-	Demonstration of potassium efficient variety of Tapioca -Sree Pavitra	1	0	0	FAS-5 FV- 3	0	200 sets	0	-	-
13	INM	Banana	Unscientific Nutrient Management	-	Demonstration of Ayar in Banana	1	0	0	FAS-4 FV- 2	0	0	0	-	-
14	Crop improvement	Black Pepper	Dearth of adequate quality planting materials	-	Column Method for production of quality planting materials in Black Pepper	1	0	0	FAS-8 FV- 5	0	0	0	-	-
15	Crop improvement	Ginger	High cost and scarcity of seed material of HYVs.	-	Improved soil less method (Protray) for production of healthy planting material of ginger	1	1	0	FAS-4 FV- 1	0	500	0	9 litres	-
16	Crop Management	Mushroom	Unscientific disposal of Spent mushroom compost	-	Utilization of Spent Mushroom Compost (SMC) as a medium for vegetable production in grow bags	2	2	0	FAS-10 FV- 8	0	200	0	-	-
17	Kitchen waste management	-	Improper kitchen waste management	-	Low cost bio-compost bin for kitchen waste management	0	2	0	4	-	-	-	EM Solution - 8 litre Bio compost bin – 4 Nos.	-
18	Value addition	Rose apple	Fruit wastage	-	Product diversification in rose apple to reduce wastage and increase additional income	0	2	0	6	-	-	-	-	-
19	Fodder production	Mixed fodder	Shortage of fodder	-	Demonstration of fodder cafeteria in rural households of Idukki district	4	0	0	Field visit-3 Method demonstration -2	Sorghum-7kg Hedge Lucerne-2kg Agathi-3kg Maize-25kg Stylo-1kg	-	-	-	-
20	Disease management	Hybrid dairy cattle	Occurrence of mastitis disease	Assessment of different methods of prophylactic management of udder oedema disease in dairy animals	-	3	0	0	Field visit-3 Method demonstration-2	-	-	-	-	-
21	Disease management	Hybrid poultry	Occurrence of Ranikhet disease	-	Prophylactic management of New castle disease in poultry using oral pellet vaccine	3	0	0	Field visit-3	-	-	-	-	-
22	Evaluation of Breeds	Vigova Duck	Unawareness about new breeds	-	Demonstration of Vigova super M duck in backyard system	3	0	0	Field visit-3	-	-	-	-	-

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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 suitable Black Pepper Foot rot (Quick wilt) resistant variety for Idukki District	IISR & Farmers Developed Variety	Black Pepper	5	0	3	FAS - 7 Field Visits - 8 Diagnostic Visits - 2 Method Demo - 5
2	Assessment of different bio-pesticides and parasites against cardamom stem and capsule borer, <i>Conogethes punctiferalis</i>	ICRI & NBAIR	Small Cardamom	5	0	6	FAS - 5 Field Visits - 12 Diagnostic Visits - 2 Method Demo - 5
3	Biological control of cowpea anthracnose disease, <i>Colletotrichum destructivum</i>	NBAIR	Cowpea	5	0	3	FAS - 16 Field Visits - 16 Diagnostic Visits - 4 Method Demo - 5
4	Integrated Management for fusarium disease in small cardamom plantations	ICRI	Small Cardamom	0	16	22	FAS - 45 Field Visits - 8 Diagnostic Visits - 10 Method Demo - 10
5	Assessment of the effect of zinc and Boron on the yield of bitter gourd in comparison with vegetable top-up	KAU	Bitter gourd	5	0	1	FAS-8 FV- 3
6	Assessment of varieties of Salad cucumber (<i>Brassica oleracea</i> var. <i>italica</i>) in polyhouse for high ranges	KAU	Salad Cucumber	5	0	1	FAS-10 FV- 3
7	Assessment of different varieties of tapioca for resistance of cassava mosaic virus disease in high ranges	CTCRI	Cassava	5		1	FAS-6 FV- 4
8	Integrated Nutrient Management in Cardamom	ICRI	Cardamom	0	10	5	FAS-7 FV- 6
9	Demonstration of open precision farming in bitter gourd	KAU	Bittergourd	0	03	2	FAS-5 FV- 6
10	Demonstration of low cost open precision farming in Strawberry (<i>Fragaria ananassa</i>)	KAU	Strawberry	0	03	0	FAS-5 FV- 2
11	Demonstration of Acrid free variety Gajendra of Amorphophallus in high ranges	CTCRI & APAU	Amorphophallus	0	10	0	FAS-8 FV- 3
12	Demonstration of potassium efficient variety of Tapioca - Sree Pavitra	CTCRI	Cassava	0	10	1	FAS-5 FV- 3
13	Demonstration of Ayar in Banana	KAU	Banana	0	10	1	FAS-4 FV- 2
14	Column Method for production of quality planting materials in Black Pepper	IISR	Black Pepper	0	03	1	FAS-8 FV- 5
15	Improved soil less method (Protray) for production of healthy planting material of ginger	KAU & IISR	Ginger	0	03	2	FAS-4 FV- 1
16	Utilization of Spent Mushroom Compost (SMC) as a medium for vegetable production in grow bags	KAU & TNAU	Mushroom	0	05	4	FAS-10 FV- 8
17	Low cost bio – compost bin for kitchen waste management	Innovative technology by Mr. V. P. Davis, Chalakkudy		0	1	2	FAS - 6 Field Visits - 8 Diagnostic Visits - 0 Method Demo - 10
18	Product diversification in rose apple for reduced wastage and increased additional income	KAU	Rose apple	0	1	2	FAS - 20 Field Visits - 6 Diagnostic Visits - 0 Method Demo-3
19	Assessment of different methods of prophylactic management of udder oedema disease in dairy animals	TANUVAS & KVASU	Hybrid dairy cattle	1	0	3	Field visit-3 Method demo-2

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20	Popularization of fodder cafeteria in rural households of Idukki district	TNAU & KAU	Mixed Fodder	0	1	4	Field visit-3 Method demo-2
21	Demonstration of Vigova super M duck inj backyard system	CPDO,,Hessaraghatta	Poultry-Duck	0	1	3	Field visit-3
22	Prophylactic management of New castle disease in poultry using oral pellet vaccine	TANUVAS	Hybrid poultry	0	1	3	Field visit-3

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
1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0
5	2	3	0	0	0	0	0	0	8	8	0	0	0	0	0	0
6	1	4	0	0	0	0	0	0	10	5	0	0	0	0	0	0
7	3	2	0	0	0	0	0	0	10	8	0	0	0	0	0	0
8	0	0	0	0	5	5	0	0	68	21	6	8	0	0	0	0
9	0	0	0	0	2	1	0	0	25	21	4	0	0	0	0	0
10	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	7	3	1	2	12	4	0	0	0	0	0	0
13	0	0	0	0	7	3	0	0	8	8	0	0	0	0	0	0
14	0	0	0	0	3	0	0	0	9	8	0	0	0	0	0	0
15	0	0	0	0	3	0	0	0	27	3	0	0	0	0	0	0
16	0	0	0	0	3	2	0	0	61	32	12	8	0	0	0	0
17	0	0	0	0	3	1	0	0	26	32	12	3	0	0	0	0
18	0	0	0	0	0	6	0	0	22	28	2	4	0	0	0	0
19	2	3	0	0	0	0	0	0	53	47	0	0	0	0	0	0
20	0	0	0	0	4	6	0	0	18	49	0	0	0	0	0	0
21	0	0	0	0	6	4	0	0	48	68	0	0	0	0	0	0
22	0	0	0	0	4	6	0	0	34	23	0	0	0	0	0	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					1					1
Varietal Evaluation					1				1	2
Integrated Pest Management			1					1		2
Integrated Crop Management								1		1
Integrated Disease Management								1		1
Small Scale Income Generation Enterprises										
Weed Management										
Resource Conservation Technology										
Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique										
Mushroom cultivation										
Total			1		2			3	1	7

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 enterprises:

Thematic areas	Cattle	Poultry	Piggery	Rabbitry	Fisheries	TOTAL
Evaluation of Breeds						
Nutrition Management						
Disease of Management	1	0	0	0	0	1
Value Addition						
Production and Management						
Feed and Fodder						
Small Scale income generating enterprises						
TOTAL	1	0	0	0	0	1

4.A4. Abstract on the number of technologies refined in respect of livestock enterprises: Nil.**4.B. Achievements on technologies Assessed and Refined****4.B.1. Technologies Assessed under various Crops**

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trail covering all the Technological Options)
Integrated Nutrient Management	Bitter gourd	Assessment of the effect of zinc and Boron on the yield of bitter gourd in comparison with vegetable top-up	15	5	0.12
Varietal Evaluation	Black pepper	Assessment of suitable Black Pepper Foot rot (Quick wilt) resistant variety for Idukki District	5	5	0.2
	Salad Cucumber	Assessment of varieties of Salad cucumber (Brassica oleracea var. italica) in polyhouse for high ranges	10	5	0.02
	Cassava	Assessment of different varieties of tapioca for resistance of cassava mosaic virus disease in high ranges	20	5	0.06
Integrated Pest Management	Small Cardamom	Assessment of different bio-pesticides and parasites against cardamom stem and capsule borer, <i>Conogethes punctiferalis</i>	5	5	0.50
Integrated Crop Management					
Integrated Disease Management	Cowpea	Biological control of cowpea anthracnose disease, <i>Colletotrichum destructivum</i>	5	5	0.02
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
Total			60	30	0.92

