

ANNUAL REPORT 2008-09

(FOR THE PERIOD OCTOBER 2008 TO SEPTEMBER 2009)

KRISHI VIGYAN KENDRA (IDUKKI)

PART I - GENERAL INFORMATION ABOUT THE KVK

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

Address	Telephone		E mail	Web Address
Bapooji Krishi Vigyan Kendra, Santhanpara P.O., Idukki (Dt.), Pin-685 619, Kerala.	Office	FAX	kvksanathanpara@rediffmail.com	www.kvکیدukki.org
	04868-247541 247715	04868- 247715		

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

Address	Telephone		E mail	Web Address
Bapooji Sevak Samaj, Kakkattu, Meenadom P.O., Pampady, Kottayam (Dt.), Pin-686 516, Kerala.	Office	FAX	kvksanathanpara@rediffmail.com	www.kvکیدukki.org
	0481-2506271 +919446826019	NIL		

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. S. Jayababu Programme Coordinator i/c	04868-247546	9446223170	kvksanathanpara@rediffmail.com

1.4. Year of sanction: 1994.

1.5. Staff Position (as on 31st August 2009)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M/F	Discipline	Highest Qualification (for PC, SMS and Prog. Asstt.)	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/OBC/ Others)
1	Programme Coordinator	Vacant	Programme Coordinator	-	-	-	12000-375-18000	-	-	-	-
2	SMS	Dr. S. Jayababu	Subject Matter Specialist	M	Animal Science	B.V. Sc. in Animal Husbandry	8000-275-13500	11850	19-06-1995	Permanent	Others
3	SMS	Manoj Oommen	Subject Matter Specialist	M	Agronomy	M. Sc. (Ag) in Agronomy	8000-275-13500	10200	17-08-2001	Permanent	Others
4	SMS	Manju Thomas	Subject Matter Specialist	F	Horticulture	M. Sc. (Ag) in Horticulture	8000-275-13500	10200	17-08-2001	Permanent	Others
5	SMS	K. Valliammal	Subject Matter Specialist	F	Soil Science	M. Sc. (Ag) in Soil Science	8000-275-13500	8550	02-05-2007	Permanent	SC
6	SMS	Vacant	Subject Matter Specialist	-	Plant Protection	-	8000-275-13500	-	-	-	-
7	Programme Assistant(Lab Tech.)/T-4	Jayisy Joseph	Programme Assistant	F	Home Science	M. Sc. Home Science (Extension)	5500-175-9000	7950	20-06-1995	Permanent	Others
8	Programme Assistant (Computer)/ T-4	Biju Narayanan	Programme Assistant	M	Computer Application	M.C.A.	5500-175-9000	5675	10-10-2007	Permanent	OBC
9	Programme Assistant/ Farm Manager	Rachel Skariakutty	Programme Assistant	F	Rural Craft	M.A. Sociology (P.G. Diploma in Rural Development)	5500-175-9000	7775	05-06-1995	Permanent	Others
10	Assistant	Shaji. K. Kakkattu	Assistant	M	-	-	5500-175-9000	7775	05-06-1995	Permanent	Others

11	Jr. Stenographer	Daisy Daniel	Jr. Stenographer	F	-	-	3050-80-4590	4110	05-06-1995	Permanent	Others
12	Driver	P. Nandagopal	Driver	M	-	-	3050-80-4590	4110	05-06-1995	Permanent	OBC
13	Watchman	K.P. Venugopal	Watchman	M	-	-	2550-55-3200	3260	05-06-1995	Permanent	OBC
14	Supporting staff	K.O. Jose	F.F. Attendant	M	-	-	2550-55-3200	3260	05-06-1995	Permanent	Others
15	Supporting staff	P. Sabu	F.F. Attendant	M	-	-	2550-55-3200	3260	05-06-1995	Permanent	Others
16	Peon/Messenger	K.T. Mathew	Peon/Messenger	M	-	-	2550-55-3200	3260	05-06-1995	Permanent	Others

1.6. Total land with KVK (in ha) : 20 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	18.426 ha

1.7. Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	2002	740	47,85,208.10	-	-	-
2.	Farmers Hostel	NA	-	-	-	-	-	-
3.	Staff Quarters	NA	-	-	-	-	-	-
	1							
	2							
	3							
	4							
	5							
	6							
4.	Demonstration Units		-	-	-	-	-	-
	1. Duck cum fish culture unit.	RF	15-06-2009	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	-	-	-	-	-	-
6	Rain Water harvesting system	NA	-	-	-	-	-	-
7	Threshing floor	NA	-	-	-	-	-	-
8	Farm godown	NA	-	-	-	-	-	-
9								
10								

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Tempo Trax	July - 1995	3,06,676.34	1,18,796	Vehicle in running condition with poor fuel efficiency.
Motor Bike	January - 1995	37,972.78	8,174	In running condition with poor fuel efficiency.
Honda Aviator	March - 2009	50,000.00	916	Good condition.

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
A.V. aids (Specify)			
Television	1995	20,894.00	Good
GE OHP	1996	7,100.00	Good
2ET Slide Projector	1996	11,556.00	Good
Sharp Video Player	1996	10,000.00	Good
Pentax SLR Camera	1996	13,599.15	Good
Public Address System	2003	26,755.00	Good
Power Generator	2003	32,492.00	Good
Soil Science Lab Equipments (Specify)			
KEM HOT PLATE with Energy Regulator	2006	5,400.00	Good
Electronic Balance	2006	1,00,000.00	Good
Physical Balance	2006	8,991.00	Good
Spectrophotometer	2006	1,17,499.00	Good
Electronic Automatic KEL PLUS model KES 12L (Nitrogen Analyzer)	2006	97,043.00	Good
Conductivity Meter (PH Meter Utech 510)	2006	21,935.00	Good
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	Good
Conductivity Meter	2006	13,500.00	Good
LG 280 Litre Fridge Model – GI 296 TM V-Guard Stabilizer	2006	250.00	Good
Mixi 750 Watts	2006	4,500.00	Good
Online UPS System with Battery	2006	36,916.00	Good
Glassware and Chemicals with fume chamber 3 x 2	2006	2,68,192.00	Good
Bio-control Lab Equipments			
Laminar Flow Chamber	2000	50,000.00	Good
Refrigerator	2000	10,760.00	Good
Chemical Balance	2000	1,800.00	Good
Auto Clave	2000	19,000.00	Good
Step up Stabilizer	2008	4,595.00	Good
Other Equipments			
Brush Cutter	2009	23,726.00	Good
Fax Machine	2009	15,000.00	Good
FACIT Typewriter (Malayalam)	1995	9,735.00	Bad
FACIT Typewriter (English)	1995	9429.00	Good
Stencil Duplicator	1995	13,700.00	Average
Computer with Printer	2003	49,750.00	Good
Photostat Machine	2003	80,000.00	Good

1.8. A). Details SAC meeting conducted in 2008-09: Not conducted during the reporting period.

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	Homestead based farming
3	Tea plantation
4	Cool season vegetables
5	Dairying
6	Banana cropping
7	Rubber monocrop

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 monocropped 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 ⁰ 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 occupies major area. Potato, temperate fruits are grown in a small scale. Zone includes the only wheat-growing tract of Kerala. North East monsoon 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	-
2.	Cheenikuzhy series	Fine loamy texture.	-
3.	Thommankuthu series	Clayey texture.	-
4.	Venmani series	Clayey texture.	-
5.	Marayoor series	Clay loam to Clayey texture.	-
6.	Pampadumpara series	Clayey texture.	-

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	32846	9076	276
2.	Pepper	84219	52063	618
3.	Banana	1828	13883	7595
4.	Rice	2932	7500	2558
5.	Coconut	24343	90 million nuts	3697
6.	Tapioca	6608	205293	31067
7.	Coffee	10870	6820	627
8.	Tea	23702	40063	1690

Source of Data:- Economics and Statistics Department, Idukki.

2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)
		Maximum	Minimum	
Oct 2008	290.30	24.17	18.73	93.23
Nov 2008	59.00	25.70	17.50	91.93
Dec 2008	33.00	23.53	16.48	91.97
Jan 2009	27.00	24.00	14.38	93.41
Feb 2009	-	27.50	15.43	91.07
Mar 2009	32.60	28.63	16.94	90.48
Apr 2009	161.20	28.70	18.53	93.47
May 2009	48.70	28.00	18.62	92.90
Jun 2009	204.60	25.50	17.35	92.27
Jul 2009	536.60	22.73	17.73	98.30
Aug 2009	-	-	-	-
Sep 2009	-	-	-	-

Source of Data:- Indian Cardamom Research Institute (ICRI), Myladumpara, Idukki (Dt.), Kerala.

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

Category	Population	Production	Productivity
Cattle			
<i>Crossbred</i>	147000	Milk – 3109 (Lakh tone)	
<i>Indigenous</i>	27500	-	
Buffalo	7000	148 (Lakh tone)	
Sheep			
<i>Crossbred</i>	-	-	
<i>Indigenous</i>	-	-	
Goats	200150	Meat – 210.07 (000 tone)	
Pigs			
<i>Crossbred</i>	78000	81.86 (000 tone)	
<i>Indigenous</i>	-	-	
Rabbits	38400	72 (000 tone)	
Poultry			
Hens	750000	Egg – 2 (Crore)	
<i>Desi</i>	200000	1.80	
<i>Improved</i>	-	-	
Ducks	4000	72 (000)	
Turkey and others	100	0.08 (000)	

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

Category	Area	Production	Productivity
Fish			
<i>Marine</i>			
<i>Inland</i>	286 ha	2000 kg/ha	
Prawn			
Scampi	14 ha	7500 kg (500 Kg/Acre)	
Shrimp			

Source of Data:- Department of Fisheries, Idukki.

