University of Agricultural Sciences, Bangalore

Krishi Vigyan Kendra

Navile, Shimoga

ANNUAL REPORT 2013-14

(for the period April 2013 to March 2014)

KRISHI VIGYAN KENDRA

Navile, Abbalagere Post, Shimoga – 577225

Tele/Fax. No.08182-295516 E-mail:shimogakvk@gmail.com

PART I - GENERAL INFORMATION ABOUT THE KVK

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

KVK Address	Telephone		E mail	Web Address
	Office	Fax		
Krishi Vigyan Kendra Navile, Abbalagere Post, Shimoga-577 225 Karnataka	08182- 295516, 267017	-	shimogakvk@gmail.com	-

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

Address	Telephone		E mail	Web Address
	Office	Fax		
University of Agricultural Sciences, GKVK Bangalore-65	080- 23418883	080- 23516836	deuasb@yahoo.com	www.uasbangalore.edu.in

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. B.C.Hanumanthaswamy	9448255252	9449866938 9480838976	bchswamy@gmail.com

1.4. Year of sanction: 2000

1.5. Staff Position (as on 31st March 2014)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M /F	Discipline	Highest Qualification (for PC, SMS and Prog. Asstt.)	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/ OBC/Others)
1	Programme Coordinator	Dr. B.C.Hanumantha swamy	Programme Coordinator	M	Agril. Entomology	M.Sc.,(Agri. Entomology) Ph.D., PGDBA, PGDPP	15600-39100	24170	22.12.2011	Permanent	General
2	SMS	Dr. Basavaraj Beerannavar	SMS (Agril. Extn.)	M	Agril. Extension	M.Sc. (Agri.) in Agril. Extension	15600-39100	21380	03.12.2011	Permanent	SC
3	SMS	Dr. B.C. Dhananjaya	SMS (SS & AC)	M	Soil Science & Agril. Chemistry	M.Sc.,(Soil Science and Agricultural Chemistry), Ph.D.	15600-39100	20560	19.02.2007	Permanent	OBC
4	SMS	Mrs.Jyoti M.Rathod *	SMS (Home Science)	F	Home Science	M.H.Sc. (Food and Nutrition)	15600-39100	19810	12.03.2007	Permanent	SC
5	SMS	Dr. M. Ashok	SMS (Animal Science)	M	Animal Science	M.VSc., PGDEM	15600-39100	19810	18.05.2007	Permanent	OBC
6	SMS	Dr. Nagarajappa Adivappar	SMS (Horticulture)	M	Horticulture	M.Sc.,(Horticulture) Ph.D., PGDIPR, PGDEM	15600-39100	18370	17.07.2009	Permanent	General
7	SMS	Dr. T.M.Soumya	SMS (Agronomy)	F	Agronomy	M.Sc.(Agronomy), Ph.D.	15600-39100	18370	22.10.2013	Permanent	General
8	Programme Assistant (Lab Tech.)/T-4	Mr. R. Nagaraja	Programme Assistant (Lab Tech)	M	Agril. Microbiology	M.Sc.(Agri.) in Agricultural Microbiology, PGDEM	9300-34800	10560	23.10.2010	Permanent	OBC
9	Programme Assistant (Computer)/ T-4	Smt. Geetha B.S.	Programme Assistant (Computer)	F	Computer	M.Com., PGDCA, PGDHR	9300-34800	10560	22.01.2011	Permanent	General
10	Programme Assistant/ Farm Manager	Dr. P.R. Somashekharappa	Farm Manager	M	Agronomy	M.Sc.(Agri.) in Agronomy, Ph.D.(Agronomy)	9300-34800	9300	23.12.2013	Permanent	General
11	Assistant	Smt. Sujatha, K	Assistant	F	Assistant	B.A.	16000-29600	17650	27.08.2009	Permanent	OBC
12	Jr. Stenographer	Smt. Usha, K**	Typist cum computer operator	F	Typist cum computer operator	M.A.	14550-24700	14350	13.08.2007	Temporary	Others
13	Driver	Mr. N. Gopala	Driver (LV)	M	Driver (Jeep)	SSLC	11600-21000	11800	16.08.2012	Permanent	OBC
14	Driver	Mr. K.H. Mohan	Driver (Tractor)	M	Driver (Tractor)	7th Std.,	14550-26700	15600	20.10.2008	Permanent	OBC
15	Supporting staff	Mr. H Manjunatha	Messenger	M	Messenger	SSLC	9600-14550	12500	03.03.2008	Permanent	SC
16	Supporting staff	Mr. T. Chikkaiah	Assistant Cook cum Caretaker	M	Cook cum caretaker	SSLC	10400-16400	11200	22.11.2008	Permanent	OBC

* On study leave for three years. (From 3-8-2013 to 2-8-2015 to pursue her Ph.D. degree in the subject of Home Science at UAS, Dharwad)
** On consolidated salary

1.6. Total land with KVK (in ha) : 10.00 ha

Sl. No.	Item	Area (ha)
1	Under Buildings	0.86
2.	Under Demonstration Units	0.60
3.	Under Crops	3.29
4.	Orchard/Agro-forestry	5.25
5.	Others	10.00

1.7. Infrastructural Development:

A) Buildings

Sl. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs. In lakhs)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	Oct. 2009	550	55	-	-	-
2.	Farmers Hostel	ICAR	Sept. 2012	305	33.33			
3.	Staff Quarters	-	-	-	-	-	-	-
4.	Demonstration Units		-	-	-	-	-	-
	1. Vermi Compost Unit	NCOF Ghazia bad	2008	-	1.25			
	2. Poultry Unit	RKVY	2012	100 sq.m.	1.20			
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
Tractor with Trailer	2001	3,71,892.00	3892.30 hr	Good condition
Jeep (Mahindra Bolero)	2005	4,40,000.00	160612	Good condition
Hero Honda Splendor+	2009	39,350.00	30799	Good condition
Honda Activa	2009	46,102.00	21239	Good condition

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Lap top and LCD	2007	1,00,000.00	Good
Photocopier	2008	92,297.00	Good
Mobile Display Board	2008	3,360.00	Good
Hakims mobile Pivot Stand	2008	2,300.00	Good
Hakims Data Press Board	2008	4,400.00	Good
Hakims Combination Board	2008	1,800.00	Good
Hakims 3 type rotation Book Stand	2008	3,100.00	Good
Acrylic name holder	2008	2,800.00	Good
Hakims Security Board (Flap type)	2008	3,100.00	Good
Hakims Display in minutes 4 board – double side stand	2008	8,950.00	Good
Research Microscope	2008	66,555.00	Good
Digital Micro pipette set	2009	21,180.00	Good
Hot Air Oven	2009	24,160.00	Good
Laminar Air Flow	2009	54,013.00	Good
pH Meter	2009	6,600.00	Good
HP Scanner	2009	4,000.00	Good
Autoclave	2009	28,687.00	Good
ELISA Reader	2009	1,47,155.00	Good
Video Camera	2009	1,84,000.00	Good
Information KIOSK (Touch screen)	2009	1,24,519.00	Good
Video Conference Facility	Due to satellite failure, the video conferencing system is not working since last 2½ years.		
LCD	2009	44,990.00	Good
Motorized Screen	2009	23,000.00	Good
Visual production Unit	2009	5,99,500.00	Good
Desk Top Computers (2 Nos.)	2009	46,000.00	Good
Printers (2 Nos.)	2009	15,645.00	Good
Digital Copier cum network printer	2009	55,125.00	Good
Display board (15 Nos.)	2009	30,000.00	Good
Voltage Stabilizer (2 Nos.)	2009	5,520.00	Good
UPS – (CBTMPCS)	2010	26,000.00	Good
Canon Printer-2900B	2010	5,524.00	Good
HP Laser Printer	2010	19,864.00	Good
Sony digital Camera-DSC H-20 Sl.No.2348907	2010	17,500.00	Good
Sony digital Camera-DSC H-20 Sl.No.2285039	2010	9,950.00	Good
Panasonic Fax Machine (Sl. No.91CBA004235)	2010	8,736.00	Good
Generator (Genset-EXK-28005)	2011	59,850.00	Good
UPS	2011	38,587.00	Good
Incubator	2011	24,425.00	Good
Desk Top Computers (2 Nos.) HCL	2011	38,600.00	Good
Desk Top Computers (2 Nos.) HCL	2011	38,169.00	Good
21" Black Onida CTV-21	2011	8,990.00	Good
Bosch Gas Geyser	2011	7,600.00	Good
Public Address System–Amplifier SSP-1 No. Cardless microphone-2 Nos., Cardless microphone 630 vc-1 No., wall mounting speakers – 2 Nos.	2013	36,600.00	Good

Farm Equipments & Implements				
Name of the equipment	**Date of purchase**	**Cost of equipments (Rs.)**	**Source of fund**	**Present status**
Shakthi Power Tiller and accessories	31.03.2010	1,31,500.00	ICAR	Good
5 HP diesel engine pump and accessories	03.06.2010	18,030.00	ICAR	Good
Portable agri sprayer	03.06.2010	9,975.00	ICAR	Good
Tractor drawn implements – Trencher, ridger, marker	26.03.2011	86,500.00	ICAR	Good
Tractor drawn 2 ferrow MB plough & Tractor drawn disk harrow	28.03.2011	88,000.00	ICAR	Good
Power Tiller trailer	28.03.2011	48,048.00	ICAR	Good
Tractor drawn water tanker – Chassis mounted 3500 ltr. Capacity, Water tank with resole tyre and heavy axel, Water Tanker	22.06.2011	99,250.00	ICAR	Good
Hand operated 'C' type areca leaf plate making machine.	21.06.2011	38,850.00	ICAR	Good
Tractor mounted water pully	02.07.2011	32,500.00	ICAR	Good
Tractor operated winnover	30.06.2011	20,500.00	ICAR	Good
Chaff cutter with 2 HP ISI	26.08.2011	20,500.00	NHM	Good
Tractor drawn 5 furrow opener	26.08.2011	31,000.00	ICAR	Good
Disk harrow	22.06.2013	1,455.00	ICAR	Good
Pruning saw - 'OM'	12.09.2013	18,723.00	NHM	Good
Iron plough - 1 wing	19.12.2012	1,600.00	Revolving fund	Good
Iron plough - 2 wings	19.12.2012	1,900.00	Revolving fund	Good

1.8. Details SAC meeting conducted in 2013-14 : NIL

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	Rice based cropping system
2	Maize based cropping system
3	Ragi, Pulses and Oilseeds
4	Arecanut based cropping system
5	Coconut based cropping system
6	Fruit crops and spices
7	Floriculture
8	Dairy
10	Poultry

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

Sl. No	Agro-climatic Zone	Characteristics
1.	Southern Transition Zone (Zone - 7)	• The total geographical area of Southern Transition Zone (STZ) (Zone–7) is 13.09 lakh ha. Shimoga, Bhadravathi and Shikaripur taluks of Shimoga District comes under this zone. KVK, Navile, Shimoga is located in this zone. • The zone 7 has varying altitude ranging from as low as 547 mt. in the North to as high as 1050mt. in the South. • The soils of the zone are predominantly sandy soils, shallow to moderate deep, reddish brown to black in colour, slightly acidic in pH and low in organic matter. Soils are generally medium in fertility and respond well to irrigation, manuring and management practices. • The climate of the zone is basically tropical benefited by the two monsoons accounting for major part of the rainfall. The zone receives an average annual rainfall of 96.16 mm with minimum of 2.20 mm and maximum of 308.90 mm. The lowest minimum temperature ranges from 14.70 C (January) to 20.30C (May) while the maximum temperature ranges from 24.80C (July) to 33.20 (April).
2.	Hilly Zone (Zone - 9)	• The total geographical area of hilly zone (Zone – 9) is 22.90 lakh ha. Soraba, Sagara, Thirtthahally and Hosanagara taluks of Shimoga District comes under this zone. • The zone - 9 has varying altitude ranging from as low as 700 to as high as 1050mt. above mean sea level. • The soils of the zone are predominantly sandy loamy or sandy clay loam soils, shallow to moderate deep, yellow, reddish brown to black in colour, low in cation exchange capacity, low in water holding capacity, moderately to highly acidic in pH, low in organic matter and deficient in zinc and boron. Generally, the soils are low in fertility and respond well to irrigation, manuring and management practices. • The climate of the zone is basically tropical benefited by the two monsoons accounting for major part of the rainfall. The zone receives and average annual rainfall of 2308mm with a minimum of 922mm and maximum of 3695mm. The lowest minimum temperature of 100 C will be observed during winter.

Sl. No	Agro ecological situation	Characteristics
1	Lateritic gravelly soils with high rainfall based (Thirthahally, part of Hosanagara, Sagara and Soraba taluks)	Comparatively dense forest based, hilly tracks, moderate temperature region, high rainfall. The soils under this AES soils are yellow, reddish brown surface sandy loamy soils or sand clay loam texture. These soils are low in cation exchange capacity with medium water holding capacity and low in fertility status i.e. low in organic matter, and deficiency in zinc and boron. The Western Ghats regions are rich in flora and fauna. Medicinal plants and herbs like, Asana, Amla, Sandal, Anale, Sarpagandhi, Terminalia, Bixa,etc
2	Red loamy soil with medium rainfall (Parts of Sagara, Soraba, Shikaripura and Hosanagara)	This AES's comprises of medium rainfall area with medium temperature. The soils are medium, shallow to moderate deep with reddish brown to black in colour. Medium in water holding capacity, low in organic matter, only in some patches deficient in Zinc and Boron.
3	Red and Black mixed soils with medium rainfall (Parts of Shimoga, Bhadravathi, Shikaripura)	The soils under this AES are derived from Ignatius rocks and montmorillonite clay with high in fertility status, high in water holding capacity and cation exchange capacity. These soils are deep and sufficient in micronutrients except some patches.
4	Irrigated red sandy with medium rainfall (Parts of Shimoga and Bhadravathi)	Comparatively plain lands. Less vegetation, higher temperature. Soils of this situation are predominantly sandy soils, shallow to moderate deep, reddish brown to acidic in pH. Soils are medium in fertility level and respond well for irrigation, manuring and other management practices.

2.3 Soil type/s

Sl. No	Soil type	Characteristics	Area in ha
1	Red Sandy	Red sandy soils are derived from acidic rock materials, reddish brown to dark reddish brown in colour and gravelly loamy sand to sandy loam in texture. They are neutral to acidic in reaction with low cation exchange capacity, low base saturation and low water holding capacity. The soils are well drained and respond well to irrigation, manuring and other management practices. These soils are found in the eastern parts of Shikaripur and entire Shimoga and Bhadravathi Taluks.	Red gravelly loam – 61546 Red loamy – 22819 Red gravelly clay – 6357 Red gravelly mixed with deep black – 58849 Red clayey – 33904 Red gravelly clay – 14491 Red clayey – 14167 Laterite gravelly clay – 13524 Laterite clayey – 118301 Laterite gravelly clay – 19904 Black clayey – 22358 Alluvial loamy – 61133 Alluvial black clayey – 12087 Alluvial clayey – 25660 Forest brown clayey – 15441 Red gravelly clayey –36446
2	Mixed Red and Black Soils	The soils are derived from ignetious rocks and montmorillonite clay with high fertility status, high in water holding capacity and cation exchange capacity. The soils are deep and sufficient in micronutrients except in some patches. These soils are found in the eastern parts of Shikaripur and entire Shimoga and Bhadravathi Taluks.	
3	Red loamy Soils	The soils are medium, shallow to moderate, deep with reddish brown to Black in colour. They are Medium in water holding capacity, low in organic matter, deficient in Zinc and Boron in some patches. These soils are found in the eastern parts of Sagar, Soraba, Shikaripur and Hosanagar Taluks.	
4	Lateritic gravelly soils	Laterite soils are derived from acidic ignetious rocks, sand stones and sedimentary rocks, yellowish red to reddish brown in colour. They are dominated with kaolinite clay mineral. The soils are acidic with low cation exchange capacity and medium water holding capacity. These soils are found in the western parts of Shikaripur taluk, Thirthahalli and parts of Hosanagar, Sagar and Soraba Taluks.	

