



UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE



KRISHI VIGYAN KENDRA, TUMAKURU

ANNUAL PROGRESS REPORT OF KVK TUMAKURU
FOR 2014-15

KRISHI VIGYAN KENDRA, TUMAKURU
Konehalli-572 202, Kasaba Hobli, Tiptur Taluk
Tumakuru District

Phone: 08134-294771

E mail: kvkTumakuru@gmail.com

ANNUAL REPORT 2014-15

(FOR THE PERIOD APRIL 2014 TO MARCH 2015)

KRISHI VIGYAN KENDRA (TUMAKURU)

1.6. Total land with KVK (in ha) : 23 ha

S. No.	Particulars	Area (ha)
1.	Under Buildings	03
2.	Under Demonstration Units	
3.	Under Crops	20
4.	Orchard/Agro-forestry	
5.	Others	-

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 UAS	22.02.2012	-	55,00,000 25,00,000	-	-	-
2.	Farmers Hostel	ICAR	22.12.2012	550	53,00,000	-	-	-
3.	Staff Quarters	-	-	-	-	-	-	-
4.	Demonstration Units	-	-	-	-	-	-	-
5.	Fencing	-	-	-	-	-	-	-
6.	Rain Water harvesting system	-	-	-	-	-	-	-
7.	Threshing floor	-	-	-	-	-	-	-
8.	Farm godown	-	-	-	-	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Jeep Mahindra BOLERO	2004	5,00,000	260862	Good
Tractor Massey Ferguson	2002	3,80,000	3384.2 (hours)	Good
Bike TVS Star City	2006	40,000	27057	Good
TVS VICTOR(UAS Vehicle)	2003	50,000	38146	Good
Honda Activa	2009	50,000	30218	Good

C) Equipments & AV aids

Sl. No.	Name of Equipments	Year of purchase	Cost (Rs.)	Present status
1	Photo Copier (Toshiba)	30-03-2009	77,954	Good
2	Generator (10 KV)	01-04-2002	86,100	Good
3	Over Head Projector (OHP)	28-05-2002	15,976	Good
4	Camera Pentax –SLR	31-07-2002	25,000	Good
5	Public Address System	31-07-2002	21,500	Good
6	Kodak Ektalite Slide Projector with slide tray	05-04-2003	47,125	Good
7	Philips TV 21 inches + VGuard Stabilizer	20-05-2003	12,513 + 882	Good
8	Philips DVD Player 625 K	20-05-2003	8,276	Good
9	LYNX Stevenson Screen Single	04-07-2003	6,000	Good
10	Trolley Stand	05-04-2003	7,655	Good
11	Bee hive boxes (12 nos.)	06-01-2003	7,800	Good
12	Nova easy carry display system (1 set)	06-01-2003	14,000	Good
13	Nova cardinal writing board (3' x 4')	05-04-2003	5,742	Good
14	HP Deskjet 3745 Printer	12-03-2005	3,400	Good
15	HP Scanjet 2400 Scanner	12-03-2005	4,400	Not working
16	Thoshiba Projector	14-06-2007	60,106	Good
17	Honda weed cutter	17-02-2009	30,000	Good
18	Panasonic fax machine	21-01-2011	--	Good
19	HP Lasejet 1020plus printer	28-02-2012	7,350	Good
20	Computer (Intel Pentium)	21-01-2013	--	Good
21	CANON Laser printer	21-01-2013	--	Good
22	Digital Sony camera MDSEW 320	21-01-2013	--	Good
23	Acer desktop computer	28-02-2013	32,150	Good
24	DSC coolpix S 6300 NIKON digital camera	07-03-2013	10,490	Good
25	NIKON coolpix P530 camera	13-03-2013	19,991	Good

1.8. Details SAC meeting conducted in 2014-15

Sl. No.	Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
1.	-	-	-	-	-

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	Finger millet, Paddy, Ground nut, Redgram, Coconut, Vegetables, Arecanut, Dairying, Sericulture

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

Sl. No	Agro-climatic Zone	Characteristics
1	Central Dry Zone (Zone - 4) Madhugiri, Pavagada, Sira, Koratagere, Tiptur and C.N. Halli taluks	Red sandy soil mixed with clay soil and patches of black soil Average rain fall 606.81 mm Source of irrigation are small tanks & borewells
2	Eastern Dry Zone (Zone -5) Tumakuru and Gubbi taluk	Red clay loam and clay lateritic soil Average rainfall 768.16 mm Source of irrigation are tanks, wells and borewells
3	Southern Dry Zone (Zone-6) Kunigal and Turvekere taluk	Red sandy soil mixed with clay soil. Average rainfall 750.56 Source of irrigation are small tanks and borewells

S. No	Agro ecological situation	Characteristics
1	Agro eco sub region-1	Hot moist, semiarid with LGP 150-180 days (LGP-length of growing period)

2.3 Soil types

S. No	Soil type	Characteristics	Area (ha)
1	Red sandy loam	Soil contains 75-80% sand, silt 5-15% and clay 16-20%. Depth of the soil is shallow to medium. The clay fraction of red soils is rich in kaolinitic type of clay minerals, medium in fertility	6, 15,230
2	Shallow black soils	Depth of the soil is shallow, water holding capacity is poor, low fertility	2, 45,432
3	Red loamy soils	Red loams characterized by argillaceous soils with a cloddy structure and the presence of only a little concretionary material. Soils contain 31 – 34 % sand and 44 to 47% silt and 22 to 25 % clay, medium to high fertility. "N" is below 0.1 percent	2, 04,093

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

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	Rice	10578	38892	3677
2	Jowar	2225	1176	528
3	Finger millet	175024	232364	1328
4	Maize	24987	59542	2383
5	Minor Millets	3428	1381	403
6	Redgram	13317	5020	377
7	Black gram	1047	132	126
8	Horsegram	11713	3290	281
9	Field bean	9754	2636	270
10	Greengram	11131	1824	164
11	Cowpea	4124	1263	306
12	Groundnut	84237	35827	425
13	Sesamum	345	57	164
14	Sunflower	736	788	1071
15	Castor	2290	780	340
16	Niger	1377	233	169
17	Mustard	706	109	155
18	Cotton	695	3607	5
19	Sugarcane	646	54884	85

(Source: Dept of Agriculture, Tumakuru)

2.5. Weather data

Month	Rainfall (mm)	Temperature ⁰ C		Relative Humidity (%)
		Maximum	Minimum	
April 14	41.0	35.48	21.29	85.40
May 14	89.0	33.28	21.61	86.33
June 14	31.5	31.09	21.72	84.58
July 14	24	28.59	21.53	84.23
August 14	158.5	28.76	21.3	86.57
September 14	166	29.23	20.65	86.72
October 14	286.5	29.63	20.74	88.91
November 14	14.5	28.76	21.00	84.97
December 14	0.0	27.75	21.54	82.94
January 15	6.5	26.53	15.86	88.42
February 15	0.0	32.19	16.98	78.75
March 15	25.0	35.36	18.63	74.33

(Source: Dept of Agriculture, Tumakuru)

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

Category	Population	Production	Productivity
Cattle			
<i>Crossbred</i>	63704	54	5.5745
<i>Indigenous</i>	440888	56	2.0671
Buffalo	217528	68	2.5382
Sheep	meat 000 tons		
<i>Crossbred</i>	9		--
<i>Indigenous</i>	884643	17.31	--
Goats	322373	16.60	--
Pigs	-	-	-
<i>Crossbred</i>	905	0.23	--
<i>Indigenous</i>	12411		--
Rabbits	560	NA	--
Poultry	egg production in lakhs		
Hens		--	--
<i>Desi</i>	6,42,382	273	--
<i>Improved</i>	-	71	--
Ducks	-	-	-
Turkey and others	-	-	-

Category	Area	Production	Productivity
Fish	-		
<i>Marine</i>	-		
<i>Inland</i>	1306 ha	16,000 metric ton	650-700 kg/ha
Prawn	-	-	-
Scampi	-	-	-
Shrimp	-	-	-

2.7 District profile has been Updated for 2014-15 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	Tiptur	Honnavalli	Honnavalli Pattarehalli Lakkiahalli	3 year	Redgram Tomato Banana Banana Rangapura	Use of local and old varieties, yield decline due to delayed sowing Incidence of pod borer menace Low nutrient use efficiency Wider spacing, less number of plants per unit area Incidence of Sigatoka leaf spot and Panama Wilt Lack of awareness on methodology for grading of copra and marketing	Maintaining crop productivity through soil & pest management
2	Turvekere	Mayasandra	Mavinkere Dhabbegatta Obenagasandra Devihalli	3 year	Fingermillet Bengalgram Field bean Tomato Arecanut Banana	Neck and finger blast, Lack of knowledge on value addition Inefficient use of paddy fallows Use of local and old varieties Improper plant protection measures for wilt including use of tolerant variety Improper control measures for pod borer Low yield, Lack of HYVs, Improper nutrient management Severe nut splitting and yield loss due to deficiency of boron	Introduction of high yielding varieties Nutrient and water management
3	C.N. Halli	Shettikere	Shettikere Kuppur Thamadihalli Gopalanahalli	3 year	Mango Groundnut Kodomillet Coconut Vegetable Banana	Low soil fertility, high weed infestation and lower income Low yield potential of existing ruling varieties Lack of awareness on branding and labelling of Kodomillet products Severe incidence of Basal stem rot leading to death of palm Inefficient use of space, and lower income from mono cropping	Maintaining productivity through introduction of high yielding variety Pest management
4	Gubbi	Nittur	Nittur Muganahunase	3 year	Mango Arecanut Coconut Vegetable Banana	Higher incidence of fruit flies, traditional method of harvesting, secondary infection and poor quality fruits Inefficient use of space, weed menace, low soil fertility, lower income from mono cropping Inefficient use of space, low soil fertility, heavy weed growth Severe incidence of Red palm weevil and Black headed caterpillar leading to yield decline	Maintaining productivity Sustainable income generation through animal husbandry activities

5	Kunigal	Yediyur	Yediyur	3 years	Coconut Arecanut Vegetable Paddy Finger millet	Low soil fertility, high weed infestation and lower income Low yield potential of existing ruling varieties Lack of awareness on branding and labelling of Kodomillet products Severe incidence of Basal stem rot leading to death of palm Inefficient use of space, and lower income from mono cropping	
---	---------	---------	---------	---------	--	--	--

2.9 Priority thrust areas

S. No	Thrust areas
1	Natural resource management
2	Integrated nutrient management
3	Integrated pest management
4	Processing and value addition of agriculture produce
5	Promotion of fodder varieties
6	Promotion of dry land horticulture
7	Income generating activities for SHG's

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
6	6	25	26	18	18	130	136

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
35	39	1400	1468	500	971	28845	29698

Seed Production (Qtl.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
Finger Millet(Ragi) : 15	Finger millet (Ragi) : 45.50	Vegetables (IIHR & Pvt Variety) : 3,00,000	Chilli Seedlings : 65300
Redgram(BRG 1) : 15	Little millet : 12.0		Tomato Seedlings : 49300
	Foxtail millet : 8.0		Bringal Seedlings : 2400
	Horse gram : 2.50		Drumstick Seedlings : 155
	Redgram (BRG -1) : 18.4		

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
-	-	-	-

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	Integrated Crop Management	Finger millet	Decreased yield due to moisture stress	Improved method of sowing in finger millet to overcome moisture stress	-	-	-	-	-	-	Seeds - 12 kg	-	-	-	-
2	Integrated Crop Management	Coconut	Low income from mono cropping due to inefficient use of space and low soil fertility of Coconut gardens	French bean as intercrop in Coconut gardens	-	-	-	-	-	-	French beans seeds- 8kg (200/kg) Cowpea seeds - 3 kg (Rs.200/kg)	-	-	-	-
3	Integrated Nutrient Management	Mango	Low soil fertility, high weed infestation and lower income	Enhancing soil fertility in mango orchards through legumes	-	1 off campus	-	-	-	Method demo -02 soil sampling seed treatment	Cowpea – 30 kg Redgram – 10 kg Greengram – 15 kg	-	-	-	-
4	Production technology	Groundnut	Low seed replacement and low yield potential of existing varieties	Groundnut varieties for high yield potential	-	-	-	-	-	Field day -1	Groundnut seeds – 40 kg pods Gypsum – 20 kgs	-	-	-	-
5	Integrated Disease Management	Coconut	Severe incidence of Basal stem rot leading to death of coconut palm	Management of Basal stem rot in Coconut	-	-	-	-	-	-	Lime – 10 kgs	-	-	Trichoderma	5 kgs
6	Integrated Disease Management	Pigeonpea	Prevalence of Wilt and Collar rot leading to yield decline	Management of wilt and collar rot in Redgram	-	-	-	-	-	-	Carbendazim + Mancozeb (SAAF) – 100 g	-	-	Trichoderma	200 gm
7	Integrated Crop Management	Tomato	Use of low yielding variety, Poor nutrient management - blight, wilt and fruit borer incidence	-	Integrated Crop Management in Tomato (Arka Rakshak)	-	-	-	-	-	Tomato seeds – 200 g	-	-	Neem cake Vegetable special	500 kg 50 kg
8	Integrated Crop Management	Mango	Improper canopy management Alternate bearing Flower & fruit dropping Fruit fly & Powdery mildew menace	-	Integrated Crop Management in Mango (Var. Alphonso)	-	-	-	-	-	-	-	-	Mango special Paclubuto rozol Fruit traps	50 kg 2 ltr 20
9	Integrated Crop Management	Banana	Improper selection of quality planting material, improper sucker management, Poor nutrient management practices.	-	Integrated crop management in Banana	1 Off campus	-	-	-	-	-	-	-	Banana special	60 kg
10	Integrated Crop Management	Pigeonpea	Delayed sowing leading to yield decline, use of local and old varieties, Lack of knowledge on the availability of newer varieties	-	Integrated Crop Management in Redgram (BRG - 4)	-	-	-	-	-	BRG- 4 Seeds - 6kgs Micro nutrients – 10 kgs	-	-	-	-
11	Integrated Crop Management	Finger millet	Neck and finger blast, Imbalanced nutrition	-	Finger millet var.KMR 301 for early sown conditions	-	-	-	-	-	Seed material 5g/ acre	-	-	-	-
12	Integrated Nutrient Management	Areca nut	Severe nut splitting leading to yield loss, Non adoption of micro nutrients	-	Management of Nut Splitting in Areca nut	1 off campus 1 on campus	-	-	-	Method demo -02 soil sampling application of Boron	-	-	-	-	-
13	Integrated Nutrient Management	Foxtail millet	Poor nutrient management practices	-	Micro Nutrient Management in Millets	1 on campus	-	-	-	Method demo -01 soil sampling	Saame seeds – 80 kg	-	-	PSB	15 kg
14	Integrated Nutrient Management	Chilli	Low nutrient use efficiency, imbalanced use of fertilizers	-	Arka microbial consortium for higher NUE in Chilli	-	-	-	-	Method demo -01 soil sampling	Chilli seeds - 600 g	-	-	AMC	30 kg