2.6 Details of Operational area / Villages

Sl. No.	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1.	Peermedu	Azhutha	Peermedu Manjhumala Periyar Kumily Elappara Upputhara Vagaman Peruvamthanam Kokkayar	Tea, Cardamom, tourism Dairy cattle, Buffaloes, Broiler Japanese Quail, Goats, Turkey Toys making Bouquet making Emboss painting Tanjore painting Sand painting Shadow work. Milk products Snacks unit, preservation units.	Pest and diseases and imbalanced nutrition in cardamom. Scarcity in green fodder, Higher cost of Animal feed, Poor growth rate in goats, Stunted growth and higher mortality rate in calves, goat kids and lower production in birds. Lack of awareness about income generation activities especially for school dropouts which are more in number in this area. Low profit for dairy farmers. Motivation and awareness is lacking in many SHG's. Nutritional status data of ICDS shows malnutrition problem is clearly seen in the children of estate labours. Low market price for fruits. Wastage of fruits in rainy season. Daily intake of fruits and vegetables is less in Idukki, when compared to other districts.	IPDM in Cardamom & improving productivity of Cardamom. Scientific livestock management. Value addition in milk products. Empowerment of SHGs and other people in the backward section of the society. Area specific alternative practices through educating the extension functionaries.

2.	Udumbanchola	1.) Kattappana 2.) Nedumkandom	Vandanmedu Anakkara Pampadumpara Kattappana Karunapuram Parathodu Senapathy Rajakumary Rajakkad	<p>Crops: Cardamom, pepper, banana, vegetables, coconut, ginger, fodder crops.</p> <p>Enterprises: Vermi composting, mushroom cultivation, plant nurseries, fruit and vegetable crops.</p> <p>Dairy cattle, goat, rabbit, pig</p> <p>Preparation of home care products, decorative and fancy articles, paper carry bag making. File preparation, Book binding Tie and Dye work, Ceramic arts. Book binding, soft toys making, fabric painting and such other craft works on small scale which require expansion and skill.</p> <p>Jack fruit, papaya, orange, mango, amla, Ginger, Gauva, etc.</p>	<p>Pest and disease infestation in cardamom,, Heavy incidence of fungal diseases in vegetables, Imbalanced nutrition in banana and paddy, Poor soil fertility status. Mastitis in dairy cattle. Infertility problem in dairy cattle. Poor growth in kids, lack of awareness about new breeds of goats. Goiter disease due to iodine deficiently. It leads to abortion, still birth incidence of retained placenta, birth of weak hairless offspring, ie, reproductive failures. Lack of knowledge and skill in Handicraft items. Motivation and awareness is lacking in many women SHGs Low market price for fruits. Wastage of fruits in rainy season. Comparatively daily intake of fruits and the block vegetables is less.</p>	<p>IPDM in cardamom Increase productivity of major crops. Scientific livestock management. Entrepreneurship development among SHG Value addition of fruit crops, preservation of fruits. Effective planning and implementation of nutritional gardening for households.</p>
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3.	Devikulam	1.) Adimali 2.) Devikulam	Bisonvalley Kunchithanny Pallivasal Vellathooval Mannankandam Kanthaloor Marayoor Vattavada	<p>Crops: Cardamom. Pepper, coconut, vegetables, cocoa, ginger, tapioca, banana.</p> <p>Rice, wheat, potato, garlic, cool season vegetables.</p> <p>Pig, livestock products</p> <p>Paper carry bag making, screen printing, fabric painting and Book binding</p> <p>Fruit Preservation and snacks preparation unit</p> <p>Mushroom preservation</p>	<p>Pest and disease incidences in cardamom and pepper. Indiscriminate use of chemicals fertilizers and pesticides.</p> <p>Low productivity in Rice.</p> <p>Heavy infestation of pest and diseases in cool season crops, low rainfall areas.</p> <p>Lack of scientific knowledge on pig rearing.</p> <p>Lack of knowledge on livestock product preparation.</p> <p>Lack of awareness about income generation activities especially for school drop outs</p> <p>Income generating enterprises are very less in SHGs.</p>	<p>IPDM in vegetables, cardamom and pepper. Improving productivity of major crops.</p> <p>Rainwater harvesting.</p> <p>Scientific Piggery Management.</p> <p>Entrepreneurship development among SHGs.</p>
4.	Thodupuzha	Elamdesam	Arakkulam Kanjikkuzhi Vazhathoppu	<p>Crops: Pineapple, Rubber, coconut, vegetables, tapioca and ginger</p> <p>Pig, livestock products</p> <p>Value addition of fruits</p> <p>Toys making, bouquet making, emboss painting, Tanjore painting, sand painting and shadow work.</p>	<p>Low productivity of major crops grown.</p> <p>Lack of scientific knowledge on pig rearing and livestock product preparation.</p> <p>Wastage of seasonal fruits.</p> <p>Low entrepreneurial skills for running enterprises successfully.</p>	<p>Increase productivity of major crops grown.</p> <p>Scientific piggery management. Value addition of livestock products</p> <p>Preservation and value addition of fruits</p> <p>Entrepreneurship development among women SHGs.</p>

2.7 Priority thrust areas

S. No.	Thrust area
1.	Increase productivity of location specific major crops.
2.	Entrepreneurship development.
3.	Integrated Pest & disease management in major crops.
4.	Farm mechanization.
5.	Productivity improvement of poultry.
6.	Scientific livestock management.

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
11	11	92	92	12	12	98	98

Training				Extension Activities			
3				4			
Number of Courses		Number of Participants		Number of activities		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
253	118	4064	3417	31	240	11708	7792

Seed Production (Qtl.)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
Cereals – Nil.	121.5 Kg	Tuber – Nil	25000
Vegetables – 2 Kg	12.36 Kg	Ornamentals – Nil	225
Flower crops – Nil.	5 Kg	Cardamom – Nil	500
		Pepper – 10000	4001
		Silver oak – Nil	300

Livestock (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
Poultry Egg – 200 Nos.	163	Spawn – 5000 Nos.	1347 Nos.
Japanese Quail egg – 3500 Nos.	2903	Trichoderma – 1000 Kg	168 Kg
Duck egg – 80 Nos.	26	Pseudomonas – 1000 L	542 L
		Bee colonies – 500 Nos.	10 Nos.

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

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions												
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products			
													No.	Kg		
1	Increase in productivity	Banana	Untapped yield potential & high cost of cultivation	High Density Planting in Banana	Scientific nutrient management in banana (On going)	3	-	-	-	-	-	-	-	-	-	-
		Pepper	1) Unavailability of high yielding var. 2) Poor soil health resulting in high incidence of P&D. 3) Gall wasp attack on pepper standard Erythrina.	1) Effect of consortium bio-fertilizers in improving productivity in pepper. 2) Evaluation of various pepper standards. 3) Testing high yielding varieties in pepper.	-	3	-	-	-	-	4000 Nos. (Pepper cuttings)	-	-	-	-	-
		Cardamom	1) Low productivity. 2) Immature capsule shedding.	-	1) Scientific nutrient management in cardamom. 2) Application of Zn and B in cardamom (Ongoing).	3	-	-	-	-	-	-	-	-	-	-
		Rice	1) Non-availability of high yielding varieties. 2) Low pH of paddy fields. 3) High incidence of pest and disease. 4) Low yield.	Evaluation of yield performance of Uma variety of Rice under high ranges for improving productivity.	Management of iron toxicity using seed treatment with lime and micronutrients.	4	1	1	3	7.50	-	-	-	-	279	Pseudo monas
		Sweet potato	Non-availability of high yielding varieties.	To assess the suitability of sweet potato varieties (Sree Arun, Sree Varun and Sree Gauri from CTCRI) for high ranges of Idukki district.	-	-	-	-	-	-	-	-	-	-	-	-
2	Entrepreneurship development	Plant nursery	Unemployment of rural youth	-	-	-	2	-	-	-	0.17	-	-	-	-	
		Apiculture	1) Lack of skill. 2) Low yield.	-	Apiary units in cardamom for income generation.	2	3	-	1	-	-	-	10	-		
		Mushroom cultivation	Poor yield of oyster mushroom varieties grown	-	Demonstration of oyster mushroom varieties CO1 and Florida (On going).	2	1	-	-	-	-	-	134	7		