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

4. B.3. Technologies assessed under Livestock and other enterprises:

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Evaluation of breeds				
Nutrition management				
Disease management	Dairy Cattle	Assessment of different methods of prophylactic management of udder oedema disease in dairy animals	5	5
Value addition				
Production and management				
Feed and fodder				
Small scale income generating enterprises				
Total			5	5

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

4. C1. Results of Technologies Assessed

Results of On Farm Trial

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Black pepper	Perennial	Chengannoor is highly susceptible to quick wilt & heavy dosage of fungicides	Assessment of suitable Black Pepper Foot rot (Quick wilt) resistant variety for Idukki District.	5	1. Farmers practice (Chengannoor) 2. IISR Thevam 3. Aswathi 4. Suvarna	% reduction in quick wilt incidence	-	IISR-Thevam is showing least percentage of quick wilt	IISR-Thevam is showing least percentage of quick wilt disease incidence compared to farmer developed varieties and check	-	-
Small cardamom	Perennial	Heavy infestation of stem and capsule borer leading to heavy usage of PPC	Assessment of different bio-pesticides and parasites against cardamom stem and capsule borer, <i>Conogethes punctiferalis</i>	5	1. Farmers practice (Recommended Insecticides) 2. Spray of <i>Bacillus thuringiensis</i> @ 2g/L 3. Spray of <i>Beauveria bassiana</i> @ 5g/L 4. Release of <i>Apanteles</i> sp @ 20,000/ha 5. Release of <i>Friona</i> sp @ 20,000/ha	% reduction over control & % parasitism	-	<i>Bacillus thuringiensis</i> var <i>Kurstaki</i> sprays in combination with the releases of parasites <i>Apanteles</i> sp and <i>Friona</i> sp gave effective control of stem and capsule borer	<i>Bacillus thuringiensis</i> var <i>Kurstaki</i> was also found to be effective when combination with <i>Beauveria bassiana</i> .	-	-
Cowpea		Heavy dosage of fungicides are applied for the control of cowpea anthracnose	Biological control of cowpea anthracnose disease, <i>Colletotrichum destructivum</i>	5	1. Farmers practice (Recommended Fungicides) 2. <i>Pichia guilliermondii</i> (NB AIR Strains) @ 10ml/L 3. <i>Hanseniaspora uvarum</i> (NB AIR Strains) @ 10ml/L 4. <i>Trichoderma harzianum</i> (NB AIR Strains) @ 10g/L	% reduction in anthracnose incidence	-	-	<i>Hanseniaspora uvarum</i> showing least percentage of anthracnose disease incidence	-	-

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Bitter gourd	Commercial	Micronutrient deficiency	Assessment of the effect of zinc and Boron on the yield of bitter gourd in comparison with vegetable top-up	5	TO1 - No micronutrient application (FP) TO2 - Application of ZnSO ₄ (0.5%) + Boron (0.1%) based on soil test along with recommended dose of NPK TO3 - Foliar spray of micronutrient top up at 30, 45, 60 days after sowing along with recommended dose of NPK	1. No of days for attaining first flowering 2. Girth of the plant 3. Ht of the plant 4. Yield (kg/ha)	TO1 - 52 days TO2 - 41 days TO3 - 38 days TO1 – 1.0 cm TO2 – 1.2 cm TO3 – 1.2 cm TO1 – 2.0 m at 50 DAP TO2 – 2.1 m at 50 DAP TO3 – 2.3 m at 50 DAP Crop not over	Earliness in female flower initiation in TO3 No significant difference No significant difference Gross yield is expected to be increased in TO3	Better crop stand in TO3 and Gross yield is expected to be increased	-	-
Salad Cucumber	Commercial	Non popularity of exotic vegetables and public sector varieties	Assessment of varieties of Salad cucumber (<i>Brassica oleracea</i> var. <i>italica</i>) in polyhouse for high ranges	5	TO1 - Kiyan TO2 - KPCH-1	1. Germination percentage 2. Days to flower bud initiation 3. Days to harvesting 4. Weight of the fruit (g) 5. Yield (kg/ha)	TO1 - 100 TO2 – 98 TO1 - 24 TO2 –14 TO1 - 44 TO2 –37 TO1 - 198 TO2 – 232 TO1 - 65500 TO2 -98500	TO1 - Kiyan TO2 - KPCH-1	-	-	-
Cassava	Commercial	Non-availability of mosaic resistant varieties	Assessment of different varieties of tapioca for resistance of cassava mosaic virus disease in high ranges	5	TO1 – Local Variety (FP) TO2 – Sree Jaya TO3 – Vellayani Hraswa TO4 – Suvarna	1. Average weight of tuber 2. Yield (kg/ha)	Observations not over for all the varieties	-	-	-	-
Dairy cattle	Homestead	Occurrence of Mastitis disease	Assessment of different methods of prophylactic management of udder oedema disease in dairy animals	5	Assessment of different methods of prophylactic management of udder oedema disease in dairy animals	1) Incidence of Oedema disease 2) Quantity of milk production (3 month lactation period) 3) Quality of milk production	T1: 25 T2: 0 T3: 0 T1: 1350 T2: 1620 T3: 1980 T1: 3 T2: 3.2 T3: 4.2	Dipol solution & Premast powder was found effective for prevention and control of mastitis disease	Well adapted for High range condition & produce more milk production	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's Practice - Chengannoor)	-	kg/ha	680	75000	1.35
Technology option 2 (IISR Thevam)	IISR	kg/ha	1110	222000	2.55
Technology option 3 (Aswathi)	Farmers Developed variety	kg/ha	840	169000	2.05
Technology option 4 (Suvarna)	Farmers Developed variety	kg/ha	790	152000	1.88
Technology option 1 (Spray of <i>Bacillus thuringiensis</i>)	ICRI & NBAIR	kg/ha	750	262000	1.75
Technology option 2 (Spray of <i>Beauveria bassiana</i>)	ICRI & NBAIR	kg/ha	820	438000	2.46
Technology option 3 (Release of <i>Apanteles</i> sp)	ICRI & NBAIR	kg/ha	710	309000	1.94
Technology option 4 (Release of <i>Friona</i> sp)	ICRI & NBAIR	kg/ha	690	261000	1.73
Technology option 1 (Recommended Fungicides)	-	kg/ha	510	15000	1.08
Technology option 2 (<i>Pichia guilliermondii</i>)	NBAIR	kg/ha	810	125000	1.78
Technology option 3 (<i>Hanseniaspora uvarum</i>)	NBAIR	kg/ha	900	169000	2.20
Technology option 4 (<i>Trichoderma harzianum</i>)	NBAIR	kg/ha	760	153000	1.89
Technology option 1 (Farmer's Practice -)	-	Crop not over	0	0	0
Technology option 2 ()	KAU	Crop not over	0	0	0
Technology option 3 ()	IHR	Crop not over	0	0	0
Technology option 1 (Farmer's Practice -)	Nil	0	0	0	0
Technology option 2 ()	Nunhems	655kg/100m2	65500kg/ha	0	0
Technology option 3 ()	KAU	985kg/100m2	98500kg/ha	0	0
Technology option 1 (Farmer's Practice -)	-	-	-	0	0
Technology option 2 ()	-	-	-	0	0
Technology option 3 ()	-	-	-	0	0
Technology option 1 (Farmer's Practice - Chalk powder mixed with Lemon juice & Redovet powder mixed with Egg white)	-	395	lit/animal	3200/-	1.25
Technology option 2 (Premast powder 50 g daily for 20 days before and after calving)	TANUVAS	531	lit/animal	5740/-	1.36
Technology option 3 (20 ml of Dipol Solution mixed with 1 litre of water by using Teat Cup for teat dipping)	TANUVAS & KVASU	621	lit/animal	9160/-	1.53

4.C2. Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details

1)

- 1 Title of Technology Assessed: **Assessment of suitable Black Pepper Foot rots (Quick wilt) resistant variety for Idukki District**
- 2 Problem Definition: Chengannoor is highly susceptible to quick wilt & heavy dosage of fungicides
- 3 Details of technologies selected for assessment:
 - 1) Farmers practice (Chengannoor) 2) IISR Thevam 3) Aswathi 4) Suvarna
- 4 Source of technology: IISR & Farmers Developed variety

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- 5 Production system and thematic area: Varietal evaluation
- 6 Performance of the Technology with performance indicators: IISR-Thevam is showing least percentage of quick wilt
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Nil
- 8 Final recommendation for micro level situation: IISR-Thevam suitable for high range area
- 9 Constraints identified and feedback for research: Nil
- 10 Process of farmers participation and their reaction: Nil

2)