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			
15	Fodder Crops	Fodder slips	Use of low yielding local varieties, Lack of knowledge on new varieties	-	Fodder var. COFS 29-1 for higher yield	1 on campus	-	-	-	-	Seeds – 12.5 kg	-	-	-	-		
16	Integrated Pest Management	Paddy	Blast, Stemborer, Weeds	-	Integrated pest management in Paddy	-	-	-	-	-	-	-	-	-	Londax power Carbendazim Hexaconazole Stem borer traps Chloropyrifos 250ml 0.5 lit 2 2 Pheromone traps RPW lure RB Lure 2 2	4 kg 500 g 500 ml 8 No 1 litre	
17	Integrated Pest Management	Coconut	Severe incidence of Red palm weevil Rhinoceros beetle leading to yield decline	-	Integrated Management of Red palm weevil and Rhinoceros beetle in Coconut	-	-	-	-	-	-	-	-	-	-	Nuvan Chlorpyrifos Pheromone traps RPW lure RB Lure 250ml 0.5 lit 2 2	250ml 0.5 lit 2 2
18	Integrated Pest Management	Mango	Powdery mildew Anthracnose Fruitfly Hopper	-	Integrated pest management in mango	-	-	-	-	-	-	-	-	-	-	Wettable sulphur imidachloprid Carbendazim Pheromone traps 500 ml 1 kg 15 No.	1.5 kg 500 ml 1 kg 15 No.
19	Integrated Crop Management	Chickpea	Inefficient use of paddy fallows Use of local and old varieties Improper plant protection measures for wilt including use of susceptible variety	-	Bengal gram for residual moisture conditions (paddy fallows)	-	-	-	-	-	Seeds- 25 kgs	-	-	-	-	Indoxacarb 100 ml	100 ml
20	Marketing linkages	Mango	Higher incidence of fruit flies, traditional method of harvesting, secondary infection and poor quality fruits	-	Strengthening marketing linkages of mango growers	-	-	-	-	-	-	-	-	-	-	Pheromone traps Crates Ripening chamber 20 4 2	20 4 2
21	Branding and market linkages	Little millet	Lack of awareness on branding and labeling of little millet products	-	Branding and market linkages to Little millet (Saame) products	-	-	-	-	-	-	-	-	-	-	Packaging material Nutrition label Weighing balance Sealing machine 1 kg & ½ kg size 4bundles 1 1	1 kg & ½ kg size 4bundles 1 1
22	Processing and market linkages	Tamarind	Lack of awareness on processing, Branding and labeling of tamarind products	-	Processing and Branding of Tamarind Value added products	2 off campus	-	-	-	1 (method demo)	-	-	-	-	-	Packaging material Nutrition label Tamarind slabs Weighing balance Sealing machine 1 kg & ½ kg size 4bundles 2 1 1	2 1 1
23	Integrated Disease Management	Sheep	Incidence of PPR (Peste Des Petits Ruminants), HS (Hemorrhagic Septicemia) and ET (Enterotoxemia) leading to high mortality and poor productivity in sheep	-	Integrated disease management in Sheep	1 off campus	-	-	-	-	-	-	-	-	-	syp. Praziquintol + Fenbendazole Ivermectin + Cloxanten Vaccines (Dept. supply) Fenvalarate 1000 ml 300 ml 500 ml	1000 ml 300 ml 500 ml

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	
24	Integrated Disease Management	Dairy animals	Increased inter calving period due to improper supplementation of nutrients	-	Management of Post Partum fertility in dairy animals	1 off campus	-	-	-	-	-	-	-	Mineral mixture Syp. Fentas plus Vitamin supplement ation (Syp. Vimerol Syp. Broton Bolus Ecosac)	12 kg 250 ml 250 ml 250 ml 15 Boli

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	Improved method of sowing in finger millet to overcome moisture stress	ITK	Finger millet	3	-	-	-
2	French bean as intercrop in Coconut gardens	IIHR, CHES, Hirehalli	Coconut	7	-	-	-
3	Enhancing soil fertility in mango orchards through legumes	IIHR, Bangalore	Mango	1	-	1	2 method demos
4	Groundnut varieties for high yield potential	APAU	Groundnut	2	-	-	1 Field day
5	Management of Basal stem rot in Coconut	ITK	Coconut	2	-	-	-
6	Management of wilt and collar rot in Redgram	AICRP (Pigeonpea)	Pigeonpea	5	-	-	-
7	Integrated Crop Management in Tomato (Arka Rakshak)	IIHR, Bangalore	Tomato	-	10	-	-
8	Integrated Crop Management in Mango (Var. Alphonso)	IIHR, Bangalore	Mango	-	10	-	-
9	Integrated crop management in Banana	IIHR, Bangalore	Banana	-	10	-	-
10	Integrated Crop Management in Redgram (BRG - 4)	UAS, Bangalore	Pigeonpea	-	12	-	-
11	Finger millet var.KMR 301 for early sown conditions	UAS, Bangalore	Finger millet	-	25	-	-
12	Management of Nut Splitting in Arecanut	CPCRI, Kasargod	Arecanut	-	10	2	2 method demos
13	Micro Nutrient Management in Millets	UAS, Bangalore	Foxtail millet	-	12	1	1 method demo
14	Arka microbial consortium for higher NUE in Chilli	IIHR, Bangalore	Chilli	-	10	-	-
15	Fodder var. COFS 29-1 for higher yield	KVAFSU	Fodder slips	-	5	1	-
16	Integrated pest management in Paddy	UAS, Bangalore	Paddy	-	10	-	-
17	Integrated Management of Red palm weevil and Rhinoceros beetle in Coconut	UAS, Bangalore	Coconut	-	10	-	-
18	Integrated pest management in mango	UAS, Bangalore	Mango	-	5	-	-
19	Bengal gram for residual moisture conditions (paddy fallows)	UAS, Bangalore	Chickpea	-	12	-	-

20	Strengthening marketing linkages of mango growers	IIHR, Bangalore	Mango	-	2	2	1 method demo
21	Branding and market linkages to Little millet (Saame) products	UAS, Bangalore	Little millet	-	1 SHG	2	1 method demo
22	Processing and Branding of Tamarind Value added products	MGIRI Wardha, Maharashtra	Tamarind	-	1 SHG	2	1 method demo
23	Integrated disease management in Sheep	TANVASU	Sheep	-	3	1	-
24	Management of Post Partum fertility in dairy animals	NDRI	Dairy animals	-	3	1	-

3.B2 contd..

Sl.No	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	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3	1	-	-	-	-	-	-	15	5	-	-	10	5	-	-	
4	2	-	-	-	-	-	-	-	-	-	-	16	-	-	-	
5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	
8	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	
9	-	-	-	-	10	-	-	-	32	20	-	-	-	-	-	
10	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	
11	-	-	-	-	24	-	1	-	-	-	-	-	-	-	-	
12	-	-	-	-	10	-	-	-	1	20	-	-	14	6	-	
13	-	-	-	-	12	-	-	-	12	-	-	-	15	36	-	
14	-	-	-	-	10	-	-	-	-	-	-	-	12	3	9	
15	-	-	-	-	5	-	-	-	4	1	-	-	-	-	-	
16	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	
17	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	
18	-	-	-	-	05	-	-	-	-	-	-	-	-	-	-	
19	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	
20	-	-	-	-	1	-	-	1	1	-	-	1	1	-	1	
21	-	-	-	-	0	12	-	-	-	43	-	-	-	43	-	
22	-	-	-	-	0	15	-	-	-	21	-	-	-	12	-	
23	-	-	-	-	3	-	-	-	5	3	2	-	-	-	-	
24	-	-	-	-	3	-	-	-	4	2	3	-	-	-	-	

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

Thematic areas	Cattle	Poultry	Piggery	Rabbitry	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.A4. Abstract on the number of technologies refined in respect of livestock enterprises: Nil

Thematic areas	Cattle	Poultry	Piggery	Rabbitry	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	Number of farmers	Area in ha (Per trial covering all the Technological Options)
Integrated Nutrient Management	Mango	Enhancing soil fertility in mango orchards through legumes	1	1	1.35
Varietal Evaluation	Groundnut	Groundnut varieties for high yield potential	2	2	0.50
	-	-	-	-	-
Integrated Pest Management	-	-	-	-	-
	-	-	-	-	-
Integrated Crop Management	Finger millet	Improved method of sowing in finger millet to overcome moisture stress	3	3	0.6
	Coconut	French bean as intercrop in Coconut gardens	07	07	
Integrated Disease Management	Coconut	Management of Basal stem rot in Coconut	02	02	0.4
	Redgram	Management of wilt and collar rot in Redgram	5	5	0.2
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.2. Technologies Refined under various Crops : Nil

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trial covering all the Technological Options)
Integrated Nutrient Management	-	-	-	-	
	-	-	-	-	
Varietal Evaluation	-	-	-	-	
	-	-	-	-	
Integrated Pest Management	-	-	-	-	
	-	-	-	-	
Integrated Crop Management	-	-	-	-	
	-	-	-	-	
Integrated Disease Management	-	-	-	-	
	-	-	-	-	
Small Scale Income Generation Enterprises	-	-	-	-	-
	-	-	-	-	-
Weed Management	-	-	-	-	-

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trial covering all the Technological Options)
	-	-	-	-	-
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 and other Enterprises: Nil

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	-	-	-	-
Value addition	-	-	-	-
Production and management	-	-	-	-
Feed and fodder	-	-	-	-
Small scale income generating enterprises	-	-	-	-
Total			-	-

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

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	-	-	-	-
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 1 : Improved method of sowing in finger millet to overcome moisture stress

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
Finger millet	Rainfed	Decreased yield due to moisture stress	Improved method of sowing in finger millet to overcome moisture stress		TO1: Broadcasting of seeds TO2: Transplanting in pits of 1 x 1 ft TO3: Transplanting in pits of 2x2 ft	TO1: Grain Yield (q/ha) Straw Yield (t/ha) No of tillers / plant	15.50 5.20 5.20	Net Returns Rs. / ha : 37800 B:C Ratio: 1.54	Farmers expressed through the number of tillers more in TO3, Yield obtained is lower than TO1 and even the straw yield is Remarkably lower hence TO1 is better in terms of yield as well as economic returns	-	-
					TO2: Grain Yield (q/ha) Straw Yield (t/ha) No of tillers / plant	18.50 5.40 5.60	Net Returns Rs. / ha : 43100 B:C Ratio: 2.10				
					TO3: Grain Yield (q/ha) Straw Yield (t/ha) No of tillers / plant	15.20 4.10 5.93	Net Returns Rs. / ha : 33250 B:C Ratio: 1.31				

Contd..

Technology Assessed	Source of Technology	Production	Grain Yield (q/ha)/ Straw Yield (t/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	FP	Grain Yield (q/ha) Straw Yield (t/ha)	15.50 5.20	37800	1.54
Technology option 2	UAS (B)	Grain Yield (q/ha) Straw Yield (t/ha)	18.50 5.40	43100	2.10
Technology option 3	ITK	Grain Yield (q/ha) Straw Yield (t/ha)	15.20 4.10	33250	1.31

4.C2. Details of On Farm Trial - 1

- 1 **Title of Technology Assessed:** Improved method of sowing in finger millet to overcome moisture stress
- 2 **Problem Definition:** Decreased yield due to moisture stress
- 3 **Details of technologies selected for assessment:**
 TO1: Broadcasting of seeds
 TO2: Transplanting in pits of 1 x 1 ft
 TO3: Transplanting in pits of 2x2 ft
- 4 **Source of technology:** ITK
- 5 **Production system and thematic area:** ICM
- 6 **Performance of the Technology with performance indicators:**
 TO1: Grain Yield (q/ha) : 15.50, Straw Yield (t/ha) : 5.20
 TO2: Grain Yield (q/ha) : 18.50, Straw Yield (t/ha) :5.40
 TO3: Grain Yield (q/ha) : 15.20, Straw Yield (t/ha) : 4.10
7. **Feedback, matrix scoring of various technology parameters:**
done through farmer's participation / other scoring Techniques : Farmers expressed through the number of tillers more in TO3, Yield obtained is lower than TO1 and even the straw yield is Remarkably lower hence TO1 is better in terms of yield as well as economic returns
- 8 **Final recommendation for micro level situation :-**
- 9 **Constraints identified and feedback for research:** Since there was more number of tillers / hill, research on dryland situation is needed
- 10 **Process of farmers participation and their reaction:** Farmers were reluctant to take part in testing as they were more interested to harvest more straw as well as grain yield.

Results of On Farm Trial 2 : Groundnut varieties for high yield potential

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
Groundnut	Rainfed	Low yield potential of existing ruling varieties	Groundnut varieties for high yield potential	2	TO1: Use of Groundnut Var.TMV 2 TO2: Var.KCG 6 TO 3 : Var.Kadiri 6 TO 4: Var.ICGV 91114	TO1: Pod yield (q/ha) Plant height (cm) Leaf spot incidence(%) Shelling percent (%) No. of pods per plant (No) 100 kernel weight	15.03 16.25 22.51 68.75 21.00 29.75	Net Returns Rs./ ha : 21750 B:C Ratio: 2.01	ICGV- 91114 and KCG -6 are almost equal in performance in terms of pod yield and other yield parameters in terms of pod yield and other yield parameters. All three varieties performed well compared to TMV-2 any one can be thought for replacement	-	-
						TO2: Pod yield (q/ha) Plant height (cm) Leaf spot incidence(%) Shelling percent (%) No. of pods per plant (No) 100 kernel weight	17.75 23.76 5.41 72.25 23.00 36.28	Net Returns Rs. / ha : 23225 B:C Ratio: 2.32			
						TO3: Pod yield (q/ha) Plant height (cm) Leaf spot incidence(%) Shelling percent (%) No. of pods per plant (No) 100 kernel weight	16.50 21.25 10.24 70.15 22.00 33.25	Net Returns Rs. / ha : 22550 B:C Ratio: 2.21			
						TO4: Pod yield (q/ha) Plant height (cm) Leaf spot incidence(%) Shelling percent (%) No. of pods per plant (No) 100 kernel weight	18.25 26.50 4.25 72.75 26.00 38.25	Net Returns Rs. / ha : 24256 B:C Ratio: 2.41			

Contd..