3	Integrated Pest & disease management	Banana	Heavy infestation of rhizome weevil and pseudostem weevil in banana.	1) Integrated management of rhizome weevil. 2) Integrated management of pseudostem weevil.	-	2	1	1	-	-	-	-	-	5
		Ginger	Heavy incidence of soft rot in ginger	-	Integrated management of soft rot in ginger.	1	-	-	-	-	-	-	-	-
		Cardamom	High incidence of clump rot.	-	Prophylactic management of clump rot.	3	-	-	-	-	-	-	-	328 Pseudo monas & Tricho derma
		Tapioca	Heavy incidence of cassava mosaic disease.	-	Production of quality planting material through "miniset technique".	3	-	-	2	25000 sets	-	-	-	-
		Vegetables	Indiscriminate use of plant protection chemicals.	-	-	-	-	1	-	-	-	-	-	-
4	Farm mechanization	Pepper	1) Price fluctuation. 2) Traditional methods of White pepper making is time consuming	-	Mechanization of White pepper making (To be initiated later this year).	-	-	-	-	-	-	-	-	
		Paddy	Labour shortage in harvesting paddy fields on time.	Performance of brush cutter in harvesting marginal paddy lands.	-	2	1	1	3	-	20 rotary weeders sold to farmers for inter-cultural operations	-	-	
		Coconut	1) Low yield. 2) Labour shortage for harvesting.	-	IPM in coconut (ATMA FLD – Ongoing). Demonstration on Coconut climbing machine	1	1	0	1	4 Coconut climbers sold to farmers	-	-	100 (Baculovirus infested beetles)	-
5	Productivity improvement of poultry.	Duck	Low egg and meat production.	Kuttanad layer ducks for backyard poultry farming.	-	3	1	1	-	-	-	-	-	
		Japanese quail	Low egg production.	-	Rearing of improved variety of Japanese quail with space, feed & light management.	2	0	1	-	-	-	-	-	
		Poultry	Low egg production.	-	Improvement of egg production by commercial hybrid layer chicken Gramasree in backyard system.	3	1	1	-	-	-	-	-	
6	Scientific livestock management.	Dairy cattle	Tick infestation.	Study on the efficacy of Fumethrin pour for the control of Tick infestation in cattle.	-	5	0	1	-	-	-	-	-	

	Dairy calves	Endo parasites problem and low body weight.	-	Monitoring of birth weight, average daily gain and weight of 6 month for female cross bred calves incorporating scientific deworming and calf starter based ration.	5	0	1	-	-	-	-	-	-
	Dairy cattle	Low milk production.	-	Increase milk production in dairy cattle by feeding with silage under scarcity condition.	3	0	1	-	-	-	-	-	-

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	Popularization of Uma variety of rice under High ranges for improving productivity.	KAU	Rice	1	0	2	One Rice workshop organized, where result of the OFT was discussed.
2	Management of iron toxicity using seed treatment with lime and micronutrients	KAU	Rice	0	1	1	-
3	Assessment of field performance of brush cutter in harvesting marginal paddy fields.	KAU	Rice	1	0	1	-
4	Evaluation of pepper standards.	KAU	Pepper	1	0	2	-
5	Test the suitability of High yielding varieties in pepper.	KAU & IISR	Pepper	1	0	2	-
6	To test the suitability of consortium biofertilisers in improving productivity in Pepper.	KAU	Pepper	1	0	2	-
7	Mechanization of white pepper making	UAS, Bangalore	Pepper	0	1	0	-
8	Application of Zn and B on improving productivity in cardamom.	ICRI, Myladumpara, Idukki	Cardamom	0	1	2	-
9	Scientific Nutrient Management towards the control of immature capsule shedding.	ICRI, Myladumpara, Idukki	Cardamom	0	1	3	Field Visit-2
10	Prophylactic management for the control of clump rot.	ICRI, Myladumpara, Idukki	Cardamom	0	1	2	FAS-3
11	High Density Planting	KAU	Banana	1	0	2	Method demonstration-2 Field Visit-10 FAS-8
12	Scientific Nutrient Management	KAU	Banana	0	1	2	Field Visits-5 FAS-10
13	IPM for the control of Rhizome weevil in banana.	NRCB, Trichy	Banana	1	0	2	-
14	Management of pseudostem weevil in banana	NRCB, Trichy	Banana	1	0	0	-
15	Integrated Disease Management	IISR	Ginger	0	1	0	Field Visit-2 FAS-5
16	Production of quality planting material through miniset technique	CTCRI, Trivandrum	Tapioca	0	1	2	Field Visit-4 FAS-2
17	Newly released Sweet potato varieties Sree Arun, Sree Varun and Sree Kanaka for high ranges.	CTCRI, Trivandrum	Sweet potato	1	0	0	-
18	Kuttanad layer ducks for backyard poultry farming.	KAU	Duck	1	0	3	-

Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique										
Mushroom cultivation										
Total	2					4		3		9

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

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management										
Varietal Evaluation										
Integrated Pest Management										
Integrated Crop Management										
Integrated Disease Management										
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										

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

Thematic areas	Cattle	Poultry	Piggery	Rabbitary	Fisheries	TOTAL
Evaluation of Breeds		1				1
Nutrition Management						
Disease of Management	1					1
Value Addition						
Production and Management						
Feed and Fodder						
Small Scale income generating enterprises						
TOTAL	1	1				2

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

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

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	Area (ha)
Integrated Nutrient Management	Pepper	Efficiency of consortium bio-fertilizers in improving productivity of black pepper.	5	0.80
Varietal Evaluation	Pepper	Test the suitability of high yielding varieties Panniyoor-2-5 & IISR Malabar Excel, IISR Thevam under High Range conditions.	5	1.00
	Rice	Assessing the performance of UMA variety in Rice for improving productivity.	5	1.00
	Sweet potato	Assessment of suitability of sweet potato varieties Sree Arun, Sree Varun and Sree Kanaka.	5	1.21
Integrated Pest Management	Banana	IPM for the control of Rhizome weevil in banana.	5	1.00
		Management of pseudostem weevil in banana.	5	1.00
Integrated Crop Management	Pepper	Evaluation of various standards for black pepper.	4	0.40
	Banana	High density planting.	5	0.50
Integrated Disease Management				
Small Scale Income Generation Enterprises				
Weed Management				
Resource Conservation Technology				
Farm Machineries	Rice	Assessing the field performance of Brush cutter for harvesting paddy.	5	1.00
Integrated Farming System				
Seed / Plant production				
Value addition				
Drudgery Reduction				
Storage Technique				
Mushroom cultivation				
Total				

4.B.2. Technologies Refined under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Area (ha)
Integrated Nutrient Management				
Varietal Evaluation				
Integrated Pest Management				
Integrated Crop Management				

Integrated Disease Management				
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				

4.B.3. Technologies assessed under Livestock

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials
Evaluation of breeds	Layer duck	Kuttanad layer duck for backyard poultry farming	5
Nutrition management			
Disease management	Dairy cattle	Study on the efficacy of Fumethrin pour for the control of Tick infestation in cattle	43
Value addition			
Production and management			
Feed and fodder			
Small scale income generating enterprises			
Total			48

4.B.4. Technologies Refined under Livestock

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials
Evaluation of breeds			
Nutrition management			
Disease management			
Value addition			
Production and management			
Feed and fodder			
Small scale income generating enterprises			
Total			

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 done	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Rice	Rice based farming	Lack of availability of high yielding varieties.	Assessing the yield performance of Uma variety under high ranges for improving production.	5	Yield performance of Uma variety for improving productivity in Rice.	1) Yield. 2) B:C Ratio.	Uma Variety : 6.67 t/ha. Edavaka – check: 2.5558 t/ha. B:C Ratio in demonstration – 2.71. B:C Ratio in check plots – 1.90.	1) 30 % increase in yield. 2) Profitability increased.	Performance of Uma variety is being reported as excellent by farmers.	Nil	Nil.
	Paddy based cropping system	1) Labour shortage. 2) High labour cost. 3) Low profit from paddy farming.	On Farm Testing to assess the field performance of Brush cutter in harvesting paddy fields.	5	Assessing the performance of brush cutter in harvesting marginal paddy lands.	Field level efficiency.	Brush cutter harvested 50 cents in 6 hours with the help of 2 labours. Rs.670/- (Mean) was saved with the use of machine compared to traditional manual harvesting.	Brush cutter is a practical solution for harvesting marginal holdings of paddy lands where labour activity is a problem. Operating the machine in waterlogged areas is found impractical.	Machine is a workable solution for labour shortage in timely harvest of paddy fields.	Nil	Nil
Pepper	Pepper based cropping system	Erythrina gall wasp attack on pepper standards.	Performance evaluation of various standards for black pepper.	4	Erythrina, Glyricidia, Muringa, Silver oak and Jack as different standards for suitability.	1) Establishment rate. 2) Growth of vines.	Ongoing.				
	Pepper based cropping system	1) Low yielding varieties. 2) Low productivity.	Testing the suitability of black pepper varieties – Panniyoor-2, 3, 4 and 5, IISR Thevam and Malabar Excel varieties under high range conditions.	5	Varietal evaluation of Panniyoor-2, 3, 4 and 5, IISR Thevam and Malabar Excel varieties under high range conditions.	1) Establishment rate. 2) Growth of vines.	Ongoing.				
	Pepper based cropping system	Low productivity.	Assess the efficiency of consortium bio-fertilizers application in rejuvenating black pepper gardens.	5	1 Kg Neem cake + 10 Kg FYM + 25g each Azospirillum, Phospho bacteria + 110g AMF.	1) Yield. 2) Soil fertility.	Ongoing.				