- 1 Title of Technology Assessed: **Assessment of different bio-pesticides and parasites against small cardamom stem and capsule borer, *Conogethes punctiferalis***
- 2 Problem Definition: Heavy infestation of stem and capsule borer leading to heavy usage of PPC
- 3 Details of technologies selected for assessment:
Spray of *Bacillus thuringiensis* @ 2g/L,
Spray of *Beauveria bassiana* @ 5g/L,
Release of *Apanteles* sp @ 20,000/ha and Release of *Friona* sp @ 20,000/ha
- 4 Source of technology: ICRI & NBAIR
- 5 Production system and thematic area: Bio-intensive pest management
- 6 Performance of the Technology with performance indicators: Nil
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Nil
- 8 Final recommendation for micro level situation: Nil
- 9 Constraints identified and feedback for research: Nil
- 10 Process of farmers participation and their reaction: Nil

3)

- 1 Title of Technology Assessed: **Biological control of cowpea anthracnose disease, *Colletotrichum destructivum***
- 2 Problem Definition: Heavy dosage of fungicides are applied for the control of cowpea anthracnose
- 3 Details of technologies selected for assessment:
Farmers practice (Recommended Fungicides)
Pichia guilliermondii (NBAIR Strains)@10ml/L
Hanseniaspora uvarum (NBAIR Strains) @10ml/L
Trichoderma harzianum (NBAIR Strains) @10g/
- 4 Source of technology: NBAIR
- 5 Production system and thematic area: Bio-intensive disease management
- 6 Performance of the Technology with performance indicators: Nil
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Nil
- 8 Final recommendation for micro level situation: *Hanseniaspora uvarum* showing least percentage of anthracnose disease
- 9 Constraints identified and feedback for research: Nil
- 10 Process of farmers participation and their reaction: Nil

4)

- 1 Title of Technology Assessed: **Assessment of the effect of zinc and Boron on the yield of bitter gourd in comparison with vegetable top-up**
- 2 Problem Definition: Micronutrient deficiency.
- 3 Details of technologies selected for assessment:
TO1 - No micronutrient application (FP).
TO2 - Application of ZnSO₄ (0.5%) + Boron (0.1%) based on soil test along with recommended dose of NPK.
TO3 - Foliar spray of micronutrient top up at 30, 45, 60 days after sowing along with recommended dose of NPK.
- 4 Source of technology: KAU & IIHR.
- 5 Production system and thematic area: Commercial & Integrated Nutrient Management.
- 6 Performance of the Technology with performance indicators:
 - a. No of days for attaining first flowering - Earliness in female flower initiation in TO3
 - b. Girth of the plant - No significant difference
 - c. Ht of the plant - No significant difference
 - d. Yield (kg/ha) - Gross yield is expected to be increased in TO3 as the crop is not over
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Better crop stand in TO3 and Gross yield is expected to be increased.
- 8 Final recommendation for micro level situation: Crop is not over.
- 9 Constraints identified and feedback for research: Nil.
- 10 Process of farmers participation and their reaction: Nil.

5)

- 1 Title of Technology Assessed: **Assessment of varieties of Salad cucumber (*Brassica oleracea var. italica*) in poly house for high ranges.**
- 2 Problem Definition: Non popularity of exotic vegetables and public sector varieties.
- 3 Details of technologies selected for assessment:
TO1 - Nil
TO2 - Kiyani
TO3 - KPCH-1
- 4 Source of technology: Nunhems & KAU.
- 5 Production system and thematic area: Commercial & Varietal Evaluation.
- 6 Performance of the Technology with performance indicators:
 - a. Germination percentage : TO1-100% & TO2-98%
 - b. Days to flower bud initiation: TO1-24 & TO2-14
 - c. Days to harvesting: TO1-44 & TO2-37
 - d. Weight of the fruit (g): TO1-198 & TO2-232
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: KPCH-1 is a good variety which gets an equal consumer acceptance when compared to Kiyani and has a better keeping quality.
- 8 Final recommendation for micro level situation: An even better option for hybrid poly house cucumbers from the public sector.
- 9 Constraints identified and feedback for research: Nil.
- 10 Process of farmers participation and their reaction: Nil.

6)

- 1 Title of Technology Assessed: **Assessment of different varieties of tapioca for resistance of cassava mosaic virus disease in high ranges.**
- 2 Problem Definition: Non-availability of mosaic resistant varieties.
- 3 Details of technologies selected for assessment:

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- TO1 – Local Variety (FP)
- TO2 – Sree Jaya
- TO3 – Vellayani Hraswa
- TO4 – Suvarna

- 4 Source of technology: KAU & CTCRI.
- 5 Production system and thematic area: Commercial & Varietal Evaluation.
- 6 Performance of the Technology with performance indicators:
 - a. Average weight of tuber
 - b. Yield (kg/ha)
7. Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring techniques:
- 8 Final recommendation for micro level situation: Nil.
- 9 Constraints identified and feedback for research: Nil.
- 10 Process of farmers participation and their reaction: Nil.

7)

- 1 Title of Technology Assessed: **Assessment of different methods of prophylactic management of Udder oedema disease in dairy animals**
- 2 Problem Definition: Occurrence of mastitis disease.
- 3 Details of technologies selected for assessment: Premast powder 50 g daily for 20 days before and after calving. 20 ml of Dipol Solution mixed with 1 litre of water by using Teat Cup for teat dipping.
- 4 Source of technology: TANUVAS & KVASU.
- 5 Production system and thematic area: Disease management.
- 6 Performance of the Technology with performance indicators: Very good Effect.
7. Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring techniques: Nil.
- 8 Final recommendation for micro level situation: Well adapted for High range condition & produce more milk production.
- 9 Constraints identified and feedback for research: Non awareness and negligence.
- 10 Process of farmers participation and their reaction: Well adapted for High range condition & produce more milk production.

4. D1. Results of Technologies Refined: Nil.

4. D.2. Details of each On Farm Trial for refinement: Nil.

PART V - FRONT LINE DEMONSTRATIONS

5. A. Summary of FLDs implemented during 2016-17

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
1	Oilseeds													
2	Pulses													
3	Cereals													
4	Millets													
5	Vegetables	Commercial	Annual	Bittergourd	Local	-	Water & fertilizer use efficiency	Demonstration of open precision farming in bitter gourd	0.6	0.6		3	3	-

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5.a.		Homestead	-	-	-	-	Kitchen waste management	Low cost bio – compost bin for kitchen waste management	4 units	4 units	0	4	4	-
6	Flowers													
7	Ornamental													
8	Fruit	Commercial	Annual	Strawberry	Local	-	Water & fertilizer use efficiency	Demonstration of low cost open precision farming in Strawberry (<i>Fragaria ananassa</i>)	0.03	0.03		3	3	-
		Commercial	Annual	Banana	Nendran	-	Integrated Nutrient Management	Demonstration of Ayar in Banana	0.025	0.025		10	10	-
		Homestead	-	Rose apple	local	-	Value addition	Product diversification in rose apple to reduce wastage and increase additional income	6 units	6 units	0	6	6	-
9	Spices and condiments	Perennial	-	Small cardamom	Njallani	-	IDM	Integrated management of Fusarium disease in small cardamom	2	2	-	10	10	-
9.a.		Commercial	Perennial	Cardamom	Njallani	-	INM	Integrated Nutrient Management in Cardamom	1.0	1.0		10	10	-
9.b.		Commercial	Perennial	Black Pepper	Karimunda	-	Crop improvement	Column Method for production of quality planting materials in Black Pepper	3	3		3	3	-
9.c.		Commercial	Perennial	Ginger	Any	-	Crop improvement	Improved soil less method (Protray) for production of healthy planting material of ginger	0.012	0.012		3	3	-
10	Commercial crops													
11	Medicinal and aromatic													
12	Fodder													
13	Plantation													
14	Fibre													
15	Dairy	Mixed Farming	Throughout the year	Dairy Cattle	Jersey and HF	Cross bred	Feed and Fodder	Demonstration of fodder Cafeteria in rural households of Idukki District	0.5 ha	0.5 ha	0	5	5	-
16	Poultry	Mixed Farming	Throughout the year	Poultry	Chicken	Hybrid poultry	Scientific Disease management	Prophylactic management of Newcastle Disease in poultry using oral pellet vaccine	10	10	0	10	10	-
17	Rabbitry													
18	Pigerry													
19	Sheep and goat													
20	Duckery	Mixed Farming	Throughout the year	Poultry	Vigova Duck	Hybrid breed	Evaluation of breeds	Demonstration of Vigova super M Duck in backyard system	10	10	0	10	10	-
21	Common													

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	carps													
22	Mussels													
23	Ornamental fishes													
24	Oyster mushroom													
25	Button mushroom													
26	Vermicompost	Commercial	Perennial	Spent Mushroom Compost	Oyster mushroom	-	Crop Management	Utilization of Spent Mushroom Compost (SMC) as a medium for vegetable production in grow bags	5	5		5	5	-
27	Sericulture													
28	Apiculture													
29	Implements													
30	Others (Tuber Crops)	Commercial	Annual	Amorphophallus	Gajendra		Varietal introduction	Demonstration of Acrid free variety Gajendra of Amorphophallus in high ranges	0.04	0.04		10	10	-
31	Others (Tuber Crops)	Commercial	Annual	Tapioca	Sree Pavitra		Varietal introduction	Demonstration of potassium efficient variety of Tapioca -Sree Pavitra	0.04	0.04		10	10	-
32	Others (specify)													