Technology Assessed	Source of Technology	Production	Pod yield (q/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	UAS (B)	Pod yield	15.03 q/ha	21750	2.01
Technology option 2	UAS (B)	Pod yield	17.75 q/ha	23225	2.32
Technology option 3	ANGRAU	Pod yield	16.50 q/ha	22550	2.21
Technology option 4	ICRISAT	Pod yield	18.25 q/ha	24256	2.41

4.C2. Details of On Farm Trial - 2

1 **Title of Technology Assessed:** Groundnut varieties for high yield potential

2 **Problem Definition:** Low yield potential of existing ruling varieties

3 **Details of technologies selected for assessment:**

TO1: Use of Groundnut Var.TMV 2

TO2: Var.KCG 6

TO 3 : Var.Kadiri 6

TO 4: Var.ICGV 91114

4 **Source of technology:** ICRISAT/ ANGRAU / UAS (B)

5 **Production system and thematic area:** Irrigated / varietal evaluation

6 **Performance of the Technology with performance indicators:**

TO1: Pod yield : 15.03 q/ha

TO2: Pod yield : 17.75 q/ha

TO3: Pod yield : 16.50 q/ha

TO4: Pod yield :18.25 q/ha

7. **Feedback, matrix scoring of various technology parameters:**

done through farmer's participation / other scoring Techniques : ICGV- 91114 and KCG -6 are almost equal in performance in terms of pod yield and other yield parameters

in terms of pod yield and other yield parameters. All three varieties performed well compared to TMV-2 any

one can be thought for replacement

8 **Final recommendation for micro level situation:-**

9 **Constraints identified and feedback for research:-**

10 **Process of farmers participation and their reaction:** Farmers were reluctant to take part in testing as they were more interested to harvest yield.

Results of On Farm Trial 3: French bean as intercrop in Coconut gardens

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
Coconut	Rainfed	Low income from mono cropping due to inefficient use of space and low soil fertility of Coconut gardens	French bean as intercrop in Coconut gardens	7	TO 1: Coconut sole cropping TO 2: Coconut + veg. cowpea TO 3: Coconut + French bean	TO1: Coconut Yield (nuts / palm/ year)	58	TO1: Gross return: Rs. 1,72,500 Net return: Rs. 1,12,500 B:C ratio: 2.88	Since vegetable cowpea has got lower market demand, Adopting Vegetable French bean as a intercrop in coconut garden is better	-	-
					TO2: Coconut Yield (nuts / palm/ year) Cowpea pod yield (t / ha) Cowpea Plant height (cm) Cowpea Number of branches Cowpea Number of pickings Cowpea Number of pods per plant Cowpea Length of pods (cm)	62 2.20 72 22-25 3-4 60-70 14-16	TO 2: Gross return: Rs. 2,05,000 Net return: Rs. 1,35,000 B:C ratio: 2.93				
					TO3: Coconut Yield (nuts / palm/ year) French bean pod yield (t / ha) French bean Plant height (cm) French bean Number of branches French bean Number of pickings French bean Number of pods per plant French bean Length of pods (cm)	64 3.50 64 20-23 3-4 50-60 13-15	TO3: Gross return: Rs. 2,22,000 Net return: Rs. 1,49,000 B:C ratio: 3.04				

Contd..

Technology Assessed	Source of Technology	Production	Pod yield (q/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	FP	Coconut Yield (nuts / palm/ year)	58	1,12,500	2.88
Technology option 2	UAS (B)	Coconut Yield (nuts / palm/ year) Cowpea pod yield (t / ha)	62 2.20	1,35,000	2.93
Technology option 3	IIHR, CHES, Hirehalli	Coconut Yield (nuts / palm/ year) French bean pod yield (t / ha)	64 3.50	1,49,000	3.04

4.C2. Details of On Farm Trial - 1

- 1 **Title of Technology Assessed:** French bean as intercrop in Coconut gardens
- 2 **Problem Definition:** Low income from mono cropping due to inefficient use of space and low soil fertility of Coconut gardens
- 3 **Details of technologies selected for assessment:**
 TO 1: Coconut sole cropping
 TO 2: Coconut + veg. cowpea
 TO 3: Coconut + French bean
- 4 **Source of technology:** IIHR, CHES, Hirehalli
- 5 **Production system and thematic area:** Intercropping system and Nutrient management
- 6 **Performance of the Technology with performance indicators:**
 TO1: Coconut Yield (nuts / palm/ year) : 58
 TO2: Coconut Yield (nuts / palm/ year) : 62, Cowpea pod yield (t / ha): 2.20
 TO3: Coconut Yield (nuts / palm/ year) : 64, French bean pod yield (t / ha) : 3.50
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring Techniques :-**
- 8 **Final recommendation for micro level situation:** Vegetable French bean as a intercrop in coconut garden provides higher net returns with improvement in soil fertility status
- 9 **Constraints identified and feedback for research:** Low market demand for vegetable cowpea
- 10 **Process of farmers participation and their reaction:** Farmers convinced about growing vegetable French bean as an intercrop in coconut garden

Results of On Farm Trial – 4 : Assessment of effective control measures for Basal stem rot in Coconut

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
Coconut	Rainfed	Severe incidence of Basal stem rot leading to death of palm	Assessment of effective control measures for Basal stem rot in Coconut	2	TO 1 : * Putting fire at the oozing region base of the palm * Growing Cactus plant near the base of palm * Making a slight cut around the palm * Brushing of lime and Red earth around the trunk. TO 2 : * Opening of isolation trench around the palm * Application of neem cake @ 5 Kg/palm yearly * Application of Trichoderma @ 250 gms/palm + 10 Kg FYM twice a year * Root feeding of Hexaconazole @ 3ml/100 ml water/Palm at quarterly interval TO 3 : * Application of cow urine @ 10 litres/palm, twice a year * Application of 1Kg Lime /palm, twice a year * Application of 20 Litres of cowdung slurry/Palm, twice a year * Application of Trichoderma @ 250 gms/palm, twice a year	No. of functional leaves/palm TO1: TO2: TO3:	Pre treatment 15 15 15	Post Treatment 18 22 24	T3 is effective in improving growth of coconut palm besides reducing stem rot	Still effective management package is needed	-	-
						No. of leaves drooped/ palm TO1: TO2: TO3:	Pre treatment 8 8 8	Post Treatment 6 4 2				

Contd..

Technology Assessed	Source of Technology	Production	Nuts/palm/year	Net Return (Profit) in Rs. / palm	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	FP	Nut yield	55	295	2.23
Technology option 2	UAS (B)	Nut yield	62	308	2.47
Technology option 3	ITK	Nut yield	68	382	2.66

4.C2. Details of On Farm Trial - 4

- 1 **Title of Technology Assessed:** Assessment of effective control measures for Basal stem rot in Coconut
- 2 **Problem Definition:** Severe incidence of Basal stem rot leading to death of palm
- 3 **Details of technologies selected for assessment:**
 TO 1 : Putting fire at the oozing region/ base of the palm, Growing Cactus plant near the base of palm, Making a slight cut around the palm, Brushing of lime and Red earth around the trunk.
 TO 2 : Opening of isolation trench around the palm, Application of neem cake @ 5 Kg/palm yearly, Application of Trichoderma @ 250 gms/palm + 10 Kg FYM twice a year , Root feeding of Hexaconazole @ 3ml/100 ml water/Palm at quarterly interval
 TO 3 : Application of cow urine @ 10 litres/palm, twice a year, Application of 1Kg Lime /palm, twice a year, Application of 20 Litres of cowdung slurry/Palm, twice a year, Application of Trichoderma @ 250 gms/palm, twice a year
- 4 **Source of technology:** ITK
- 5 **Production system and thematic area:** Coconut based cropping system and integrated disease management
- 6 **Performance of the Technology with performance indicators:** -
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring**
Techniques: -
- 8 **Final recommendation for micro level situation:** Application of cow dung slurry and cow urine enriched Trichoderma is effective in improving coconut palm growth besides reducing Basal stem rot
- 9 **Constraints identified and feedback for research:** Timely availability of critical inputs in required quantity for large scale application and timely information
- 10 **Process of farmers participation and their reaction:** Convinced about technology

Results of On Farm Trial 5: Management of wilt and collar rot in Redgram

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
Redgram	Rainfed	Prevalence of Wilt and Collar rot leading to yield decline	Management of wilt and collar rot in Redgram	5	TO 1: No seed treatment TO 2: Seed treatment with carbendazim @ 3gm/kg seeds TO 3: Seed treatment with Carbendazim+ Mancozeb (SAAF)@ 3gm/kg seeds followed by Trichoderma @ 6gm/kg seeds	TO1: Yield (q/ha) Per cent wilt disease incidence (%) Per cent collar rot disease incidence (%) TO2: Yield (q/ha) Per cent wilt disease incidence (%) Per cent collar rot disease incidence (%) TO3: Yield (q/ha) Per cent wilt disease incidence (%) Per cent collar rot disease incidence (%)	8.50 33 8.4 10.9 18.2 12.5 13.4 10 2.5	Gross Cost (Rs. / ha) :18808 Gross Return (Rs./ha): 31815 Net Return (Rs./ ha) : 13007 BCR :1.68 Gross Cost (Rs. / ha) :21350 Gross Return (Rs./ha) :43200 Net Return (Rs./ ha) :21850 BCR:2.01 Gross Cost (Rs. / ha) :22900 Gross Return (Rs./ha) :53070 Net Return (Rs./ ha) :30170 BCR :2.31	Effective in managing wilt and collar rot in redgram	-	-

Contd..

Technology Assessed	Source of Technology	Production	yield (q/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	FP	Yield (q/ha)	8.50	13007	1.68
Technology option 2	UAS B	Yield (q/ha)	10.9	21850	2.01
Technology option 3	AICRP (Pigeonpea)	Yield (q/ha)	13.4	30170	2.31

4.C2. Details of On Farm Trial - 1

- 1 **Title of Technology Assessed:** Management of wilt and collar rot in Redgram
- 2 **Problem Definition:** Prevalence of Wilt and Collar rot leading to yield decline
- 3 **Details of technologies selected for assessment:**
TO 1: No seed treatment
TO 2: Seed treatment with carbendazim @ 3gm/kg seeds
TO 3: Seed treatment with Carbendazim+ Mancozeb (SAAF)@ 3gm/kg seeds followed by Trichoderma @ 6gm/kg seeds
- 4 **Source of technology:** AICRP (Pigeonpea)
- 5 **Production system and thematic area:** IDM
- 6 **Performance of the Technology with performance indicators:**
TO1 Yield (q/ha) : 8.50
TO2 Yield (q/ha) : 10.9
TO3 Yield (q/ha) : 13.4
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring Techniques :-**
- 8 **Final recommendation for micro level situation :-**
- 9 **Constraints identified and feedback for research:-**
- 10 **Process of farmers participation and their reaction:-**

Results of On Farm Trial 6: Enhancing soil fertility in mango orchards through legumes

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																					
Mango	Rainfed	Low soil fertility, high weed infestation and lower income	Enhancing soil fertility in mango orchards through legumes	6	TO1: Mango as sole crop TO2: Cowpea as intercrop in mango TO3: Redgram + Green gram (1:4) as intercrop in mango	TO1: Soil fertility status	TO1: Soil fertility status <table border="1"> <thead> <tr> <th>Soil fertility parameter</th> <th>Before</th> <th>After</th> </tr> </thead> <tbody> <tr> <td>Soil pH</td> <td>5.67</td> <td>5.72</td> </tr> <tr> <td>EC (ds/m)</td> <td>0.44</td> <td>0.47</td> </tr> <tr> <td>Organic carbon %</td> <td>0.23</td> <td>0.20</td> </tr> <tr> <td>N (Kg/ ha)</td> <td>289</td> <td>273</td> </tr> <tr> <td>P (Kg/ ha)</td> <td>16</td> <td>14</td> </tr> <tr> <td>K (Kg/ ha)</td> <td>175</td> <td>169</td> </tr> </tbody> </table>	Soil fertility parameter	Before	After	Soil pH	5.67	5.72	EC (ds/m)	0.44	0.47	Organic carbon %	0.23	0.20	N (Kg/ ha)	289	273	P (Kg/ ha)	16	14	K (Kg/ ha)	175	169	Gross cost (Rs/ha): 50000 Gross return(Rs/ha):140000 Net returns (Rs/ha): 90000	Soil fertility status Improved Mango Yield data is awaited Intercrop Redgram yield: 2.90 q/ha Intercrop Green gram yield:1.00 q/ha	--	--
Soil fertility parameter	Before	After																														
Soil pH	5.67	5.72																														
EC (ds/m)	0.44	0.47																														
Organic carbon %	0.23	0.20																														
N (Kg/ ha)	289	273																														
P (Kg/ ha)	16	14																														
K (Kg/ ha)	175	169																														
					Mango yield (t/ha) 7	TO2: Soil fertility status	TO2: Soil fertility status <table border="1"> <thead> <tr> <th>Soil fertility parameter</th> <th>Before</th> <th>After</th> </tr> </thead> <tbody> <tr> <td>Soil pH</td> <td>5.67</td> <td>5.80</td> </tr> <tr> <td>EC (ds/m)</td> <td>0.44</td> <td>0.37</td> </tr> <tr> <td>Organic carbon %</td> <td>0.23</td> <td>0.25</td> </tr> <tr> <td>N (Kg/ ha)</td> <td>289</td> <td>297</td> </tr> <tr> <td>P (Kg/ ha)</td> <td>16</td> <td>19</td> </tr> <tr> <td>K (Kg/ ha)</td> <td>175</td> <td>184</td> </tr> </tbody> </table>	Soil fertility parameter	Before	After	Soil pH	5.67	5.80	EC (ds/m)	0.44	0.37	Organic carbon %	0.23	0.25	N (Kg/ ha)	289	297	P (Kg/ ha)	16	19	K (Kg/ ha)	175	184	Gross cost (Rs/ha): 60000 Gross return(Rs/ha):180000 Net returns (Rs/ha):120000			
Soil fertility parameter	Before	After																														
Soil pH	5.67	5.80																														
EC (ds/m)	0.44	0.37																														
Organic carbon %	0.23	0.25																														
N (Kg/ ha)	289	297																														
P (Kg/ ha)	16	19																														
K (Kg/ ha)	175	184																														
					Mango yield Intercrop yield	7.3 Cowpea yield : 3.40 q/ha	TO3: Soil fertility status	TO3: Soil fertility status <table border="1"> <thead> <tr> <th>Soil fertility parameter</th> <th>Before</th> <th>After</th> </tr> </thead> <tbody> <tr> <td>Soil pH</td> <td>5.67</td> <td>5.85</td> </tr> <tr> <td>EC (ds/m)</td> <td>0.44</td> <td>0.36</td> </tr> <tr> <td>Organic carbon %</td> <td>0.23</td> <td>0.27</td> </tr> <tr> <td>N (Kg/ ha)</td> <td>289</td> <td>292</td> </tr> <tr> <td>P (Kg/ ha)</td> <td>16</td> <td>18</td> </tr> <tr> <td>K (Kg/ ha)</td> <td>175</td> <td>178</td> </tr> </tbody> </table>	Soil fertility parameter	Before	After	Soil pH	5.67	5.85	EC (ds/m)	0.44	0.36	Organic carbon %	0.23	0.27	N (Kg/ ha)	289	292	P (Kg/ ha)	16	18	K (Kg/ ha)	175	178	Gross cost (Rs/ha): 60000 Gross return(Rs/ha):176000 Net returns (Rs/ha):116000		
Soil fertility parameter	Before	After																														
Soil pH	5.67	5.85																														
EC (ds/m)	0.44	0.36																														
Organic carbon %	0.23	0.27																														
N (Kg/ ha)	289	292																														
P (Kg/ ha)	16	18																														
K (Kg/ ha)	175	178																														
					Mango yield Intercrop yield	7.2 Redgram yield: 2.90 q/ha Intercrop Green gram yield: 1.00 q/ha																										