Banana	Monocropping banana in low lands.	1) High cost of cultivation. 2) Unexploited yield potential.	High Density Planting in Nendran Banana.	5	Pits taken at a spacing 3m x 2m and planting 2 plants / pit. Plant population 3332/ha.	1) Average bunch weight. 2) Hands / bunches. 3) Yield/ha.	10 Kg. 5 33.32 T	In HDP with an average bunch weight of 10 Kg and a plant population of 3332/ ha, the total yield recorded was 33.32 T/ha whereas in normal planting the yield was 32.5 T/ha with an average bunch weight of 13 Kg and plant population of 2500.	HDP enables to increase the profitability without causing any additional cost on labour, interculture operations, irrigations, plant protection etc.	Nil.	Nil.
	Banana based cropping system	Heavy yield loss in banana due to the attack of rhizome weevil.	IPM for the control of rhizome weevil in banana.	5	Sucker treatment with Beauveria @ 2g/L of water & setting cosmolure trap at 4 months onwards.	1) Percentage reduction of pest incidence. 2) Yield data.	Ongoing project				
	Banana based cropping system	High incidence of pseudostem weevil in banana.	Management of banana pseudostem weevil.	5	Spraying Chlorpyrifos @ 0.03% twice, pseudostem trap smeared with Beauveria bassiana, spraying of Azadiractin @ 2.5 ml / L + 0.5 ml soap solution at 5 months old plants. Stem injection of monocrotophos 150 ml in 350 ml water thrice from 5 th month onwards.	1) Percentage reduction of pest incidence. 2) Yield.	To be initiated				
Sweet potato	Homestead farming	Non-availability of high yielding varieties.	Assessment of the suitability of sweet potato varieties in high ranges.	5	Varietal evaluation of Sree Arun, Sree Varun and Sree Kanaka under high ranges.	1) Yield. 2) Crop duration.	Ongoing				
Duck	Now a days duck farming is a major enterprise where low egg production & lack of awareness for evaluation of breeds	Low egg production	Kuttanad layer ducks for backyard poultry farming	5	Kuttanad layer ducks have high production potential and more suitable for backyard system.	1) Survival percentage. 2) Major growth parameters. 3) Yield parameters. 4) BCR.	Survival percentage was good. 15% increase in growth performance. 50% increase in egg production with good egg weight (80 gm).				
Dairy cattle	Dairy farming is a major enterprise	Low yield and poor growth	Study on the efficacy of Fumethrin	20	Fumethrin is very effective against Tick	1) Infestation before and after	Fumethrin trial – full control of	Very effective against Tick	The efficacy and control status of	-	-

	where endo and ecto parasite infestation is a major problem resulting from unscientific management practices.	performance	pour for the control of Tick infestation in dairy cattle		infestation	intervention. 2) Major physiological parameters. 3) Milk yield. 4) BCR	Tick infestation and it is very effective. 15-20% increase in milk yield. 15-20% increase in body weight.	infestation.	Fumethrin is very effective and have good result according to farmers opinion.		
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Technology Assessed	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
Technology option 1 (Farmer's practice)	4680	Kg/ha	Rs.18,894/ha	1.9
Technology option 2	6670	Kg/ha	Rs.35,809/ha	2.71
Technology option 3	Nil	Nil	Nil	Nil
Technology option 1 (Farmer's practice)	7 man labours required for harvesting 50 cents.	7 man labours / 50 cents.	-	-
Technology option 2	2 man labours required for harvesting 50 cents.	2 man labours / 50 cents.	Saving of Rs.670 / 50 cents compared to manual harvesting.	-
Technology option 3	Nil	Nil	Nil	Nil
Technology option 1 (Farmer's practice)	Growing Erythrina as a pepper standard.	Ongoing	-	-
Technology option 2	Growing Glyricidia as a pepper standard.	Ongoing	-	-
Technology option 3	Growing Muringa as a pepper standard.	Ongoing	-	-
Technology option 4	Growing Silver oak as a pepper standard.	Ongoing	-	-
Technology option 5	Growing Jack as a pepper standard.	Ongoing	-	-
Technology option 1 (Farmer's practice)	Growing Karimunda variety.	Ongoing	-	-
Technology option 2	Growing Panniyoor-2, 3, 4, and 5 under recommended package of practices.	Ongoing	-	-
Technology option 3	Growing IISR Thevam and Malabar Excel varieties.	Ongoing	-	-
Technology option 1 (Farmer's practice)	Factomphos application without specific dozes.	Ongoing	-	-
Technology option 2	50:50:150 (NPK) g / vine / year.	Ongoing	-	-
Technology option 3	1 Kg Neem cake + 10 Kg FYM + 25g each Azosprillum, Phospho bacteria + 110g AMF.	Ongoing	-	-
Technology option 1 (Farmer's practice)	32.5	Tons/ha	Rs.3,25,000/ha	2
Technology option 2	33.32	Tons/ha	Rs.3,74,850/ha	3
Technology option 3	Nil	Nil	Nil	Nil
Technology option 1 (Farmer's practice)	Use of local banana varieties, indiscriminate use of pesticides and fertilizers.	Ongoing	-	-
Technology option 2	Sucker treatment with slurry of cow dung and ash.	Ongoing	-	-
Technology option 3	Sucker treatment with Beauveria @ 2g / L of water with wetting agent, using Pseudostem trap smeared with Beauveria at 3 months old, setting cosmolure trap at 4 th month onwards @ 2 / acre.	Ongoing	-	-
Technology option 1 (Farmer's practice)	Application of Carbofuran in soil at the time of planting without specified doze.	To be started	-	-
Technology option 2	Spraying Chlorpyriphos twice @ 0.03% when the infestation persists.	To be started	-	-
Technology option 3	Pseudostem trap smeared with Beauveria bassiana. Spraying of Azadiractin @ 2.5 ml / L + 0.5 ml soap solution at 5 month old plant. Stem injection of Monocrotophos @ 2 ml / plant (150 ml Monocrotophos in 350 ml water) at 5, 6, 7 months after planting.	To be started	-	-
Technology option 1 (Farmer's practice)	Use of local varieties of Sweet potato	Ongoing	-	-
Technology option 2	Test the suitability of sweet potato variety Sree Arun.	Ongoing	-	-
Technology option 3	Test the suitability of sweet potato variety Sree Varun.	Ongoing	-	-
Technology option 4	Test the suitability of sweet potato variety Sree Kanaka.	Ongoing	-	-
Technology option 1 (Farmer's practice) Farmers rearing has descript breeds with low production potential.	18-20 eggs / month / bird.	4-5 eggs / week / bird	Rs.720 / Unit	1.13

Technology option 2 Kuttanad layer ducks under backyard system.	25-35 eggs / month / bird.	7-10 eggs / week / bird	Rs.1,050 / Unit	1.65
Technology option 3	Nil	Nil	Nil	Nil
Technology option 1 (Farmer's practice) Application of neem oil and fumigation of the premises of cattle shed.	-	-	-	-
Technology option 2 Application of antiparasitic drugs.	2 L / day / animal Improved	8 L / day / animal	Rs.21,600 / Unit	2.60
Technology option 3 Pouring Fumethrin liquid on the body of the animal between time interval.	4 L / day / animal Improved	12 L / day / animal	Rs.32,400 / Unit	3.13

4.C2. Details of each On Farm Trial to be furnished in the following format separately along with raw data as per the separate proforma provided

1.)

1. Title of Technology Assessed

On Farm Testing programme to assess the yield performance of Uma variety of Rice under high range conditions.

2. Problem Definition

Rice farming is slowly becoming non-profitable, due to low productivity and labour shortage. Farmers don't have access/information about high yielding varieties.

3. Details of technologies selected for assessment/refinement

Uma variety of Rice with yield potential as high as 10 t/ha was a good option for the farmers of Rajakumari village to improve productivity in Rice.

4. Source of technology

Kerala Agricultural University.

5. Production system and thematic area

Rice based farming system and varietal evaluation in Rice.

6. Performance of the Technology with performance indicators

Mean yield of Uma variety in the trial plots was 6.67 t/ha as against 4.68 t/ha in check plots and in both plots, same agro management practices were followed in both the check and trial plots.

7. Final recommendation for micro level situation

Uma variety of rice is suitable for high ranges, especially in the second crop of the season.

8. Constraints identified and feedback for research

Water scarcity was a problem during middle stage of the crop. Seed dormancy of Uma variety was tackled through soaking of seeds in water.

9. Process of farmers participation and their reaction

Farmers were identified through group discussion in the Rajkumari Padasekharam. Krishi Bhavan and progressive farmers were also involved in the selection of farmers. During the crop season, many farmers in the village visited the trial plots. All were impressed by the bumper crop stand. Harvest festival was organized to get further dissemination of the technology. A rice workshop titled "**Karshaka Sangamam**" involving 150 farmers were organized at Rajakad village. The yield data and other attributes of the variety were discussed in the workshop. Plant breeders who have released the variety from KAU were involved in the workshop. A publication titled "**Front Line Demonstration on Scientific Rice Cultivation 2009-10**" was also published in the workshop. The publication highlighted the On Farm Trial results on Uma variety which was distributed to 100 farmers.

2.)

1. Title of Technology Assessed

Assessing the performance of Brush cutter for harvesting marginal holdings in paddy.

2. Problem Definition

Paddy farming is becoming a non-profitable one due to high cost of cultivation; labour shortage during harvesting stages delays timely harvest. To solve the problem of labour shortage during harvesting in marginal paddy fields, brush cutter with reaper attachment is being tried as an alternative.

3. Details of technologies selected for assessment/refinement

Oliomac weed cutter 2.1 hp petrol engine model Sparta 42, with reaper attachment (Italian make).

4. Source of technology

KAU.

5. Production system and thematic area

Rice based cropping system and mechanized paddy farming.