Source: NBSS & LUP Publication – 47 (1998)

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

Sl. No	Crop	Area (ha)	Production (Metric tons)	Productivity (kg /ha)
Field Crops				
1.	Paddy	106234	381639	3592
2.	Jowar (hybrid)	301	686	2278
3.	Ragi	936	1067	1140
4.	Maize	64278	288894	4494
5.	Redgram	692	477	690
6.	Blackgram	5	2	450
7.	Greengram	41	19	475
8.	Cowpea	406	203	500
9.	Horse gram	15	6	400
10.	Avare	10	6	550
11.	Groundnut	248	223	900
12.	Sesamum	2	1	250
13.	Castor	87	83	950
14.	Niger	2	0	200
15.	Sugarcane	6102	610200	100
16.	Tobacco	6	4	725
17.	Cotton (Bales)	693	4881	390

Source: Department of Agriculture, Shimoga as per 2012-13

Horticulture Crops				
Sl. No	**Crop**	**Area (ha)**	**Production (tons)**	**Productivity (t/ha)**
1	Arecanut	45171	67890	1.5
2	Coconut	6950	764.5	0.11
3	Banana	5720	128200	22.41
4	Mango	3725	34517	9.27
5	Sapota	654	8517	13.02
6	Ginger	6850	68500	10
7	Cashew	1301	1951.5	1.5
8	Cocoa	250	138	0.55
9	Cardamom	417	65.3	0.16
10	Pineapple	1679	100740	60
11	Pomegranate	3	30	10
12	Jack	13	520	40
13	Vanilla	119	35.7	0.30
14	Guava	25	500	20

Source: Department of Horticulture, Shimoga as per 2012-13

2.5. Weather data

Month	Rainfall (mm)	Temperature ^{0}C		Relative Humidity (%)	
		Maximum	Minimum	At 0830 hours	At 1730 hours
April-2013	30.2	38.53	22.30	92.07	40.77
May-2013	149.2	36.57	21.79	91.74	46.48
June-2013	107.4	30.52	20.76	91.90	73.53
July-2013	333.2	29.05	19.45	91.77	80.32
Aug-2013	172	29.19	20.01	91.52	72.03
Sept-2013	133.4	31.13	21.43	92.00	67.47
Oct-2013	127.8	31.82	20.22	91.94	63.10
Nov-2013	0	33.14	19.55	91.83	59.63
Dec-2013	0	34.77	17.94	91.52	46.48
Jan-2014	0	33.59	16.93	85.39	47.03
Feb-2014	0	33.86	17.54	85.14	55.39
March-2014	29	35.45	20.05	85.39	54.16
TOTAL	**1082.2**	**-**	**-**	**-**	**-**

Source: Agromet advisory services ZAHRS, Shimoga

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

Category	Population	Production	Productivity
Cattle			
Crossbred	882 (in '00 Nos.)	83	4.617
Indigenous	2560 (in '00 Nos.)	79	1.301
Buffalo	1583 (in '00 Nos.)	54	1.508
Sheep	63396	1078 (in Tonnes)	17
Goats	25357	406 (in tones)	16
Pigs	3182	150 (in tones)	47
Poultry			
Hens	4554	864 (in lakhs)	229.5
Desi	1039664	1539 (in tonnes)	1.48
Improved			
Ducks			

Source : Department of Animal husbandry, Shimoga as per 2012-13

2.7 District profile has been Updated for 2013-14 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 problems identified	Identified thrust areas
1.	Shimoga	Kumsi Aynuru Haranahalli Bedarahosahalli Sominakoppa Haramghatta Aladahalli Chikkamarasa Kalakoppa Pillangere Halalakkavalli	5 5 4 7 7 7 3 5 2 3 2	Paddy Maize Banana Ginger Vegetables Arecanut Dairy Poultry	▪ Leaching losses N & K nutrients ▪ Scarcity of labour for transplanting ▪ Blast, sheath blight, stem borer in paddy ▪ Improper utilization of maize straw ▪ Shoot borer problem in ginger ▪ Inflorescence dieback and Snail menace in arecanut ▪ Imbalanced Nutrition in dairy cows ▪ Infertility in dairy animals ▪ Unaware of improved poultry breeds for backyard poultry	▪ INM ▪ IPDM ▪ Farm mechanization ▪ Resource utilization ▪ Value addition ▪ Nutrient and disease management in dairy cows ▪ Vaccination and deworming in back yard poultry ▪ Deworming and concentrate feeding in growing sheep ▪ IFS model for dry lands ▪ Fodder production

2.	Bhadravathi	Holehonnur Anveri Ittigehalli	7 5 3	Paddy Azolla Groundnut Arecanut Flower crops Backyard poultry and commercial poultry	• Leaching losses N & K nutrients • Blast and sheath blight disease • Inefficient space utilization in Arecanut • Inflorescence die back and caterpillar in Arecanut • Lack of awareness on new varieties of flower crops • Soil acidity	▪ Varietal introduction ▪ Integrated Nutrient Management ▪ IPDM ▪ Garden management ▪ Soil reclamation ▪ Value addition ▪ Mushroom cultivation
3.	Shikaripura	Hosur Shiralkoppa Anjanapura Hittala Madagaharanahalli Esuru Nimbegondi Suragihalli Madagaharnahalli	6 6 6 7 3 3 3 3 3	Maize Groundnut Sunflower Cotton Azolla Banana	▪ Non-availability of improved hybrids ▪ Improper nutrient management ▪ Tikka disease ▪ Bollworm incidence ▪ Sigatoka leaf spot in Banana ▪ Non-availability of green fodder source for livestock • Lack of awareness on new variety of poultry birds	▪ Varietal and hybrid introduction ▪ Introduction of Bt. Cotton ▪ INM ▪ IPDM ▪ Nutrient management in dairy cows ▪ Value addition ▪ Fodder production
4.	Hosanagara	Ripponpet Nagara Benavalli	7 4 6	Coconut Ginger	• Leaching losses of N & K nutrient • Bud rot in Coconut • Lack of awareness on new ginger varieties	• INM • IPDM • Varietal introduction • Value addition

5.	Sagara	Varadamula Byakodu Thalaguppa Ulluru Mavali Kouthi	8 5 6 5 6 3	Paddy Arecanut Coconut Banana Pepper Jack Vegetables	• Non-availability of submergence tolerant paddy varieties • Improper nutrient management • Root grub in Arecanut • Bud rot in Arecanut • No value addition	• Varietal introduction • INM • IPDM • Value addition in Banana and Jack
6.	Soraba	Jade Hirekasavi Ulavi Mallapura Thumarikoppa	7 7 6 3 3	Ginger Pulses Pineapple	• Lack of awareness on new ginger varieties • Non-availability of short duration pulse varieties • Heart rot in pineapple • Lack of pulse storage knowledge	• Varietal introduction • Value addition • IPDM • Improved storage techniques
7.	Thirthahalli	Devangi Konandur	8 6	Paddy Arecanut Jack fruit Pepper	• Non-availability of submergence tolerant paddy varieties • Root grub in arecanut • No value addition • Improper drying techniques	• Varietal introduction • IPDM • Value addition in Jack fruit • Value addition in pepper

2.9 Priority thrust areas

Sl. No.	Thrust Area
1.	Soil reclamation
2.	INM
3.	IPDM
4.	Variety / hybrid introduction
5.	Farm mechanization
6.	Quality seed / seedling production
7.	Nutrient and disease management in cattle
8.	Fodder production and enrichment of dry fodder crops
9.	Infertility management in dairy animals
10.	Back yard poultry
11.	Value addition
12.	Post harvest technology

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
3	3	26	26	22	22	130	123

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
65	79	2500	3337	190	210	5000	5850

Seed Production (Qtl.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
20.0	23.68	50,000/-	57,988/-

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	
1	INM	Maize	Leaching loss of nitrogen at different crop growth stages	Assessment of nitrogen scheduling in maize	-	2	-	-	Field visits – 7, Field day – 1				DAP	49kg
													Urea	38 kg
													MOP	18.5kg
													$ZnSO_4$	2.08kg
2.	IPM	Paddy	Weeds, stem borer, blast and sheath blight	-	IPM in paddy	3	1	-	Field visits-4 Field day–1	-	-	-	Eraze strong	48 kg
													Carbofuran	60 kg.
													Copper oxychloride	6 kg
													Streptocycline	420 g.
													Hexaconozole	12 ltr.
													Chloropyriphos	12 ltr.
													Carbendazim	12 kg.
3.	Disease management	Paddy	Sheath blight	-	Management of sheath blight in paddy	2	1	-	Field visits–3	-	-	-	Tebuconozole	1 kg.
4	Crop management	Groundnut	Soil acidity, secondary and micronutrient deficiencies, low shelling percentage and incidence of leaf spot and collar rot disease	-	Integrated crop management in ground nut in acid soils	1	-	-	Field visits–8 Field day–1	Groundnut pods-400kg			Trichoderma	10 kg
													PSB	0.75 kg
													Agricultural lime	500kg
													$ZnSO_4$	25kg
													Borax	2kg

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	
5	Crop management	Sunflower	Sulphur deficiency due to soil acidity, incidence of powdery mildew, bud necrosis and collar rot	-	ICM in sunflower	1	-	-	Field visits–5				SSP	1200 k g
													Neem oil	10lit
													ZnSO4	50kg
													Borax	8.5kg
6	Varietal evaluation	Green gram	Non-utilization of residual moisture in rice fallows	-	Short duration green gram variety KKM-3 in rice fallows	3	-	-	Field visits–5 Field day–1	Green gram seeds : 0.4			Pseudomonas	3 kg
													Trichoderma	3 kg
													Urea	150 kg
													SSP	600kg
													MOP	100kg
													ZnSO4	50kg
7	Varietal evaluation	Turmeric	Low yielding varieties	Assessment of high yielding varieties of turmeric	-	2	-	1	Field visits–6 Field day–1		Rhizomes –5 qtl.	-	-	-
8	Varietal evaluation	Tomato	Disease susceptible hybrids and low yield	-	High yielding and triple disease tolerant F1 hybrid tomato *Arka Rakshak*	1	-	-	Field visits–6	Seeds – 200 gm.				

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	
9	Varietal evaluation	French bean	Low yielding and Photoperiod sensitive variety	-	Photoperiod insensitive, stringless, round and high yielding French bean variety *Arka Sharath*	1	-	--	Field visits–8 Field day – 1	Seeds – 86 kg.				
10	Varietal evaluation	Gaillardia	Low yield	-	High yielding garland purpose flower crop Gaillardia	2	-	-	Field visits–5	Seeds 1.66 kg				
11	Crop management	Ragi	Non availability of improved high yielding varieties	-	ICM in Ragi	1	-	-	Field visits– 4 Field day–1	Ragi seeds-40kg			ZnSO4	40kg
													Borax - 2kg	2kg
12	Pest management	Ginger	Shoot borer	-	Management of shoot borer in ginger	3	-	-	Field visits -3				Lamda Cyhalothrin	28 ltr.
13	Pest management	Arecanut	Root grub	-	Management of root grub in arecanut	2	-	-	Field visits-2	-	-	-	Neem cake	600 kg.
													Imidachloprid	18 ltr.
14	Pest management	Arecanut	Snail menace	-	Management of snails in arecanut	2	-	-	Field visits-2	-	-	-	Methomyl	12 kg
15	Pet management	Arecanut	Inflorescence die back and caterpillar	-	Management of Inflorescence die back and caterpillar	2	-	-	Field visits-2	-	-	-	Saaf	20 kg
													Chloropyriphos	20 ltr.

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	
16	Infertility management	Dairy	Lower fertility and calving rates due to repeat breeding problem in cross bred cows	Assessment of effective treatment technique for repeat breeding in Cross bred cows	-	3	-	-					Mineral mixture	135kg
													Fenbendazole	50 bolus
													Vitamin A	12 vials
													Chorulon	12 vials
17	Increasing fodder production	Dairy	Lack of awareness on high yielding fodder varieties	-	Introduction of fodder production units at farmer's field	2	-	-					Fenbendozole	14
													Feed supplement	bolus 180 kg
18	Increasing the milk fat percentage	Dairy	Lower fat percentage in milk due to imbalanced nutrition	-	Feeding by pass fat to cross bred cows during early lactation	1	-	-	-				SAT Maize seeds	10kg
													COFS Sorghum seeds	5 kg
													Cowpea seeds	10kg
													CO4 root slips	10000 Nos.
													Lucerne seeds	6 kg.
19.	Increasing the poultry production in rural areas	Poultry	Lack of awareness on improved breeds of back yard poultry	-	Introduction of Swarnadhara bird in backyard poultry	4	-	-	-			Day old chiks-510	Poultry feed	400kg
													Lasota vaccine	1000 doses
													IBD vaccine	500 doses
													Vitamins	120ml
													Antibiotic	1000 ml

3.B2. Details of technology used during reporting period

S. No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
1.	Assessment on nitrogen scheduling in Maize	UAS, Bangalore and Directorate of Maize research, New Delhi	Maize	3	-	1	Field day – 1, Field visits-7
2.	IPM in paddy	UAS, Bangalore	Paddy	-	1	3	Field visits-4 Field day–1,
3.	Management of sheath blight in paddy	UAS, Bangalore	Paddy	-	1	3	Field visits – 3
4.	Integrated crop management in ground nut in acid soils	UAS, Bangalore	Groundnut	-	5	1	Field day – 1 Field visits – 8
5.	ICM in sunflower	UAS, Bangalore	Sunflower	-	12	1	Field visits – 2
6.	Short duration green gram variety KKM-3 in rice fallows	UAS, Bangalore	Green gram	-	7	3	Field day – 1 Field visits 4
7.	ICM in Ragi	UAS, Bangalore	Ragi	-	8	1	Field day – 1
8.	Assessment of high yielding varieties of turmeric	UAS, Dharwad, UAS, Bangalore, OUAT Bhubaneshwar, IISR Calicut	Turmeric	1	-	2	Field day – 1, Field visits – 8
9.	High yielding and triple disease tolerant F1 hybrid tomato *Arka Rakshak*	IIHR, Bangalore	Tomato	-	1	1	Field visits – 6
10.	Photoperiod insensitive, stringless, round and high yielding French bean variety *Arka Sharath*	IIHR, Bangalore	French bean	-	1	1	Field visits – 8 Field day – 1
11.	High yielding garland purpose flower crop Gaillardia – Arabavi Local	UAHS, Bagalkot	Gaillardia	-	1	2	Field visits – 5
12.	Management of shoot borer in ginger	UAS, Bangalore	Ginger	-	1	3	Field visits -3
13.	Management of root grub in arecanut	UAS, Bangalore	Arecanut	-	1	2	Field visits -2
14.	Management of snails in arecanut	UAS, Bangalore	Arecanut	-	1	2	Field visits -2
15.	Management of Inflorescence die back and caterpillar	UAS, Bangalore	Arecanut	-	1	2	Field visits -2
16.	Assessment of effective treatment technique for repeat breeding in CB cows	KVAFSU, Bidar and TNAVAS, Chennai	Dairy	20 units	-	2	Field visits – 22 Interaction – 11
17.	Introduction of fodder production units at farmer's field	KVAFSU, Bidar	Dairy	-	5	2	Interaction programmes-10, Field visits-13
18.	Feeding by pass fat to lactating cross bred cows during early lactation	NDDB, Bangalore	Dairy	-	13 units	2	Interaction programmes -12, Field visits-14
19.	Introduction of Swarnadhara bird in backyard poultry	KVAFSU, Bidar	Poultry	-	5	4	Interaction programmes-8, Field visits-10

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	-	-	-	-	-	-	-	39	3	10	-	18	-	8	-
2.	-	-	-	-	8	-	4	-	70	22	20	8	92	31	20	6
3.	-	-	-	-	3	4	1	2	54	14	6	3	41	12	8	2
4.	-	-	-	-	-	-	4	1	36	4	39	-	2	-	10	-
5.	-	-	-	-	4	-	8	-	23	2	20	-	-	-	-	-
6.	-	-	-	-	3	-	3	1	83	17	8	3	10	1	12	-
7.	-	-	-	-	6	-	2	-	16	2	8	1	8	-	4	-
8.	2	-	-	-	-	-	-	-	26	36	12	26	48	-	28	-
9.	-	-	-	-	3	-	1	-	28	-	11	-	5	-	8	-
10.	-	-	-	-	3	-	1	-	28	-	11	-	90	-	32	-
11.	-	-	-	-	-	-	4	-	32	6	27	0	10	2	8	2
12.	-	-	-	-	10	-	4	-	66	18	12	6	52	6	6	2
13.	-	-	-	-	4	-	2	-	52	11	8	4	16	-	8	-
14.	-	-	-	-	6	-	4	-	58	8	6	2	38	-	14	-
15.	-	-	-	-	8	-	4	-	56	9	7	3	32	-	11	-
16.	17	1	1	1	-	-	-	-	31	14	17	7	24	2	4	-
17.	-	-	-	-	5	-	-	-	85	9	71	41	31	4	2	1
18.	-	-	-	-	6	1	-	-	31	12	17	8	28	6	1	1
19.	-	-	-	-	5	-	-	-	66	7	17	7	26	4	2	1

PART IV - ON FARM TRIAL

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

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

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

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

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

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 trail covering all the Technological Options)
Integrated Nutrient Management	Maize	Assessment on nitrogen scheduling in Maize	3	3	0.19
Varietal Evaluation	Turmeric	Assessment of high yielding turmeric varieties	2	2	0.40
Integrated Pest Management					
Integrated Crop Management					
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
Total					

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

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

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Evaluation of breeds				
Nutrition management				
Disease management	Dairy	Assessment of effective treatment technique for repeat breeding in Cross bred cows	20 units	20
Value addition				
Production and management				
Feed and fodder				
Small scale income generating enterprises				
		Total	**20 units**	**20**

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

4.C1. Results of Technologies Assessed

1) Results of On Farm Trial : Assessment on nitrogen scheduling in Maize

Crop	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
1	2	3	4	5	6	7	8			9	10
							Tech.opt.1	Tech.opt.2	Tech.opt.3		
Maize	Rainfed	Leaching losses of nitrogen under high rainfall	Assessment of nitrogen scheduling in maize	3	Nitrogen application in four splits at different crop growth stages	Cob length (cm)	16.85	17.03	17.05	N application at 4 different splits resulted in 11% higher grain yield over recommended practice and 25% higher grain yield over farmers practice	Split application favours higher yield and increased fertilizer use
						Cob weight (g)	91.58	110.40	128.98		
						Initial Soil Status					
						pH	6.40				
						EC (ds/m)	0.020				
						Available N (kg/ha)	235.20				
						Available P_2O_5 (kg/ha)	87.09				
						Available K_2O (kg/ha)	179.20				
						Final Soil Status					
						pH	6.74	7.14	7.13		
						EC (ds/m)	0.020	0.023	0.020		
						Available N (kg/ha)	222.33	204.67	161.67		
						Available P_2O_5 (kg/ha)	98.37				
						Available K_2O (kg/ha)	188.00				

Contd..