5. A. 1. Soil fertility status of FLDs plots during 2016-17

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	
1	Oilseeds												
2	Pulses												
3	Cereals												
4	Millets												
5	Vegetables	Commercial	Annual	Bitter gourd	Local		Water & fertilizer use efficiency	Demonstration of open precision farming in bitter gourd	Summer	M	H	M	Snake gourd
6	Flowers												
7	Ornamental												
8	Fruit	Commercial	Annual	Strawberry	Local		Water & fertilizer use efficiency	Demonstration of low cost open precision farming in Strawberry (<i>Fragaria ananassa</i>)	Winter	M	M	M	-
9		Commercial	Annual	Banana	Nendran		Integrated Nutrient Management	Demonstration of Ayar in Banana	Rainfed	M	H	M	-
10	Spices and condiments	Commercial	Perennial	Cardamom	Njallani		INM	Integrated Nutrient Management in Cardamom	Yearround	M	H	H	-
11		Commercial	Perennial	Black Pepper	Any		Crop improvement	Column Method for production of quality planting materials in Black Pepper	Yearround	M	M	M	-
12		Commercial	Perennial	Ginger	Any		Crop improvement	Improved soil less method (Protray) for production of healthy planting material of ginger	Summer	-	-	-	-
13	Commercial crops												

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14	Medicinal and aromatic																	
15	Fodder																	
16	Plantation																	
17	Fibre																	
18	Others (Tubers)	Commercial	Annual	Amorphophallus	Gajendra		Varietal introduction	Demonstration of Acrid free variety Gajendra of Amorphophallus in high ranges				Rainfed	M	H	H			
19	Others (Tubers)	Commercial	Annual	Tapioca	Sree Pavitra		Varietal introduction	Demonstration of potassium efficient variety of Tapioca - Sree Pavitra				Summer	M	H	H			
20	Others (pl.specify)																	

5. B. Results of Frontline Demonstrations

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 Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
							H	L	A										
Oilseeds																			
Pulses																			
Cereals																			
Millets																			
Vegetables	Demonstration of open precision farming in bitter gourd	Local		Summer	3	0.6	2000	1860	1930	1774	8.8	164700	253840	89140	1.54	115000	150000	35000	1.30
Flowers																			
Ornamental																			
Fruit	Demonstration of low cost open precision farming in Strawberry (<i>Fragaria ananassa</i>)	-	-	Winter	3	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-
	Demonstration of Ayar in Banana	-	-	Rainfed	10	0.025	-	-	-	-	-	-	-	-	-	-	-	-	-
Spices and condiments	Integrated Management for fusarium disease in small cardamom plantations	Njallani	-	Irrigated	10	2	110	85	91	81	54	285000	465000	180000	1.631	300000	394000	94000	1.31
	Integrated Nutrient Management in Cardamom	Njallani		Year round	10	1	9.8	10.0	9.9	8.0	25.0	250000	653600	403600	2.6	218000	414200	196200	1.90
	Column Method for production of quality planting materials in Black Pepper	Karimunda		Year round	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-
	Improved soil less method (Protray) for production of healthy planting material of ginger	Any		Summer	3	0.012	-	-	-	-	-	-	-	-	-	-	-	-	-
Commercial																			
Fibre crops like cotton																			
Medicinal and aromatic																			
Fodder																			
Plantation																			
Fibre																			

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Others (pl. specify)	Low cost bio compost bin for kitchen waste management	-	-	-	4	4	-	-	-	-	-	4100	6400	2300	1.56	-	-	-	-
Others (pl. specify)	Product diversification in rose apple to reduce wastage and increase additional income	Local	-	-	6	6	-	-	-	-	-	1070	1640	570	1.53	305	350	45	1.14
Others (pl. specify)	Utilization of Spent Mushroom Compost (SMC) as a medium for vegetable production	Local	-	Homestead farming	5	0.08	0.98	0.79	0.84	Not practiced	Not practiced	1690.66	3435.5	1744.84	2.03	Not practiced			
Others (Tuber crops)	Demonstration of Acrid free variety Gajendra of Amorphophallus in high ranges	Gajendra		Commercial	10	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-
Others (Tuber crops)	Demonstration of potassium efficient variety of Tapioca -Sree Pavitra	Sree Pavitra		Commercial	10	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-
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

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

5. B.2. Livestock and related enterprises

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Yield (q/ha)			% Increase	*Economics of demonstration (Rs./unit)				*Economics of check (Rs./unit)				
					Demo				Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
					H	L	A										
Dairy	Demonstration of Fodder Cafeteria in rural households of Idukki district.	Dairy Cows	10	10	18	13	15	14	7.14	13610	30420	16810	2.24	14600	23940	8230	1.63
Poultry	Prophylactic management of Newcastle Disease in poultry using oral pellet vaccine	Hybrid poultry	10	10	23	19	20	18	11.11	400	788	388	1.99	219	357	138	1.63
Rabbitry																	
Pigerry																	
Sheep and goat																	
Duckery	Demonstration of Vigova super M duck in backyard system	Vigova Super M Duck breed	10	10	23	19	20	18	11.11	1899	5470	3571	2.85	1025	2594	1569	2.45
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

5. B.3. Fisheries: Nil.

5. B.4. Other enterprises: Nil.

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

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

Sl. No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	2	46	-
2	Farmers Training	14	184	-
3	Media coverage	4	-	-
4	Training for extension functionaries	0	0	-
5	Others (Please specify)			

PART VI – DEMONSTRATIONS ON CROP HYBRIDS: Nil.**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										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management	1	14	0	14	0	0	0	14	0	14
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify)										
Others (Organic farming in vegetable)	2	75	14	89	0	0	0	75	14	89
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 (Specify)										
Others (ICM in Vegetable crops)										
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										

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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										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
Livestock Production and Management										
Dairy Management	1	7	10	17	0	0	0	7	10	17
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										

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Feed and Fodder technology										
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										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Women empowerment										
Location specific drudgery production										
Rural Crafts	4	0	23	23	0	35	35	0	58	58
Women and child care										
Others (pl.specify)										
Others (Processing and Packaging of Mushroom)										
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										
Integrated Disease Management										
Bio-control of pests and diseases										
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										

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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	2	93	0	93	9	2	11	102	2	104
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										
Apiculture										
Others (pl.specify)										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
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										
Others (Pl. specify)										
TOTAL	10	189	47	236	9	37	46	198	84	282

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										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										

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Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management (Spices)										
Soil and Water Conservation										
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 (Specify)										
Others (ICM in vegetables)	5	176	52	228	80	16	96	256	68	324
Others (Organic farming-Vegetables)	11	335	176	511	133	44	177	468	220	688
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										

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Production and Management technology										
Processing and value addition										
Others (pl.specify)										
Others (Crop diversification)										
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										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
Others (Soil Conservation)										
Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management	3	52	30	82	0	0	0	52	30	82
Feed and Fodder technology										
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 (workshop)	1	2	6	8	1	16	17	3	22	25
Gender mainstreaming through SHGs	1	4	8	12	0	0	0	4	8	12

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Storage loss minimization techniques										
Value addition	3	4	67	71	0	4	4	4	71	75
Women empowerment	2	9	18	27	0	8	8	9	26	35
Location specific drudgery production										
Rural Crafts	5	0	44	44	0	52	52	0	96	96
Women and child care										
Others (Industry training on food processing)	1	9	24	33	0	0	0	9	24	33
Others (Processing & popularization of Jack fruit)										
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	3	94	27	121	0	0	0	94	27	121
Integrated Disease Management	4	87	17	104	11	2	13	98	19	117
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides	6	282	159	449	32	15	47	314	174	488
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										

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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										
Apiculture	2	45	8	53	15	0	15	60	8	68
Others (pl.specify)										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
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										
Others (Pl. specify)										
TOTAL	47	1099	636	1743	272	157	429	1371	793	2164

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										
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	1	11	27	38	1	0	1	12	27	39

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Small scale processing	1	12	13	25	1	3	4	13	16	29
Post Harvest Technology	4	75	74	149	9	10	19	84	84	168
Tailoring and Stitching										
Rural Crafts	3	19	54	73	6	10	16	25	64	89
Production of quality animal products										
Dairying	3	63	74	137	0	0	0	63	74	137
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 (pl.specify)										
TOTAL	12	180	242	422	17	23	40	197	265	462

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										
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	1	22	21	43	4	9	13	26	30	56
Tailoring and Stitching										

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Rural Crafts	3	0	35	35	0	25	25	0	60	60
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 (pl.specify)										
TOTAL	4	22	56	78	4	34	38	26	90	116