6. Performance of the Technology with performance indicators

Brush cutter harvested 50 cents in 6 hours with the help of 2 man labours. Rs.670/- was saved in ash with mechanized harvesting compared to manual harvesting.

7. Final recommendation for micro level situation

Brush cutter is a practical solution for harvesting marginal paddy lands where scarcity of labour is a problem.

8. Constraints identified and feedback for research

Brush cutter harvesting in waterlogged areas is not practical. Farmers also requested for paddy thresher for harvesting.

9. Process of farmers participation and their reaction

Brush cutter was demonstrated in the harvest festivals organized by KVK in different paddy fields of the district. 100 farmers participated in the 5 demonstrations conducted at Muttukadu, Anakkara, Senapathy, Rajakumari North and Manjakkuzhy Padasekharams. Farmers were enthusiastic about the demonstration.

3.)

1. Title of Technology Assessed

Performance evaluation of various standards for black pepper.

2. Problem Definition

Erythrina gall wasp attack in Erythrina standards.

3. Details of technologies selected for assessment/refinement

Growing Erythrina, Glyricidia, Muringa, Silver oak and Jack used as standards for pepper vine.

4. Source of technology

KAU

5. Production system and thematic area

Pepper based cropping system. Increasing productivity in pepper.

6. Performance of the Technology with performance indicators

Ongoing.

7. Final recommendation for micro level situation

Ongoing.

8. Constraints identified and feedback for research

-

9. Process of farmers participation and their reaction

Farmers are identified for this technology through PRA meeting and the results, farmers reaction will be documented in later.

4.)

1. Title of Technology Assessed

Test the suitability of high yielding varieties (Panniyoor-2, 3, 4 & 5, IISR Thevam & Malabar Excel) in high ranges of Idukki district.

2. Problem Definition

Low productivity of pepper plantations.

3. Details of technologies selected for assessment/refinement

Growing Panniyoor-2, 3, 4 & 5, IISR Thevam & Malabar Excel in a scientific and recommended package of practices.

4. Source of technology

KAU

5. Production system and thematic area

Pepper based cropping system. Varietal evaluation.

6. Performance of the Technology with performance indicators

Ongoing.

7. Final recommendation for micro level situation

Trial in progress.

8. Constraints identified and feedback for research

-

9. Process of farmers participation and their reaction

Farmers are identified for this technology through PRA meeting and the results, farmers reaction will be documented in later.

5.)

1. Title of Technology Assessed

Assess the efficacy of consortium bio-fertilizers application in rejuvenating black pepper gardens.

2. Problem Definition

Low productivity of pepper plantations.

3. Details of technologies selected for assessment/refinement

Application of Neem cake @ 1 Kg / plant + 10 Kg FYM + Consortium bio-fertilizers ie, Azospirillum and Phosphobacteria @ 25 g / plant and AMF 110g / plant.

4. Source of technology

KAU (Adhoc recommendation 2007).

5. Production system and thematic area

Pepper based cropping system. Integrated Nutrient Management.

6. Performance of the Technology with performance indicators

Trial in progress.

7. Final recommendation for micro level situation

Trial in progress.

8. Constraints identified and feedback for research

-

9. Process of farmers participation and their reaction

Farmers are identified for this technology through PRA meeting and the results, farmers reaction will be documented in later.

6.)

1. Title of Technology Assessed

High Density Planting in Banana.

2. Problem Definition

- High cost of cultivation.
- Unexploited yield potential.

3. Details of technologies selected for assessment/refinement

In HDP pits are taken at a spacing of 3m x 2m and two suckers are planted / pit and thus the plant population would be 3332/ha whereas in normal planting, pits are taken at a spacing of 2m x 2m and only one sucker planted / pit.

4. Source of technology

KAU.

5. Production system and thematic area

Monocropping banana in low lands.

Thematic area – Integrated crop management.

6. Performance of the Technology with performance indicators

Average bunch weight – 10 Kg.

No. of hands / bunch – 5.

Yield / ha – 33.32 T.

7. Final recommendation for micro level situation

Tissue culture plants are best suited for HDP. HDP requires 25% more fertilizer over the normal planting. Pits of 50 cm³ size to be taken 3m x 2m apart 2 tissue culture plants / suckers of about the same size are planted in pit 1 feet apart.

8. Constraints identified and feedback for research

Due to the lack of availability of tissue-cultured plants in adequate numbers, farmers usually resort to planting of suckers. Sucker selection in most cases is not properly practiced due to which only one of the two suckers will show active growth and the other would remain stunted.

9. Process of farmers participation and their reaction

Farmers were very much convinced about HDP and are ready to take it up in the following seasons.

7.)

1. Title of Technology Assessed

Integrated Pest Management for the control of rhizome weevil in banana.

2. Problem Definition

Heavy yield loss in banana cultivation due to the attack of rhizome weevil.

3. Details of technologies selected for assessment/refinement

1. Sucker treatment with bio-control agent (*Beauveria bassiana*).
2. Trap method – Setting Pseudostem trap from third month onwards, cosmolure trap at 4 month old plants.

4. Source of technology

NRCB, Trichy.

5. Production system and thematic area

Banana based cropping system and improving the productivity in banana cultivation by the control of disease management.

6. Performance of the Technology with performance indicators

Trial in progress.

7. Final recommendation for micro level situation

Trial in progress.

8. Constraints identified and feedback for research

-

9. Process of farmers participation and their reaction

For adopting this technology, the farmers are selected through PRA meeting, the results and the farmers reaction will be document in later.

8.)

1. Title of Technology Assessed

Management of Banana pseudostem weevil, *Odoiporous longicollis*.

2. Problem Definition

Severe incidence of pseudostem weevil.

3. Details of technologies selected for assessment/refinement

Spraying Chlorpyrifos twice @ 0.03% when the infestation persists. Pseudostem trap smeared with Beauveria bassiana. Spraying of Azadiractin @ 2.5 ml / L + 0.5 ml soap solution at 5 month old plant. Stem injection of Monocrotophos @ 2 ml / plant (150 ml Monocrotophos in 350 ml water) at 5, 6, 7 months after planting.

4. Source of technology

NRCB, Trichy.

5. Production system and thematic area

Banana based cropping system. Integrated Pest Management.

6. Performance of the Technology with performance indicators

To be started.

7. Final recommendation for micro level situation

To be started.

8. Constraints identified and feedback for research

-

9. Process of farmers participation and their reaction

For adopting this technology, the farmers are selected through PRA meeting, the results and the farmers reaction will be document in later.

9.)

1. Title of Technology Assessed

To assess the suitability of Sweet Potato varieties (Sree Arun, Sree Varun and Sree Kanaka from CTCRI) for high ranges of Idukki district.

2. Problem Definition

Sweet potato cultivation is less in Idukki district. Majority of the farmers were using local varieties of sweet potato seedlings for cultivation resulting in low yield.

3. Details of technologies selected for assessment/refinement

High yielding varieties of sweet potato Sree Arun, Sree Varun and Sree Kanaka were selected to assess the suitability for high ranges of Idukki district.

4. Source of technology

CTCRI – Thiruvananthapuram.

5. Production system and thematic area

Homestead farming and improvement in productivity.

6. Performance of the Technology with performance indicators

To be initiated in the month of January 2010.

7. Final recommendation for micro level situation

Trial is in progress.

8. Constraints identified and feedback for research

-

9. Process of farmers participation and their reaction

For Sweet Potato cultivation selected farmers identified through PRA meeting and the sweet potato cuttings will be supplied to them. The results and farmers reaction about this trial will be documented later.

10.)

1. Title of Technology Assessed

Kuttanad layer ducks for backyard poultry farming.

2. Problem Definition

The local breed has low production potential.

3. Details of technologies selected for assessment/refinement

The Kuttanad layer ducks have high production potential and more suitable for backyard system of management. This is well adapted in high ranges of Idukki district along with better farming system.

4. Source of technology

KAU.

5. Production system and thematic area

Egg and meat production.

6. Performance of the Technology with performance indicators

Parameter	Control	Treated
Egg yield	18-20 eggs / month / bird	25-35 eggs / month / bird
Egg weight	65 gm	80 gm

7. Final recommendation for micro level situation

Kuttanad layer ducks under backyard system have higher production potential and get additional income.

8. Constraints identified and feedback for research

Lack of awareness and improper managerial practices.

9. Process of farmers participation and their reaction

Farmers are very eagerly following the technology and using regularly.

11.)

1. Title of Technology Assessed

Study on the efficacy of Fumethrin pour for the control of Tick infestation in cattle.

2. Problem Definition

Occurrence of Tick infestation causing lower milk production.

3. Details of technologies selected for assessment/refinement

Besides acting as an ectoparasite Tick serves as a vector for other bacterial diseases which affects the health of the cow badly results in very low milk production. To overcome this the highly effective Fumethrin pour released for control of Tick infestation.

4. Source of technology

KAU.

5. Production system and thematic area

Milk production.

6. Performance of the Technology with performance indicators

Parameter	Control	Treated
Milk yield	8 L / day / animal	12 L / day / animal

7. Final recommendation for micro level situation

Application of antiparasitic drugs have not fully but partially control the ectoparasites in animals but at the same time Fumethrin 20% EC fully control the ectoparasites in dairy animals. The efficacy and control status of Fumethrin is very effective and have result according to farmers opinion.

8. Constraints identified and feedback for research

Lack of awareness, negligence and improper managerial practices.