Any refinement needed	Justification for refinement	Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14	15	16	17	18
-	-	**Technology. Option 1:** 20% recommended N as basal dose & 60 % recommended N at 3-4 weeks after sowing besides 20% N at grain filling stage.	Farmer practice	4154	kg/ha	22171	1.91
		Technology. Option 2: Recommended NPK @ 100:50:25 Kg/ha. N and K in 2 splits. Basal 50 % N, 100% P and 50 % K and top dressing of 50 % N and 50 % K at 30 DAS.	UAS, Bangalore	4794	kg/ha	32131	2.40
		Technology. Option 3: Recommended NPK @ 100:50:25 Kg/ha. N application in 4 splits. (a) 20 % N at sowing (Basal), (b) 25 % N at 4 leaf stage (1st top dress) (c) 30 % N at 8 leaf stage (2nd top dress) (d) 25 % N at tasselling (3rd top dress)	UAS, Bangalore + DMR, New Delhi	5181	kg/ha	36082	2.54

1) **Title of Technology Assessed :** Assessment on nitrogen scheduling in maize

2) **Problem Definition:** Nitrogen deficiency at grain filling stage

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

Sl. No.	Technological Options	Details of Technology
1.	Farmer's Practice	20% recommended N as basal dose & 60 % recommended N at 3-4 weeks after sowing besides 20% N at grain filling stage.
2.	Technological Option 2	RDF NPK @ 100:50:25 Kg/ha on soil test basis. + 10 kg. $ZnSO_4$/ha. 100% P and 50 % K as basal and 50 % K at 30 DAS. **N application in 2 splits**: 50% recommended N at sowing (basal) + 50% recommended N at 3-4 weeks after sowing (Top dress).
3.	Technological Option 3	Technological Option 2 + **N application in 4 splits.** (a) 20 % N at sowing (Basal), (b) 25 % N at 4 leaf stage (1^{st} top dress) (c) 30 % N at 8 leaf stage (2^{nd} top dress) (d) 25 % N at tasselling (3^{rd} top dress)

4) **Source of technology:** UAS, Bangalore and Directorate of Maize research, New Delhi

5) **Production system and thematic area :** Rainfed and nutrient management

6) **Performance of the Technology with performance indicators:** Length of the cob and cob weight were higher in alternate practice as a result of which, grain yield / ha increased by 10.3 q/ha compared to farmers practice and 3.90 q/ha compared to recommended practice.

7) **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques : -----**

8) **Final recommendation for micro level situation:** Nitrogenous fertilizer application in 4 different splits fulfills the crop nitrogen requirement at different crop growth stages.

9) **Constraints identified and feedback for research:** Difficulty in applying the last split of nitrogenous fertilizers at grain filling stage.

10) **Process of farmers' participation and their reaction:** Farmers actively participated in the on farm testing.

2. Results of On Farm Trial : Assessment of high yielding turmeric varieties

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
Turmeric	Irrigated	Low yielding varieties	Assessment of high yielding turmeric varieties	2	Assessment of high yielding turmeric varieties : Kadapa, Salem, Alleppy, Rajapuri, PTS-24, Belgaum Local, Bidar-4, Prathibha, CLI-32	1) No. of secondary rhizomes.	Variety	No. of secondary rhizomes.	No. of tertiary rhizomes	Higher no. of secondary and tertiary rhizomes were observed in PTS-24 and Rajapuri. Higher fresh weight and B:C recorded in PTS-24 and Prathibha	Varieties PTS-24 and Prathibha were found to be promising.	-	-
						2) No. of tertiary rhizomes	Belgaum Local	3.73	6.83				
							CLI-32	4.86	7.86				
							Bidar-4	3.75	10.66				
						3) Rhizomes fresh weight	Salem	4.46	8.26				
							Rajapuri	5.73	10.80				
							Prathibha	4.86	8.46				
							PTS-24	5.60	10.40				
							Alleppy	4.00	8.20				
							Kadapa	5.33	6.73				

Contd..

Technology Assessed	Source of Technology	Production Rhizome fresh weight / ha (t/ha)	Unit	Net Return (Profit) in Rs. / unit	BC Ratio
13	**14**	**15**	**16**	**17**	**18**
Technology option 1: Belgaum Local	Farmers practice	20.57	t/ha	133175.00	1.76
Technology option 2: CLI-32	Farmers practice	32.00	t/ha	301175.00	2.68
Technology option 3: Bidar-4	Farmers Practice	24.00	t/ha	183562.00	2.04
Technology option 4: Salem	UAS, Dharwad	34.13	t/ha	332225.00	2.84
Technology option 5: Rajapuri	UAS, Dharwad	39.46	t/ha	410500.00	3.26
Technology option 6: Prathibha	IISR, Calicut	42.66	t/ha	450900.00	3.38
Technology option 7: PTS-24	OUAT, Orissa	43.42	t/ha	469300.00	3.57
Technology option 8: Alleppy	UAS, Bangalore	35.42	t/ha	354105.00	2.99
Technology option 9: Kadapa	UAS, Dharwad	25.16	t/ha	201960.00	2.15

1. **Title of Technology Assessed : Assessment of high yielding turmeric varieties**
2. **Problem Definition:** Low yielding varieties
3. **Details of technologies selected for assessment**

Sl. No.	Technological Options	Details of Technology
1.	Technology option 1	Belgaum Local
2.	Technology option 2	CLI-32
3.	Technology option 3	Bidar-4
4.	Technology option 4	Salem
5.	Technology option 5	Rajapuri
6.	Technology option 6	Prathibha
7.	Technology option 7	PTS-24
8.	Technology option 8	Alleppy
9.	Technology option 9	Kadapa

4. **Source of technology :** UAS, Dharwad, UAS, Bangalore, OUAT, Orissa, IISR, Calicut

5. **Production system and thematic area :** Irrigated, Varietal evaluation

6. **Performance of the Technology with performance indicators:** Higher no. of secondary and tertiary rhizomes were noticed in PTS-24 and Rajapuri. Among 9 different varieties PTS-24 and Prathibha recorded higher fresh weight and BC Ratio.

7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques :** Varieties Belgaum Local and Prathibha found to be less tolerant to pests of turmeric.

8. **Final recommendation for micro level situation:** Varieties Salem, PTS-24 and Pratibha found to be promising.

9. **Constraints identified and feedback for research:** Availability of rhizomes for planting is the major constraint. Hence, Rhizome multiplication of promising varieties is essential.

10. **Process of farmers' participation and their reaction:** Farmers participated actively and rhizomes produced by the farmers in OFT are given to other farmers for varietal spread by farmers themselves.

3. Results of On Farm Trial : Assessment of effective treatment technique for repeat breeding in cross bred cows

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
Dairy	Year-round	Lower fertility and calving rates due to repeat breeding problem in cross bred cows	Assessment of effective treatment technique for repeat breeding in Cross bred cows	20	Hormone treatment and supplementation of micro minerals and vitamins	**Fertility (%)**		Higher fertility percentage was observed in alternate practice (T_3)	Conceive percentage is higher than the normal practice and decrease in milk yield during trial period	-	-
						Tech. opt. 1	16.70				
						Tech. opt. 2	58.30				
						Tech. opt. 3	83.30				

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice): Feeding of sprouted Horse gram	Farmer's practice	All animals are in last trimester pregnancy. Economics will be calculated after collecting data on calving.			
Technology option 2: At the time of AI Injecting Vit-E + Selenium (500 IU + 40 mg) + deworming with Fenbendazole 7.5 to 10mg + feeding of Curry leaves @ 250 gm/cow for 10 days.+ mineral mixture @ 50g/day / animal	KVAFSU, Bidar				
Technology option 3: Hormones therapy – Chorulon @1500IU on day of oestrous +feeding of 250gms of curry leaves 10 days +deworming with Fenbendazole 7.5 to 10 mg + Mineral mixture @ 50g/day / animal	TNAVAS, Chennai				

1) **Title of Technology Assessed :** Assessment of effective treatment technique for repeat breeding in cross bred cows

2) **Problem Definition:** Lower fertility and calving rates due to repeat breeding problem in cross bred cows

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

Sl. No.	Technological Options	Details of Technology
1.	Farmer's Practice	Feeding of sprouted Horse gram
2.	Technological Option 2	At the time of AI Injecting Vit-E + Selenium (500 IU + 40 mg) + deworming with Fenbendazole 7.5 to 10mg + feeding of Curry leaves @ 250 gm/cow for 10 days.+ mineral mixture @ 50g/day / animal
3.	Technological Option 3	Hormones therapy – Chorulon @1500IU on day of oestrous +feeding of 250gms of curry leaves 10 days +deworming with Fenbendazole 7.5 to 10 mg + Mineral mixture @ 50g/day / animal

4) **Source of technology:** KVAFSU, Bidar and TNAVAS, Chennai

5) **Production system and thematic area :** Year-round

6) **Performance of the Technology with performance indicators:** Alternate practice recorded 83.3 percent fertility rate while recommended practice and farmer practice recorded fertility rates of 58.3 and 16.7 percent, respectively.

7) **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques:** Infertility due to repeat breeding problem in cross bred cows can be overcome by adopting scientific management practices and timely hormone therapy. Decrease in milk yield during trial period was observed in T_2 and T_3

8) **Final recommendation for micro level situation:** Micronutrient (vitamin + minerals) supplementation with hormone treatment will give good fertility rate in cross bred cows.

9) **Constraints identified and feedback for research:** Need effective supplementation of micro minerals and vitamins through feed.

10) **Process of farmers' participation and their reaction:** Good. The culling of repeat breeding cross bred cows was reduced and farmers are adopting the technology for other animals in the cluster villages.

4.D1. Results of Technologies Refined : NIL

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

PART V - FRONTLINE DEMONSTRATIONS

5.A. Summary of FLDs implemented during 2013-14

Sl. No	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
1.	Oilseeds	Rain fed	*Kharif*, 2013	Ground nut	GPBD-4	-	Crop management	Integrated crop management in ground nut in acid soils	2.0	2.0	5	0	5	-
		Irrigated	Summer, 2013	Sunflower	-	Cargill hybrid (SH-3859)	Crop management	ICM in sunflower	5.0	4.8	8	4	12	-
2.	Pulses	Rainfed	Rabi/ summer, 2013	Green gram	KKM-3	-	Varietal evaluation	Short duration green gram variety KKM-3 in rice fallows	5.0	2.4	4	3	7	Less availability of seeds of green gram variety KKM – 3
3.	Cereals	Irrigated	Kharif-2013	Paddy	MTU-1001	-	IPM in paddy	• Weed management through – Londax power herbicide @ 4 kg/ac. • Seed treatment with Carbendazim @ 4 gm/kg • Soil application of Carbofuron @2kg/ac	5.0	5.0	4	8	12	-

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	
								nursery • Stem-borer management through pheromone traps & Chloropyriphos @ 0.2% • Sheath blight management through Hexaconazole @ 0.1%						
		Irrigated	Kharif-2013	Paddy	JGL-1798	-	Management of sheath blight in paddy	Spraying of 0.02% Trifloxystrobin & Tebuconazole (NATIVO)	4.0	4.0	3	7	10	
		Rain fed	*Kharif* 2013	Ragi	GPU-66	-	Crop management	ICM in Ragi	5.0	3.2	2	6	8	-
4.	Millets													
5.	Vegetables	Irrigated	*Kharif-2013 & rabi - 2013*	Tomato	-	Arka Rakshak	Varietal evaluation	High yielding and triple disease tolerant F1 hybrid tomato	2.0	2.0	1	3	4	
		Irrigated	*Kharif-2013*	French bean	Arka Sharath	-	Varietal evaluation	Photoperiod insensitive, stringless, round and high yielding French bean variety *Arka Sharath*	4.0	4.0	-	4	4	

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	
6.	Flowers	Irrigated	*Kharif-2013 & Rabi-2013*	Gaillardia	Arabhavi Local	-	Low flower yield	High yielding garland purpose flower crop Gaillardia – Arabavi Local	2.0	2.0	4	-	4	-
7.	Ornamental													
8.	Fruit	Irrigated	Rabi / summer 2013-14	Pineapple	Que	-	Management of heart rot	• Soil application of Neem enriched Trichoderma @ 20 gm/hill + Sucker treatment with Metalaxyl MZ @ 0.3% • Drenching with Metalaxyl MZ when disease is noticed	5.0	5.0	2	3	5	
9.	Spices and condiments	Irrigated	Kharif-2013	Ginger	Himachal	-	Management of shoot borer	Spraying of insecticide, Lambda Cyahalothrin @ 1.0 ml/L.	5.0	5.0	4	10	14	
10.	Commercial													
11.	Medicinal and aromatic													

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	
12	Fodder	Irrigated	Kharif and summer 2013	South African tall maize	Ksheramrutha	-	Increasing fodder production	Introduction of fodder production units at farmer's field	2	2	-	05	05	
				Multicut sorghum	COFS 29	-								
				Napier Hybrid	-	CO 4								
				Cowpea	KBC 2									
				Lucerne	RL 88									
13	Plantation	Irrigated	Kharif-2013	Arecanut	Sagar local	-	Management of Root grub	Application of neem cake and Imidachloprid @ 0.5 ml/ltr.	5.0	5.0	2	4	6	
		Irrigated	Summer-2014	Arecanut	Maidan local	-	Management of inflorescence die back and caterpillar	Carbendazim + Mancozeb (SAAF) – 2 gm/ltr. Chloropyriphos – 2 ml/ltr.	4.0	4.0	4	6	10	
		Irrigated	Kharif-2013	Arecanut	Thirthahalli local	-	Management of snails	Preparation and broadcasting of Poisonbait; 10 kg. Rice bran, 4 kg. jaggery, 100 gm. Methomyl	5.0	5.0	4	8	12	
14	Fibre													

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	
15	Dairy	Cows	Year round	-	Cross bred	Jersey and HF	Increasing the milk fat percentage	Feeding by pass fat to cross bred cows during early lactation	20 units	13 units	-	07	07	High cost of critical inputs
16	Poultry	Back yard poultry	Year round	-	Swarnadhara	-	Increasing the poultry production in rural areas	Demonstration of Swarnadhara bird in backyard poultry	5 units	5 units	-	05	05	-
17	Rabbitry													
18	Pigerry													
19	Sheep and goat													
20	Duckery													
21	Common carps													
22	Mussels													
23	Ornamental fishes													
24	Oyster mushroom													
25	Button mushroom													
26	Vermicompost													
27	Sericulture													
28	Apiculture													
29	Implements													
	Others (specify)													

5.A. 1. Soil fertility status of FLDs plots during 2013-14

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
1	Oilseeds	Rain fed	*Kharif*, 2013	Groundnut	GPBD-4	-	Crop management	**Integrated crop management in ground nut in acid soils:** Demonstration of groundnut variety -GPBD 4, application of lime based on soil test, seed treatment with PSB and Trichoderma and foliar nutrition of boron (0.2 %)	*Kharif*, 2013	L	H	M	Maize
		Irrigated	Summer, 2013	Sunflower	-	Cargill hybrid (SH-3859)	Crop management	**ICM in sunflower:** Seed treatment with Imidacloprid @5g/kg, soil application of *Trichoderma @ 4kg/ac, s*ulphur nutrition @ 20 kg/ha as SSP and foliar nutrition of Boron (0.2%)	Summer, 2013	L	H	M	Maize
2	Pulses	Rainfed	Summer, 2013	Green gram	KKM-3	-	Varietal evaluation	Short duration green gram variety KKM-3 in rice fallows	Summer, 2013	L	H	M	Paddy

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	
3	Cereals	Irrigated	Kharif- 2013	Paddy	MTU-1001	-	IPM	**IPM 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%	Kharif-2013	L	H	M	Paddy
		Irrigated	Kharif-2013	Paddy	JGL-1798	-	Disease management	**Management of sheath blight in paddy :** Spraying of 0.02% Trifloxystrobin & Tebuconazole (NATIVO)	Kharif-2013	L	H	M	Paddy

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	
		Rain fed	*Kharif* 2013	Ragi	GPU-66	-	Crop management	**ICM in Ragi:** Demonstration of new Ragi variety, GPU-66. Application of 12 kg. $ZnSO_4$/ha. and Borax @ 10 kg. / ha	*Kharif* 2013	L	H	M	Maize
4	Millets												
5	Vegetables	Irrigated	Kharif-2013	French bean	Arka sharath	-	Varietal evaluation	Photoperiod insensitive, stringless, round and high yielding French bean variety	Kharif-2013	L	M	H	Tomato
		Irrigated	Kharif & Rabi – 2013	Tomato	-	Arka Rakshak	Varietal evaluation	High yielding and triple disease tolerant F1 hybrid tomato	Kharif & Rabi – 2013	L	M	H	Beans and maize
6	Flowers	Irrigated	Rabi – 2013	Gaillardia	Arabhavi local	-	Varietal evaluation	High yielding garland purpose flower crop Gaillardia	Rabi – 2013	M	M	H	Arecanut
7	Ornamental												
8	Fruit	Irrigated	Rabi / summer 2013-14	Pineapple	Que	-	Disease management	**Management of heart rot** • Soil application of Neem enriched *Trichoderma* @ 20 gm/hill + Sucker	Rabi / summer 2013-14	L	H	M	Vegetable