Contd..

Technology Assessed	Source of Technology	Production	Seed yield (q/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	FP	Mango yield	7.0 t/ha	Gross cost (Rs/ha): 50000 Gross return(Rs/ha):140000 Net returns (Rs/ha): 90000	2.8
Technology option 2	UAS (B)	Mango yield Intercrop cowpea yield :	7.3 t/ha 3.40 q/ha	Gross cost (Rs/ha): 60000 Gross return(Rs/ha):180000 Net returns (Rs/ha):120000	3.0
Technology option 3	IIHR, Bangalore	Mango yield Intercrop Redgram yield: Intercrop Green gram yield:	7.2 t/ha 2.90 q/ha 1.00 q/ha	Gross cost (Rs/ha): 60000 Gross return(Rs/ha):176000 Net returns (Rs/ha):116000	3.1

4.C2. Details of On Farm Trial - 4

- 1 **Title of Technology Assessed:** Enhancing soil fertility in mango orchards through legumes
- 2 **Problem Definition:** Low soil fertility, high weed infestation and lower income
- 3 **Details of technologies selected for assessment:**
TO1: Mango as sole crop
TO2: Cowpea as intercrop in mango
TO3: Redgram – Green gram (1:4) as intercrop in mango
- 4 **Source of technology:** IIHR, Bangalore
- 5 **Production system and thematic area:** Intercropping system & Nutrient management
- 6 **Performance of the Technology with performance indicators:**
TO1: Mango yield : 7.0 t/ha
TO2: Mango yield : 7.3 t/ha, Intercrop cowpea yield : 3.40 q/ha
TO3: Mango yield : 7.2 t/ha, Intercrop Redgram yield: 2.90 q/ha, Intercrop Green gram yield: 1.00 q/ha
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring**
Techniques : -
- 8 **Final recommendation for micro level situation:** Best option as Redgram + Greengram (1:4) as both have good market demand besides improving soil fertility status
- 9 **Constraints identified and feedback for research: -**
- 10 **Process of farmers participation and their reaction:** Farmers convinced about growing Redgram + Greengram (1:4) as an intercrop in Mango orchards

4.D1. Results of Technologies Refined

Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology refined	Parameters of refined t	Data on the parameter	Results of refinement	Feedback from the farmer	Details of refinement done
1	2	3	4	5	6	7	8	9	10	11
-	-	-	-	-	-	-	-	-	-	-

Contd..

Technology Refined	Source of Technology for Technology Option1 / Justification for modification of assessed Technology Option 1	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 (best performing Technology Option in assessment)	-	-	-	-	-
Technology Option 2 (Modification over Technology Option 1)	-	-	-	-	-
Technology Option 3 (Another Modification over Technology Option 1)	-	-	-	-	-

4.D.2. Details of each On Farm Trial for refinement to be furnished in the following format separately as per the following details:

1. Title of Technology refined
2. Problem Definition
3. Details of technologies selected for refinement
4. Source of technology
5. Production system and thematic area
6. Performance of the Technology with performance indicators
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques
8. Final recommendation for micro level situation
9. Constraints identified and feedback for research
10. Process of farmers participation and their reaction

PART V - FRONTLINE DEMONSTRATIONS

5.A. Summary of FLDs implemented during 2014-15

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	
Oilseeds														
		-	-	-	-	-	-	-	-	-	-	-	-	-
Pulses														
1	Pulses	Rainfed	<i>Kharif</i> 2014	Redgram	BRG-4	-	ICM	Integrated Crop Management in Redgram Variety BRG-4 Seeds Seed treatment Application of Micro nutrients Plant protection measures	4	4	-	12	12	-
2	Pulses	Rainfed	<i>Rabi</i> 2014	Bengal gram	JG- 11	-	ICM	Bengal gram for residual moisture conditions Use of improved variety JG 11 (tolerant to wilt and drought)	4	4	-	12	12	-
Cereals & Millets														
3	Pulses	Irrigated	<i>Kharif</i> 2014	Paddy	IR-64	-	IPM	Integrated pest management in Paddy Weed management through – Londax power herbicide - 4 kg/ac. Seed treatment with Carbendazim @ 4 gm/kg Soil application of carbofuron @2kg/ac (nursery) Stem-borer management through pheromone traps & Chloropyriphos @ 0.2% Sheath blight management through Hexaconazole @ 0.1%	4	4	-	10	10	-
4	Millets	Rainfed	<i>Kharif</i> 2014	Finger millet	KMR- 301	-	Production technology	Finger millet var.KMR 301 for early sown conditions Use of neck & finger blast tolerant variety (KMR 301) Nutrient management practices	10	10	1	24	25	-
5	Millets	Rainfed	<i>Kharif</i> 2014	Saame	-	-	INM	Micro Nutrient Management in little millets RDF + Use of Zinc (5kg/ha) and boron (2kg / ha)	4	4	-	12	12	-
6	Millets	-	<i>Kharif</i> 2014	Little millet	--	-	Market linkage	Branding and market linkages to Little millet (Saame) products Branding, Packaging and nutrition labeling of Saame products Preparation of Saame rice and papad	1 SHG	1 SHG	-	1	1	-
Vegetables														
7	Vegetables	Irrigated	<i>Rabi</i> 2014	Tomato	-	Arka Rakshak	ICM	Integrated Crop Management in Tomato (Arka Rakshak) Use of Hybrid Arka Rakshak Foliar spray of Vegetable special Application of Neem cake Plant Protection Chemicals- Indoxicorb & Corbendazin	2	2	-	10	10	-
8	Vegetables	Irrigated	<i>Kharif</i> 2014	Chilli	-	Arka Meghana	INM	Arka microbial consortium for higher NUE in Chilli FYM 25t/ha+75% RDF NPK Kg/ha+ arka microbial consortium 12.5 Kg/ha	2	2	-	10	10	-
Flowers														
Ornamental														

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	
Fruit crops														
9	Fruit	Irrigated	Rabi 2014	Banana	Puttabale	-	ICM	Integrated crop management in Banana Application of recommended dose of NPK 180:108:225 NPK g/pl (three split doses) Use of Banana special – 5 spray @5 g/lit Leaving One sucker per plant (More than 2 sucker in FP) Bunch feeding (500 g fresh cow dung+ 100 ml water+ 2.5 g urea+ 2.5 g SOP) Management of Rhizome weevil, Panama wilt and sigatoka disease	2	2	-	10	10	-
10	Fruit	Rainfed	Kharif 2014	Mango	Alphonso	-	ICM	Integrated Crop Management in Mango Canopy management (Pruning) Application of Paclobutrozal for inducing regular bearing Use of Mango special @ 5 g/lit Fruit fly traps & use of wettable sulphur	2	2	-	10	10	-
11	Fruit	Rainfed	Kharif 2014	Mango	-	-	IPM	Integrated Pest Management in Mango Spraying with 0.05% Imidachloprid Spraying with Wettable sulphur 0.3% Spraying with 0.1% Carbendazim Erection of Fruit fly traps@ 15 Nos./ha	2	2	-	5	5	-
12	Fruit	Rainfed	Kharif 2014	Mango	-	-	INM	Strengthening marketing linkages of mango growers Scientific production and harvesting of mango Ethylene mediated ripening technology using polythene tents Packaging and labeling through corrugated boxes Marketing	0.4	0.4	-	2	2	-
13	Fruit	Rainfed	Kharif 2014	Tamarind	-	-	Value added	Processing and Branding of Tamarind Value added products Demonstration on preparation of tamarind slabs, tamarind powder and tamarind toffees Branding, packaging and labeling of tamarind slabs & toffee	1 SHG	1 SHG	-	1	1	-
Spices and condiments														
Commercial														
Medicinal and aromatic														
Fodder														
14	Fodder	Rainfed	Kharif 2014	Fodder	COFS 29-1	-	ICM	Fodder var. COFS 29-1 for higher yield Use of COFS 29-1 Improved nutrient management practices	1	1	-	5	5	-
Plantation														
15	Plantation	Rainfed / protected irrigation	Kharif 2014	Coconut	Arsikere tall	-	IPM	Integrated Management of Red palm weevil and Rhinoceros beetle in Coconut *Hooking of rhinoceros beetle *Injection of Nuvan into bored holes *Treating FYM pits with 2% chlorpyrifos solution for rhinoceros beetle *Use of Pheromone traps (RPW and RB traps)	4	4	-	10	10	-

5.A. 1. Soil fertility status of FLDs plots during 2014-15

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
Oilseeds													
Pulses													
1	Pulses	Rainfed	<i>Kharif</i> 2014	Redgram	BRG-4	-	ICM	Integrated Crop Management in Redgram Variety BRG-4 Seeds Seed treatment Application of Micro nutrients Plant protection measures	<i>Kharif</i> 2014	H	M	L	Finger millet
2	Pulses	Rainfed	<i>Rabi</i> 2014	Bengal gram	JG- 11	-	ICM	Bengal gram for residual moisture conditions Use of improved variety JG 11 (tolerant to wilt and drought)	<i>Rabi</i> 2014	H	M	L	Finger millet
Cereals & millets													
3	Millets	Rainfed	<i>Kharif</i> 2014	Finger millet	KMR- 301	-	Production technology	Finger millet var.KMR 301 for early sown conditions Use of neck & finger blast tolerant variety (KMR 301) Nutrient management practices	<i>Kharif</i> 2014	L	M	L	Finger millet
4	Millets	Rainfed	<i>Kharif</i> 2014	Saame	-	-	INM	Micro Nutrient Management in little millets RDF + Use of Zinc (5kg/ha) and boron (2kg / ha)	<i>Kharif</i> 2014				
5	Cereals	Irrigated	<i>Kharif</i> 2014	Paddy	IR-64	-	IPM	Integrated pest management in Paddy Weed management through – Londax power herbicide - 4 kg/ac. Seed treatment with Carbendazim @ 4 gm/kg Soil application of carbofuron @2kg/ac (nursery) Stem-borer management through pheromone traps & Chloropyriphos @ 0.2% Sheath blight management through Hexaconazole @ 0.1%	<i>Kharif</i> 2014	M	L	M	Paddy
Vegetables													
6	Vegetables	Irrigated	<i>Rabi</i> 2014	Tomato	-	Arka Rakshak	ICM	Integrated Crop Management in Tomato (Arka Rakshak) Use of Hybrid Arka Rakshak Foliar spray of Vegetable special Application of Neem cake Plant Protection Chemicals- Indoxicorb & Corbendazin	<i>Rabi</i> 2014	M	M	L	Cowpea
7	Vegetables	Irrigated	<i>Kharif</i> 2014	Chilli	-	Arka Meghana	INM	Arka microbial consortium for higher NUE in Chilli FYM 25t/ha+75% RDF NPK Kg/ha+ arka microbial consortium 12.5 Kg/ha	<i>Kharif</i> 2014	L	L	L	Finger millet
Flowers													
Ornamental													
8	Fruit	Irrigated	<i>Rabi</i> 2014	Banana	Puttabale	-	ICM	Integrated crop management in Banana Application of recommended dose of NPK 180:108:225 NPK g/pl (three split doses) Use of Banana special – 5 spray @5 g/lit Leaving One sucker per plant (More than 2 sucker in FP) Bunch feeding (500 g fresh cow dung+ 100 ml	<i>Rabi</i> 2014	M	L	M	French bean / Avare