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

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

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										
1.c.	Integrated Pest and Disease Management	7	181	44	225	11	2	13	191	46	237
2	Production and value addition										
2.a.	Fruit Plants										
2.b.	Ornamental plants										
2.c.	Spices crops										
3.	Soil health and fertility management										
4	Production of Inputs at site										
5	Methods of protective cultivation										
6	Others (Banana cultivation)										
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 (Poultry)										
10.f.	Others (Livestock production and management)										
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										
12.a.	Capacity Building and Group Dynamics										
12.b.	Others (pl.specify)										
	Total	7	181	44	225	11	2	13	191	46	237

Details of sponsoring agencies involved

1. State Horticulture Mission
2. Dept. of Agriculture
3. ATMA
4. District Industries Centre (DIC), Idukki
5. Kudumbasree, Idukki
6. Coffee Board
7. NSS College, Rajakumary
8. GVHSS, Rajakumary
9. MBVHSS, Senapathy
10. NHRDF
11. MES College, Nedumkandam
12. DIC Idukki
13. VKV Foundation, Adimali

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 (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	2	28	40	68	0	0	0	28	40	68		
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	30	0	198	198	0	242	242	0	440	440		
4.e.	Seed production												
4.f.	Sericulture												
4.g.	Mushroom cultivation												
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	32	28	238	266	0	242	242	28	480	508		

PART VIII – EXTENSION ACTIVITIES**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
Field Day	2	61	0	61	0	0	0	2	0	2
Kisan Mela										
Kisan Ghosthi										
Exhibition	4	45000	34000	79000	1600	1410	3010	25	20	45
Film Show	8	48	48	96	0	0	0	3	2	5
Method Demonstrations	2	100	29	129	0	0	0	0	0	0
Farmers Seminar										
Workshop										
Group meetings	10	111	10	121	0	0	0	0	6	6
Lectures delivered as resource persons										
Newspaper coverage	14	-	-	-	-	-	-	-	-	-
Radio talks										
TV talks	4									
Popular articles										
Extension Literature										
Advisory Services	356	355	57	412	0	0	0	2	4	6
Scientific visit to farmers field	18	23	0	23	0	0	0	0	0	0
Farmers visit to KVK										
Diagnostic visits	6	8	0	8	0	0	0	2	0	2
Exposure visits	3	37	0	37	0	0	0	0	0	0
Ex-trainees Sammelan	2	20	6	26	0	0	0	1	0	1
Soil health Camp										
Animal Health Camp	2	50	41	91	0	0	0	5	0	5
Agri mobile clinic										
Soil test campaigns										
Farm Science Club Conveners meet										
Self Help Group Conveners meetings	40	0	130	130	0	52	52	0	0	182
Mahila Mandals Conveners meetings										
Celebration of important days (World food day)	1	9	0	9	0	0	0	28	30	58
World Soil Day	1	80	8	88	0	0	0	13	6	19
National Milk Day	1	30	6	36	0	0	0	0	0	0
Any Other (Specify)										
Total	474	45932	34335	80267	1600	1462	3062	81	68	331

PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIALS

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

9.B. Production of planting materials by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Commercial						
Vegetable seedlings						
Fruits	Mangosteen	High yielding local selection	-	20	6000	6
Ornamental plants						
Medicinal and Aromatic						
Plantation						
Spices	Nutmeg	High yielding local selection	-	50	15000	12

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Tuber						
Fodder crop saplings						
Forest Species						
Others(specify)						
Total				70	21,000.00	18

9.C. Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	Number of farmers to whom provided
Bio Fertilizers				
Bio-pesticide	Metarhizium	145	17400.00	61
	<i>Bacillus thuringensis</i>	69	8280.00	20
	Beauveria	448	53760.00	99
	Lecanicillium	64	7680.00	36
	Yellow sticky trap	5590	391300.00	380
	Blue sticky trap	10	700.00	1
	Neem oil	995	348250.00	420
Bio-fungicide	Trichoderma	1384	166080.00	215
Bio Agents	Pseudomonas	1074	128880.00	199
	<i>Bacillus subtilis</i>	24	2880.00	9
Others (specify)				
Total		9803	11,25,210.00	1,440

9.D. Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
Poultry				
Broilers				
Layers	BV 300	200	32000.00	89
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl. specify)				
Fisheries				
Fingerlings				
Others (Carp Fishes)	Carp	535 Kg	80250.00	2
Total			1,12,250.00	91

PART X – PUBLICATION, SUCCESS STORY, SWTL, TECHNOLOGY WEEK AND DROUGHT MITIGATION

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

(A) KVK News Letter ((Date of start, Periodicity, number of copies distributed etc.)

(B) Literature developed/published

Item	Title	Authors name	Number
Research papers			
Technical reports			
News letters	KVK Newsletter	All Staff	5000
Technical bulletins			
Popular articles			
Extension literature			
Others (Pl. specify)			
TOTAL			

10.B. Details of Electronic Media Produced: Nil.

S. No.	Type of media (CD / VCD / DVD/ Audio-Cassette)	Title of the programme	Number

10.C. Success Stories / Case studies, if any**1. Title of the success stories** : Skill development enterprise for Rural youth**Details of success stories** :**1. Background**

A group of 55 tribal school drop-outs is an example how rural youth can effectively utilize their talents, which would help to lead towards personality development and to reduce poverty. The objective of this group is to mainstream scheduled tribes girl children who have been pushed out. With this objective, the academic orientation is not sufficient and it was realised that vocational and life –skill based training is essential. Following this, in collaboration with KVK Rural craft section, we are engaged in vocational skill development training as well as supportive education for the children in adivasi colonies. To livelihood and starvation issues in these colonies are severe. Hence, the plan is to train tribal girl children and start a production unit for fabric designing and Jewellery making.

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. Intervention Technology

- To create 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.
- To enhance the 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 educational programmes.

- To provide women and adolescent girls with the necessary support structures and an informal learning environment to create opportunities for education.

4. Impact Horizontal Spread

This enterprise aimed at empowering 100 rural youth in tribal areas of Idukki district by providing skill development training to make them self-sufficiency and self-reliant. This enterprise will enable women deprived, poverty stricken, working as domestic servants, single parent and widows are being given opportunity to undergo free training and in turn they earn and live on their own. The entire family will be benefited, will support the beneficiary to establish small scale units.

5. Impact Economic Gains

They earn an average Income per month of Rs.10000/-

6. Impact on Employment Generation

This programme will empower women for their families well being 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.

2. Title of the success stories : Women Entrepreneurship - A Success

Details of success stories :

1. Background

Mrs. Lovely Babu, Kollarackal, Rajakumary panchayat in Idukki district. She was raised in a below middle class family. She always dreamt of reaching the sky, but all her talents and dreams were buried due to the responsibilities of her family since she was the elder child. She always had the desire to make varieties of artificial flowers and handicrafts. In her childhood days she used to collect dry leaves and flowers from the forest nearby and used to make different varieties of bouquet arrangements but no one realized her talents and abilities. Even after her marriage, she had been struggling for twenty years to bring up her children and to look after her in laws. But all these problems were silly as compared to her great dream. She always kept in touch with her interest and dreams. Six months ago fortunately, she got a chance to attend the vocational training conducted under KVK Rural craft discipline. She was inspired by the motivations she received from Mrs. Rachel Skaria, Programme Assistant of Rural craft discipline, KVK. Her support brought great changes in Mrs. Lovely's hidden talents. Both of them combined their ideas and brought a change in their creations and marketing trends. They visited various forests, hills, valleys and farms in the neighbouring states of Kerala, Tamil Nadu and Karnataka to collect raw-materials like varieties of dried grasses, areca sheets, palm leaves, corn husk, different types of cereals etc. They met owners of farms and seek their permission to pick up agricultural wastes, they visited bread factories to collect discarded bread to make a different varieties of flowers. Now Mrs. Lovely is an example how a 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. She has employed two ladies to work along with her. The main finishing work 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.

4. Impact 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. Impact Economic Gains

She earns an average profit of Rs. 25000 / month

6. Impact on Employment Generation

Motivated from the above mentioned Mrs. Lovely's successful enterprise, 12 rural women formed a self help group named Arts Vigyan SHG under Rural Craft discipline KVK, they started designing, jewelry 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.

10.D. Give details of innovative methodology or innovative technology of Transfer of Technology developed and used during the year: Nil.

10.E. Give details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photographs): Nil.

10.F. Indicate the specific training need analysis tools/methodology followed for

- Identification of courses for farmers/farm women – Individual requests from farmers/farm women, Interactive questionnaire during field visits, requests from the State Department of Agriculture
- Rural Youth – Interaction with SHGs, Need analysis in Vocational Schools & Colleges
- Inservice personnel - Requests from the State Department of Agriculture and other line departments

10.G. Field activities

- | | | |
|------|-------------------------------|------------|
| i. | Number of villages adopted | : 11 |
| ii. | No. of farm families selected | : 216 |
| iii. | No. of survey/PRA conducted | : One each |

10.H. Activities of Soil and Water Testing Laboratory

Status of establishment of Lab : Functioning.