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	
								treatment with Metalaxyl MZ @ 0.3% • Drenching with Metalaxyl MZ when disease is noticed					
9	Spices and condiments	Irrigated	Kharif-2013	Ginger	Himachal	-	Pest management	**Management of shoot borer:** Spraying of insecticide, Lambda Cyahalothrin @ 1.0 ml/L.	Kharif-2013	L	H	M	Maize
10	Commercial												
11	Medicinal and aromatic												
12	Fodder	Irrigated	Kharif and summer 2013	South African tall-Maize	Ksheramrutha		Fodder production	Demonstration of fodder production units at farmer's field	Kharif and summer 2013	L	H	M	Fodder
				Multicut sorghum	COFS 29								
				Napier Hybrid	-	CO 4							
				Cowpea	KBC 2								
				Lucerne	RL 88								
13	Plantation	Irrigated	Throughout the year	Arecanut	Sagar local	-	Pest management	**Management of Root grub:** Application of neem cake and Imidachloprid @ 0.5 ml/ltr.	Throughout the year	L	H	M	Arecanut

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	
		Irrigated	Throughout the year	Arecanut	Maidan local	-	Pest management	**Management of inflorescence die back and caterpillar:** Carbendazim + Mancozeb (SAAF) – 2 gm/ltr. Chloropyriphos – 2 ml/ltr.	Throughout the year	L	H	M	Arecanut
		Irrigated	Throughout the year	Arecanut	Thirthahalli local	-	Pest management	**Management of snails :**Preparation and broadcasting of Poisonbait; 10 kg. Rice bran, 4 kg. jaggery, 100 gm. Methomyl	Throughout the year	L	H	M	Arecanut
14	Fibre												

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 Gross Cost	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
							H	L	A										
Oilseeds	Integrated crop management in ground nut in acid soils	GPBD-4	-	Rain fed	5	2.0	13.13	10.00	11.23	9.50	18.21	21250	74118	52868	3.49	19550	62700	43200	3.21
	ICM in sunflower	-	Cargill hybrid (SH-3859)	Irrigated	12	4.8	In progress												
Pulses	Short duration green gram variety KKM-3 in rice fallows	KKM-3	-	Rainfed	7	2.4	In progress												
Cereals	IPM in paddy	MTU-1001	-	Irrigated	12	5.00	66	48	59	48	22.92	34000	82600	48600	2.43	32000	67200	35200	2.10
	Management of sheath blight in paddy	JGL-1798	-	Irrigated	10	4.00	67.5	48	55	46	19.56	28000	77000	49000	2.75	26000	64400	38400	2.48
	ICM in Ragi	GPU-66	-	Rain fed	8	3.2	29.00	26.00	27.44	24.50	12.00	11800	49392	37592	4.19	11250	44100	32850	3.92
Vegetables	High yielding and triple disease tolerant F1 hybrid tomato *Arka Rakshak*	-	Arka Rakshak	Irrigated	4	2.0	781.50	671.40	726.45	648.12	12.01	110890	435870	324988	3.93	128525	388872	260347	3.02
	Photoperiod insensitive, stringless, round and high yielding French bean variety - *Arka Sharath*	Arka Sharath	-	Irrigated	4	2.0	255.5	224.5	240	190.20	26.18	72840	264000	191160	3.62	64225	190200	125975	2.96

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase Gross Cost	*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										
Flowers	High yielding garland purpose flower crop Gaillardia – Arabavi Local	Variety	-	Irrigated	4	2.0	137.50	112.50	125.00	112.50	11.11	72415	250000	177585	3.45	78980	225000	146020	2.84
Fruit	Management of heart rot disease in pineapple	Que	-	Irrigated	5	2.0	In progress												
Spices and condiments	Management of shoot borer in ginger	Himachal	-	Irrigated	14	5.00	346	234	282	228	23.68	336000	846000	510000	2.52	312000	684000	372000	2.19
South African tall- maize	Demonstration of fodder production units at farmer's field	Ksheramrutha		Irrigated	5	2	Green fodder yield			140 (CO3 and local sorghum)	31.07	IN PROGRESS (multi cut sorghum and Napier hybrid yield taken for only three cuttings and Lucerne crop stand in the farmers field is yet to be harvested)							
Multicut sorghum		COFS 29					222	145	183.5										
							810	725	790										
Napier Hybrid		-	CO 4				840	735	805										
Cowpea		KBC 2					125	105	118										
Lucerne		RL 88					Crop sown during summer												
Plantation	Management of root grub in arecanut	Sagar local	-	Irrigated	6	5.00	12.5	8.5	10.0	8.0	25.00	63000	200000	137000	3.17	54000	160000	106000	2.96
	Management of inflorescence die back and caterpillar in arecanut	Maidan local	-	Irrigated	10	4.00	11.75	7.5	9.25	7.5	23.33	60000	185000	125000	3.08	52000	150000	98000	2.88
	Management of snail in arecanut	Thirthahalli local	-	Irrigated	12	5.0	12.75	8.25	9.50	7.75	22.58	62000	190000	128000	3.06	53000	155000	102000	2.92

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

Data on additional parameters other than yield

ICM in ground nut in acid soils		
Parameter with unit	**Demo**	**Check**
Shelling percentage	70.2	68.8
	Demo	
Initial nutrient status of soil	pH – 6.80, EC – 0.018 dS/m, Available N - 174.36 kg/ha, Available P_2O_5 - 107.9 kg/ha, Available K_2O – 171.14 kg/ha	
Nutrient status of soil after crop harvest	pH – 7.16 EC – 0.031 dS/m, Available N - 239.52 kg/ha, Available P_2O_5 - 126.66 kg/ha, Available K_2O – 183.06 kg/ha	

ICM in sunflower	
Parameter with unit	**Demo**
Initial nutrient status of soil	pH – 6.82, EC – 0.026 dS/m, Available N - 238.34 kg/ha, Available P_2O_5 - 114.46 kg/ha, Available K_2O – 206.27 kg/ha
IN PROGRESS	

Short duration green gram variety, KKM – 3 in rice fallows	
Parameter with unit	**Demo**
Initial nutrient status of soil	pH – 7.01, EC – 0.037 dS/m, Available N - 226.84 kg/ha, Available P_2O_5 - 1141.15 kg/ha, Available K_2O – 275.33 kg/ha
IN PROGRESS	

IPM in paddy			
Parameter with unit		**Demo**	**Check**
No. of tillers / hill		23.50	16.00
Weed count mean No. per sqm.	Monocot	1.82	2.74
	Dicot	3.84	3.96
Sheath blight (%)		22.40	24.50
Stem borer (%)		8.20	11.40
Leaf roller (%)		9.60	12.20
Bacterial blight (%)		10.50	17.00
Blast (%)		11.50	13.50

Management of sheath blight in paddy		
Parameter with unit	**Demo**	**Check**
Sheath blight incidence (%)	20.50	28.00

ICM in Ragi	
Parameter with unit	**Demo**
Initial nutrient status of soil	pH – 6.90, EC – 0.021 dS/m, Available N - 198.36 kg/ha, Available P_2O_5 - 104.85 kg/ha, Available K_2O – 154.28 kg/ha
Nutrient status of soil after crop harvest	pH – 6.87, EC – 0.024 dS/m, Available N - 212.20 kg/ha, Available P_2O_5 - 148.06 kg/ha, Available K_2O – 177.33 kg/ha

High yielding and triple disease tolerant F1-Hybrid Tomato-Arka Rakshak		
Parameter with unit	**Demonstration (Arka Rakshak)**	**Local**
Duration (days)	140	130-135
Disease resistant	Resistant to 3 diseases viz., Leaf curl virus, bacterial wilt, early blight	Not Resistant
Fruit Weight (g)	90	80-90
Keeping quality (Days)	8-10	7-8

Photoperiod insensitive, high yielding and fiber less French bean variety- Arka Sharath		
Parameter with unit	**Demonstration (Arka Sharath)**	**Local (Anupama- Solar Seeds)**
Duration (days)	75	80
Fiber content	Fiber less	Less fiber
Average Pod Weight (g)	10.58	7.94
Average Pod length (cm)	17.12	12.31
Yellow vein Mosaic (%)	0.01	0.1

High yielding garland purpose flower crop Gaillardia – Arabhavi Local		
Parameter with unit	**Demonstration (Arabhavi Local)**	**Local**
Keeping quality of flowers (hr)	48	42
Flower colour	Yellow	Yellow and Pink

Management of shoot borer in ginger		
Parameter with unit	**Demo**	**Check**
Shoot borer incidence (%)	12.5	23.00

Demonstration of fodder production units at farmer's field		
Parameter with unit	**Demo**	**Check**
Milk Yield (L/day/animal)	16	12
Milk fat percentage	4	3

Management of root grub in arecanut		
Parameter with unit	**Demo**	**Check**
No. of grubs per plant	2.5	7.0

Management of inflorescence dieback and caterpillar in arecanut		
Parameter with unit	**Demo**	**Check**
Dieback incidence (%)	4.5	16
Inflorescence caterpillar incidence (%)	6	17.5

Management of snail in arecanut		
Parameter with unit	**Demo**	**Check**
Snail control (%)	71.05	43.83

5.B.2. Livestock and related enterprises

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Yield (q/ha)				% Increase	*Economics of demonstration Rs./unit)				*Economics of check (Rs./unit)			
					Demonstration			Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Dairy	Feeding by pass fat to lactating cross bred cows during early lactation	Jersey and HF	13	13	5.5	3.50	4.00	2.5	60.0	26496	35802	9306	1.40	24350	27000	2650	1.10
Poultry	Demonstration of Swarnadhara bird in backyard poultry	Swarnadhara	5	5	1250	990	1150	650	75	IN PROGRESS (Birds are 4 months old. Data on egg production is to be collected)							

Data on additional parameters other than yield

Feeding by pass fat to lactating cross bred cows during early lactation		
Parameter with unit	**Demo**	**Check**
Milk Yield (L/day/animal)	15.3	15.00
Conceive percentage	73.0	65.0

Demonstration of Swarnadhara bird in backyard poultry		
Parameter with unit	**Demo**	**Check**
Mortality (%) (up to 8th Week)	2.0	12.0

5.B.3. Fisheries : NIL

5.B.4. Other enterprises : NIL

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

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

Sl. No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	7	335	
2	Farmers Training	23	997	
3	Media coverage (TV)	3	-	
4	Training for extension functionaries	1	20	
5	Others (Please specify)			

PART VI – DEMONSTRATIONS ON CROP HYBRIDS

Demonstration details on crop hybrids

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	* Economics of demonstration (Rs./ha)				* Economics of check (Rs./ha)			
					Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Vegetable crops																	
Tomato	High yielding and triple disease tolerant F1 hybrid tomato Arka Rakshak	Arka Rakshak	4	2.0	781.50	671.40	726.45	648.12	12.01	110890	435870	324988	3.93	128525	388872	260347	3.02
Total			**4**	**2.0**	**781.50**	**671.40**	**726.45**	**648.12**	**12.01**	**110890**	**435870**	**324988**	**3.93**	**128525**	**388872**	**260347**	**3.02**

H-High L-Low, A-Average

PART VII. TRAINING

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming	3	58		58	13		13	71		71
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management	7	293	27	320	98	3	101	391	30	421
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify) Organic Farming	2	57	4	61	9		9	66	4	70
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	1	49	1	50	17		17	66	1	67
Off-season vegetables										
Nursery raising	1	26		26	12		12	38		38
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl.specify)										
b) Fruits										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants	2	32	6	38	17	2	19	49	8	57
Others (pl.specify)										
d) Plantation crops										
Production and Management technology	1	80	4	84	36		36	116	4	120
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology	2	26	36	62	12	26	38	38	62	100
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology	1	6		6	2	1	3	8	1	9
Processing and value addition										
Others (pl.specify)										
g) Medicinal and Aromatic Plants										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management	1	39	3	42	10		10	49	3	52
Integrated water management										
Integrated nutrient management	1	35		35	10		10	45		45
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops	1	7		7	3		3	10		10
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
Livestock Production and Management										
Dairy Management	3	52	20	72	50	15	65	102	35	137
Poultry Management	1	9	1	10	4		4	13	1	14
Piggery Management										
Rabbit Management										
Animal Nutrition Management	1	31		31	25		25	56		56
Animal Disease Management	1	15	6	21	9	2	11	24	8	32
Feed and Fodder technology	4	107	9	116	102	43	145	209	52	261
Production of quality animal products										
Others (pl.specify) Scientific sheep rearing	1	39		39	14	3	17	53	3	56
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	1	15	4	19	5	3	8	20	7	27
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management	1	12		12	10		10	22		22
Integrated Disease Management	1	9		9	4		4	13		13
Bio-control of pests and diseases	1	10	3	13	15	7	22	25	10	35

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Production of bio control agents and bio pesticides										
Others (pl.specify) Safe use of pesticides	1	70	10	80	20	4	24	90	14	104
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production										
Apiculture	1	6	15	21	3	7	10	9	22	31
Others (Pl.specify)										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs	2	13		13	53	6	59	66	6	72
Mobilization of social capital										
Entrepreneurial development of farmers/youths	1	18	7	25	7	4	11	25	11	36
Others (pl.specify)	2	59	14	73	28	6	34	87	20	107
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	**45**	**1173**	**170**	**1343**	**588**	**132**	**720**	**1761**	**302**	**2063**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										

Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management										
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs	3	40		40	27	2	29	67	2	69
Others (pl.specify)										
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	1	28		28	11		11	39		39
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl.specify)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit	1	10	5	15	7	3	10	17	8	25
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										

d) Plantation crops										
Production and Management technology	2	42	11	53				42	11	53
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology	1	12	2	14	10	2	12	22	4	26
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management										
Integrated water management										
Integrated nutrient management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify) Use of biofertilizers	1	4	36	40		20	20	4	56	60
Livestock Production and Management										
Dairy Management	1	32	2	34	4		4	36	2	38
Poultry Management	2	24		24	2		2	26		26
Piggery Management										
Rabbit Management										
Animal Nutrition Management	1	6	2	8	22	8	30	28	10	38

Animal Disease Management										
Feed and Fodder technology										
Production of quality animal products										
Others (pl.specify)										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management	4	69	16	85	19	9	28	88	25	113
Integrated Disease Management										

Bio-control of pests and diseases	1	31	-	31	3	-	3	34	-	34
Production of bio control agents and bio pesticides										
Others (pl.specify)										
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production										

Apiculture										
Others (pl.specify)										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs	**1**	**-**	**67**	**67**	**-**	**15**	**15**	**-**	**82**	**82**
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify) Coconut Palm climbing – skill development training	3	43	2	45	13	2	15	56	4	60
TOTAL	**22**	**341**	**143**	**484**	**118**	**61**	**179**	**459**	**204**	**663**

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

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

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	1	15	25	40	-	-	-	15	25	40
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs	1	34	5	39	-	-	-	34	5	39
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										

Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
Modified guidelines of ATMA	1	27	3	30	3		3	30	3	33
Organic farming	1	34	5	39				34	5	39
Use of trichoderma in forest nursery	1	30		30	10		10	40		40
Modified guidelines of ATMA	1	27	3	30	8		8	35	3	38
Advanced production technologies in fruit and spice crops	1	19	1	20				19	1	20
Model Kitchen garden	1	9	31	40				9	31	40
Scientist and Extension worker interface in arecanut and coconut	1	48	8	56				48	8	56
Programme planning	1	13	16	29				13	16	29
Documentation of success stories	1	32		32				32		32
Total	**11**	**288**	**97**	**385**	**21**	**0**	**21**	**309**	**97**	**406**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										

Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
Establishment and maintenance of nutritional gardens	1	12	8	20	-	-	-	12	8	20
Total	**1**	**12**	**8**	**20**	**-**	**-**	**-**	**12**	**8**	**20**

7.G. Sponsored training programmes conducted

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Increasing production and productivity of crops										
1.b.	Commercial production of vegetables										
2	**Production and value addition**										
2.a.	Fruit Plants										
2.b.	Ornamental plants										
2.c.	Spices crops										
3.	**Soil health and fertility management**										
4	**Production of Inputs at site**										
5	**Methods of protective cultivation**										
6	**Others (pl.specify)**										

7	**Post harvest technology and value addition**										
7.a.	Processing and value addition										
7.b.	Others (pl.specify)										
8	**Farm machinery**										
8.a.	Farm machinery, tools and implements										
8.b.	Others (pl.specify)										
9.	**Livestock and fisheries**										
10	**Livestock production and management**										
10.a.	Animal Nutrition Management										
10.b.	Animal Disease Management										
10.c	Fisheries Nutrition										
10.d	Fisheries Management										
10.e.	Others (pl.specify)										
11.	**Home Science**										
11.a.	Household nutritional security										
11.b.	Economic empowerment of women										
11.c.	Drudgery reduction of women										
11.d.	Others (pl.specify)										
12	**Agricultural Extension**										
12.a.	Capacity Building and Group Dynamics										
12.b.	Others (pl.specify)										
	Protection of plant varieties and farmers' right act-2001	1	50	20	70	17	13	30	67	33	100
	Total	**1**	**50**	**20**	**70**	**17**	**13**	**30**	**67**	**33**	**100**

Details of sponsoring agencies involved

1. Coconut development board, Cochin, GoI
2. Sanjeevini (Ministry of panchayath raj and rural development)
3. SAMETI South, Bangalore
4. Protection of Plant Varieties and Farmers' Rights Authority, New Delhi