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										
Pulses																			
Redgram	Integrated Crop Management in Redgram	BRG-4	-	Rainfed	12	4	12.00	9.50	10.67	10.55	1.13	13246	45239	31992	3.38	12797	40814	28017	3.18
Bengal gram	Bengal gram for residual moisture conditions	JG- 11	-	Rainfed	12	4	10.00	8.50	9.50	8.25	15.15	12900	41400	28500	3.20	11250	38250	27000	3.40
Cereals & millets																			
Cereals	Integrated pest management in Paddy	IR-64	-	Rainfed	10	4	58	52	55	43	27.91	46000	71500	25500	1.54	43000	63700	20700	1.48
Millets	Finger millet var.KMR 301 for early sown conditions	KMR-301	-	Rainfed	25	10	28.00	24.50	26.50	20.75	27.71	23600	40400	16800	1.711864	22500	36100	13600	1.60
Millets	Micro Nutrient Management in little millets	-	-	Rainfed	12	4	13.70	10.30	12.00	10.10	18.18	12245	29000	16755	2.36	11469	25250	14781	2.2
Millets	Branding and market linkages to Little millet (saame) products	-	-	-	1	1 SHG	-	-	-	-	-	4700	8000	3300	1.70	3700	4000	300	1.08
Vegetable																			
Tomato	Integrated Crop Management in Tomato	-	Arka Rakshak	Irrigated	10	2	630	490	560	430	28.60	75000	224000	149000	3.0	78000	172000	94000	2.20
Chilli	Arka microbial consortium for higher NUE in Chilli	-	Arka Meghana	Irrigated	10	2	In progress												
Flowers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ornamental	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fruit																			
Banana	Integrated crop management in Banana	Puttabale	-	Irrigated	10	2	In progress												
Mango	Strengthening marketing linkages of mango	-	-	Rainfed	2 units	2	In progress												
Mango	Integrated Crop Management in Mango	Alphonso	-	Rainfed	10	2	In progress												
Mango	Integrated Pest Management in Mango	-	-	Rainfed	5	2	In progress												
Tamarind	Processing and Branding of Tamarind Value added products	-	-	Rainfed	1	1 SHG	-	-	-	-	-	4800	10000	5200	2.08	4000	5000	1000	1.25

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										
Spices and condiments																			
Commercial																			
Fibre crops like cotton																			
Medicinal and aromatic																			
Fodder																			
Fodder	Fodder var. COFS 29-1 for higher yield	COFS 29-1	-	Rainfed	5	1	3.0	2.0	2.5	-	-	-	-	-	-	-	-	-	-
Plantation																			
Plantation	Management of Nut Splitting in Arecanut	Local	-	Irrigated	10	4	14.50	12.90	13.7	12.3	11.4	12000	411000	291000	3.4	115000	369000	254000	3.2
Plantation	Integrated Management of Red palm weevil and Rhinoceros beetle in Coconut	Arsikere tall	-	Rainfed / protected irrigation	10	4	Nuts/ Plant				7.88	-	-	-	-	-	-	-	-
							68	60	62	57									
Fibre	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Title of FLD	Data on other parameters in relation to technology demonstrated		
	Parameter with unit	Demo	Check
Integrated Crop Management in Redgram	Plant height (cm)	138	116
	No.of branches / plant	16	11
	No. of pods / plant	513	469
	No. of seeds / pod	5 to 6	3 to 4
	Test weight (g)	13.2	9.7
	Pod borer incidence (%)	5.5	15.68
	Sterility mosaic disease (%)	3.33	7.03
Bengal gram for residual moisture conditions	Pod borer incidence (%)	10.39	21.50
	Wilt disease incidence (%)	2.75	7.22
Integrated pest management in Paddy	Stem borer incidence %	8	11
	Sheath blight incidence %	11	16
Finger millet var.KMR 301 for early sown conditions	Weed index	5	20
	Straw Yield (t/ha)	4.54	4.07
	No of tillers / plant (No.)	5.60	5.20
	Blast incidence (%)	No blast	20
	Numbers of ear heads / plant	8 to 9	5 to 6
	Numbers of fingers / earhead	6 to 7	4 to 5
	Finger length (cm)	10 to 12	9 to 10
Integrated Crop Management in Tomato	Test weight (g)	4	2.9
	Plant height (cm)	50-60	55
	Days taken for flowering	46-48	44
	Days taken for harvesting	72-75	65
	Fruit weight (g)	105	98
	No. of fruits / plant	60	48
Arka microbial consortium for higher NUE in Chilli	Average Fruit weight / plant (g)	750	680
	Average fruit length (cm)	8-10	7-8
	Average number of fruits / plant	120	102

Integrated crop management in Banana	Fruit weight (g)	112	110
	No. of fruits / bunch	225	200
	No. of hands / bunch	15	12
Strengthening marketing linkages of mango	No. of fruit flies trapped / Trap	32	-
	% of Fruit damage	6	13
Integrated crop management in Mango	Fruit weight (g)	240	223
	No. of fruits /tree	840	796
Integrated Pest Management in Mango	Powdery mildew incidence (%)	6	13
	No. of Fruit flies Trapped/ trap	32	-
	Average No. of fruits / plant	135	95
Strengthening marketing linkages of mango growers	No. of fruit flies trapped / Trap	32	-
	% of Fruit damage	6	13
Management of Nut Splitting in Arecanut	Boron (ppm)	Before : 0.39 After : 0.42	0.38
	Nut splitting (%)	Before : 20 After :18	22
Integrated Management of Red palm weevil and Rhinoceros beetle in Coconut	RPW trapped (No's)	15	-
	RB trapped	7	-

5.B.2. Livestock and related enterprises: Nil

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			Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
					H	L	A											
					Milk yield (lpd)													
Dairy	Management of Post Partum fertility in dairy animals	-	3	3 animals	12	10	10	6	-	-	-	-	-	-	-	-	-	-
Poultry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rabbitry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pigerry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Body weight (Kgs)													
Sheep and goat	Integrated Disease Management in Sheep	-	3	30 sheep	26	22	24	16	-	-	-	-	-	-	-	-	-	-
Duckery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Title of FLD	Data on other parameters in relation to technology demonstrated		
	Parameter with unit	Demo	Check
Management of Post Partum fertility in dairy animals	Post partum heat (average)	76 days	132 days
	No. of inseminations	2	4
	Average milk yield (liters / day)	11	6
	Time required for involution of uterus	Around 64 days	Around 119 days
Integrated Disease Management in Sheep	Disease prevalence (%)	1	8
	Mortality rate (%)	1	4
	weight gain record	Average initial weight : 8 kg's Average weight after 6 months : 24 kg's	Average initial weight : 8 kg's Average weight after 6 months : 16 kg's

5.B.3. Fisheries : Nil

Type of Breed	Name of the technology demonstrated	Breed	No. of Demo	Units/ Area (m ²)	Yield (q/ha)			% Increase	*Economics of demonstration (Rs./unit) or (Rs./m ²)				*Economics of check (Rs./unit) or (Rs./m ²)				
					Demo				Check if any	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Common carps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mussels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ornamental fishes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data on additional parameters other than yield (viz., reduction of percentage diseases, effective use of land etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Check if any
-	-	-

5.B.4. Other enterprises

Enterprise	Name of the technology demonstrated	Variety/ species	No. of Demo	Units/ Area {m ² }	Yield (q/ha)			% Increase	*Economics of demonstration (Rs./unit) or (Rs./m ²)				*Economics of check (Rs./unit) or (Rs./m ²)				
					Demo				Check if any	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Oyster mushroom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Button mushroom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vermicompost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sericulture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Apiculture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data on additional parameters other than yield (viz., additional income realized, employment generation, quantum of farm resources recycled etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Local
-	-	-

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Apiculture	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Capacity Building and Group Dynamics	-	-	-	-	-	-	-	-	-	-
Leadership development	-	-	-	-	-	-	-	-	-	-
Group dynamics	-	-	-	-	-	-	-	-	-	-
Formation and Management of SHGs	2	48	0	48	0	0	0	48	0	48
Mobilization of social capital	-	-	-	-	-	-	-	-	-	-
Entrepreneurial development of farmers/youths	1	60	0	60	5	5	10	65	5	70
Others (CBO formation)	-	-	-	-	-	-	-	-	-	-
Others (ICT Importance)	-	-	-	-	-	-	-	-	-	-
Agro-forestry	-	-	-	-	-	-	-	-	-	-
Production technologies	-	-	-	-	-	-	-	-	-	-
Nursery management	-	-	-	-	-	-	-	-	-	-
Integrated Farming Systems	-	-	-	-	-	-	-	-	-	-
Others (Palm climbing and plant protection)	2	20	20	40	0	0	0	20	20	40
TOTAL	22	626	206	842	67	25	92	694	231	925

	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-
Capacity Building and Group Dynamics										
Leadership development	-	-	-	-	-	-	-	-	-	-
Group dynamics	-	-	-	-	-	-	-	-	-	-
Formation and Management of SHGs	1	14	0	14	0	0	0	14	0	14
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	12	326	75	401	48	54	102	374	129	503

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Freshwater prawn culture	-	-	-	-	-	-	-	-	-	-
Shrimp farming	-	-	-	-	-	-	-	-	-	-
Pearl culture	-	-	-	-	-	-	-	-	-	-
Cold water fisheries	-	-	-	-	-	-	-	-	-	-
Fish harvest and processing technology	-	-	-	-	-	-	-	-	-	-
Fry and fingerling rearing	-	-	-	-	-	-	-	-	-	-
Any other (pl.specify)	-	-	-	-	-	-	-	-	-	-
TOTAL	2	21	21	42	0	0	0	42	0	42

7.E. Training programmes for Extension Personnel including sponsored training programmes (on campus) : 07

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	4	186	13	199	0	0	0	186	13	199
Integrated Pest Management	-	-	-	-	-	-	-	-	-	-
Integrated Nutrient management	-	-	-	-	-	-	-	-	-	-
Rejuvenation of old orchards	-	-	-	-	-	-	-	-	-	-
Protected cultivation technology	-	-	-	-	-	-	-	-	-	-
Production and use of organic inputs	-	-	-	-	-	-	-	-	-	-
Care and maintenance of farm machinery and implements	-	-	-	-	-	-	-	-	-	-
Gender mainstreaming through SHGs	-	-	-	-	-	-	-	-	-	-
Formation and Management of SHGs	-	-	-	-	-	-	-	-	-	-
Women and Child care	2	0	57	57	0	6	6	0	63	63
Low cost and nutrient efficient diet designing	1	0	23	23	0	0	0	0	23	23
Group Dynamics and farmers organization	-	-	-	-	-	-	-	-	-	-
Information networking among farmers	-	-	-	-	-	-	-	-	-	-
Capacity building for ICT application	-	-	-	-	-	-	-	-	-	-
Management in farm animals	-	-	-	-	-	-	-	-	-	-
Livestock feed and fodder production	-	-	-	-	-	-	-	-	-	-
Household food security	-	-	-	-	-	-	-	-	-	-
Any other (pl.specify)	-	-	-	-	-	-	-	-	-	-
Total	7	186	93	279	0	6	6	186	99	285

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	10	240	30	270	3	2	5	-	-	-
Kisan Mela	5	300	40	340	9	9	18	-	-	-
Kisan Ghosthi	-	-	-	-	-	-	-	-	-	-
Exhibition	3	450	200	750	-	-	-	-	-	-
Film Show	30	700	70	770	5	5	10	60	62	112
Method Demonstrations	53	700	20	720	10	7	17	-	-	-
Farmers Seminar										
Workshop	3	15	10	25	0	0	0			
Group meetings	47	380	100	400	70	5	75	-	-	-
Lectures delivered as resource persons	80	2100	300	2300	3	3	6	65	15	80
Newspaper coverage	78	-	-	-	-	-	-	-	-	-
Radio talks	-	-	-	-	-	-	-	-	-	-
TV talks	-	-	-	-	-	-	-	-	-	-
Popular articles	5	-	-	-	-	-	-	-	-	-
Extension Literature	5	-	-	-	-	-	-	-	-	-
Advisory Services	709	500	100	600	59	50	109	-	-	-
Scientific visit to farmers field	109	180	20	200	18	4	22	-	-	-
Farmers visit to KVK	248	210	38	248	0	0	0	-	-	-
Diagnostic visits	31	60	20	80	3	2	5	-	-	-
Exposure visits	2	90	30	120	0	0	0	-	-	-
Ex-trainees Sammelan	-	-	-	-	-	-	-	-	-	-
Soil health Camp	-	-	-	-	-	-	-	-	-	-
Animal Health Camp	5	150	40	190	5	8	13	-	-	-
Agri mobile clinic	-	-	-	-	-	-	-	-	-	-
Soil test campaigns	-	-	-	-	-	-	-	-	-	-
Farm Science Club Conveners meet	-	-	-	-	-	-	-	-	-	-
Self Help Group Conveners meetings	-	-	-	-	-	-	-	-	-	-
Mahila Mandals Conveners meetings	-	-	-	-	-	-	-	-	-	-
Celebration of important days (World Environment Day, Kissan day, World food day)	7	150	50	200	40	9	49	-	-	-
Farmers Scientist interaction	-	-	-	-	-	-	-	-	-	-
SMS service	57	24000	290	-	-	-	-	-	-	-
Total	1487	30225	1068	7213	225	104	329	125	77	192

PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIALS**9.A. Production of seeds**

Crop category	Name of the crop	Variety	Hybrid	Quantity of seed (qtl)	Value (Rs)	Number of farmers to whom provided
Cereals & millets (crop wise)						
	Finger millet	-	-	45.5	113750	600
	Foxtail millet (Saame)	-	-	8.0	72000	50
	Little millet	-	-	12.0	57600	20
Pulses	Redgram	BRG -1	-	18.4	82800	195
	Horse gram	-	-	2.50	7500	20
Commercial crops	-	-	-	-	-	-
Vegetables	-	-	-	-	-	-
Flower crops	-	-	-	-	-	-
Spices	-	-	-	-	-	-
Fodder crop seeds	-	-	-	-	-	-
Fiber crops	-	-	-	-	-	-
Forest Species	-	-	-	-	-	-
Others (specify)	-	-	-	-	-	-
Total				74.4	276050	865

9.B. Production of planting materials

Crop category	Name of the crop	Variety	Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Commercial	-	-	-	-	-	-
Vegetable seedlings	Chilli	-	Arka Meghana, Arka haritha, Arka Kyathi	65300	39180	60
	Tomato	-	Arka Rakshak	49300	24650	45
	Brinjal	-	Arka anand	2400	1200	12
	Drum stick	Bhagya, PKM-1	-	155	1550	15
Fruits	-	-	-	-	-	-
Plantation	-	-	-	-	-	-
Total				117155	66580	132

9.C. Production of Bio-Products : NIL

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	Number of farmers to whom provided
Bio Fertilizers	-	-	-	-
Bio-pesticide	-	-	-	-
Bio-fungicide	-	-	-	-
Bio Agents	-	-	-	-
Others	-	-	-	-
Total	-	-	-	-