9. Process of farmers participation and their reaction

Farmers are very eagerly following and using the technology because of efficacy and control status of Fumethrin is very effective and good result.

4.D1. Results of Technologies Refined

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 done	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12

Contd..

Technology Refined	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
Technology option 1 (Farmer's practice)				
Technology option 2				
Technology option 3				

4.D.2. Details of each On Farm Trial to be furnished in the following format separately as per the proforma below : NA.

5.B. Results of Frontline Demonstrations

5.B.1. Oilseeds: Nil.

5.B.2. Pulses: Nil.

5.B.3. Other 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	**	Gross Cost	Gross Return	Net Return	**
							H	L	A										
Cereals																			
Millets																			
Vegetables																			
Flowers																			
Ornamental																			
Fruit																			
Spices and condiments	Scientific nutrient management towards the control of immature capsule shedding in cardamom	Njallani	-	Cardamom based cropping system	5	1	7	5	6	4	50% (2 q/ha)	70000	2.5 lakhs	1.8 lakhs	3.6	75000	1.5 lakhs	75000	2.0
Commercial																			
Medicinal and aromatic																			
Fodder																			
Plantation																			
Fibre																			
Others (pl. specify)																			

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

** BCR= GROSS RETURN/GROSS COST

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

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Local
Reduction in capsule shedding (%)	95	70

Others (pl.specify) HDP in Banana	1	5	0	5	0	0	0	5	0	5
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	3	23	20	43	0	0	0	23	20	43
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	2	77	15	92	5	3	8	82	18	100
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	2	0	61	61	0	20	20	0	81	81
Others (pl.specify)										
Livestock Production and Management										
Dairy Management	8	143	122	265	84	0	84	227	122	349
Poultry Management	2	38	19	57	3	1	4	41	20	61
Piggery Management										
Rabbit Management	1	0	26	26	0	5	5	0	31	31
Animal Nutrition Management										
Animal Disease Management	1	42	2	44	0	0	0	42	2	44

Vermi-culture										
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition	1	22	13	35	3	5	8	25	18	43
Small scale processing	2	25	30	55	3	5	8	28	35	63
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts	11	3	172	175	4	17	21	7	189	196
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming	1	13	31	44	0	0	0	13	31	44
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	15	63	246	309	10	27	37	73	273	346

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management	1	13	7	20	0	0	0	13	7	20
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing	1	13	7	20	0	0	0	13	7	20

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	2	0	52	52	0	5	5	0	57	57
10.b.	Animal Disease Management										
10.c.	Fisheries Nutrition										
10.d.	Fisheries Management										
10.e.	Others (pl.specify)										
11.	Home Science										
11.a.	Household nutritional security	1	22	13	35	3	5	8	25	18	43
11.b.	Economic empowerment of women	2	3	48	51	4	13	17	7	61	68
11.c.	Drudgery reduction of women	1	22	14	36	3	6	9	25	20	45
11.d.	Others (pl.specify)										
12	Agricultural Extension										
12.a.	Capacity Building and Group Dynamics										
12.b.	Others (pl.specify)										
	Total	33	464	513	977	46	114	160	510	627	1137

Details of sponsoring agencies involved

1. State Planning Board.
2. Horticulture Corporation.
3. State Department of Agriculture.
4. Coffee Board.
5. ATMA.
6. Vegetable and Fruit Promotion Council of Kerala (VFPCK).
7. Kerala Agricultural University (AICRP on Water Management).
8. State Horticulture Mission.
9. High Range Development Society (NGO).
10. Block Panchayaths.

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	2	3	5	0	3	3	2	6	8
1.d.	Integrated crop management										
1.e.	Organic farming										
1.f.	Ornamental gardening	2	6	35	41	0	6	6	6	41	47
2	Post harvest technology and value addition										
2.a.	Value addition	1	0	9	9	0	0	0	0	9	9
2.b.	Others (pl.specify)										
3.	Livestock and fisheries										
3.a.	Dairy farming										
3.b.	Composite fish culture										
3.c.	Sheep and goat rearing										
3.d.	Piggery										
3.e.	Poultry farming										
3.f.	Others (pl.specify)										
4.	Income generation activities										
4.a.	Vermi-composting										
4.b.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.										
4.c.	Repair and maintenance of farm machinery and implements										
4.d.	Rural Crafts	9	0	152	152	0	12	12	0	164	164
4.e.	Seed production										
4.f.	Sericulture										
4.g.	Mushroom cultivation										
4.h.	Nursery, grafting etc.										
4.i.	Tailoring, stitching, embroidery, dyeing etc.	1	2	4	6	0	0	0	2	4	6
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	14	10	203	213	0	21	21	10	224	234

PART VIII – EXTENSION ACTIVITIES**Extension Programmes (including activities of 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	3	35	50	85	15	45	60	5	3	8s
Kisan Mela										
Kisan Ghosthi										
Exhibition	2	850	350	1200	280	120	400	20	42	62
IFilm Show										
Method Demonstrations	32	56	148	204	0	0	0	4	2	6
Farmers Seminar	3	255	75	230	260	180	440	18	35	53
Workshop										
Group meetings	3	0	60	60	8	18	26	0	0	0
Lectures delivered as resource persons	5	1206	242	1448	62	48	110	12	26	38
Newspaper coverage	6		0	0	0	0	0	0	0	0
Radio talks	7									
TV talks										
Popular articles										
Extension Literature	2									
Advisory Services	80	69	33	102	30	6	36	0	0	0
Scientific visit to farmers field										
Farmers visit to KVK	24	1050	477	1527	212	418	630	25	40	65
Diagnostic visits	18	0	0	0	0	0	0	0	0	0
Exposure visits	15	62	198	260	8	40	48	8	12	20
Ex-trainees Sammelan										
Soil health Camp										
Animal Health Camp										
Agri mobile clinic										
Soil test campaigns										
Farm Science Club Conveners meet										
Self Help Group Conveners meetings										
Mahila Mandals Conveners meetings										
Celebration of important days (specify)										
Field Visit	30	200	180	380	11	22	33	0	0	0
TV Programmes	4	0	0	0	0	0	0	0	0	0
ATMA Meetings	4	0	0	0	0	0	0	0	0	0
HRD Trainings	1	0	0	0	0	0	0	0	0	0
Rice Workshop (Nelkarshaka Sangamam)	1	120	10	130	10	6	16	10	5	15
Any Other (Specify)										
Total	240	3903	1823	5726	896	903	1799	102	165	267

PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIALS

9.A. Production of seeds by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Quantity of seed (qtl)	Value (Rs)	Number of farmers to whom provided
Cereals	Paddy	Uma	-	121.50 Kg	5250.00	50
Oilseeds						
Pulses						
Commercial crops						
Vegetables	Brinjal	Haritha	-	12.36 Kg	6180.00	340
	Amaranthus	CO1	-			
	Bittergourd	Priya	-			
	Cowpea	Lola	-			
Flower crops	Dianthus	-	-	5 Kg	2,500.00	30
	Marygold					
	Xenia					
	Phlox					
Spices						
Fodder crop seeds						
Fiber crops						
Forest Species						
Value added food products	Jam	-	-	94 Nos.	940.00	36
	Squash	-	-	42 Bottles	1470.00	30
	Jelly	-	-	36 Packets	360.00	20
	Sipups	-	-	744 Nos.	834.00	160
Total				138.86 Kg	13,930.00	420.00

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						
Ornamental plants	Dianthus			225	3,515.00	30
	Coleus					
	Portulaca	-	-			
	Marygold					
	Euphorbia					
Medicinal and Aromatic						
Plantation						
Spices	Cardamom	Njallani	-	500	10,000.00	30
	Pepper	Sreekara Subhakara Panchami Pournami	-	4001	11,818.00	50
Tuber	Tapioca sets	Sreejaya	-	25000	2,500.00	15
Fodder crop saplings						
Forest Species	Silver oak	-	-	300	450.00	2
Others(specify)						
Total				30026	28,283.00	77

9.C. Production of Bio-Products

Bio Products	Name of the bio-product	Quantity		Value (Rs.)	Number of farmers to whom provided
		No	Kg		
Bio Fertilizers	Azolla	-	79	4,740.00	110
Bio-pesticide	Beauveria	-	5	1,000.00	5
	Bacculo virus	-	175	875.00	25
	Trichogramma	-	4	1700.00	50
Bio-fungicide	Trichoderma	-	168	12,578.00	75
	Pseudomonas	-	542	44,475.00	150
Bio Agents	Spawn	1347	-	23,750.00	105
Others (specify)	Honeybee colonies	10	-	8,000.00	10
Total		1357	973	97,118.00	530

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	Gramasree	163	489.00	20
Duals (broiler and layer)				
Japanese Quail	Quotronix Quotronix Japanica	2943	4,415.00	126
Turkey				
Emu				
Ducks	Kuttanad	26	104.00	8
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl.specify)				
Fisheries				
Fingerlings				
Others (Pl. specify)				
Total				

PART X – PUBLICATION, SUCCESS STORY, SWTL

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

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

Date of start : December 2003.
 Periodicity : Half yearly.
 No. of copies distributed : 2000.