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

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Commercial floriculture										
1.b.	Commercial fruit production										
1.c.	Commercial vegetable production										
1.d.	Integrated crop management										
1.e.	Organic farming										
1.f.	Others (pl.specify)										
2	**Post harvest technology and value addition**										
2.a.	Value addition										
2.b.	Others (pl.specify)										
3.	**Livestock and fisheries**										
3.a.	Dairy farming	1	34	3	37	20	-	20	54	23	77
3.b.	Composite fish culture										
3.c.	Sheep and goat rearing										
3.d.	Piggery										
3.e.	Poultry farming										
3.f.	Others (pl.specify)										
4.	**Income generation activities**										
4.a.	Vermi-composting										
4.b.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.										
4.c.	Repair and maintenance of farm machinery & implements										
4.d.	Rural Crafts										
4.e.	Seed production										
4.f.	Sericulture										
4.g.	Mushroom cultivation										
4.h.	Nursery, grafting etc.										
4.i.	Tailoring, stitching, embroidery, dying etc.										
4.j.	Agril. para-workers, para-vet training										
4.k.	Others (pl.specify)										
5	**Agricultural Extension**										
5.a.	Capacity building and group dynamics										
5.b.	Others (pl.specify)										
	Coconut palm climbing – skill development training	5	63	10	73	21	6	27	84	16	100
	Grand Total	**6**	**97**	**13**	**110**	**41**	**6**	**47**	**138**	**39**	**177**

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	272	88	360	121	34	155	3	1	4
Kisan Mela	3									
Kisan Ghosthi	1									
Exhibition	3	470								
Film Show	13	288	120	408	155	55	210			
Method Demonstrations	4	62								
Farmers Seminar	2	217								
Workshop										
Group meetings	3	45	-	45	14	-	14			
Lectures delivered as resource persons	68	3782	2198	5980	1397	963	2360	175	80	255
Newspaper coverage	78									
Radio talks	8									
TV talks	5									
Popular articles	4									
Extension Literature	12									
Advisory Services	81	302	25	327	157	18	175			
Scientific visit to farmers field	72	304								
Farmers visit to KVK	227	249								
Diagnostic visits	10	83	16	99	16	4	20	24	-	24

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
Exposure visits	4	128	10	138	56	6	62	4	-	4
Ex-trainees Sammelan										
Soil health Camp										
Animal Health Camp										
Agri mobile clinic										
Soil test campaigns										
Farm Science Club Conveners meet										
Self Help Group Conveners meetings										
Mahila Mandals Conveners meetings										
Celebration of important days (specify)										
Parthenium Awareness Week	1	40	30	70	20	14	34			
World Food Day	1	121	84	205	54	41	95			
Women in Agriculture Day	1		55	55		12	12			
Kisan Day	1	70	10	80	20	4	24			
Technology Week-2013	1	312	190	502	122	76	198			
Any Other (Specify)										
Foot and Mouth Disease awareness campaign	2	19	40	59	11	22	33	2		2
SMS Messages	10	6356	630	6986	1210	120	1330	30	10	40
Total	**625**	**12934**	**3482**	**15115**	**3296**	**1356**	**4653**	**238**	**91**	**329**

PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIALS

9.A. Production of seeds by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Quantity of seed (qtl)	Value (Rs)	Number of farmers to whom provided
Cereals (crop wise)	Ragi	ML-365, GPU-45, GPU-48	-	12.50	28750.00	135
Oilseeds	Groundnut	GPBD-4, TMV-2	-	8.98	79920.00	32
Pulses	Redgram	BRG-1	-	1.90	9500.00	38
Commercial crops						
Vegetables						
Flower crops						
Spices						
Fodder crop seeds	Sorghum	COFS-29	-	0.06	180.00	-
	Cowpea	KBC-2	-	0.08	720.00	-
	Maize	Southafrican tall	-	0.05	250.00	-
Fiber crops						
Forest Species						
Others (specify)						
Total				**23.57.00**	**119320.00**	**205**

9.B. Production of planting materials by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Commercial						
Vegetable seedlings	Drumstick	PKM-1, Bhagya		29413	294130	52
	Tomato	-	JK seeds	3506	706	25
Fruits	Papaya		Red Lady	23308	279691	59
	Lime	Seedling origin		93	930	28
	Mango	Alphanso		2	80	1
Ornamental plants						
Medicinal and Aromatic						
Plantation						
Spices	Curry leaf	Suvasini		904	9040	62
Tuber						
Fodder crop saplings						
Forest Species						
Others(specify)						
Flower	Chrysanthemum	Dundi		237	2370	25
TOTAL				**57463**	**586947**	**252**

9.C. Production of Bio-Products : NIL

9.D. Production of livestock materials: NIL

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

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

(A) KVK News Letter (Date of start, Periodicity, number of copies distributed etc.) :
December, - 2006, Quarterly – 1000

(B) **Literature developed / published**

Item	Title	Authors name	Number
Research papers			
Technical reports	1. Monthly Progress Report 2. Quarterly Progress Report 3. ZREP Report 4. EPCB Report 5. EEC Report 6. Citizen's-Client's Charter Report 7. Information on Agricultural Ecological Situation 8. Significant Achievements 9. Annual Progress Report 10. Action Plan	B.C.Hanumanthaswamy, Basavaraj Beerannavar, B.C.Dhananjaya, Ashok M., Nagarajappa Adivappar, T.M.Soumya, Nagaraja R. P.R.Somashekharappa	12 4 1 1 1 12 12 12 1 1
News letters	'Spandana' – Quarterly farmers' news letter	B.C.Hanumanthaswamy, Basavaraj Beerannavar, B.C.Dhananjaya, Ashok M., Nagarajappa Adivappar, T.M.Soumya, Nagaraja R. P.R.Somashekharappa	4
Technical bulletins	Production technologies of Pepper	Nagarajappa Adivappar, B.C.Hanumanthaswamy, K.R. Shreenivasa T.H.Gowda	500
	Improved production technologies of Papaya	Nagarajappa Adivappar, B.C.Hanumanthaswamy, K.R. Shreenivasa Basavaraja Beerannavar	500
	Protection of plant varieties and farmers right Act-2001	Basavaraja Beerannavar B.C.Hanumanthaswamy Nagaraja R.	1000
Popular articles	Abaleya Sabaleekaranakkiruva preranegalu. Siri Samrudhi, February, 2014, P. 20-23	T.M. Soumya Ashok, M. B.C. Dhananjaya	
	Keetanashakagala surakshita balake – 2014. Bala Vignana, 36 (3) : 13-16	B.C. Hanumanthaswamy Nagarajappa Adivappar\	
	Savayava Krishiyalli jyvika keeta nashakagala balake-2014. Bala Vignana, 36 (5) : 21-25	B.C. Hanumanthaswamy Nagarajappa Adivappar	
	Sanna rythana dodda sadhane -2013. Krishi Munnade, 26 (12) : 37	Nagarajappa Adivappar B.C. Hanumanthaswamy	

	Kosina vajra bennina pathanada nirvahane – 2014. Krishi Munnade, 27 (3) : 23	B.C. Hanumanthaswamy Nagarajappa Adivappar	
Extension literature			
Others (Pl. Specify)			
Abstracts	1. Nagarajappa Adivappar, Hanumantaswamy, B.C. and Sunil, C., 2013, Importance of Weather Based Crop Insurance (WBCIS) in Cashew. In: National Symposium on Cashew, 29-30th October, pp. 33. 2. Hanumanthaswamy, B.C. and Nagarajappa Adivappar., 2013, Bio-efficacy of *Bacillus thuringiensis* against Greater Wax Moth, *Galleria mellonella*. In : National Conference on Biotechnology in Healthcare Bench Co Bedside, 27 & 28th September, pp. 42. 3. Hanumantaswamy, B.C. and Nagarajappa Adivappar., 2013, Adoption of Eco-Friendly Pest Management Practices in Tomato. In : National Conference on Biotechnology in Healthcare Bench Co Bedside, 27 & 28th September, pp. 43. 4. Nagarajappa Adivappar and Hanumantaswamy, B.C., 2013, Genetically Modified Crops : Role in Ameliorating the Food Scarcity. In : National Conference on Biotechnology in Healthcare Bench Co Bedside, 27 & 28th September, pp. 44. 5. Hanumanthaswamy, B.C., Shreenivasa, K.R. and Nagarajappa Adivappar., 2013, Management of root grub in arecanut gardens. In : 10th National Symposium on Soil Biology and Ecology – Soil Biota and Social Insects for Sustainable Agriculture, 19-21st December, pp. 154. 6. Shreenivasa, K.R., Hanumanthaswamy, B.C. and Rekha, D., 2013, Management of heart rot disease in pineapple. In : 10th National Symposium on Soil Biology and Ecology – Soil Biota and Social Insects for Sustainable Agriculture, 19-21st December, pp. 154. 7. Hanumanthaswamy, B.C., Nagarajappa Adivappar and Shreenivasa, K.R, 2013, Diversity and foraging activity of honey bee pollinators on sunflower. In : 10th National Symposium on Soil Biology and Ecology – Soil Biota and Social Insects for Sustainable Agriculture, 19-21st December. pp. 161. 8. Hanumanthaswamy, B.C., Nagarajappa Adivappar and Shreenivasa, K.R., 2013, Integrated Management of Chilli Fruit Borer. In: National Conference on Spice – Recent Advances and Future Strategies, 19-21st December, pp. 66. 9. Hanumanthaswamy, B.C., Shreenivasa, K.R. and Nagarajappa Adivappar., 2013, Management of Ginger Shoot Borer. In: National Conference on Spice – Recent Advances and Future Strategies, 19-21st December, pp. 84. 10. Nagarajappa Adivappar, Hanumanthaswamy, B.C. and Rudragowda, 2013, Problems and Prospects of Ginger and Turmeric Cultivation-Farmers Experience. In: National Conference on Spice – Recent Advances and Future Strategies, 19-21st December. pp, 35. 11. Nagarajappa Adivappar, Hanumanthaswamy, B.C., Shreenivasa, K.R. and Veeranna, H.K. 2013, Impact of Extension Activities in Improving the Production and Productivity of Spices. In: National Conference on Spice – Recent Advances and Future Strategies, 19-21st December, pp. 72.		

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	Organic Farming	Shivalingaiah B.C.Hanumanthaswamy Basavaraj Beerannavar B.C. Dhananjaya	
Chapters in manual	Saavayava Krishiyalli poshakamshagala nirvahane. Training manual on Organic farming for the extension functionaries from 15-16 November, 2013 at KVK, Shimoga, p. 6-13.	T.M. Soumya L.B. Ashok	
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	Savayava krishiyalli keeta peedegala nirvahane. Training manual on Organic farming for the extension functionaries from 15-16 November, 2013 at KVK, Shimoga, p. 22-26.	Hanumanthaswamy, B.C.	
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Folder	Important Pest and Disease Management in Maize-2013	B.C.Hanumanthaswamy, K.R. Shreenivasa Basavaraja Beerannavar Nagaraja R	1000
	Bee keeping-2013	B.C.Hanumanthaswamy, Nagarajappa Adivappar, Basavaraja Beerannavar Nagaraja R.	1000
	Perennial vegetable crop Drumstick – 2013	Nagarjappa Adivappar B.C. Hanumanthswamy Nagaraj, R.	1000
	Jenu nonagala shatrugalu mattu hvugala nirvahane -2013	B.C. Hanumanthswamy K.R. Shreenivasa Basavaraj Beerannavar Nagaraj, R.	1000
	Samagra Krishi Paddati -2013	Basavaraj Beerannavar B.C. Hanumanthswamy Nagaraj, R	1000
	Bale beleyalli sasya samrakshane – 2013	K.R. Shreenivasa B.C. Hanumanthaswamy Nagarajappa Adivappar	1000
	Kalubayi jwara – 2014	Ashok, M.	1000
	Bhattdalli kandujigi huluvina bhade mattu nirvahane -2014	T.H. Gowda B.C. Hanumanthaswamy M.S. Ganeshbabu K.R. Shreenivasa	1000
	Benki rogada lakshanagalu hagu nirvahane kramagalu-2014	T.H. Gowda K.R. Shreenivasa M.S. Ganeshbabu B.C. Hanumanthaswamy	1000
	Hesaru bele paddathige sooktha bele-2014	T.M. Soumya B.C. Dhananjaya B.C. Hanumanthaswamy T.H. Gowda	1000
TOTAL			**12079**

10.B. Details of Electronic Media Produced : NIL

10.C. Success Stories / Case studies.

1. Success Story of KVK Nursery

Under National Horticulture Mission (NHM) in 2008-09 Model Horticulture Nursery has been sanctioned to KVK, Shimoga. In this project different propagating structures *viz.,* mist chamber, poly house and shed nets were constructed. The main objective of the project is to produce elite horticultural planting material for the needy farmers of the district. KVK, Shimoga has taken initiative in production of different horticultural plants viz., mango, sapota, papaya, drumstick, vegetable seedlings, curry leaf and flowering plants. Among these different seedlings / grafts, production of papaya and drumstick seedlings is note worthy.

For successful horticulture crop production, supply of elite planting material and training to growers is very essential. In this regard, from 2010-11 to 2013-14 KVK conducted 08 training programmes on topics related to “Improved production technologies of papaya and drumstick”. During the training programmes 321 farmers/farm women / rural youth were trained. By realizing the immense scope and potentiality of growing papaya and drumstick as a sole / intercrop farmers purchased quality planting material from KVK, Shimoga. Totally, 35,400 drumstick (PKM-1 & Bhagya) seedlings of worth Rs. 3,54,000/- were sold to 66 farmers by covering an area of 52 ha as sole crop or intercrop in younger arecanut gardens. Similarly, 47,785 papaya seedlings (Arka Surya and Taiwan–786) of worth Rs.5,603,50/- were sold to 97 farmers by covering in area of 40 ha as intercrop in younger areanut gardens. By growing papaya and drumstick as intercrops farmers have obtained Rs. 1,80,000/- and Rs. 1,50,000/- per ha respectively as a additional income in arecanut apart from protecting younger arecanut plants from scorching sun, reducing weed menace and creating better micro climate for areca growth. Due to concerted efforts of KVK intercropping of papaya and drumstick in younger areca gardens has spread to more than 500 ha in the district with an additional income of Rs. 7.5 to 9.0 crores.

2. Upliftment of farm families through Integrated Farming System Demonstration project by KVK.

Introduction : Historically, India’s crop production scenario has been dominated by food grains more especially cereals. The country has registered a declining trend in crop and livestock production and per head food production, while maintaining increase in cereal productivity over the past decade. Sustainable development in agriculture must include integrated farming systems with efficient soil, water, crop and pest management practices, which are environmentally sound, economically viable and socially acceptable. The future agricultural system should reorient from the single commodity system to food diversification approach for sustaining food production and income generation. Integrating crops and cropping systems, horticulture, livestock, sericulture, agro-forestry, aquaculture, etc., therefore, assume greater importance for conserving and recycling of farm resources to enhance farm productivity, which will reduce environmental degradation and maintain agricultural sustainability by providing nutritional and livelihood security. Realizing the importance of integrated farming system, Government of Karnataka under RKVY project supported financial assistance for implementing the IFSD project through Agricultural Universities. University of Agricultural Sciences, Bangalore has initiated integrated farming system through 12 KVKs, 3 EEUs and FTI, GKVK with the involvement of Scientists / Teachers working at ZARS / ARS and Colleges coming

under different agro-climatic zones. KVK, Shimoga is one of the implementing centre under UAS, Bangalore.

Need for IFS : A large gap exist between potential, on-farm and farmers yields of post crop varieties developed during the green revolution. FARMSCAPE (Farmers, Advisors, Researchers, Monitoring, Communication and Performance Evaluation) of programme of participatory transfer of technology with the farming community could be successful in translating technological development on the farmers' fields. Improving the productivity of the whole farm is of larger concern today than ever before for the reason of Total Factor Productivity (TFP). Although, the overall production of food grains and milk are the highest, the per hectare productivity is low. Thus, augmenting production through efficient management of natural resources, human resources through IFS approach would meet the present requirement of livelihood security and farm profitability.

Objectives

- To attain sustainable improvement in productivity and income by adopting IFS model.
- To ensure livelihood security of farm families and landless labourers in the project area.

Location : The programme was implemented in Konagavalli Gramapanchayath of Shimoga Taluk. Total of 10 villages (1515 farm families) comprising 1058 agriculturists and 457 landless agricultural laborers were covered under the project.

Duration : The project was initiated in the year 2011-12. The total duration of project is three years.

Activities carried out under IFSD project.

- Orientation about IFSD schedule to the data collecting volunteers.
- Collected bench mark information of IFSD villages (1515 families)
- Orientation on the PRA techniques to all the implementing staff of the project.
- Analysis of the collected data through outsourcing.
- Capacity building of farmers / farm women through various trainings, demonstrations and exposure visits.
- Distribution of critical inputs to the farmers as per their needs.
- Conduct of field days before harvest of the demonstration plot.
- Selection of model stake holders for showcasing / impact analysis
- Formation and strengthening of the commodity based association / agro service centres.

Critical inputs supplied

I. Crop Component

1) Cereals – Paddy, Ragi, Maize
2) Pulses – Black gram, Redgram, Green gram
3) Oil seeds – Groundnut

II. Horticulture component

1) Planting materials : Drumstick, papaya, mango, Coconut, sapota, curry leaf, lime.

III. Animal component

1) Sheep – (Bandur cross breed),
2) Poultry birds – Giriraja, Swarnadhara
3) Mineral mixture, feed additives and deworming agents

IV. Other components

1) Micro nutrients – Zinc sulphate, gypsum, Boron
2) Bio-Fertilizers
3) Foliar sprays
4) Mobile vermicompost unit with earthworms
5) Plant protection chemicals
6) Small Agricultural equipments

V. Initiation of Commodity Based Associations (CBAs) / Agro Service Centres (ASCs) :

In order to provide inputs at desired level and also interlink the sale of produce two CBAs/ ASCs were started in two villages of the project area. Each CBA is having 15 members and the members contributed Rs.1.00 lakh. Seed money of Rs. 1.00 is contributed from the project to each of the CBA.