9.D. Production of livestock materials : Nil

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	-	-	-	-
Duals (broiler and layer)	-	-	-	-
Japanese Quail	-	-	-	-
Turkey	-	-	-	-
Emu	-	-	-	-
Ducks	-	-	-	-
Others (Pl. specify)	-	-	-	-
Piggery	-	-	-	-
Piglet	-	-	-	-
Others (Pl. specify)	-	-	-	-
Fisheries	-	-	-	-
Fingerlings	-	-	-	-
Others (Pl. specify)	-	-	-	-
Total	-	-	-	-

**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** : Kalparuksha
Date of start : January 2014
Periodicity : Quarterly
No. of copies distributed : 300

(B) Literature developed/published

Item	Title	Authors name	Number
Research papers : 8	Socio- economic profile, knowledge gain and problem faced by the co growers of Chikmagalur district of Karnataka state. International Journal of Research in umanities, Arts and Literature(IMPACT:IJRHAL)Vol.2, Iss Jun 2014, pp. 15-20.	Bharath Kumar, T.P.,Sukanya, T.S.,Belli, R.B., Shashikumar, S. and Girish, R., 2014	-
	Performance of the lambs born to crossbreeding local sheep with ramboulets. International journal of Science and Nature. Vol.5(2). 2014, pp 270.	Sukanya, T.S., Rudraswamy, M.S. and Bharath Kumar, T.P., 2014	-
	Performance of hatavari based herbal galactagogue-milkplus supplement to crossbred cattle of Malnad region. International Journal of Science and Nature.Vol.5 (2). 2014, pp. 362-363	Sukanya, T.S., Rudraswamy, M.S. and Bharath Kumar, T.P., 2014	-
	Efficacy of CIDR to induce oestrous synchronization in anoestrous crossbred cows of Malnad region. The Indian Veterinary Journal, October. 2014, Vol.91, Issue 10, pp.79-81.	Rudraswamy, M.S., Sukanya, T.S. and Siddalingswamy Hiremath, 2014	-
	Impact of Improved Methods of Management on the Performance of Crossbred Pigs. Frontier Journal of Veterinary and Animal Sciences, Journal of Karnataka Veterinary, Animal and Fisheries Sciences University, Vol.3(1), January-June 2014	Rudraswamy M.S., Sukanya T.S., Siddalinga Hiremath and Chaithanya M.S.,2014	-
	Growth and yield attributes of Coleus vettiveroides as influenced by different levels of fertilizers , The asian journal of Horticulture, Volume 9, issue 2, December 2014, page no. 324-327	B. Mamatha, D.V. Naveen, V.M. Roopa and T.N. Shivanna	-
	Factors contributing to entrepreneurs behaviors of rural and urban women, International journal of farm sciences, Vol 5 (2), 2015 Page No 217-223	B.S. Savitha, B.S. Siddaramaiah and M.H. Shankara	-
	Constraints faced by rural and urban women entrepreneurs, International journal of farm sciences, Vol 5 (2), 2015 Page No 231-235	B.S. Savitha, B.S. Siddaramaiah and M.H. Shankara	-
Abstracts published in conference proceedings : 5	Enhancing soil fertility status in Mango orchards through intercropping of legumes, published in proceedings of National conference on value chain management in mango, 20 th – 22 nd march 2014, Hogalagere, Srinivasapura, Kolar district, Karnataka	B. Mamatha, Nagappa desai, Shankara M.H., Sujith G.M, Shreenivasa K.R and Roopa B Patil	--

	Siridhanya haraka beleya besata kramagalu mathu pousthiathe, Krishi vigyana, 38(3), July-September 2014	Roopa B Patil, B. Mamatha, Sujith G.M, Shankara M.H	-
	Krushiyalli Khushi kanda yuva raitha – yashogathe, Krishi vigyana, 38(4), October- December 2014	B. Narendra babu, Shankara M.H and S Vinay	-
	Thai mathu arogayakke yede haalu okkaligara pattrike, 5(4), September 2014	M.S. Mamatha, S.V. Suresh, M.H. Shankara	-
	Extension strategies for human resource development for better performance, National seminar on extension management reference initiatives and impact, Theme 21, Page No. 21	M.H. Shankara, Roopa B Patil, H.B. Shivappa nayaka	-
	Empowerment of Indian women through agricultural entrepreneurship, Theme V, Page No. 109	M.H. Shankara, B. Mamatha and K.R. Shreenivasa	-
	Convergence and collaboration for Urban Waste Management to protect environment and health security. . In: Proceedings of National conference on Environment pollution , Urban waste management and public health security, February 13-14,2015, pp.71.	Sukanya T.S. and Narayanaswamy B.K.,2014	-
News letters : 03	Kalparuksha Jan– June 2014	Sujith G.M Shankar M.H Nagappa Desai K R Shreenivasa Mamatha B Roopa B Patil H B Shivappa Nayaka Arjuman Banu Pradeep Kumar H	75
	Kalparuksha July – September 2014	T. S. Sukanya Shankar M.H Nagappa Desai K R Shreenivasa Mamatha B Roopa B Patil H B Shivappa Nayaka Arjuman Banu Pradeep Kumar H	75
	Kalparuksha October – December 2014	T. S. Sukanya Shankar M.H Nagappa Desai K R Shreenivasa Mamatha B Roopa B Patil H B Shivappa Nayaka Arjuman Banu Pradeep Kumar H	75

	Kalparuksha January – March 2015	T. S. Sukanya Shankar M.H Nagappa Desai K R Shreenivasa Mamatha B Roopa B Patil H B Shivappa Nayaka Arjuman Banu Pradeep Kumar H	75
Technical bulletins :	-	-	-
Popular articles :	Problematic soils management , Krishi munnade, April 2014	B. Mamatha and Nagappa desai	-
	Harakada Besaya Kramagalu mattu Poushtikathe, Krishi Vignana, July-September 2014 2014, 38(3): 1-3	Roopa. B. Patil, Mamatha.B, Sujith G. M, Shankar M.H	-
Others News paper publicity : 78	Training programmes, weather, Pest and Disease forecasting, and other technical information	Team KVK	78
Training manuals : 06	Coconut climbing machine and plant Protection.	Sukanya, T.S., Bharath Kumar,T.P.,Girish,G.and Nagaraj Gokavi	20
	Apoushtikathe Nivaraneyalli Samatolana Ahaarada Patra.	Roopa B Patil, Sukanya T. S., M. H. Shankar, Dr.Mamatha.B, Dr.Shivappa Nayaka H. B, Nagappa Desai, Dr.K. R.Srinivasa, Arjuman Banu	30
	Apoushtikathe Nivaraneyalli Poushtika Ahaarada Mahatva.	Roopa B Patil, Sukanya T. S., M. H. Shankar, Dr.Mamatha.B, Dr.Shivappa Nayaka H. B, Nagappa Desai, Dr.K. R.Srinivasa, Arjuman Banu	30
	Makkala Arogya Nirvahaneyalli Anganawadi Karyakarteyara Patra.	Roopa B Patil, Sukanya T. S., M. H. Shankar, Dr.Mamatha.B, Dr.Shivappa Nayaka H. B, Nagappa Desai, Dr.K. R.Srinivasa, Arjuman Banu	30
	Mannu Pareekshe Mattu Neeru Nirvahane.	Dr.Mamatha, Sukanya T. S., M. H. Shankar, Dr.K. R.Srinivasa, Roopa B Patil, Dr.Shivappa Nayaka H. B, Arjuman Banu, Pradeep Kumar H	30
	Mannu Pareekshe Mattu Neeru Nirvahane.	Mamatha,B., Sukanya T. S., M. H. Shankar, Dr.K. R.Srinivasa, Roopa B Patil, Dr.Shivappa Nayaka H. B, Arjuman Banu, Pradeep Kumar H	30
Folders	Plant protection varieties and farmers right.	Sukanya, T.S., Bharath Kumar,T.P., Girish, R. and Nagaraj Gokavi, KVK Mud Chikmagalur district	20

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 (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. Title: Impact of Training programme on social and economic stability of youths (Group approach)

Background: Tumakuru district is an land of coconut and accounts an area of 1.5 lakh hectare. With this, recently farmers facing sever labour problem to harvest tender and matured nuts along with the serious pest like Red Palm weevil, Rhinoceros beetle, black headed caterpillar, mites and diseases incidence such as Ganaoderma wilt, stem bleeding, Bud rot etc. with all these the KVK in collaboration with Coconut Development Board, Bangalore and Karnataka State Rural Livelihood Promotion Scheme, GOK organized vocational training programme.

Interventions

Process: KVK, Konehalli, Tiptur tq, Tumakuru Dist. in collaboration with Coconut Development Board, Bangalore and Karnataka State Rural Livelihood Promotion Scheme, GOK organized 7 (6 days each) vocational training programme on Palm Climbing and Plant Protection under Friends of Coconut Tree (FOCT) programme for self employment for 180 young farmers of the district during the year 2013-14 and 3 programmes 60 young farmers during 2012-13. In each training programme programme schedule, modules and lesson plan were developed to organize the training in more effective and efficient way. The resource persons of our institute along with outside institutes technical persons and local progressive farmers were engaged to take up the technical sessions in the programme. A master trainer who is a ex trainee of our same training programme organized at our centre during the past training programme where he teach the skill of climbing the palm by using climbing equipment. The technical sessions organized in most effective way by using different methodologies and aids including field visits. And more emphasis was given on skill development on palm climbing and plant protection aspects by using systematic method demonstrations.

Technology: Training programme on Palm Climbing and Plant Protection

Impact:

Horizontal Spread: KVK has totally covered 240 young farmers of the district during 2012-13, 2013-14 and under palm climbing and plant protection training programme and eventually they involving in harvesting of their own farm nuts along with engaging in harvesting of nuts from others farm by charging of Rs. 30 per palm. A single trainee can harvest the nuts from 40-50 trees in a day. And on an average 70 trainees are engaging in harvesting of nuts along with crown cleaning including plant protection aspects as a labour and realized the self employment status. KVK with this efforts formed two climbers group such as “Kalpasiri Coconut climbers group”, Raysandra, Thuruvekere Tq. And “Kalpaganga Coconut climbers group”, Ganganahalli, Thuruvekere Tq. Where in a group approach these groups working most effectively and solving the labours problems to a certain extent.

Economic gains: A climber charges Rs. 30 per palm for harvesting of nuts and Rs. 50 for crown cleaning and plant protection aspects. One can earn an handsome income of Rs. 1500-2000 per month along with his daily farming work.

Employment Generation: After the training programme KVK has formed two climbers group such as “Kalpasiri Coconut climbers group”, Raysandra, Thuruvekere Tq. And “Kalpaganga Coconut climbers group”, Ganganahalli, Thuruvekere Tq. Where in a group approach these groups working most effectively and solving the labours problems to a certain extent. Our trainees are also invited by many other KVK’s who organized such training programmes to work as a mater trainee, by that also they earning good income.

2. Title: Impact of Training programme on social and economic stability of a young farmer of the District (Individual approach)

Background: Tumakuru district is an land of coconut and accounts an area of 1.5 lakh hectare. With this, recently farmers facing sever labour problem to harvest tender and matured nuts along with the serious pests like Red Palm weevil, Rhinoceros beetle, black headed caterpillar, mites and diseases incidence such as Ganaoderma wilt, stem bleeding, Bud rot etc. with all these the KVK in collaboration with Coconut Development Board, Bangalore and Karnataka State Rural Livelihood Promotion Scheme, GOK organized vocational training programme.

Interventions

Process: KVK, Konehalli, Tiptur tq, Tumakuru Dist. in collaboration with Coconut Development Board, Bangalore and Karnataka State Rural Livelihood Promotion Scheme, GOK organized 7 (6 days each) vocational training programme on Palm Climbing and Plant Protection under Friends of Coconut Tree (FOCT) programme for self employment for 180 young farmers of the district during the year 2013-14 and 3 programmes 60 young farmers during 2012-13. In each training programme programme schedule, modules and lesson plan were developed to organize the training in more effective and efficient way. The resource persons of our institute along with outside institutes technical persons and local progressive farmers were engaged to take up the technical sessions in the programme. A master trainer who is a ex trainee of our same training programme organized at our centre during the past training

programme where he teach the skill of climbing the palm by using climbing equipment. The technical sessions organized in most effective way by using different methodologies and aids including field visits. And more emphasis was given on skill development on palm climbing and plant protection aspects by using systematic method demonstrations.

Technology: Training programme on Palm Climbing and Plant Protection

Impact:

Horizontal Spread: KVK has totally covered 240 young farmers of the district during 2012-13 and 2013-14 under palm climbing and plant protection training programme and eventually they involving in harvesting of their own farm nuts along with engaging in harvesting of nuts from others farm by charging of Rs. 30 per palm. A single trainee can harvest the nuts from 40-50 trees in a day. And on an average 70 trainees are engaging in harvesting of nuts along with crown cleaning including plant protection aspects as a labour and realized the self employment status.

Economic gains: A climber charges Rs. 30 per palm for harvesting of nuts and Rs. 50 for crown cleaning and plant protection aspects. One can earn an handsome income of Rs. 1500-2000 per month along with his daily farming work.

Employment Generation: A Mr. Nataraju, marginal farmer with land holding of 1 acre dry land and before attending the training programme he was engaged in masonry work and with a savings of Rs. 200-250 per day. By the advertisement of KVK regarding training programme he attended the training programme on Palm climbing and Plant Protection during September 2013. He was actively involved in all the activities of training programme during sessions of one week. After training programme he went back to his native and tried lot about more skill on palm climbing himself and after that he is fully engaged in palm climbing by leaving masonry work. Earlier days KVK has given advertisement about his work in the daily news paper and magazines and Mr. Nataraju also prepared visiting cards of his profile. By all these efforts now Mr. Nataraju is more demanding person in the District and neighbor districts for harvesting of Coconuts and Crown cleaning along with plant protection work. Now he is fetching an income of Rs. 800-1000 daily by deducting all other expenditures. He also involved other trainees who got training at our KVK for harvesting of nuts when ever the more demands comes. Mr. Nataraju proudly says that, the KVK has given good and more effective training programme where it changes my life style by improving the economic status and because of all these I cleared the loan of Rs. 50,000/- and purchased new motor cycle and am happy now.