(B) Literature developed/published

Item	Title	Authors name	Number
Research papers	-	-	-
Technical reports	Front Line Demonstration on Scientific Rice cultivation.	Dr. Anina Susan Zachariah, Mr. Manoj Oommen, Mr. A. Murugesan, Mrs. Manju Thomas, Mrs. K. Valliammal	500 copies.
News letters	-	-	-
Technical bulletins	-	-	-
Popular articles	-	-	-
Extension literature	-	-	-
Evaluation Report	Evaluation Report on Women in Agriculture, [Scheme for Women in Primary Sector (SWIP) 2008-09].	Mr. Manoj Oommen, Dr. Anina Susan Zachariah,	6 copies.
TOTAL			

10.B. Details of Electronic Media Produced

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

10.C. Success Stories / Case studies, if any (two or three pages write-up on each case with suitable action photographs. The Success Stories / Case Studies need not be restricted to the reporting period).**1.) Women Entrepreneurship – A Success**

Mrs. Mini Valsalan, Pallimolayil House, Rajakumari Panchayath in Idukki district is an example how women can effectively utilize their talents and leisure time for income generation. She is an ambitious housewife from a rural village and has attended three months vocational training in fabric designing. One of the topics that she followed up and practices was the fabric designing. Motivated from the training, she started a unit with three likeminded women. She learnt to make fabric items to meet the present trend of marketing. Her enterprise has grown to such a dimension as to take bulk orders from textiles and local markets. She purchased the required raw materials in bulk and has employed three women to work along with her. Now she earns an average income of Rs.12,000 / month.

KVK Intervention

- Three months vocational training.
- Motivation to start an enterprise.
- Details about availability of raw materials given.
- Follow up.
- Technical backup in running the unit as and when required.

Timeline showing the details

- Training attended in November 2008 to January 2009.
- Unit started on experimental basis – February 2009.
- Unit established on commercial basis – March 2009.
- Present status – Running successfully.

Impact

Each member of this fabric-designing unit earns on an average of Rs.3000/- to Rs.4000/- per month. In addition to fabric designing, they are planning to start a small textile shop with loan availing from nearby cooperative bank for self-sufficiency and self-employment. Motivated from Mrs. Jaya Binu's successful designing unit, around 20 rural women are going to start fabric designing on a commercial basis.

2.) Vallapurathu Nursery – A Successful enterprise

Sri. K.O. Eldho, Vallapurathu, Senpathy aged 28, after completing his matriculation was in the look out for a job. He tried his luck in various small private firms as gate watcher, peon, salesman etc. He happened to attend a vocational training of 6 months duration on Nursery Management and Ornamental Gardening at

KVK, which started on September-2009. He completed the training by February 2009. Under the technical guidance of KVK, he started a plant nursery by May 2009. He has been able to employ 3 of his fellow trainees in his nursery. He earns an average net income of Rs.3,500/- per month. It has been 5 months since the start of his enterprise. According to him, he is fully satisfied with his new venture as he now gets social acceptance, besides being able to earn a stable income. He owes his success to KVK and he still seeks the technical support and guidance of KVK through regular visits and over telephone.

3.Amrutham – A model food processing enterprise by Rural Youth

A group of 5 rural youth with leadership of Mr. Vinodkumar attended “Preservation Training” conducted by KVK at Edamattom, Rajakumari village on 22nd June 2009. They were much motivated through the demonstration classes and underwent 5 more preservation training at their village level organized by KVK. Special emphasis was given for the preservation of locally available fruits. Technical advices to start an enterprise is given by KVK. The group started an enterprise on value added products in the month of July 2009. They named the group as “**Amrutham**” which is running very successfully in Kadukkacity.

KVK Intervention

- Identification of interested rural youth from the first training on preservation.
- Off campus trainings and preservation demonstrations for the group.
- Technical guidance.
- Motivation to start the unit.
- Regular follow up visits.

Technology

Locally available fruits and its preservation techniques were given to the group. The group make use of Jackfruits, Oranges, Passionfruits, Guava, lemon, pineapples, grapes etc. for preparing products. Squash, Jam, Jelly, sipups, Wine, Serbath etc. were the items prepared by them.

Impact

Horizontal spread.

The selected youths were from Vocational Higher Secondary School. The trainings were given for 44 persons. In school itself, unit started and almost all of them showed interest to bring locally available fruits for value addition. The sale of their products were made during a public meeting and covered through local channels.

Economic gains

Now “**Amrutham**” group earn an average profit of Rs.3,000/- per month.

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

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)

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1	Value added food products	The salt taste of the foodstuffs can be reduced by putting charcoal while cooking.	Charcoal absorbs salt taste. The quality of the food increased due to this.
2	Value addition of milk	While preparing curd, a piece of coconut to be added for getting thick curd.	Thick curd is preferred.
3	Food processing	For fermenting flours, instead of using yeast, cocoa pulp can be used.	Easy method for household fermentation.

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

- Identification of courses for farmers/farm women
- Rural Youth
- Inservice personnel

10.G. Field activities

- i. Number of villages adopted
- ii. No. of farm families selected
- iii. No. of survey/PRA conducted

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 temp: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
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 including during 2008-09 :

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	231	117	35	9,300.00
Water Samples				
Plant samples				
Manure samples				
Others (specify)				
Total				9,300.00

Details of samples analyzed during 2008-09 :

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized
Soil Samples	153	89	20	7,020.00
Water Samples				
Plant samples				
Total				7,020.00

PART XII 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)
Apiculture	218	70	Nil	Rs.1000/month
Mushroom cultivation	66	10	Nil	Rs.2000/month
Value addition of locally available fruits	143	25	Nil	Rs.3000/month
Fabric designing	310	85	Nil	Rs.3000/month
Decorative & fancy articles	300	70	Nil	Rs.2500/month

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

11.B. Cases of large scale adoption

Popularization of Uma variety of Rice

Front Line Demonstration on Uma variety of seeds in Paddy was demonstrated in 2008-09 in 4 Padasekharams of Idukki covering 50 ha area in the district, involving 147 farmers. The FLD was conducted in the second season of 2008-09, with the assistance of State Planning Board.

The demonstration was on Uma variety of seeds with yield potential as high as 10 t/ha. The demonstrated plots had recorded an yield of 6.67 t/ha for the demonstration. Impressed by the yield performance, 30% of the participating farmers have adopted the variety and cultivated it in the next season (Kharif 2009-10). 500 Kg of Uma seeds was sold to 30 farmers covering 5 ha area in the district.

A workshop of Rice farmers was organized at Rajakad village. 150 farmers, extension functionaries and scientists participated in the workshop. Plant breeders from KAU had much appreciated the efforts of the KVK-Idukki and the yield performance of Uma in high ranges.

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

PART XII - LINKAGES

12.A. Functional linkage with different organizations

Name of organization	Nature of linkage
Dept. of Agriculture, Govt. of Kerala	Joint diagnostic surveys, joint implementation, participation in meeting, Conducting training programmes etc. In service training of Agricultural Officers and Agri. Assistants, Scientists of KVK provides resource persons for farmers training programmes organized by Agri. Dept.
Dept. of Animal husbandry, Govt. of Kerala	Animal husbandry camps, participation in meeting conducting training programmes etc.
Kerala Agricultural University	Collection of planting material of crops for the KVK nursery and supply of planting material on demand, Technical advice towards the planning and implementation of OFTs and FLDs
State Horticulture Mission	Small nursery, trainings, mushroom spawn production unit.
NABARD	Project formulation and submission.
Integrated Child Development Scheme (ICDS)	Organizing health, nutrition and childcare programmes participating in farm video programme, Radio talks etc. for extension workers of Social welfare Department.
All India Radio	Participating in farm video programmes, Radio talks announcement of training programmes and other activities of KVK.
Spices Board	Conducting training programmes in Agriculture and organizing spice clinics, Seminars, demonstration classes and field visits planting material for OFT programme were procured from spices Board Nursery.
ICRI, Myladumpara	Training programmes, Training materials, field visits, and technical consultation
Grama Panchayats of the District	Joint conduct of extension activities, participation in meetings

	and conducting training programmes. Women Cell of KVK imparted trg. programmes for SHG groups in collaboration with District Grama Panchayath. Technical staffs are members of various working groups to evaluate 10 th Five Year Plan.
Block Development Office, Nedumkandam	Training to Farmers and farmwomen.
Kerala Agri. University Regional Research Station	Technical Support for the implementation of various programme
National Literacy mission	Organizing farm information centres through Jana Vidhya Kendras
Planning Board	Conduct of OFT and FLD on Paddy.
Directorate of extension Govt. of India	Implementation of Central Sector Scheme of Agricultural extension through Voluntary organization
Cardamom Research Station, Pampadumpara	Technical consultancy supply of recently released Cardamom variety PV1 and PV2 to Germplasm collection of KVK and Field visit.
Principal Agricultural Office Idukki	Training Organizer of KVK as a member of District Nodal Agency of NWDPRRA under the Principal Agricultural Office, Idukki
Malayala Manorama	Conduct of Seminars contribution of Articles in Karshaka Sree a Agriculture magazine of Malayala Manorama
Dairy Development Department	Procurement of planting materials for Frontline Demonstration programme.
Grama Panchayath, Santhanpara	Trg. Organizer is the vice-Chairman of working Group on Agriculture as a part of Kerala Development programme conduct of trainings etc.
Society for Orientation and Rural Development Kudumbasree	Conduct of Seminar in different parts of Idukki district
Vocational Higher Secondary Education, Directorate	OJT to V.H.S.E. 2 nd year students and orientation courses to 1 st year students.
ATMA	Management Committee and governing board meeting. Preparation and conduct of OFT and FLD.
Malanadu Agricultural Development Bank	Long term on and off campus trainings for women groups are organized jointly
Directorate of Extension, Ministry of Agriculture, Govt. of India	Implementing agency for Central Sector Scheme on Agricultural extension.
STED	Trainings to Farmers and Farmwomen.
Schools	Agri / Farm clubs formation and trainings.