Impact of the IFSD project

1) Seed replacement with improved varieties of crops
2) Increase in yield of crops (8-10 %) due to use of supplied critical inputs
3) Improvement in soil health by use of micronutrients, bio-fertilizers and organic fertilizers (Vermi Compost)
4) Improvement in long term assets of farming communities through Horticulture plant seedlings.
5) Additional income to the landless labourers and small farmers through rearing of sheep and poultry birds.
6) Increase in knowledge, skill development through capacity building programmes and exposure visits.

3. Integrated management of Rhizome borne diseases in banana- a CASE STUDY

Background : Banana is one of the important fruit crop of Shimoga District. Which is cultivated in an area of 5305 ha. with a production of 125750 tons during 2008-09. This crop is either grown as a sole crop is a mixed crop under younger arecanut gardens are even in older gardens under traditional farming. The planting material used for banana planting by 80% of the farmers in the District are the suckers / rhizomes obtained by nearby gardens or from any sources. The major constrains for banana cultivation is the diseases and the pest which are either sucker / rhizome borne or from soil viz., the panama disease, burrowing nematode, bunchy top disease, root knot nematode while pest like rhizome weevil / pseudo stem weevil.

It is evident from the past history that the ancient and most tasty banana cultivar Nanjanagood Rasabale which was devastated because of the Rhizome borne disease complex. In order to over cum the rhizome borne disease complex management the tissue culture banana were developed but these cultivars are available only for either robusta / Grand-9 cultivars but 60% of the banana growers and consumers prefer either Rasabale or Yelakki bale, but there no tissue culture materials available as on now on commercial basis however the trials under pipeline.

Interventions : In order to manage this problem an holistic approach of managing these diseases and pest problem were addressed by conducting Front line demonstration in 10 farmers field during 2008-09 and 2009-10 by Krishi Vigyan Kendra Shimoga in major banana

growing areas of the district . The technology was demonstrated through method demonstration, training both on and off campus programmes and other extension activities to spread the technology.

Process /Technology : The technology demonstrated was selection of disease free planting material, opening of banana pits before one month of planting, soil application of Trichoderma enriched FYM/compost , application of 500 gram neemcake per plant , paring and pralinage of sucker, Dipping of the pared suckers in 0.2% Carbendazim and application of 20 gram Carbofuran granules per plant during planting.

Impact

Horizontal Spread : After the successful conduct of the front line demonstration in 10 farmers' field during 2008-09 the farmers could harvest 28.5 t /ha fruit yield in demonstrated plot with a BC ratio of 1:3.01 besides reduction in rhizome borne disease incidence of 23. % and 10% sigatoka severity, compared to farmer practice where they could harvest 19.5 t/ha fruit yield with BC ratio 1:1.84 but rhizome borne disease incidence was 52% and 22% sigatoka severity. Further, the famers could able to raise the ratoon crop in the next with less disease incidence and good harvest.

Similarly 10 more FLD were conducted during 2009-10 in other farmers field to further spread the technology in the district .As a result of successful conduct of the FLD the banana growers in the district could able to manage this problem one such farmer who adapted this technology and harnessed the result is Sri Ranganath, Sominakoppa village of Shimoga taluk. Now the technology is being spread to other farmers by following different extension methodologies by involving department of horticulture and other agencies

Economic gains : The banana growers in the District could able to reduce the cost of plant protection upto Rs.5000/- per ha. besides the cost on the management of the disease in ratoon crop too.

The suckers grown by the crop are free from the disease so that the next crop could be saved.

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

Up scaling innovative practice in paddy cultivation

Paddy is one of the important food crops grown in Melinahanasavadi village of Shimoga taluk in Tunga command area. The farmers in these villages have been following time tested methods of growing crops to accomplish the challenging task of feeding themselves. Paddy is the major crop occupying 90% of the total cultivable area in the village. Farmers have been facing problems like high incidence of pests and diseases, high cost of cultivation, scarcity of labourers and limited labour available are also to be paid higher wages as this villages are located nearer to Shimoga city (5 kms). Resulting in poor yield and lesser marginal returns to the farmers. They were however living with these problems and not knowing how to address them. KVK, Shimoga was very keen to address this issue by promoting a integrated crop mg practices in paddy by using lesser resources. **The beginning** KVK conducted baseline survey

in these villages, Gramsabhas were conducted in each village, followed by PRA for understanding village situation and identifying the problems jointly with communities. KVK identified large scope for improvement in paddy farming and initiated good agricultural practices through a structured capacity building process with groups of farmers. KVK has a firm conviction that, farmers capacity building through participatory approaches is the most effective way to address problems in farming. It is necessary to widen the farmers' perception, deepen their insights, modify their attitudes and upgrade their management abilities. For this purpose, KVK has been effectively using. Farmer Field School (FFS) as a methodology of building capacities of farmers. Farmer interest group (Volunteers) with 30 interested farmers in this village was formed in the beginning. Season long FFS was organized in the village during the cropping season from May to November, 2010. Group members were very enthusiastic to learn about scientific paddy cultivation by discovering learning process in FFS made. In different sessions, group members were involved in different short studies, which made them to learn by doing and experiencing. In each session groups actively participated and conducted different short studies as listed below which made them confident. **Learning process** Group of paddy farmer (30) will learn about IPM approaches from seed to crop harvest. FFS conducted in Melinahanasavadi village of Shimoga District. Small sub groups take IPM practices conduct RRA, take observations and analyze the incidence of pest and disease. The priority activities focused in FFS includes; Summer deep ploughing and importance of green leaf manuring Selection of healthy and disease free seeds and seed treatment practices. Maintenance of soil fertility by use of balanced nutrients for management of pest and diseases. Method demonstration on mat nursery beds and nursery diseases, Method demonstration on machine transplanting of paddy seedlings, Role of weeds and clean sanitation measures for control of pest and disease, Preparation of nursery beds and nursery diseases, Better water management practices, Demonstration on identification nutrient deficiency and pest & disease symptoms, Role of botanicals and traps for IPM and plant protection chemicals safe use, dosage and time of application, Harvest and post harvest losses and their management

During the end of FFS 30 farmers, involved in this FFS appreciated this innovative method of rice cultivation Significant changes were observed, such as 42% labour saving with respect to transplanting reduction in seed rate 30-35 kg/ha as compared to 60-65 kg/ha in their traditional practice and maintaining adequate plant population as per recommendation, transplanting of 18 days old seedlings raised on mat nursery through machine transplanter and use of Cono Rotary Weeder for effective weed control and root aeration. Substantial increase in the number of tillers/m2 (456/m2) with lesser or no incidence of BPH (6%) which otherwise was a major problem (32%) prevailed during previous season. Which was also due to balanced dose of fertilizer application as indiscriminate use of chemical fertilizer was also one of the reasons for severe occurrence of BPH during last season. Finally yields were enhanced by 16% (65 q/ha as against 56 q/ha compared to farmer practice). Higher yield is attributed to significant increase in number of tillers (26% higher) more particularly the productive tillers.

The FFS has played a critical role in motivating farmers to adopt ICM practices in paddy in a short time. Moreover, it has enhanced the experimenting capacity of farmers leading to innovations. With good results in the very first season ICM practice in paddy has shown the potential for wider spread in the region. **Scaling up of FFS** For wider scaling, meetings and field days were organized. The results of the efforts made were discussed during these events.

Farmers from the region participated and got to know the good impacts of following ICM practices in paddy.

Through the events helped in building awareness among a large no of farmers about this practice but, yet it did not help in making them practice. Machine transplanting being a new method of paddy cultivation farmers were very confident of practicing it as they learnt all the skills involved with respect to different operations. Only bottle neck was with respect to cost of machine transplantor. A planned effort and continuous support was therefore required to motivate farmers to follow this innovative practice. In summer season of 2011, KVK, Shimoga with the support of NFSM programme for paddy crop operated by Department of Agriculture planned a scaling up strategy to reach 500 farmers (215 acre). Spread across 15 villages. This programme aimed at sensitizing not only the farmers but also all the other promoters and supporters of ICM practices in the district. Wherein with the support from Department of Agriculture, farmers' interest group of Melinahanasavadi village was sanctioned with one machine transplanter and one SHG of that village has come forward for raising and supply of mat nursery needed for the entire village.

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

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

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

1. Training courses decided based on the feedback from the field extension workers of agriculture / Horticulture / animal husbandry / NGOs and allied departments during bimonthly workshop / meetings and also based on the feedback collected during the field visit by KVK scientists.
2. Based on the suggestions by Scientific Advisory Committee members
3. Based on Ex-trainees' suggestions
4. Based on the SWOT / thrust areas identified during action plan preparation

10.G. Field activities

i.	Number of villages adopted	: 14
ii.	No. of farm families selected	: 1400
iii.	No. of survey/PRA conducted	: 14

10.H. Activities of Soil and Water Testing Laboratory

1. Status of establishment of Lab : Good
2. Year of establishment : 2006

3. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost
1	pH Meter	1 No.	8,550
2	Conductivity meter	1 No.	7,400
3	Physical balance (KROY)	1 No.	12,000
4	Chemical balance (Shimadzu)	1 No.	48,900
5	Water distillation still	1 No.	48,850
6	Shaker	1 No.	27,600
7	Hot air oven	1 No.	20,000
8	Magnetic stirrer with hot plate	1 No.	5,500
9	Spectrophotometer	1 No.	42,000
10	Flame photometer	1 No.	35,200
11	Macro digestion system	1 No.	52,118
12	Automatic distillation system	1 No.	85,232
13	Electronic Acid neutralizer scrubber	1 No.	23,909
14	Hot plate Rectangular	1 No.	9,600
15	Ind. & Comml.	1 No.	26,400
16	F & P Fume cupboard	1 No.	41,625
17	FRP ducting with FRP blower	1 No.	18,000
18	Refrigerator	1 No.	18,133
19	Khaitan Heavy duty fan	1 No.	3,777
20	Flame Burner	1 No.	1,146
21	Digital Micro pipette set	1 No.	21,180
22	pH Meter	1 No.	6,600
22	Chemicals		30,055
23	Glassware		1,35,417

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	2680	652	652	83400.00
Water Samples	384			23960.00
Plant samples	-	-	-	-
Manure samples	68	19	19	7950.00
Lime	05	03	03	500.00
Total	**3137**	**674**	**674**	**115810.00**

Details of samples analyzed during the 2013-14 :

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	451	186	186	13530.00
Water Samples	155			9300.00
Plant samples	-	-	-	-
Manure samples	08	03	03	960.00
Others (specify)	01	01	01	100.00
Total	**615**	**190**	**190**	**23890.00**

10.I. Technology Week celebration during 2013-14 : YES

Period of observing Technology Week : From 24-09-2013 to 28-09-2013
Total number of farmers visited : 700
Total number of agencies involved : 7
Number of demonstrations visited by the farmers within KVK campus : 32

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Gosthies	-	-	-
Lectures organized	10	700	Paddy, maize, groundnut, cotton, arecanut, ginger, Turmeric, flower crops, dairy, poultry, value addition, marketing
Exhibition	1		
Film show	5		
Fair			
Farm Visit	5	700	Maize, Hebbal Avare, chilli, Cotton, groundnut, ragi, papaya, drumstick, bird of paradise, cowpea, redgram, CO3 fodder crop, poultry incubator, farm machineries, implements, sprayers, green gram, black gram, French bean, brinjal, China aster
Diagnostic Practical's	2	700	Soil and water testing laboratory, Disease diagnostic lab.
Supply of Literature (No.)	4	700	
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		700	

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Lectures organized	10	700	Paddy, maize, groundnut, cotton, arecanut, ginger, Turmeric, flower crops, dairy, poultry, value addition, marketing
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Film show	5		

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Fair			
Farm Visit	5	700	Maize, Hebbal Avare, chilli, Cotton, groundnut, ragi, papaya, drumstick, bird of paradise, cowpea, redgram, CO3 fodder crop, poultry incubator, farm machineries, implements, sprayers, green gram, black gram, French bean, brinjal, China aster
Diagnostic Practical's	2	700	Soil and water testing laboratory, Disease diagnostic lab.
Supply of Literature (No.)	4	700	
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		700	

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

A. Introduction of alternate crops/varieties : NIL

B. Major area coverage under alternate crops/varieties : NIL

C. Farmers-scientists interaction on livestock management : NIL

D. Animal health camps organized : NIL

E. Seed distribution in drought hit states : NIL

F. Large scale adoption of resource conservation technologies : NIL

G. Awareness campaign : Foot and mouth disease management in livestock

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
Karnataka	**2**	**94**										
TOTAL	**2**	**94**										

PART XI. IMPACT

11.A. Impact of KVK activities

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Coconut Palm climbing by using climber	100	100	Rs. 4500/- per month per person	Rs. 12,000/- per month per person
Mushroom production	80	• 80% of the participants started using mushroom as component in their daily diet.	-	-
		• 20 % of the participants started mushroom production for additional income.	-	Additional income of Rs. 6000 – Rs.7000 per month
Preparation of eco-friendly products from arecanut leafsheath	60	25 %	Rs.1200/- per month	Rs.2000/- per month

11.B. Cases of large scale adoption

1) Profitability and productivity enhancement of demonstrating farmers through leaf spot resistant groundnut variety GPBD – 4 for Shimoga district

Shimoga is one of the district in Karnataka where groundnut is being grown both in *kharif* and summer seasons. As the district's groundnut growing area falls under southern transition zone with assured rainfall and prevalence of cloudy weather during cropping season of groundnut is very common. Under such climatic conditions occurrence of leaf spot disease in groundnut variety TMV-2 predominantly (released during 1960) quite obvious which results in substantial yield loss with reference to pod and haulm yield.

Over a period of time, the yields of TMV-2 have been gradually decreasing owing to various reasons *viz.,* non availability of pure seed, loss of genetic vigor in the available seed, small size of pods and kernels and susceptibility to pests and diseases owing to continuous cultivation and its removal from the government subsidy programme.

The programme:

Understanding the need for an improved groundnut variety suitable to Shimoga district, a programme on assessment of groundnut varieties was launched during 2005.

The process

To start with an awareness meeting was held with farmers. Farmers identified constraints in groundnut, production and also ways to mitigate them. Based on the problems and possible solutions it was decided to conduct frontline demonstrations in farmers field with improved variety GPBD - 4 released by UAS, Dharwad during 2005, which is having resistance to leaf spot disease.

Intervention

KVK, Shimoga conducted frontline demonstration on groundnut variety GPBD - 4 during the years 2005-06 to 2013-14 in summer / Kharif seasons involving 79 farmers in 8 years. Totally 79 demonstrations on groundnut crop in an area of 32.8 hectares by involving 79 farmers in all the eight years of demonstration were conducted in 3 taluks of Shimoga district (Soraba, Shikaripura and Shimoga taluks).

Output / results

FLD results showed that GPBD-4 performed consistently better as the average pod yield of 79 demonstrations in an area of 32.8 ha. ranged from 23.55 to 28.94 q/ha. There was 17.60 % increase in pod yield in demonstrated groundnut GPBD - 4 variety which was found economically superior with higher BC ratio of 3.52 against the lower BC ratio of 2.86 in TMV-2. Incidence of leaf spot disease was not noticed in GPBD-4 as compared to severe incidence of 60 % in local check (TMV-2)

Outcome

Field days in all the years in collaboration with Department of Agriculture were conducted for larger spread of this variety. Printed literature was also provided to the needy farmers. Performance of this variety was also published in local print and electronic media. For promoting this better variety across the district, Department of Agriculture took interest in spreading the variety along with Karnataka Oil Federation (KOF).

Following are some of the efforts made to spread the variety

- ✓ Identification of farmers interested in this new variety
- ✓ Supply of foundation seeds by KVK to its contact farmers through IFSD programme
- ✓ Procuring the seeds from farmers and distributing to other farmers through FLD
- ✓ Giving wide publicity through news letter and media

By summer 2013, the variety has spread to 48 villages extending over an area of 1550 acres. It is very appreciable to note the sustained performance of GPBD - 4 groundnut variety even in adverse conditions and the increasing demand for the seed.