1. Year of establishment : 2005-06
2. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost
1.	LPG Cylinder	1	4600.00
2.	Water bath WDB-2 350'400'100mm 12 holes	1	4815.00
3.	Machinery for Homogenising (khan shaker) Model LKS2 platform size 75cmx43cmx10cm	1	20,880.00
4.	Rotary Shaker	1	16,200.00
5.	Machinery for drying (Hot air oven) with digital temperature control, size 455'455'455'	1	13,725.00
6.	Conductivity meter (PH meter Eutech 510)	1	21,935.00
7.	Genesis 20 visible Spectrophotometer meter	1	1,12,499.00
8.	CITIZEN Physical Balance Model CTL-600	1	8,991.00
9.	Micro processor based conductivity	1	13,500.00
10.	Micro Processor Based Flame Photometer with N, K & Ca FILTERS & Compressor	1	45,000.00
11.	Electronic Automatic KEL PLUS Micro processor Based Twelve Place Micro Block Digestion System	1	97,043.00

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12.	Electronic Balance Model: CP 2245 Srl.No.18606016	1	1,00,000.00
13.	Hot plate	1	5,400.00
Total		12	4,64,588.00

Details of samples analyzed so far since establishment of SWTL:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	2096	1281	43	104800.00
Water Samples	18	16	10	900.00
Plant samples	0	0	0	0.00
Manure samples	4	3	1	200.00
Others (specify)	300	300	3	90000.00
Total	2418	1600	57	1,95,900.00

Details of samples analyzed during the 2016-17:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	246	234	42	12300
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	246	234	42	12,300.00

10.I. Technology Week celebration during 2016-17 Yes/No, If Yes

Period of observing Technology Week : From 16-11-2016 to 20-11-2016
 Total number of farmers visited : 1325
 Total number of agencies involved : 8
 Number of demonstrations visited by the farmers within KVK campus : 8

10. J. Interventions on drought mitigation (if the KVK included in this special programme): NA.

PART XI. IMPACT

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

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Ecodon for rodents & Wild boar bio control	25	90	13500	24000
IIHR BANANA SPECIAL	35	65	5,000	7,500
EPN	200	50	4,500	22,500
Bio-management of Banana Pseudostem weevil	50	80	1,200/ha	3,100

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

11.B. Cases of large scale adoption: Nil.

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

PART XII - LINKAGES

12.A. Functional linkage with different organizations

Name of organization	Nature of linkage
ATMA	Demonstration and Trainings
State Planning Board	Demonstration and Scouting and documentation of farm innovations

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

12.B. List Externally Funded Projects / schemes undertaken by the KVK and operational now, which have been financed by State Govt./Other Agencies

Name of the scheme	Role of KVK	Date/ Month of initiation	Funding agency	Amount (Rs.)
Evaluation of horticultural nurseries	Horticultural nurseries funded by SHM during the period from 2003 till 2014 were evaluated based on the criteria envisaged	12/01/2016	State Horticulture Mission	70,000.00
Skill development programme for agro-service centre executives	Agro-service centre executives were given hands on experience for different enterprises	10/03/2016	Department of Agriculture	1,97,000.00
Strengthening of bio-production unit	Bio-products were produced in an economic mode and supplied to farmers	23/03/2016	Department of Agriculture	3,58,000.00

12.C. Details of linkage with ATMA

a) Is ATMA implemented in your district: **Yes.**

If yes, role of KVK in preparation of SREP of the district?

We are actively participated in the final formulation of SREP preparation of the Idukki District. We discussed the technologies that can take up in ATMA demonstrations. We also explained the areas which can cover under various trainings programmes.

Coordination activities between KVK and ATMA during 2016-17

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	Meetings	Monthly Technology Advisory	10	2	-
02	Research projects				
03	Training programmes	Organic Farming	6	2	-
04	Demonstrations				
05	Extension Programmes				
	Kisan Mela	1	4	1	-
	Technology Week	1	5	1	-
	Exposure visit				
	Exhibition				
	Soil health camps				
	Animal Health Campaigns				
	Others (Pl. specify)				
06	Publications				
	Video Films				
	Books				
	Extension Literature				
	Pamphlets				
	Others (Pl. specify)				
07	Other Activities (Pl. specify)				

	Watershed approach				
	Integrated Farm Development				
	Agri-preneurs development				

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

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

12.F. Details of linkage with RKVY: Nil.

12. G Kisan Mobile Advisory Services: Nil.

PART XIII- PERFORMANCE OF INFRASTRUCTURE IN KVK

13.A. Performance of demonstration units (other than instructional farm): Nil.

13.B. Performance of instructional farm (Crops) including seed production: Nil.

13.C. 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.	Metarhizium	145	5800	11600	-
2.	<i>Bacillus thuringensis</i>	69	2760	5520	-
3.	Beauveria	448	17290	36470	-
4.	Lecanicillium	64	2560	5220	-
5.	Yellow sticky trap	5590	195650	195650	-
6.	Blue sticky trap	10	350	350	-
7.	Neem oil	995	199000	149250	-
8.	Trichoderma	1384	55360	110720	-
9.	Pseudomonas	1074	42960	85920	-
10.	<i>Bacillus subtilis</i>	24	960	1920	-

13.D. Performance of instructional farm (livestock and fisheries production): Nil.

13.E. Utilization of hostel facilities: NA.

13.F. Database management

S. No	Database target	Database created
1.	Farmers database	Database for 2016-17.

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

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.)		
0	0	Rain Water Harvesting Pond	2	6		85	8	200000	

PART XIV - FINANCIAL PERFORMANCE**14.A. Details of KVK Bank accounts**

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

14.B. Utilization of KVK funds during the year 2016-17 (Rs. in lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	92.59	92.59	90.62332
2	Traveling allowances	1.50	1.50	1.50000
3	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	2.25	2.25	2.25000
B	POL, repair of vehicles, tractor and equipments	1.50	1.50	1.50000
C	Meals/refreshment for trainees (ceiling up to Rs.40/day/trainee be maintained)	0.75	0.75	0.75000
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	0.30	0.30	0.30000
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	2.60	2.60	2.58900
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	0.51	0.51	0.50300
G	Training of extension functionaries	0.25	0.25	0.25000
H	Maintenance of buildings	0.00	0.00	0.00000
I	Farmer's Field School	0.00	0.00	0.00000
J	Integrated Farming System	0.50	0.50	0.50000
K	Extension Activities	0.50	0.50	0.50000
L	Library	0.20	0.20	0.20000
M	SWTL and issue of Soil Health Cards	0.50	0.50	0.50000
N	Display board	0.39	0.39	0.39000
TOTAL (A)		104.34	104.34	102.35532
B. Non-Recurring Contingencies				
1	Works	0.00	0.00	0.00000
2	Equipments including SWTL & Furniture	4.00	4.00	4.00000
3	Vehicle (Four wheeler/Two wheeler, please specify)	0.00	0.00	0.00000
4	Library (Purchase of assets like books & journals)	0.00	0.00	0.00000
TOTAL (B)		4.00	4.00	4.00000
C. REVOLVING FUND		0.00	0.00	0.00000
GRAND TOTAL (A+B+C)		108.34	108.34	106.35532

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

Year	Opening balance as on 1 st April	Income during the year	Expenditure during the year	Net balance in hand as on 1 st April of each year
April 2014 to March 2015	4.59576	18.60745	19.63000	3.57321
April 2015 to March 2016	3.57321	10.66089	9.95650	4.27760
April 2016 to March 2017	4.27760	17.35988	20.69216	0.94532

15. Details of HRD activities attended by KVK staff during 2016-17

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Sudhakar Soundarajan	SMS, (Plant Protection)	Establishment of mother cultures of different bio-control agents and Mycorrhizha	National Institute of Plant Health Management, Hyderabad.	21.04.2016 to 23.04.2016
		Mass production and quality control of bio-agents	National Bureau of Agriculturally Important Insects, Bangalore	13.11.2016 to 15.11.2016
		Participatory Impact Monitoring and Assessment (PIMA)	ICAR-KVK,MYRADA	21.02.2017 to 25.02.2017
		Front line Extension Programme for Realizing Higher productivity and profitability in Farming	TNAU, Coimbatore	07.03.2017 to 08.03.2017
Jayisy Joseph	Programme Assistant, (Home Science)	Workshop on capacity building of Home Scientists on food processing	TNAU, Agricultural College and Research Institute, Madurai	14 th to 16 th March 2017

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

ICAR-KVK Idukki, hosted by Bapooji Sevak Samaj, was honoured by the visit of **Dr. Trilochan Mohapatra**, (Secretary, DARE & Director General, ICAR) and **Shri Chhabilendra Roul**, IAS, (Addl. Secretary, DARE & Secretary, ICAR), along with the presence of **Dr. Sreenath Dixit**, (Director, ATARI, Bengaluru), on the 15th April, 2016. The team visited all the units of KVK and the farm. They observed all the works undertaken by the KVK in the campus and gave suggestions for the holistic improvement of the premises of KVK and the farm. Steps need to be taken to resolve the labour scarcity problem faced by the KVK through involving SHGs in different units in a participatory mode. Later they had an interaction with all the staff of KVK and critically analysed the work of the staff for the improvement of the agrarian scenario of Idukki district

The Interaction with Farmers Meeting of ICAR- Krishi Vigyan Kendra was held on **17th April, 2016** at ICAR-KVK, Santhanpara. The meeting was presided over by **Smt. Deenamma Kuriakose**, Chairperson, Krishi Vigyan Kendra in the presence of **Dr. Trilochan Mohapatra**, (Secretary, DARE & Director General, ICAR), **Shri Chhabilendra Roul**, IAS, (Addl. Secretary, DARE & Secretary, ICAR), **Dr. J. K. Jena**, Deputy Director General (Fisheries) & **Dr. Sreenath Dixit**, (Director, ATARI, Bengaluru).