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

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)

12.C. Details of linkage with ATMA

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

S. No.	Programme	Nature of linkage	Remarks
1	Front Line Demonstrations implemented through ATMA. 1) High density planting in Banana. 2) Integrated Pest Management in Banana. 3) Integrated Pest Management in Coconut.	FLD programmes are implemented by KVK through ATMA.	-

2	On Farm Trials / Front Line Demonstrations conducted by Department of Agriculture in different parts of Idukki district.	Technical consultation given for the formulation of On Farm Trials / Front Line Demonstrations being implemented in different places of the district in the year 2008-09.	-
3	General body, ATMA – Management Committee meeting, Block level Technical Team & Farmers Advisory Committee meetings in different Blocks of Idukki district.	Programme Coordinator and technical staff participated in these meeting regularly.	-
4	Training programmes: a. Scientific Crop Management in Banana. b. Soil fertility management. c. System of Rice Intensification. d. Integrated Pest and Disease Management in Paddy.	These trainings are organized by ATMA & KVK Staff were the technical experts for conducting the training.	-
5	District level Scientists – Farmers interface organized at Vattavada.	KVK Staff participated in the programme to address various problems of farmers.	-
6	Farmers Field School in Banana.	KVK was identified as one of the centers under ATMA for conducting Farmers Field School in Banana for the year 2009-10.	-

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

S. No.	Programme	Nature of linkage	Constraints if any
1	Small nursery in Pepper	Rs.3,00,000/- has been provided by SHM for setting up small nursery in Pepper.	-
2	Gardeners Training	Rs.13,52,500/- has been provided by SHM for the conduct of training and for strengthening infrastructure facilities like Mist chamber, Rain shelter and Potting shed cum store etc.	-
3	Farmers Training	Rs. 3,19,500/- has been provided by SHM for the conduct of 15 nos. of farmers training each of 2 days duration.	-
4	Spawn production unit	Rs.3,00,000/- has been provided by SHM for setting up a spawn production unit and for the renovation of the existing mushroom shed.	-

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

S. No.	Programme	Nature of linkage	Remarks

PART XIII- PERFORMANCE OF INFRASTRUCTURE IN KVK

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

Sl. No.	Demo Unit	Year of establishment	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1	Mushroom unit	2002	10 m ²	Oyster mushroom var. CO1	Mushroom	25 Kg	1,000.00	2,500.00	-
2	Spawn production unit	2009	10 m ²	Var.CO1, CO2, Florida	Spawn	1347 pkts.	5,980.00	23,750.00	Funded by SHM
3	Mist chamber	2009	96 m ²	Sreekara Subhakara Panchami Pournami	Pepper vines	4001	4,000.00	11,818.00	Funded by SHM
4	Rain shelter	2009	50 m ²	-	Ornamental plants	225	500.00	3515.00	Funded by SHM

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

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.	Cost of inputs	Gross income	
Cereals									
Pulses									
Oilseeds									
Fibers									
Spices & Plantation crops									
Floriculture									
Fruits									
Vegetables									
Others (specify)									

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	Bio-agents: Spawn	1347 pkts.	5,980.00	23,750.00	-
2	Bio-pesticide: 1) Beauveria 2) Bacculo virus 3) Trichogramma	5 Kg 175 Kg 4 Kg	100.00 100.00 600.00	1,000.00 875.00 1700.00	-
3	Bio-fungicide: 1) Trichoderma 2) Pseudomonas	168 Kg 542 L	1,680.00 18,970.00	12,578.00 44,475.00	-
4	Bio-fertilizer: Azolla	79 Kg	395.00	4,740.00	-

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

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty. (Nos.)	Cost of inputs	Gross income	
1	Poultry	Gramasree	Egg	163	350.00	489.00	-
2	Japanese quail	Quotronix Quotronix Japanica	Egg	2943	1800.00	4415.00	-
3	Duck	Kuttanad	Egg	26	320.00	104.00	-

13.E. Utilization of hostel facilities

Accommodation available (No. of beds)

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
October 2008			
November 2008			
December 2008			
January 2009			
February 2009			
March 2009			
April 2009			
May 2009			
June 2009			
July 2009			
August 2009			
September 2009			

13.F. Database management

S. No	Database target	Database created

13.G. Details on Rain Water Harvesting structure and micro-irrigation system

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 Demonstrations	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)		

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
With Host Institute	State Bank of Travancore	Kumily	2022	Chairman	57060837003	-	-
With KVK	State Bank of Travancore	Rajakumari	2018	Chairman & Programme Coordinator	57060836995	-	SBTR0000453
	District Cooperative Bank	Santhanpara	-	KVK Revolving Fund	3754	-	-

14.B. Utilization of funds under FLD on Oilseed (Rs. in Lakh): NA**14.C. Utilization of funds under FLD on Pulses (Rs. in Lakh):** NA**14.D. Utilization of funds under FLD on Cotton (Rs. in Lakh):** NA

14.E. Utilization of KVK funds during the year 2008-09 (up to August 2009) (Rs. in lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	47.52	55,17,000.00	47,51,672.00
2	Traveling allowances	01.00		1,00,000.00
3	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	01.90		1,90,015.24
B	POL, repair of vehicles, tractor and equipments	00.91		91,053.00
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	00.70		70,152.50
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	00.80		79,998.50
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	00.60		57,150.00
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	00.50		37,198.00
G	Training of extension functionaries	00.03		3,009.00
H	Maintenance of buildings	00.25		25,006.00
I	Establishment of Soil, Plant & Water Testing Laboratory	00.00		0.00
J	Library	00.06		5,995.00
K	Farmers Field School	00.25		25,000.00
TOTAL (A)		54.52	55,17,000.00	54,36,249.24
B. Non-Recurring Contingencies				
1	Works			
2	Equipments including SWTL & Furniture a. Fax Machine.	00.15		15,000.00
3	Vehicle (Two wheeler) a. Honda Aviator	00.50		50,000.00
4	Library (Purchase of assets like books & journals)			
TOTAL (B)		00.65		
C. REVOLVING FUND				3,84,963.90
GRAND TOTAL (A+B+C)		55.17	55,17,000.00	58,86,213.14

Utilization of KVK funds during the year 2009-10 (up to August 2009) (Rs. in lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	37.00	22,31,032.00	16,14,835.00
2	Traveling allowances	01.00		53,197.00
3	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	01.25		70,552.00
B	POL, repair of vehicles, tractor and equipments	00.95		31,234.00
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	00.90		20,101.00
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	00.60		39,118.00
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	01.03		66,717.00
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	01.32		53,650.00
G	Training of extension functionaries	00.10		0.00
H	Maintenance of buildings	00.25		0.00
I	Establishment of Soil, Plant & Water Testing Laboratory	00.00		0.00
J	Library	00.10		4,430.00
K	Extension activities	00.25		0.00
L	Farmers Field School	00.25		0.00
TOTAL (A)		45.00	22,31,032.00	19,53,834.00
B. Non-Recurring Contingencies				
1	Works			
2	Equipments including SWTL & Furniture			
3	Vehicle (Four wheeler/Two wheeler, please specify)			
4	Library (Purchase of assets like books & journals)			
TOTAL (B)				
C. REVOLVING FUND				67711.00
GRAND TOTAL (A+B+C)		45.00	22,31,032.00	20,21,545.00

14.F. 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 2006 to March 2007	24,097.01	60,673.00	21,647.30	38,998.70
April 2007 to March 2008	23,418.72	4,06,601.75	3,08,312.95	98,288.80
April 2008 to March 2009	68,825.50	7,78,157.00	3,84,963.90	3,93,193.10

PART XV - OTHERS

15. Please include information which has not been reflected above (write in detail).

Instructions

Sl.No.	Instructions
1.7	Under demonstration unit, kindly give name of unit. Source of funding must be mentioned
3.B.	This should tally with the thrust areas given in Sl.No.2.7
3.C.	This can be made in landscape table
4.A1 to 4.B.4	Total of 4.A.1 should tally with 4.B.1, 4.A.2 with 4.B.2, 4.A.3 with 4.B.3. and 4.A.4 with 4.B.4
5.A.	For example thematic area – popularization of variety, and under this thematic area if two varieties have been popularized, please give separately.
5.A and 5.B	Kindly ensure that hybrids mentioned are really hybrids and then incorporate in the appropriate column
4.A, 4.B, 4.C, 5.A and 5.B	In case of all OFTs and FLDs, raw data (data on OFT and FLD on individual farmers basis) is required to be maintained at KVK level carefully and all data for this report must be compiled based on the raw data.
7 .A to 7.H	Please ensure that the total figures are tallying properly
Part VIII	Extension activity under celebrations for each important day, please insert separate rows and give appropriate data separately. Clubbing of data may be avoided.
10.A	Monthly, quarterly and Annual Report of KVK are compilation reports only and need not be considered as Technical Reports.
Cover page	For sending to ZPD, cover page should be same as given in the first page of the format. In other words no need of putting photographs and other picture formats. The same may be included while submitting the final Annual Report during Annual Review Workshop.