Table 1: Yield performance of groundnut varieties demonstration under FLD programme in Shimoga district of Karnataka

Year	Name of the block / village	Variety	No. of demon stration	Area (ha)	Pod Yield			
					Demonstration		Check	% increase in yield
					Maximum	Average	Average	Average
2005-06	Bedarahosally, Shimoga Tq	GPBD - 4	12	4.80	31.80	28.94	23.38	23.78
2006-07	Devikoppa, Soraba Tq.	GPBD - 4	12	4.80	37.50	26.25	22.25	17.97
2007-08	Tumarikoppa, Soraba Tq	GPBD - 4	12	4.80	30.00	24.75	19.87	24.55
2008-09	Mallapura, Soraba Tq.	GPBD - 4	12	4.80	27.50	23.55	19.37	21.57
2009-10	Begur, Shikaripura Tq.	GPBD - 4	12	4.80	29.12	26.08	22.27	17.10
2010-11	Haramghatta, Shimoga Tq.	GPBD - 4	7	4.00	27.25	25.57	22.76	12.35
2011-12	Nimbegondi, Shikaripura Tq.	GPBD - 4	7	2.80	25.00	23.39	20.86	12.13
2012-13	Hirakasavi, Soraba Tq.	GPBD - 4	5	2.00	27.00	24.50	22.00	11.36
		Total	**79**	**32.80**	**29.40**	**25.38**	**21.60**	**17.60**

Table 2: Cost economics of Groundnut varieties demonstrated under FLD programme in Shimoga district

Years	Demonstration			Control / check			B:C ratio	
	Total cost (Rs/ha)	Gross return (Rs/ha)	Net income (Rs/ha)	Total cost (Rs/ha)	Gross return (Rs/ha)	Net income (Rs/ha)	Demon stration	Check
2005-06	19000	54986	35986	19500	44422	24922	2.89	2.27
2006-07	19500	52500	33000	19750	44500	24750	2.69	2.25
2007-08	18150	53213	35062	19750	42720	22970	2.93	2.16
2008-09	18500	58875	40375	21500	48425	26925	3.14	2.21
2009-10	19560	69200	45700	17775	55675	37900	3.34	3.13
2010-11	17000	56254	39254	19000	50072	31072	3.30	2.63
2011-12	16000	81865	65865	17500	73010	55510	5.12	4.17
2012-13	18000	85750	67750	19000	77000	58000	4.76	4.05
Total	**18213**	**64080**	**45374**	**19222**	**54478**	**35256**	**3.52**	**2.86**

2) Use of banana special as a foliar spray for higher yield

Shimoga district is a bestowed with ideal conditions for horticultural crops. Banana occupied 10% area of the total horticultural crops in the district. It is grown as a sole crop as well as intercrop in arecanut garden. Banana responds well to good cultural practices. Comparatively lower yields are registered due to improper nutrient management. By realizing the thrust area KVK conducted on farm trials from 2008-10 on nutrient management of banana including foliar spray of 'Banana Special'. Banana Special is a micro nutrient formulation released by Indian Institute of Horticulture Research (IIHR), Bangalore. In on-farm trials four

options *viz.,* farmer's practice, recommended practice of UAS, Bangalore, two alternate practices with slight modification in recommended practice were included and important observations bunch weight, percent finger cracking and yield were recorded. By spraying 0.5% banana special at 5,6,7,8 months after planting and two sprays on bunches has registered 10-20 % higher yield. The other beneficial effects are negligible finger cracking, higher bunch weight and higher B:C compared to other options in the trial.

Impact: Due to the constant effort by the KVK this refined practice under OFT has been already spread to 15% of the banana growing area for higher yields. On an average net profit of Rs. 10000-12000 / ha can be earned. The details of the OFT are given here under.

Technology Assessed	2008-09				2009-10				2010-11			
	Bunch weight (kg)	Finger cracking (%)	Yield (t/ha)	B:C	Bunch weight (kg)	Finger cracking (%)	Yield (t/ha)	B:C	Bunch weight (kg)	Finger cracking (%)	Yield (t/ha)	B:C
Tech.- 1	6.02	10-12	12.39	1.14	9.41	10.5-12.5	23.52	1.55	8.05	6.81	24.95	1.95
Tech.- 2	9.69	8.0-9.6	21.56	2.01	13.07	8-10	32.69	2.09	13.14	4.39	40.73	3.01
Tech.- 3	12.90	2.0-3.1	26.70	2.42	13.52	5.7.5	33.80	2.12	14.62	1.89	41.91	2.98
Tech.- 4	14.01	1.0-1.08	30.17	2.65	15.90	1.1.10	39.75	2.36	13.52	2.01	45.32	3.18

NOTE:

Technology 1 : 150:75:150 NPK at 2 splits at the time of planting and 3 months after planting + recommended FYM

Technology 2 : Recommended NPK + 4 splits + recommended FYM

Technology 3 : Recommended NPK + recommended FYM +application of 2, 4-D at 20 ppm at full flowering stage **/** use of 3%.Panchagavya

Technology 4 : Recommended NPK + recommended FYM +Banana special 0.5 % foliar spray at 5, 6, 7, 8 months of the planting and 2 sprays on bunch

3) MUSHROOM - Unleashing Enterprise

Background :

- Inefficient use of abundant crop residues from paddy, maize, sugarcane, arecanut and coconut.
- Crop residues are inputs for mushroom enterprise.
-

Intervention by KVK :

- Trained *384 unemployeed youth through 5 on campus and 12 off campus trainings.*
- *Skill transformation on mushroom production techniques.*
- *Educated to use mushroom substates to enrich compost.*
- *Emphasis on value addition / marketing.*

Output :

- 146 participants growing and using mushroom as component in their daily diet.
- 5 entrepreneurs started mushroom production as an unleashing enterprise.

Successful entrepreneur :

Mr. Gangadhar N. H., Kumbara Gundi, Shimoga

- Selling 5 kgs. mushroom per day @ Rs.75/- per kg.
- Selling 3 kgs. of spwan @ Rs.60/- per kg.
- Daily income : Rs.550/-
- Monthly net income : Rs.16,500/-
- Developed marketing linkages with local market, HOPCOMS & super market in the dist.

Outcome :

- Demand is increased for training programme on mushroom production.
- Each entrepreneur has provided opportunity to 2 labours in each production unit.
- Demand for spawn is increased from 4-5 kgs. to 20-25 kgs. per month
- Need is cattered through the mushroom unit in the campus.

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

PART XII - LINKAGES

12.A. Functional linkage with different organizations

Sl. No.	Name of organization	Nature of linkage
1.	Karnataka State Dept. of Agriculture	- Joint diagnostic survey - Joint implementation of FLD's - Bi-monthly workshops - Collaborative training programme under ATMA - Joint field visits - Demonstration under ATMA
2.	Karnataka State Dept. of Horticulture	- Joint diagnostic survey - Collaborative training under NHM project - Field visits - Technology Demonstration
3.	Karnataka state Dept. of Animal Health & Veterinary Sciences	- Collaborative training - Joint implementation of animal health camps, vaccination camps, mass deworming and nutrition management of dairy stock and calf management - Technology demonstration of Feed formulation etc.,
4.	Karnataka State Sericulture Dept.	- Collaborative training ; technology demonstration
5.	Karnataka State Dept. of Fisheries	- Technology demonstration and training under NFDB
6.	Dept. of Industries and commerce	- Collaborative training
7.	All India Radio	- Technology dissemination
8.	Doordarshan & Private TV Channels	- Technology dissemination
9.	Information and Broadcasting Dept.	- Technology dissemination & publicity
10.	Financial institutions like NABARD & Nationalized co-operative banks	- Formation of self help groups -Collaborative training programme
11.	Input agencies	- Collaborative farmers training programme - Technology dissemination
12.	Self Help Group	- Technology dissemination & organizing training
13.	Non-Governmental Organisations	- Training programme

14.	Local village level youth clubs	- Organizing training programme & field demonstration
15.	Co-operative sectors viz., milk producers, co-operative society, water users co-operative society etc.,	- Health camps and training programmes
16.	College of Agriculture	Involving RAWEP in conducting - Training Programme - Method demonstration - Group meeting & field visits
17.	Dept. of marketing and Co-operation	- Awareness & training programme on go down schemes
18.	ATMA / SAMETI (S)	Training Programmes, demonstration, field days
19.	Department of Panchayath raj and rural development	Training
20.	Coconut development Board	Training
21.	Protection of Plant Varieties and Farmers' Rights Authority, New Delhi	Training
22.	CPCRI, Kasaragod	Interaction Meet
23.	UAHS, Shimoga	Interaction Meet, Krishi Mela, Training, Seminar, Workshop

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

Name of the scheme	Date/ Month of initiation	Funding agency	Amount
Integrated Farming System Demonstration	April, 2011	Government of Karnataka	1.00 crore

12.C. Details of linkage with ATMA

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

Role of KVK in preparation of SREP of the district : **KVK Subject Matter Specialists are actively involved in preparation of SREP report.**

Coordination activities between KVK and ATMA during 2013-14

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	Meetings	In preparation of SREP report for Shimoga district	2	1	
02	Research projects				
03	Training programmes	1. Modified guidelines of ATMA, 2. Organic Farming	2	2	
04	**Demonstrations**				
05	**Extension Programmes**				
	Kisan Mela				
	Technology Week				
	Exposure visit				
	Exhibition				

	Soil health camps				
	Animal Health Campaigns				
	Others (Pl. specify)				
06	**Publications**				
	Video Films				
	Books				
	Extension Literature				
	Pamphlets				
	Others (Pl. specify)				
07	**Other Activities** (Pl. specify)				
	Watershed approach				
	Integrated Farm Development				
	Agri-preneurs development				

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

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

12.F. Details of linkage with RKVY : NIL

12.G Kisan Mobile Advisory Services

Month	No. of SMS sent	No. of farmers to which SMS was sent	No. of feedback / query on SMS sent
April 2013	2	69	
May 2013	9	183	
June 2013	25	381	
July 2013	12	148	
August 2013	15	294	
September 2013	4	45	3
October 2013	3	1325	
November 2013	1	43	2
December 2013	4	267	
January 2014	4	267	2
February 2013	4	3779	
March 2014	17	1515	
Total for the year 2013-14	**100**	**8316**	

PART XIII- PERFORMANCE OF INFRASTRUCTURE IN KVK

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

Sl. No.	Demo Unit	Year of Establishment	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty. (kg./Nos.)	Cost of inputs	Gross income (Rs.)	
1.	Horticulture crop demonstration unit	2013	0.50	Tomato –(Arka Rakshak)	Bulk	182		1820	
				Chilli		6		120	
				Radish		693		3465	
				Carrot		22		440	
				French Bean (Arka Anoop)		14.5		290	
				Amaranthus		1975		1975	
				Drumstick (PKM-1, Bhagya)		187		4685	
				Papaya (Red Lady)		10		100	
				Redgram (BRG-1, BRG-2)		10		300	
				Leafy vegetables		120		240	
				Cabbage		55		1100	

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

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty. (q)	Cost of inputs	Gross income	
Cereal : Maize	July-13	Oct-13	0.50	Hema, NH2-2049	Bulk	9.50	4513	9350	
Cereal : Ragi	July-13	Oct-13	0.36	GPU-45, 48, ML-365	Seed	12.50	8650	28750	
Pulses: Redgram	June-13	Jan-14	0.50	BRG-1, BRG-2	Seed	2.20	3500	10500	
Oil seed : Groundnut	June-13	Sept-13	1.60	GBPD-4, TMV-2	Seed	8.98	25625	79920	
Fibre - Cotton	June-13	Jan-14	0.50	Bahubali	Bulk	2.50	5820	10400	

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

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

Sl. No.	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty. (kg)	Cost of inputs	Gross income	
1.	Fish	Gowri, Catla-Catla	Bulk	80	2560.00	8000.00	

13.E. Utilization of hostel facilities

Accommodation available (No. of beds) : 40

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
April 2013	-	-	
May 2013	-	-	
June 2013	38	2	
July 2013	50	2	
August 2013	15	2	
September 2013	-		
October 2013	34	2	
November 2013	26	2	
December 2013	-	-	
January 2014	60	6	
February 2014	39	2	
March 2014	40	6	

13.F. Database management :

S. No.	Database target	Database created
1.	**----**	Managing the data in MS-Office, MS-Excel, MS-Access

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

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	Canara Bank					-	-
With KVK	Canara Bank	S.M.Circle, Shimoga	524	Programme Co-ordinator	32710	-	CNRB 0000524
IFSD	Canara Bank	S.M.Circle, Shimoga	524	Programme Co-ordinator	44649	-	CNRB 0000524

14.B. Utilization of KVK funds during the year 2013-14 (Rs. in lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	5300000	5300000	6016647
2	**Traveling allowances**	160000	160000	175004
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	200000	200000	199999
B	POL, repair of vehicles, tractor and equipments	185000	185000	184998
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	80000	80000	80803
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	70000	70000	69974
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	390000	390000	389959
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	50000	50000	49597
G	Training of extension functionaries	23000	23000	22170
H	Maintenance of buildings	27000	27000	26770
I	Establishment of Soil, Plant & Water Testing Laboratory			
J	Library	5000	5000	4947
TOTAL (A)		**6490000**	**6490000**	**7220868**
B. Non-Recurring Contingencies				
1	**Works**			
2	**Equipments including SWTL & Furniture**			
3	**Vehicle** (Four wheeler/Two wheeler, please specify)			
4	**Library** (Purchase of assets like books & journals)			
TOTAL (B)				
C. REVOLVING FUND				
GRAND TOTAL (A+B+C)		**6490000**	**6490000**	**7220868**

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

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year
April 2011 to March 2012	2,39,581.00	2,01,594.00	1,07,819.00	3,33,356.00
April 2012 to March 2013	3,33,356.00	4,79,919.00	3,34,610.00	4,78,665.00
April 2013 to March 2014	4,78,665.00	8,00,801.00	5,30,339.00	7,49,127.00

15. Details of HRD activities attended by KVK staff during 2013-14

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Dr. B.C. Dhananjaya	Subject Matter Specialist (SS & AC)	International Post Graduate training programme on, "Agri-Green management: Agri-Environmental considerations under Climatic Changes"	Hebrew University of Jerusalem, Israel	29th April to 23rd May, 2013
Dr. Nagarajappa Adivappar	Subject Matter Specialist (Horticulture)	Training programme on Farmers' Field School	Farmers Training Institute, GKVK, Bangalore	24th to 26th June, 2013
Dr. K. R. Shreenivasa	Subject Matter Specialist (Plant Protection)	Training programme on Farmers' Field School	Farmers Training Institute, GKVK, Bangalore	24th to 26th June, 2013
Smt. B.S.Geetha	Programme Assistant (Computer)	Enhancement of Programming Skill development	Staff Training Unit, UAS, Dharwad	18th to 31st August, 2013
Dr. B.C. Dhananjaya	Subject Matter Specialist (Soil Science)	SREP of Shimoga district	KSDA, Shimoga	22nd & 23rd Nov. 2013
Mr. Basavaraja Beerannavar	Subject Matter Specialist (Agril.Extension)	SREP of Shimoga district	KSDA, Shimoga	22nd & 23rd Nov. 2013
Dr. Nagarajappa Adivappar	Subject Matter Specialist (Horticulture)	SREP of Shimoga district	KSDA, Shimoga	22nd & 23rd Nov. 2013
Dr. Ashok M.	Subject Matter Specialist (Animal Science)	SREP of Shimoga district	KSDA, Shimoga	22nd & 23rd Nov. 2013
Dr. T.M.Soumya	Subject Matter Specialist (Agronomy)	Orientation programme for newly recruited technical staff of KVK	Directorate of Extension UAS, Bangalore	26th Dec,to 28th Dec.13
Dr. Nagarajappa Adivappar	Subject Matter Specialist (Horticulture)	National Symposium on Cashew	UAHS, Shimoga	29th to 30th October, 2013
Dr. Nagarajappa Adivappar	Subject Matter Specialist (Horticulture)	Third International Conference on Extension Educational Strategies for sustainable agriculture development - A global prospective	UAS, GKVK, Bangalore	5th to 8th December, 2013
Mr. Basavaraja Beerannavar	Subject Matter Specialist (Agril.Extension)	Third International Conference on Extension Educational Strategies for sustainable agriculture development - A global prospective	UAS, GKVK, Bangalore	5th to 8th December, 2013

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Dr. B.C.Hanumanthaswamy	Programme Co-ordinator	National Conference on Soil Biology and Ecology	UAS, GKVK, Bangalore	19-21st December, 2013
Dr. Nagarajappa Adivappar	Subject Matter Specialist (Horticulture)	National Conference on spices	UAHS, Shimoga	19th to 21st December, 2013
Dr. Nagarajappa Adivappar	Subject Matter Specialist (Horticulture)	Sandalwood based agroforestry models	Institute of Wood Science and Technology, Bangalore	6th to 8th January, 2014
Smt. Sujatha, K.	Assistant	Recovery of mandatory taxes in the various bills submitted to comptrollers' office for payments.	UAHS, Shimoga	10th January, 2014
Smt. B.S.Geetha	Prog.Asst.(Computer)	Recovery of mandatory taxes in the various bills submitted to Comptrollers office for payments.	UAHS, Shimoga	10th January, 2014
Smt. B.S.Geetha	Prog.Asst.(Computer)	Project Planning and Management using Microsoft Project	National institute of Agricultural extension management (MANAGE), Rajendra Nagar, Hyderabad	24th to 28th Feb. 2014

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

SUMMARY FOR 2013-14

I. TECHNOLOGY ASSESSMENT

Summary of technologies assessed under various crops

Thematic areas	Crop	Name of the technology assessed	No. of trials
Integrated Nutrient Management	**Maize**	Assessment of nitrogen scheduling in maize	**3**
Varietal Evaluation	**Turmeric**	Assessment of high yielding turmeric varieties	**2**
Integrated Pest Management			
Integrated Crop Management			
Integrated Disease Management			
Small Scale Income Generation Enterprises			
Weed Management			
Resource Conservation Technology			
Farm Machineries			
Integrated Farming System			
Seed / Plant production			
Value addition			
Drudgery Reduction			
Storage Technique			
Others (Pl. specify)			
Total			**5**

Summary of technologies assessed under livestock

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials
Disease Management	Dairy	Assessment of effective treatment technique for repeat breeding in cross bred cows	20 units
Evaluation of Breeds			
Feed and Fodder management			
Nutrition Management			
Production and Management			
Others (Pl. specify)			
		TOTAL	20 units

Summary of technologies assessed under various enterprises : NIL

Summary of technologies assessed under home science : NIL

II. TECHNOLOGY REFINEMENT

Summary of technologies refined under various crops : NIL

Summary of technologies assessed under refinement of various livestock : NIL

Summary of technologies refined under various enterprises : NIL

Summary of technologies refined under home science : NIL

III. FRONTLINE DEMONSTRATION

Crops

Crop	Thematic area	Name of the technology demonstrated	No. of KVKs	No. of Farmer	Area (ha)	Yield (q/ha)		% change in yield	Other parameters		*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
						Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Cereals Paddy	IPM	• 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%		12	5.0	59	48	22.92	**No. of tillers / hill**		34000	82600	48600	2.43	32000	67200	35200	2.10
									23.50	16.00								
									Weed count mean No. per sqm. (Monocot)									
									1.82	2.74								
									Weed count mean No. per sqm. (Dicot)									
									3.84	3.96								
									Sheath blight (%)									
									22.40	24.50								
									Stem borer (%)									
									8.20	11.40								
									Leaf roller (%)									
									9.60	12.20								
									Bacterial blight (%)									
									10.50	17.00								
									Blast (%)									
									11.50	13.50								