The meeting started with the ICAR Theme Song. **Dr. Binu John Sam**, Programme Coordinator i/c, briefed the purpose of the meeting and welcomed the guests of honour. **Dr. Sreenath Dixit**, Director, ATARI, Bengaluru in his opening remarks briefed the importance of this meeting to farmers and how to resolve their problems through KVK by scientist-farmer partnership mode.

Dr. J.K. Jena, Deputy Director General (Fisheries) in his address suggested that KVK, idukki have to utilize the experts in fisheries from ICAR institutes like CMFRI & CIFT, Ernakulam for promoting fisheries production and their value addition.

Smt. Deenamma Kuriakose, Chairperson, KVK in her presidential address, thanked all the Dignitaries from New Delhi & Bengaluru for attending the meeting and briefed the KVK activities and its impact in the agrarian scenario of Idukki district.

Shri. Chhabilendra, Roul, IAS, Addl. Secretary, DARE & Secretary, ICAR in his address reiterated that without farmer participation, there would not have been any use for such an interaction. He also pointed out that 109 ICAR Institutes are located throughout India. Out of this, 5 are in Kerala and 9 regional centres in Kerala. At present there are 643 KVKs functioning in India. Every technology/variety/solution has to be first tested in an experimental basis in field and transfer the technology to the farmer through KVKs. He specified the role of KVK as the link with farmers and their feedback has to be reported to ICAR system. He also pointed out that linkage with farmers in all aspects has to be strengthened further in future.

The meeting was officially inaugurated by lighting the traditional lamp by, **Dr. Trilochan Mohapatra**, Secretary, DARE & Director General, ICAR. In his inaugural address, he expressed his happiness to visit this KVK and was overwhelmed by the participation of farmers for the meeting. He also stressed the need for taking all the technologies to the doorsteps of farmers and appreciated the works done by team KVK, Idukki in such a remote and hilly area. He requested the farmers and officials of the line departments to visit this KVK often to ensure that the mandatory activities are carried out to the fullest for the benefit of farmers of Idukki district. He also urged the technical experts of this KVK to be fully equipped with the scientific advancements and always be a “Lit Lamp” among the farmers of this district. Out of the 643 KVKS in India, many KVKs are run by NGOs, SAUs and ICAR. He insisted to the KVK to plan and involve the farmers to utilize the infrastructure and other facilities of KVK to the maximum extent and to have partnership with all production organizations of this district. He suggested that all the modern technologies are scientific and very lucrative to the farming community. And he pointed out the main objective of this interface meeting is to understand the problem of farmers and find out meaningful solutions.

He briefed the different GOI Schemes which are channelized through KVKs for the benefit of the farmers. He categorically explained the following GoI initiatives for the benefit of farming community *viz*: Soil Health card for importance of soil health, Agri Insurance Scheme and support for Organic Farming. He urged the farmers to concentrate on IFS farming system models and promote their agricultural enterprises in an organic way for ensuring sustainable income. And finally he pointed out the Scheme and Slogan “Mera Gaav Mera Gurv” put forth by Mr. Radha Mohan Singh, the Honorable Minister for Agriculture.

Brochures in Malayalam from the disciplines of Plant Protection, Animal Husbandry & Soil Science were released during the meeting by ICAR Officials. .

Around 243 farmers from different locations of idukki district actively participated in the interaction session that followed and the queries from the farmers were answered within the scope of the meeting

Mr. Shaji Kakkatu (Office Superintendent, KVK, Idukki) proposed the vote of thanks and the meeting came to a end at 5.30 pm.

SUMMARY FOR 2016-17

I. TECHNOLOGY ASSESSMENT

Summary of technologies assessed under various crops

Thematic areas	Crop	Name of the technology assessed	No. of trials
Integrated Nutrient Management			
Varietal Evaluation	Black Pepper	Assessment of suitable black pepper foot rot (quick wilt) resistant variety for Idukki district	5
	Salad Cucumber	Assessment of varieties of Salad cucumber (<i>Brassica oleracea</i> var. <i>italica</i>) in poly house for high ranges	5
	Cassava	Assessment of different varieties of tapioca for resistance of cassava mosaic virus disease in high ranges	5
Integrated Pest Management	Small cardamom	Assessment of different bio-pesticides and parasites against cardamom stem and capsule borer, <i>Conogethes punctiferalis</i>	5
Integrated Crop Management			
Integrated Disease Management	Cowpea	Biological control of cowpea anthracnose disease, <i>Colletotrichum destructivum</i>	5
Small Scale Income Generation Enterprises			
Weed Management			
Resource Conservation Technology			
Farm Machineries			
Integrated Farming System			
Seed / Plant production			
Value addition			
Drudgery Reduction			
Storage Technique			
Mushroom			
Total			25

Summary of technologies assessed under livestock:

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials
Disease Management	Dairy Cattle	Assessment of different methods of prophylactic management of udder oedema disease in dairy animals	5
Evaluation of Breeds			
Feed and Fodder management			
Nutrition Management			
Production and Management			
Others (Pl. specify)			
Total			5

Summary of technologies assessed under various enterprises: Nil.

Summary of technologies assessed under home science: Nil.

II. TECHNOLOGY REFINEMENT: Nil.**III. FRONTLINE DEMONSTRATION****Crops**

Crop	Thematic area	Name of the technology demonstrated	No. of KVKS	No. of Farmer	Area (ha)	Yield (q/ha)		% change in yield	Other parameters		*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
						Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	**	Gross Cost	Gross Return	Net Return	**
Cereals																		
Millets																		
Oilseeds																		
Pulses																		
Vegetables	INM	Demonstration of Ayar in Banana	1	10	0.025	-	-	-	-	-	-	-	-	-	-	-	-	-
	Open precision farming	Demonstration of open precision farming in bitter gourd	1	2	0.6	1930	1774	8.8	-	-	164700	253840	89140	1.54	115000	150000	35000	1.30
	Crop Management	Utilization of Spent Mushroom Compost (SMC) as a medium for vegetable production in grow bags	1	5	5 units	-	-	-	0.84	Not practiced	1690.66	3435.5	1744.84	2.03	Not practiced	-	-	-
Flowers																		
Ornamental																		
Fruit	Open precision farming	Demonstration of low cost open precision farming in Strawberry (<i>Fragaria ananassa</i>)	1	3	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-
Fibres like Cotton																		
Spices and condiments	IDM	Integrated Management for fusarium disease in small cardamom plantations	-	10	2	110	81	54	-	-	285000	465000	180000	1.631	300000	394000	94000	1.31
	INM	Integrated Nutrient Management in Cardamom	1	10	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
	Crop improvement	Column Method for production of quality planting materials in Black Pepper	1	3	3 units	-	-	-	-	-	-	-	-	-	-	-	-	-
	Crop improvement	Improved soil less method (Protray) for production of healthy planting material of ginger	1	3	0.012	-	-	-	-	-	-	-	-	-	-	-	-	-
Commercial crops																		
Medicinal and aromatic																		
Fodder																		
Plantation																		
Fibre																		
Others (pl.specify)	Kitchen waste management	Low cost bio compost bin for kitchen waste management	1	4	4 units	-	-	-	-	Kitchen waste management with bio compost bin	4100	6400	2300	1.56	-	-	-	-
Others (pl.specify)	Value addition	Product diversification in rose apple to reduce wastage and increase additional income	1	6	6 units	-	-	-	-	Shelf life	1070	1640	570	1.53	305	350	45	1.14
Others (Tuber Crops)	Crop diversification	Demonstration of Acrid free variety Gajendra of Amorphophallus in high ranges	1	10	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-

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Others (Tuber Crops)	Crop diversification	Demonstration of potassium efficient variety of Tapioca -Sree Pavitra	1	10	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-
Total																		

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

** BCR= GROSS RETURN/GROSS COST

Livestock

Category	Thematic area	Name of the technology demonstrated	No. of KVKs	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
						Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Dairy	Feed & Fodder	Demonstration of Fodder Cafeteria in rural households of Idukki district.	1	10	10	15	14	7.14	0	0	13610	30420	16810	2.24	14600	23940	8230	1.63
Poultry	Scientific Disease management	Prophylactic management of Newcastle Disease in poultry using oral pellet vaccine	1	10	10	20	18	11.11	0	0	400	788	388	1.99	219	357	138	1.63
Rabbitry																		
Pigerry																		
Sheep and goat																		
Duckery	Evaluation of breeds	Demonstration of Vigova super M duck in backyard system	1	10	10	20	18	11.11	0	0	1899	5470	3571	2.85	1025	2594	1569	2.45
Others (pl.specify)																		
Total																		

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

** BCR= GROSS RETURN/GROSS COST

Fisheries: Nil.