3. Title: Improved Dairy Farming

Background:

Name of the farmer	:	Mahendra S/o Jnanamurthy Mathihalli, Tiptur (Tq) Tumakuru Dt. Karnataka Ph. No:9945310841
Age (years)	:	27
Education (Highest level and subject)	:	PUC
Land holding	:	8 acres
Crops grown	:	Cereals, Horticulture crops, fodder crops
Livestock (Cow, buffalo etc in number)	:	40 cow,

Intervention

Process: Mr. Mahendra is an young progressive farmer has land holdings of 8 acres. He is involved in cultivation of different Agriculture and horticulture crops. He adopted improved dairy farming and growing fodder crops such as B.H 18, CO 3 and MP chari in an area of 3 acres and ragi in an area of 3 acres.

Technology: Rearing high milk yielding 40 (HF and Jersey cows) and milking by using machine.

Impact

Horizontal Spread: He has adopted improved dairy farming. Nearly 500 farmers have visited his dairy shed and adopted the same technologies in their Dairy farming

Economic Gains: Daily he is getting nearly 300 lts of milk and fetching on an average Rs. 6,000 daily. Annually from crops and Dairy farming he is getting annual income of Rs. 3,00,000/-

Employment Generation: He is providing employment opportunities to 3-4 labours .

4. Title: Diversified Farming System

Background:

Name of the farmwomen	:	Pankaja w/o Mr. Chandra Shekar Siddanakatte, Ramanahalli (Pt) Kandikere Hobli Chikkanayakanahalli (Tq) Tumakuru Dt. Karnataka 09986729926
Age (years)	:	48
Education (Highest level and subject)	:	SSLC
Land holding	:	25 acres
Crops grown	:	Cereals, Horticulture crops, medicinal plants.
Livestock (Cow, buffalo etc in number)	:	1 cow, 1 calf, 2 ducks, 2 turkey and backyard poultry

Intervention

Process: Mrs . Pankaja , a progressive farm women have land holdings of 25 acres. She is involved in cultivation of different horticulture crops such as arecanut, coconut, banana ; spices like pepper, turmeric etc, flower crops like jasmine, rose, crossandra etc.,and also grows some medicinal crops like aloe vera, brahmi, lemon grass etc.,

Technology: With involvement of KVK Tumakuru and the line departments she is growing improved varieties of Agricultural and horticultural crops and livestock. She is adopting improved agriculture technologies in plantation crops like arecanut and coconut. She owns plate and cup making machine, biodigester, brick making machine, arecanut dryer, arecanut bagging equipment, flour machine, coconut oil extractor.

Impact

Horizontal Spread: She has adopted Integrated Farming System along with use of farm machinery and Processing Equipments. Nearly 1000 farmers have visited her farm and adopted the same technologies in their farms **Economic Gains:** From all these activities she approximately earns 8-10 lakhs/annum.

Employment Generation: She is providing employment opportunities to 5-6 labours .

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

1. Title: Rat control in Plantation trees using local rat traps

Background:

Name of the farmer	:	Mr. Arun Kumar, S. R Shettikere Chikkanayakanahalli (Tq) Tumakuru Dt. Karnataka
Age (years)	:	35
Education (Highest level and subject)	:	B.Sc
Land holding	:	8 acres
Crops grown	:	Cereals, Horticulture crops.
Livestock (Cow, buffalo etc in number)	:	1 cow, 1 calf,

Intervention

Process: Mr. Arun kumar from Tumakuru district Karnataka,, a young progressive farmer have land holdings of 8 acres. He is involved in cultivation of different Agriculture and horticulture crops such as arecanut, coconut, banana. Rats pose a major challenge to agriculture, especially after monsoon season. The rodents are major problem during crop growth in the field and during post harvest storage, as they consume and contaminate stored food. They also infect livestock feeds, kill poultry and consume their eggs.

Technology: The trap designed by Mr. Arun kumar is a binding wire which is tied to the four corners of an old bamboo basket and connected to a single plastic thread. The plastic thread is attached to a coconut front that can be pulled up for down . A snap trap is placed inside the bamboo basket and a chopped coconut kernel piece attached to it.

Impact

Horizontal Spread: It is low cost technology that promises to provide a good result. Grass root level technology and methodologies developed by Mr. Arun kumar benefits several farmers and has been accepted across the region. Nearly 3000 farmers were adopted this low cost technology throughout the state.

Economic Gains: On an average 1500 traps were sold @ Rs. 30 per trap. A single trap can catch upto 15-20 rats daily and 3000 -4000 nuts saved from damage from his 8 acres of land

Employment Generation: This technology can save the labour cost by manual control of rats .

Scientists – Farmer Interaction

The scientists of Krishi Vigyan Kendra, Tumakuru Visited the farm of Mrs. Rekha , Bannihalli (Pt) Tiptur (Tq), Tumakuru Dt, Karnataka and interacted (Face to Face interaction) regarding the Experience of Mrs. Rekha in Integrated Farming System and suggested the Problem solving strategies to overcome some difficulties in IFS. For past 5 years she is involved

in Integrated Farming System for sustainable agriculture development. Before venture into IFS both husband and wife were employees of Govt. institute. They have passion for agriculture and started involving different activities in farm to get higher yield and income. She involves herself in IFS activities like growing of coconut, arecanut, banana, sapota, cardamom, clove, pepper, citrus species and forest trees like Jatropa, teak, etc in an area of 3.09 acres and also involving in dairy farming. In free time she engages herself in education / tuition up to 10th standard regarding general knowledge, and educated upto an extent of 500-700 farmers on IFS and ITK's. She is also involved in vermicomposting and practices rain water harvesting in house and in field implements water saving techniques such as drip and sprinkler irrigation.

Snails management in horticulture garden through participatory approach.

Snails are becoming serious pests of horticultural crops like Arecanut, coconut, banana, brinjal, tomato, chilies, jasmine, aster. This pest is causing economic damage to all these horticultural crops. Farmers locally control the pest using common. Salt and some of them use metaldehyde that is not available in right time and harmful to pest and children in the vicinity and also cost intensive.

Crop damage is severe especially in Hemavathi canal areas and poor adoption of the technology against the snails as it requires/demands group participation results in severe damage to horticulture crops

Refinement of Existing technologies.

Hence, it was proposed to refine the existing technologies.

Alternatives

In order to suitably refine the existing technologies, the following alternatives were formulated by the scientists themselves in consultation with other specialists.

T1: Farmers not adopting any control measures

T2: Farmers use metaldehyde for snail management

T3: Slightly ripened papaya, Guava, banana, ricebran bait only. Technology is cost effective and organic farmers come forward to use the technology option. Snails have to be collected manually and destroy.

T4: Papaya/ Rice brain bait with 10 gms of methomyl in bait kills them.

Implementation of the programme

A training programme on snails management was organized at chikkanahalli Sira taluk and Mathihalli, Tiptur taluk to educate the farmers about management of snails.

In this training programme, KVK scientists stressed the importance of group approach and conducted the demonstration with all alternatives and explained about cost-benefit ratio of each technology

Farmers opinion

All the participants expressed their view about using metaldehyde, using slightly ripened fruits like papaya, banana and hand picking and using ripened fruits with methomyl(lante) as bait.

Farmers opined that using ripened fruits with hand picking is low cost and ecofriendly management practices(Rs. 500/ha) followed by using ripened fruits with methomyl (Rs 1600/ha) and metaldehyde chemicals (Rs 6800/ha)

Communication of the technology

The message that the low cost efficient and eco-friendly management technologies involving ripened fruits without baits and with baits can be effectively utilized for management of snails was communicated to the field level functionaries of the line departments using various channels such as the research extension interface, zonal workshop, training programme etc. About 85 farmers who adopted the technology during 2010-11 in an area of 220ha

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	Paddy/Ragi	Seedlings were transplanted equi distance at spacing of 22.5 x 22.5cm	It facilitates intercultivation in both directions, conserves moisture, controls weeds and enhance tillering
2	Ragi	Sowing seeds mixed with FYM	It ensures better moisture and nutrient supply and reduces seed rate and finally lesser cost of production
4	Coconut	Application of common salt Planting cactus near tree	Cost effective substitute for potash and also acts as on insect repellent To control stem bleeding
5	Arecanut	Application of Tank silt @ 50ton/ha	Supply nutrient to crop
6	Paddy	Calotropies(yekka) branches are placed at the water inlet	Acts as a insect repellent
7	Coconut	Root feeding with neem oil	Reduce stem bleeding
8	Coconut	Planting kalli plants at the base of coconut palm	Reduce stem bleeding
9	Perennial crops	Rag husk, coconut fronds and husk are used as mulch	Check evaporation and weed growth
10	Redgram	Redgram is mixed with castor oil and stored in earthen vessel	Physical barrier to pests
11	Vegetable garden	Maize is grown around vegetable garden	Physical barrier to cattle and acts as a trap crop for insects

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

- **Identification of courses for farmers/farm women**
 - PRA technique and need analysis through individual & group discussion
 - As per the suggestions of members of SAC
 - Based on discussion at Bimonthly work
- **Rural Youth**
 - Survey & discussion
 - Feedback from bankers

- **Service Personnel**

- Discussion with District and taluk level officers to know the areas of interest/choice of extension workers based on field problems
- Deliberations of Bi monthly technical workshop
- SAC interactions
- Diagnostic visits

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 : Good

1. Year of establishment : 17-12-2005

2. List of equipments purchased with amount :

Sl. No.	Equipments / Instruments	Quantity (no.)	Cost (Rs.)
1	pH meter	01	8550.00
2	Conductivity bridge	01	7400.00
3	Physical Balance	01	12,000.00
4	Chemical Balance	01	48,900.00
5	Magnetic stirrer with Hot Plate	01	5500.00
6	Shaker with DC Motor	01	27,600.00
7	Hot Air Oven	01	20,000.00
8	Water Distillation Still	01	48,850.00
9	Spectrophotometer	01	46,200.00
10	Flame Photometer	01	38,720.00
11	Kjeldahl Digestion and Distillation Setup	01	1,67,709.00
12	LG Refrigerator with Stabilizer and Stand	01	15,970.00
13	Kanchan Mixer Grinder	01	1800.00
TOTAL			Rs. 4,49,199.00
14. Under the laboratory setup : The following accessories were purchased			
a	Fume cupboard with shutter and blower	1	61,875.00
b	Laboratory tables: One table with Kadapa stone on top, size-10' x 3', One table with wooden top, size-8' x 3', One table with plywood top & compartments, size -8' x 3'	3	16,000.00
c	Showcase boxes	2	11,000.00
d	61/2' x 3' Steel almirahs with glass fitted doors	4	27,450.00
e	61/2' x 3' Steel almirahs without glass fitted doors	4	22,950.00
f	Office tables Size- 2 1/2' x 4 1/2'	1	3994.00

g	Office tables Size- 3' x 5'	1	4725.00
h	S - type chairs	5	3263.00
i	Steel rack	4	5848.00
j	Stools	5	1500.00
k	Exhaust fans	2	1688.00
l	Mesh work for laboratory rooms	---	1775.00
m	3-phase power connection to fume hood for running the motor (including labour charges)	---	3377.00
n	40 mm slab for the construction of platform for placing the fume hood (including labour charges)	---	4269.00
o	Hotplate (rectangular type) - 12' x 18'	1	10,800.00
p	Painting materials & labour charges (for painting laboratory & office rooms & wooden almirahs & tables)		3976.00
q	Extension cords	3	2400.00
r	Aluminum partition for the Laboratory	1	10,000.00
TOTAL			Rs. 1,96,890.00
GRAND TOTAL (1 to 14)			Rs. 6,46,089.00

B. Under Recurring contingency:

Sl. No.	Particulars	Cost (Rs.)
1	Chemicals	44,695.00
2	Glassware	1,35,417.00
3	Petty Items: Gas connection for spectrophotometer with stove and other accessories (1+1), Subble, Pick axe, Mumties, Bondless, Lock Covers, 35 mm locks, Stationeries, Plastic items, Cloth Bags, etc. List of Soil sampling augers and other laboratory accessories purchased: Soil Sampling augers, Standard Test Sieves, Mortar and Pestle, Burette Stand with Clamp, Spatula, Wash Bottles, Agate Mortar and Pestle, Gloves, Paper Tissue Roll, Bunsen Burners, Porcelain Crucible, Funnels, Reagent Bottles, Tongs, Burner Stands, Litmus Papers, pH Papers, Hamato Balance, etc	35,995.00
4	Soil and plant sample processing and storage facility: Plywood Almirahs with glass doors and compartments, wall box with compartments and front glass door fittings, Laboratory platform partition, Wooden table with compartments and Wooden pestle and mortar.	44,100.00
GRAND TOTAL		2,60,207.00

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	3904	3563	623	195200
Water Samples	3237	3105	605	323700
Plant samples	-	-	-	-
Manure samples	-	-	-	-
Others (specify)	-	-	-	-
Total	7141	6668	1228	518900

Details of samples analyzed during the 2014-15 :

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	530	492	294	26500
Water Samples	521	486	268	52100
Plant samples	-	-	-	-
Manure samples	-	-	-	-
Others (specify)	-	-	-	-
Total	1051	978	562	78600

10.I. Technology Week celebration during 2014-15 Yes/No, If Yes : No

Period of observing Technology Week: 10th -14th November 2014

Total number of farmers visited : 406

Total number of agencies involved : Agri. Dept, Animal husbandry dept., Horticulture Dept.