Other enterprises: Nil.

Women empowerment : Nil.

Farm implements and machinery : Nil.

Other enterprises: Nil.

IV. Training Programme

Training for 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										
Cropping Systems										
Crop Diversification										
Integrated Farming										

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Micro Irrigation/Irrigation	2	31	14	45	2	2	4	33	16	49
Seed production										
Nursery management										
Integrated Crop Management	1	14	0	14	0	0	0	14	0	14
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify)										
Others (Organic farming in vegetable)	2	75	14	89	0	0	0	75	14	89
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop										
Off-season vegetables										
Nursery raising	2	65	20	85	5	5	10	70	25	95
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (Specify)										
Others (ICM in Vegetable crops)										
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	1	25	5	30	0	0	0	25	5	30
Others (Post Harvest Management and Processing)	1	15	21	36	0	0	0	15	21	36
c) Ornamental Plants										
Nursery Management	1	14	6	20	0	0	0	14	6	20
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										

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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										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
Livestock Production and Management										
Dairy Management	1	7	10	17	0	0	0	7	10	17
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology										
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										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Women empowerment										

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Location specific drudgery production										
Rural Crafts	4	0	23	23	0	35	35	0	58	58
Women and child care										
Others (pl.specify)										
Others (Processing and Packaging of Mushroom)										
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										
Integrated Disease Management										
Bio-control of pests and diseases										
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	2	93	0	93	9	2	11	102	2	104
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										

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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										
Apiculture										
Others (pl.specify)										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
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										
Others (Pl. specify)										
TOTAL	10	189	47	236	9	37	46	198	84	282

Training for 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										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management (Spices)										
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify)										
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop										

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Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (Specify)										
Others (ICM in vegetables)	5	176	52	228	80	16	96	256	68	324
Others (Organic farming-Vegetables)	11	335	176	511	133	44	177	468	220	688
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)										
Others (Crop diversification)										
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										

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Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management										
Integrated water management										
Integrated nutrient management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
Others (Soil Conservation)										
Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management	3	52	30	82	0	0	0	52	30	82
Feed and Fodder technology										
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 (Workshop)	1	2	6	8	1	16	17	3	22	25
Gender mainstreaming through SHGs	1	4	8	12	0	0	0	4	8	12
Storage loss minimization techniques										
Value addition	3	4	67	71	0	4	4	4	71	75
Women empowerment	2	9	18	27	0	8	8	9	26	35
Location specific drudgery production										
Rural Crafts	5	0	44	44	0	52	52	0	96	96
Women and child care										
Others (Industry training on food processing)	1	9	24	33	0	0	0	9	24	33
Others (pl.specify)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										

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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	3	94	27	121	-	-	-	94	27	121
Integrated Disease Management	4	87	17	104	11	2	13	98	19	117
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides	6	282	159	449	32	15	47	314	174	488
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										
Apiculture	2	45	8	53	15	0	15	60	8	68
Others (pl.specify)										
Capacity Building and Group Dynamics										

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Leadership development										
Group dynamics										
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										
Others (Pl. specify)										
TOTAL	47	1099	636	1743	272	157	429	1371	793	2164

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										
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	1	11	27	38	1	0	1	12	27	39
Small scale processing	1	12	13	25	1	3	4	13	16	29
Post Harvest Technology	4	75	74	149	9	10	19	84	84	168
Tailoring and Stitching										
Rural Crafts	3	19	54	73	6	10	16	25	64	89
Production of quality animal products										
Dairying	3	63	74	137	0	0	0	63	74	137
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										

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Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
Any other (ICM Vegetables)										
TOTAL	12	180	242	422	17	23	40	197	265	462

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										
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	1	22	21	43	4	9	13	26	30	56
Tailoring and Stitching										
Rural Crafts	3	0	35	35	0	25	25	0	60	60
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										

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Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
Any other (ICM Vegetables)										
Any other (Organic farming)										
TOTAL	4	22	56	78	4	34	38	26	90	116

Training programmes for Extension Personnel including sponsored training programmes (on campus) : Nil.

Training programmes for Extension Personnel including sponsored training programmes (off campus): Nil.

Sponsored training programmes

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										
1.c.	Integrated Pest and Disease Management	7	181	44	225	11	2	13	191	46	237
2	Production and value addition										
2.a.	Fruit Plants										
2.b.	Ornamental plants										
2.c.	Spices crops										
3.	Soil health and fertility management										
4	Production of Inputs at site										
5	Methods of protective cultivation										
6	Others (Banana cultivation)										
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)										
10.f.	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										
12.a.	Capacity Building and Group Dynamics										
12.b.	Others (pl.specify)										
	Total	7	181	44	225	11	2	13	191	46	237

Details of Vocational Training Programmes carried out 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 (specify)										
2	Post harvest technology and value addition										

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2.a.	Value addition										
2.b.	Others (pl.specify)										
3.	Livestock and fisheries										
3.a.	Dairy farming	2	28	40	68	0	0	0	28	40	68
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	30	0	198	198	0	242	242	0	440	440
4.e.	Seed production										
4.f.	Sericulture										
4.g.	Mushroom cultivation										
4.h.	Nursery, grafting etc.										
4.i.	Tailoring, stitching, embroidery, dying etc.										
4.j.	Agril. para-workers, para-vet training										
5	Agricultural Extension										
5.a.	Capacity building and group dynamics										
	Grand Total	32	28	238	266	0	242	242	28	480	508

V. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	356	412	23	435
Diagnostic visits	6	8	5	13
Field Day	2	61	2	63
Group discussions	10	121	6	127
Kisan Ghosthi				
Film Show	8	96	5	101
Self -help groups	2	28	0	28
Kisan Mela				
Exhibition	4	79000	45	79045
Scientists' visit to farmers field	18	23	0	23
Plant/animal health camps	2	91	5	96
Farm Science Club				
Ex-trainees Sammelan	2	26	1	27
Farmers' seminar/workshop				
Method Demonstrations	2	129	0	129
Celebration of important days (World food day)	1	9	58	67
Celebration of important days (World soil day)	1	88	19	107
Celebration of important days (National milk day)				
Exposure visits	1	36	0	36
Others (Newspaper coverage)	3	37	0	37
Others (TV Talk)	14			
Others (pl. specify)	4			
Total	436	80165	169	80334

Details of other extension programmes

Particulars	Number
Electronic Media	0
Extension Literature	3
News Letter	1
News paper coverage	15
Technical Articles	0
Technical Bulletins	2
Technical Reports	0
Radio Talks	3

TV Talks	5
Animal health camps	0
Others (pl. specify)	0
Total	29

VI. PRODUCTION OF SEED/PLANTING MATERIAL

Production of seeds by the KVKs : Nil.

Production of planting materials by the KVKs: Nil.

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity	Value (Rs.)	No. of Farmers
		Kg		
Bio Fertilizers				
Bio-pesticide	Metarhizium	145	17400.00	61
	<i>Bacillus thuringensis</i>	69	8280.00	20
	Beauveria	448	53760.00	99
	Lecanicillium	64	7680.00	36
	Yellow sticky trap	5590	391300.00	380
	Blue sticky trap	10	700.00	1
	Neem oil	995	348250.00	420
Bio-fungicide	Trichoderma	1384	166080.00	215
Bio Agents	Pseudomonas	1074	128880.00	199
	<i>Bacillus subtilis</i>	24	2880.00	9
Others (specify)				
Total		9803	11,25,210.00	1,440

Production of livestock and related enterprise materials:

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
Poultry				
Broilers				
Layers	BV 300	200	32000.00	89
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl. specify)				
Fisheries				
Fingerlings				
Others (Carp Fishes)	Carp	535 Kg	80250.00	2
Total			40, 250.00	89

VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS 2016-17

Samples	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
Soil	246	234	42	12300
Water	0	0	0	0
Plant	0	0	0	0
Manure	0	0	0	0
Others (Specify)	0	0	0	0
Total	246	234	42	12,300.00

VIII. SCIENTIFIC ADVISORY COMMITTEE

Number of SACs conducted: 1
Date : 30-01-2017
Venue: Seminar Hall, ICAR-KVK (BSS), Idukki.
No.of Members Attended: 22

IX. NEWSLETTER

Number of issues of newsletter published: 1
Special Edition, June 2016.
No. of copies: 5000

X. RESEARCH PAPER PUBLISHED

Number of research paper published
Nil

XI. DETAILS ON RAIN WATER HARVESTING STRUCTURE AND MICRO-IRRIGATION SYSTEM

Activities conducted				
No. of Training programmes	No. of Demonstration s	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)
2	6	-	85	8

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