Number of demonstrations visited by the farmers within KVK campus : 5

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Gosthies	-	-	-
Lectures organized	10	406	-
Exhibition	-	-	-
Film show	5	406	-
Fair	-	-	-
Farm Visit	5	406	-
Diagnostic Practical's	-	-	-
Supply of Literature (No.)	-	-	-
Supply of Seed (q)	-	-	-
Supply of Planting materials (No.)	-	-	-
Bio Product supply (Kg)	-	-	-
Bio Fertilizers (q)	-	-	-
Supply of fingerlings	-	-	-
Supply of Livestock specimen (No.)	-	-	-
Total number of farmers visited the technology week	406	406	-

10. J. Interventions on drought mitigation (if the KVK included in this special programme) : No

A. Introduction of alternate crops/varieties

State	Crops/cultivars	Area (ha)	Number of beneficiaries
-	-	-	-

B. Major area coverage under alternate crops/varieties

Crops	Area (ha)	Number of beneficiaries
Oilseeds	-	-
Pulses	-	-
Cereals	-	-
Vegetable crops	-	-
Tuber crops	-	-
Total	-	-

C. Farmers-scientists interaction on livestock management

State	Livestock components	Number of interactions	No.of participants
-	-	-	-
-	-	-	-
Total	-	-	-

D. Animal health camps organized

State	Number of camps	No.of animals	No.of farmers
-	-	-	-
-	-	-	-
-	-	-	-

E. Seed distribution in drought hit states

State	Crops	Quantity (qtl)	Coverage of area (ha)	Number of farmers
-	-	-	-	-
-	-	-	-	-

E. Large scale adoption of resource conservation technologies

State	Crops/cultivars and gist of resource conservation technologies introduced	Area (ha)	Number of farmers
-	-	-	-
-	-	-	-
-	-	-	-

F. Awareness campaign

State	Meetings		Gosthies		Field days		Farmers fair		Exhibition		Film show	
	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-

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)
Introduction of paddy with pest & disease management	49	41.00	8,500	15,400
Introduction of GPBD-4 and RHC management	33	31.00	2,700	3925
Introduction of BRG-1 and pod borer management in redgram	53	38 %	6,000	9,200
Sunflower budnecrosis management with KBSH-41 hybrid	31	27.00	12,750	15,850
Preparation of Ragi malt	212	24.00	--	Rs 180/month
Introduction of MR-6 with biofertilizer	83	46.00	3,850	6300
Pest management in Bengalgram and introduction of JG-11	27	34.00	9,700	12,150
Introduction of Saame	21	29	1500	3,800

11.B. Cases of large scale adoption

A. Introduction of BR-2655 paddy variety in Tumakuru district-Successful case study

Background:

Paddy being the major cereal crop of the district occupies about 29,818 ha area with the productivity of 46.09 q/ha. The productivity is low as compared to national and state productivity. This could be attributed to use of local varieties, poor management of nutrients, pest and disease. To know the percentage parameter contribution for low productivity, KVK conducted a preliminary survey by means of group meetings, discussions, field visit and other techniques. The parameters were found to be

a) Agronomical management:

use of local varieties, poor land preparation, no seed treatment with bio fertilizer or chemicals, transplanting more number of seedling and use of aged seedlings, always flooding with water, imbalanced use of nutrients, non application of potassium and micro nutrients results in yield reduction.

b) Pest and disease management

Among pest, major were incidence of stem borer, leaf folder and sucking insects. In diseases blast is sever and in the last 3 years almost 30-40% area was severely affected by the diseases and results in yield loss.

Intervention of KVK

In the year 2002-03, KVK has conducted one OFT on blast management and during 2005-06, KVK has also conducted OFT on integrated nutrient management. Wherein, for the first time KVK has tried BR-2655. Further in the year 2006-07, the OFT tried was on Sri Method of paddy cultivation and the same OFT was continued in 2007-08 along with OFT on “sustainability in yield through effective water management. Hence KVK has given lot of importance for testing the suitability and feasibility of paddy techniques in the district.

Looking to the severity of regular infestation of blast and its rapid increase and spread in the district, KVK Tumakuru in the I PHASE gave training the farmers in villages where there was severe incidence of blast and has created awareness on the disease occurrence, identification of the disease and its effective control

In the II PHASE, KVK has conducted Front Line Demonstrations using BR 2655 variety with production technologies.

The characteristics of BR 2655 are

- a) long duration (140 to 145 days)
- b) tall variety and high fodder yielder
- c) blast tolerant
- d) low susceptibility to lodging

A. Redgram (BRG -1)- Boon for dryland**Background:**

In Tumakuru district, almost 80% of the area is under rainfed and receives an average rainfall 540 mm per year. Among the pulses, farmers are growing greengram, blackgram in pre-monsoon, horsegram in late kharif and redgram in regular monsoon period the redgram being hardy and drought tolerant pulse was able to integrate into the existing cropping system both sole as well as intercrop. Owing to poor returns of other agronomical pulse crops farmers have largely adopted redgram as major pulse crop in drylands of the district.

Redgram is an important pulse crop and its grown in 12,595 ha area with a productivity of 691 kg/ha. The achieved productivity is less than state productivity (800 kg/ha) and national productivity(925 kg/ha). The farmers of the district are getting low yield /unit area due to non adoption of improved varieties, improved production techniques and improper IPM measures

Intervention of KVK:

KVK intervention has led to the awareness of BRG-1 variety, an improved variety evolved by UAS, Bangalore during 2004. The exhaustive efforts through extension activities like training and demonstrations, the BRG-1 variety is getting popular through out the district. In the first PHASE, KVK, Tumakuru has created the awareness of farmers regarding new improved varieties and IPM measures. In the 2nd PHASE, KVK conducting Front Line Demonstrations where technologies demonstrated are

1. Introduction of BRG-1 variety
2. Use of biofertilizer particularly rhizobium and PSB
3. Plant protection measures using pheromone traps @ 8-10 traps/ha, spraying of NPV@ 250 LE/ha
4. and spraying of ekalux against redgram pod borers)

There is a very good response from farmers regarding the use of BRG-1 variety. BRG-1 variety is having duration of 170- 180 days, suitable for vegetable purpose and a high yielder. The farmers who are cultivating in lands nearby towns or cities, are getting more income as they can sell the immatured red gram pods easily and on an average they get minimum of Rs. 20/kg and each red gram plant can give 20 kg green pods since the red gram crop is highly suitable for intercalating for conservation of soil and moisture, KVK Tumakuru has conducted OFT's on

1. Redgram + Sunflower(1:2)
2. Redgram + Sesamum(8:2) after the harvest of sesamum sowing of horse gram can be done.

In these OFT's, the total income from these intercropping are very high when compared to sole crop of red gram and other crops. For accuracy and consistency, the above OFTs were continued in 2010-11 and frontline demonstration 2011-12 taken up. Now the farmers are also getting higher profit of Rs. 15,000 per acre through cultivation of sole redgram as compared to earlier profit of Rs. 6000. Thus KVK, Tumakuru has become the prime source of technology in the district for BRG-1 and improved cultivation practices

Success story :

Sri Maridevaru is a progressive farmer, aged 58 years, is having regular contacts with staff of line departments and KVK. He is a resident of Yellapura, Tumakuru taluk. He along with 25 farmers of Yellapura and surrounding villages attended programme of KVK, Konehalli, Tumakuru Dt. During training programme, lot of discussion and exchange of views about various technologies were held between farmers and scientists. It came to the notice that, farmers are growing local seeds (own seeds) of redgram and are getting only 7-8 q/ha, due to own seeds, pest incidence and uneven distribution of rainfall in May and June. Hence, KVK, Konehalli, Tumakuru Dt suggested an alternative of growing BRG-1 red gram variety which yields better. In this regard, KVK decided to implement front line demonstration on redgram variety BRG-1

Expenditure and income statement per ha.

Particulars	Farmers practice	Recommended practice
Yield (Q/ha.)	9.65	14.50
Cost of cultivation (Rs./ha.)	16,300	18,000
Gross income (Rs./ha)	21,230	43,500
Net income (Rs.)	4,930	25,500
B:C Ratio	1.30	2.4

He has got about 30 q. from 2 ha. And sold the seed material during kharif 2009 at the rate of Rs.30/kg and he has got Rs. 90,000. He has distributed seeds to nearly 250 farmers of Tumakuru and Chitradurga dt. covering nearly 480 acres of area under BRG-1 and generated higher income . By looking at his success of earning more profit, about 150 farmers were motivated and started cultivation of BRG-1 variety in 100 ha. In neighbouring villages during kharif 2011.

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

Intervention of technology (2011-12)	Outcome (2012-13)	Horizontal spread (2013-14)
Redgram -Introduction of BRG-1 variety and pest management	1) Increase in area upto 500 ha under BRG – 1 2) Pest management through eco friendly IPM to save cost 3) Increase in yield by 15%	1) Increase in area was 450ha under BRG-1 2) Increase in yield was 8% due to variety and IPM practices

Vermicompost -Scientific production of vermicompost	1)Creating additional income generating opportunities for rural youth and women 2) Increase in income of Rs 400 per month per individual	Technologies disseminated through training and demonstration to farm women and rural youth 2) Members started vermi compost production by obtaining assistance from line department
Training programme on Palm Climbing and plant protection (FOCT)	Formation of palm climbers associations Kalpatharu palm climbers associations Kalpasiri palm climbers associations	Reduction in the labour problem up to 10-15 % for harvest of tender and matured nuts along with crown cleaning Self employment Increase in the additional income by Rs. 1000-1500 per month

PART XII - LINKAGES

12.A. Functional linkage with different organizations

Name of organization	Nature of linkage
State Department of Agriculture, Tumakuru Dist.	Conducting training programmes, Frontline Demonstrations, On Farm Testing and field days
State Department of Horticulture, Tumakuru Dist.	Conducting training programmes, FLD's field visit
State Department of Animal Husbandry & Veterinary Services, Tumakuru	Conducting Animal Health Camps, Training for Veterinary Officers & farmers
Department of Women & Child Welfare, Tumakuru Dist.	Joint diagnostic survey, Conducting training to women Self Help Groups organizing programmes like nutrition week, world food day etc.
Department of Microbiology, UAS, Bangalore	Supplied Rhizobium, PSB, Azospirillum for FLD's and OFT's Supplied Fertilizers, Gypsum, Neem Cake chemicals for FLD's and OFT's
Taluk Agricultural Produce Co-operative Marketing Society (TAPCMS), Tiptur, Arsikere.	Training for Womens, Child Health campaign Conducting training programmes to the farmers/farm women Conducting training programmes to the Department officials, NGO's and farmers and financial aid for conducting training programmes
General Hospital, Tiptur Gram Panchayats	Technical information and critical inputs for FLD's and OFT's
Department of Watershed, Tumakuru	Demonstrations and trainings Conducting training and demonstration
IIHR, Hesaraghatta, Bangalore	
Zuari Industries Ltd. Tumakuru	
ORDER, NGO, Tumakuru	

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

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

12.C. Details of linkage with ATMA :

a) Is ATMA implemented in your district Yes/ No : Yes

If yes, role of KVK in preparation of SREP of the district? : Technical guidance was provided in preparation of SREP. Now, KVK staff are involved in revisiting of SREP programme under ATMA

Coordination activities between KVK and ATMA during 2014-15

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	Meetings	-	-	-	-
02	Research projects	-	-	-	-
03	Training programmes	-	-	-	-
04	Demonstrations	-	-	-	-
05	Extension Programmes	-	-	-	-
	Kisan Mela	-	-	-	-
	Technology Week	-	-	-	-
	Exposure visit	-	-	-	-
	Exhibition	-	-	-	-
	Soil health camps	-	-	-	-
	Animal Health Campaigns	-	-	-	-
	Others (Pl. specify) field days	-	-	-	-
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

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

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

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

12.F. Details of linkage with RKVY : Nil

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

12. G Kisan Mobile Advisory Services

Month	No. of SMS sent	No. of farmers to which SMS was sent	No. of feedback / query on SMS sent
April 2014	2	1273	-
May 2014	6	3829	-
June 2014	7	1920	-
July 2014	5	1583	-
August 2014	6	1909	-
September 2014	5	1033	-
October 2014	7	1450	-
November 2014	2	770	-
December 2014	5	2888	-
January 2015	5	3175	-
February 2015	5	3176	-
March 2015	2	1284	-
Total for the year 2014-15	57	24290	-

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 (ICAR)	Canara Bank	Tiptur	699	SB	0699101022252	572015202	CNRB0000699
With KVK (Revolving fund)	Canara Bank	Tiptur	699	SB	0699101025795	572015202	CNRB0000699

14.B. Utilization of KVK funds during the year 2014-15 (Rs. In lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	5200000	5500000	5720580
2	Traveling allowances	150000	96000	113755
3	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	295000	30000	319564
B	POL, repair of vehicles, tractor and equipments	223000	30000	215588
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	100000	20000	84301
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	100000	20000	77981
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	365000	200000	251234
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	107000	50000	48202
G	Training of extension functionaries	25000	10000	24820
H	Maintenance of buildings	50000	10000	50000
I	Establishment of Soil, Plant & Water Testing Laboratory	0	0	0
J	Library	5000	0	3250
K	Extension Activities	50000	10000	34283
L	Farmers' Field School	30000	10000	28356
M	IFS	50000	10000	49570
	TOTAL (A)	6750000	5996000	7021484
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)	0	0	0
C. REVOLVING FUND		0	0	0
GRAND TOTAL (A+B+C)		6750000	5996000	7021484

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 2012 to March 2013	3,77,406	12,97,753	11,58,131	5,17,028
April 2013 to March 2014	5,16,528	18,13,094	15,14,479	8,15,143
April 2014 to March 2015	8,15,143	6,25,861	6,88,294	7,52,710

15. Details of HRD activities attended by KVK staff during 2014-15

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Mrs. Roopa B Patil	Subject Matter Specialist	Hands on training on Production & Processing Technology of Jackfruit •	Department of bio technology & AICRP	22/04/2014 to 23/04/2014
Dr. K.R. Shreenivasa	Subject Matter Specialist	ICT in plant protection	Dept. of Plant pathology, UAS, GKVK	21/08/2014
Mr. Pradeep kumar H	Programme Assistant (Computer)	Hands on training on Application of software of KVK	UAS, Bangalore	18/09/2014 to 19/09/2014
Dr. Mamatha. B.	Subject Matter Specialist	Hands on training on Application of software of KVK	UAS, Bangalore	18/09/2014 to 19/09/2014
Mr. M.H.Shankara	Subject Matter Specialist	Innovative Extension Approaches	STU, Hebbal	14/10/2014 to 17/10/2014
Mr. M.H.Shankara	Subject Matter Specialist	Agriculture Knowledge Management, ICTs on Knowledge Portals	Staff Training Unit, Hebbal, Bangalore	16/12/2014 to 19/12/2014
Mr. Pradeep kumar H	Programme Assistant (Computer)	Data Base Management	KVK, Suttur, Mysore	16/12/2014 to 19/12/2014

**16. Please include any other important and relevant information which has not been reflected above (write in detail).
Farmers Field School during 2014-15**

Crop	Technology	Area (ha)	Funding Agency	Village/ Taluk
Redgram	IPM in Red gram	1.0	KVK (ICAR)	Thimmalapura, Tiptur (Tq)

Results

Parameter	Farmers plot	ICM plot	FFS plot
Yield (q/ha)	7.75	12.50	16.50
Wilt incidence %	28.5	16.0	7.5
Pod borer damage %	15.5	11.0	8.5
Sterility Mosaic Disease %	8.0	6.5	4.5
B:C ratio	1.65	2.35	2.65