Paddy	Sheath blight management	Spraying of 0.02% Trifloxystrobin & Tebuconazole (NATIVO)		10	4.0	55	46	19.56	Sheath blight incidence (%)		28000	77000	49000	2.75	26000	64400	38400	2.48
									20.50	28.00								
Ragi	ICM	Integrated crop management in Ragi	-	8	3.2	27.44	24.50	12.00			11800	49392	37592	4.19	11250	44100	32850	3.92
Millets																		
Oilseeds Groundnut	ICM	• Demonstration of groundnut variety-GPBD 4 • Application of lime based on Soil test • Seed treatment with PSB and Trichoderma • Foliar nutrition of Boron (0.2 to 0.3 %)		5	2.0	11.23	9.50	18.21	Shelling percentage		21250	74118	52868	3.49	19550	62700	43200	3.21
									70.2	68.8								
Sunflower	ICM	• Demonstration of sun flower hybrid, KBSH 53 • Seed treatment with Imidacloprid @5g/kg • Soil application of *Trichoderma @ 4kg/ac* • Sulphur nutrition @ 20 Kg/ha as SSP • Foliar nutrition of Boron (0.2 to 0.3 %)		12	4.8	In progress												
Pulses Green Gram	Varietal evaluation	Demonstration of Green Gram variety KKM-3 for rice fallows.		7	2.4	In progress												

Vegetables French Bean	Varietal introduction	Photoperiod insensitive, stringless, round and high yielding French bean variety – Arka Sharath		4	2.0	255.5	224.5	240	Duration (days) 75 | 80 Fiber content Fiber less | Less fiber Average Pod Weight (g) 10.58 | 7.94 Average Pod length (cm) 17.12 | 12.31 Yellow vein Mosaic (%) 0.01 | 0.1	72840	264000	191160	3.62	64225	190200	125975	2.96
Tomato	Varietal evaluation	High yielding and triple disease tolerant F1 hybrid tomato – Arka Rakshak		4	2.0	781.50	671.40	726.45	Duration (days) 140 | 130-135 Disease resistance Resistant to 3 diseases viz., Leaf curl virus, bacterial wilt, early blight | Not Resistant Fruit Weight (g) 90 | 80-90 Keeping quality (days) 8-10 | 7-8	110890	435870	324988	3.93	128525	388872	260347	3.02
Flower Gaillardia	Varietal introduction	High yielding garland purpose flower crop Gaillardia		4	2.0	125.00	112.50	11.11	Keeping quality of flowers (hr) 48 | 42 Flower colour Yellow | Yellow and Pink	72415	250000	177585	3.45	78980	225000	146020	2.84

Ornamental																		
Fruit Pineapple	Management of heart rot disease	•Soil application of Neem enriched Trichoderma @ 20 gm/hill + Sucker treatment with Metalaxyl MZ @ 0.3% •Drenching with Metalaxyl MZ when disease is noticed		5	2.0	**In progress**												
Fibres like Cotton																		
Spices and condiments Ginger	Management of shoot borer	Spraying of insecticide, Lambda Cyahalothrin @ 1.0 ml/L.		14	5.0	282	228	23.68	Shoot borer incidence (%) 12.5	23.00	336000	846000	510000	2.52	312000	684000	372000	2.19
Commercial																		
Medicinal and aromatic																		
Fodder																		
South African tall- maize	Fodder production	1) Demonstration of leguminous and non-leguminous fodder varieties – South African Tall Maize – Napier Hybrid CO4		5	2	183.5	140 (CO 3 and local sorghum)	31.07	IN PROGRESS (multi cut sorghum and Napier hybrid yield Taken for only three cuttings and Lucerne crop stand in the farmers field is yet to be harvested)									
Multicut sorghum						790												
Napier Hybrid						805												
Cowpea						118												

Lucerne		– Multicut Sorghum COFS29 – Cowpea KBC-2 – Lucerne 2) Scientific feeding of different fodders and concentrate feed.				Crop sown during summer												
Plantation Arecanut	Management of Root grub	Application of neem cake and Imidachloprid @ 0.5 ml/ltr.		6	5.0	10.0	8.0	25.0	No. of grubs / plant		63000	200000	137000	3.17	54000	160000	106000	2.96
									2.5	7.0								
Arecanut	Management of inflorescence die back and caterpillar	Carbendazim + Mancozeb (SAAF) – 2 gm/ltr. Chloropyriphos – 2 ml/ltr.		10	4.0	9.25	7.5	23.33	Dieback incidence (%)		60000	185000	125000	3.08	52000	150000	98000	2.88
									4.5	16								
									Inflorescence caterpillar incidence (%)									
									6	17.5								
Arecanut	Management of snails	Preparation and broadcasting of Poisonbait; 10 kg. Rice bran, 4 kg. jaggery, 100 gm. Methomyl		12	5.0	9.5	7.75	22.58	Snail control (%)		62000	190000	128000	3.06	53000	155000	102000	2.92
									71.05	43.83								
Fibre																		
Others (pl.specify)																		
	Total																	

* Economics is worked out based on total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST

Livestock

Category	Thematic area	Name of the technology demonstrated	No. of KVKs	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
						Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Dairy	Increasing the milk fat percentage	Feeding by pass fat to cross bred cows during early lactation		20	13	Milk fat (%)		60	Milk Yield (L/day/animal)		26496	35802	9306	1.40	24350	27000	2650	1.10
						4%	2.5%		15.3	15.00								
									Conceive percentage									
									73.0	65.0								
Poultry	Increase in poultry production in rural areas	Demonstration of Swarnadhara bird in backyard poultry		5	5	8^{th} week body weight (g)		75 %	Mortality (%) (up to 8^{th} Week)		In progress							
						1150 g	650 g											
Rabbitry																		
Pigerry																		
Sheep and goat																		
Duckery																		
Others (pl.specify)																		
		Total																

* Economics is worked out based on total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST

Fisheries : NIL

Other enterprises : NIL

Women empowerment : NIL

Farm implements and machinery : NIL

Other enterprises : NIL

Demonstration details on crop hybrids : NIL

IV. Training Programme

Training for Farmers and Farm Women including sponsored training programmes (On campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming	3	58		58	13		13	71		71
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management	7	293	27	320	98	3	101	391	30	421
Soil and Water Conservation										
Integrated Nutrient Management										

Production of organic inputs										
Others (pl.specify)	2	57	4	61	9		9	66	4	70
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	1	49	1	50	17		17	66	1	67
Off-season vegetables										
Nursery raising	1	26		26	12		12	38		38
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl.specify)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants	2	32	6	38	17	2	19	49	8	57
Others (pl.specify)										
d) Plantation crops										
Production and Management technology	1	80	4	84	36		36	116	4	120
Processing and value addition										

Others (pl.specify)										
e) Tuber crops										
Production and Management technology	2	26	36	62	12	26	38	38	62	100
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology	1	6		6	2	1	3	8	1	9
Processing and value addition										
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management	1	39	3	42	10		10	49	3	52
Integrated water management										
Integrated nutrient management	1	35		35	10		10	45		45
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops	1	7		7	3		3	10		10
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
Livestock Production and Management										
Dairy Management	3	52	20	72	50	15	65	102	35	137
Poultry Management	1	9	1	10	4		4	13	1	14
Piggery Management										
Rabbit Management										
Animal Nutrition Management	1	31		31	25		25	56		56

Animal Disease Management	1	15	6	21	9	2	11	24	8	32
Feed and Fodder technology	4	107	9	116	102	43	145	209	52	261
Production of quality animal products										
Others (pl.specify)	1	39		39	14	3	17	53	3	56
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	1	15	4	19	5	3	8	20	7	27
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management	1	12		12	10		10	22		22

Integrated Disease Management	1	9		9	4		4	13		13
Bio-control of pests and diseases	1	10	3	13	15	7	22	25	10	35
Production of bio control agents and bio pesticides										
Others (pl.specify)	1	70	10	80	20	4	24	90	14	104
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										

Production of Fish feed										
Mushroom production										
Apiculture	1	6	15	21	3	7	10	9	22	31
Others (pl.specify)										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs	2	13		13	53	6	59	66	6	72
Mobilization of social capital										
Entrepreneurial development of farmers/youths	1	18	7	25	7	4	11	25	11	36
Others (pl.specify)	2	59	14	73	28	6	34	87	20	107
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	**45**	**1173**	**170**	**1343**	**588**	**132**	**720**	**1761**	**302**	**2063**

Training for Farmers and Farm Women including sponsored training programmes (Off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										

Nursery management										
Integrated Crop Management										
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs	3	40		40	27	2	29	67	2	69
Others (pl.specify)										
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	1	28		28	11		11	39		39
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl.specify)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit	1	10	5	15	7	3	10	17	8	25
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										

Others (pl.specify)										
d) Plantation crops										
Production and Management technology	2	42	11	53				42	11	53
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology	1	12	2	14	10	2	12	22	4	26
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management										
Integrated water management										
Integrated nutrient management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)	1	4	36	40		20	20	4	56	60
Livestock Production and Management										
Dairy Management	1	32	2	34	4		4	36	2	38

Poultry Management	2	24		24	2		2	26		26
Piggery Management										
Rabbit Management										
Animal Nutrition Management	1	6	2	8	22	8	30	28	10	38
Animal Disease Management										
Feed and Fodder technology										
Production of quality animal products										
Others (pl.specify)										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										

Post Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management	4	69	16	85	19	9	28	88	25	113
Integrated Disease Management										
Bio-control of pests and diseases	1	31	-	31	3	-	3	34	-	34
Production of bio control agents and bio pesticides										
Others (pl.specify)										
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										

Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production										
Apiculture										
Others (pl.specify)										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs	1	-	67	67	-	15	15	-	82	82
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify) Coconut Palm climbing – skill development training	3	43	2	45	13	2	15	56	4	60
TOTAL	**22**	**341**	**143**	**484**	**118**	**61**	**179**	**459**	**204**	**663**

Training for Rural Youths including sponsored training programmes (on campus) : NIL

Training for Rural Youths including sponsored training programmes (off campus) : NIL

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	1	15	25	40	-	-	-	15	25	40
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs	1	34	5	39	-	-	-	34	5	39
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
Modified guidelines of ATMA	1	27	3	30	3		3	30	3	33
Organic farming	1	34	5	39				34	5	39
Use of trichoderma in forest nursery	1	30		30	10		10	40		40
Modified guidelines of ATMA	1	27	3	30	8		8	35	3	38
Advanced production technologies in fruit and spice crops	1	19	1	20				19	1	20
Model Kitchen garden	1	9	31	40				9	31	40
Scientist and Extension worker interface in arecanut and coconut	1	48	8	56				48	8	56
Programme planning	1	13	16	29				13	16	29
Documentation of success stories	1	32		32				32		32
Total	11	288	97	385	21	0	21	309	97	406

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
Establishment and maintenance of nutritional gardens	1	12	8	20	-	-	-	12	8	20
TOTAL	**1**	**12**	**8**	**20**	**-**	**-**	**-**	**12**	**8**	**20**

Sponsored training programmes

S. No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Increasing production and productivity of crops										
1.b.	Commercial production of vegetables										
2	**Production and value addition**										
2.a.	Fruit Plants										
2.b.	Ornamental plants										
2.c.	Spices crops										
3.	**Soil health and fertility management**										
4	**Production of Inputs at site**										
5	**Methods of protective cultivation**										
6	**Others (pl.specify)**										
7	**Post harvest technology and value addition**										
7.a.	Processing and value addition										
7.b.	Others (pl.specify)										
8	**Farm machinery**										
8.a.	Farm machinery, tools and implements										
8.b.	Others (pl.specify)										
9.	**Livestock and fisheries**										
10	**Livestock production and management**										
10.a.	Animal Nutrition Management										
10.b.	Animal Disease Management										
10.c	Fisheries Nutrition										
10.d	Fisheries Management										
10.e.	Others (pl.specify)										
11.	**Home Science**										

11.a.	Household nutritional security										
11.b.	Economic empowerment of women										
11.c.	Drudgery reduction of women										
11.d.	Others (pl.specify)										
12	**Agricultural Extension**										
12.a.	Capacity Building and Group Dynamics										
12.b.	Others (Pl.specify)										
	Protection of plant varieties and farmers' right act-2001	1	50	20	70	17	13	30	67	33	100
	Total	**1**	**50**	**20**	**70**	**17**	**13**	**30**	**67**	**33**	**100**

Details of Vocational Training Programmes carried out for rural youth

S. No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Commercial floriculture										
1.b.	Commercial fruit production										
1.c.	Commercial vegetable production										
1.d.	Integrated crop management										
1.e.	Organic farming										
1.f.	Others (Pl.specify)										
2	**Post harvest technology and value addition**										
2.a.	Value addition										
2.b.	Others (Pl.specify)										
3.	**Livestock and fisheries**										
3.a.	Dairy farming	1	34	3	37	20	-	20	54	23	77
3.b.	Composite fish culture										
3.c.	Sheep and goat rearing										
3.d.	Piggery										
3.e.	Poultry farming										

3.f.	Others (pl.specify)										
4.	**Income generation activities**										
4.a.	Vermi-composting										
4.b.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.										
4.c.	Repair and maintenance of farm machinery and implements										
4.d.	Rural Crafts										
4.e.	Seed production										
4.f.	Sericulture										
4.g.	Mushroom cultivation										
4.h.	Nursery, grafting etc.										
4.i.	Tailoring, stitching, embroidery, dying etc.										
4.j.	Agril. para-workers, para-vet training										
4.k.	Others (pl.specify)										
5	**Agricultural Extension**										
5.a.	Capacity building and group dynamics										
5.b.	Others (pl.specify)										
	Coconut palm climbing – skill development training	5	63	10	73	21	6	27	84	16	100
	Grand Total	**6**	**97**	**13**	**110**	**41**	**6**	**47**	**138**	**39**	**177**

V. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	81	502		502
Diagnostic visits	10	121	24	145
Field Day	10	515	4	519
Group discussions	3	59		59
Kisan Ghosthi	1			
Film Show	13	618		618
Self -help groups				
Kisan Mela	3			
Exhibition	3	470		470
Scientists' visit to farmers field	72	304		304
Plant/animal health camps				
Farm Science Club				
Ex-trainees Sammelan				
Farmers' seminar/workshop	2	217		217
Method Demonstrations	4	62		62
Celebration of important days	5	1275		1275
Special day celebration				
Exposure visits	4	200	4	204
Others (pl.specify)				
Foot and Mouth Disease awareness campaign	2	92	2	94
SMS Messages	100	8316	40	8356
TOTAL	**313**	**12751**	**10**	**12825**

Details of other extension programmes

Particulars	Number
Electronic Media	-
Extension Literature	12
News Letter	4
News paper coverage	78
Technical Articles	4
Technical Bulletins	5
Technical Reports	57
Radio Talks	8
TV Talks	5
Animal health camps (Number of animals treated)	
Others (Pl.specify)	
Abstracts	18
Awareness Campaign (Foot and Mouth Disease Management in Livestock)	2
TOTAL	**193**

VI. PRODUCTION OF SEED/PLANTING MATERIAL

Production of seeds by the KVKs

Crop category	Name of the crop	Name of the variety	Quantity of seed (q)	Value (Rs)	Number of farmers
Cereals	Ragi	ML-365, GPU-45, GPU-48	12.50	28750.00	135
Oilseeds	Groundnut	GPBD-4, TMV-2	8.98	79920.00	32
Pulses	Redgram	BRG-1	1.90	9500.00	38
Commercial crops					
Vegetables					
Flower crops					
Spices					
Fodder crop seeds					
Fiber crops					
Forest Species					
Others					
TOTAL			**23.38**	**118170.00**	**205**

Production of planting materials by the KVKs

Crop category	Name of the crop	Name of the variety	Number	Value (Rs.)	Number of farmers
Commercial					
Vegetable seedlings	Drumstick	PKM-1, Bhagya	29413	294130.00	52
	Tomato		3506	706.00	25
Fruits	Papaya	Red Lady	23308	279691.00	59
	Lime	Seedling origin	93	930.00	28
	Mango	Alphanso	2	80.00	1
Ornamental plants					
Medicinal and Aromatic					
Plantation					
Spices	Curry leaf	Suvasini	904	9040.00	62
Tuber					
Fodder crop saplings					
Forest Species					
Others					
Flower	Chrysanthemum	Dundi	237	2370.00	25
Total			**57463**	**586947.00**	**252**

Production of Bio-Products : NIL

Production of livestock and related enterprise materials :

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
Poultry				
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl.specify)				
Fisheries				
Fingerlings				
Others (Pl. specify)				
Fish	Gowri, Catla-Catla	**80**	8000.00	12
TOTAL		**80**	8000.00	12

VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS 2013-14

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	451	186	186	13,530.00
Water Samples	155			9,300.00
Plant samples	-	-	-	-
Manure samples	08	03	03	960.00
Others (specify)	01	01	01	100.00
TOTAL	**615**	**190**	**190**	**23,890.00**

VIII. SCIENTIFIC ADVISORY COMMITTEE

Number of SACs conducted : NIL

IX. NEWSLETTER

Number of issues of newsletter published : 4 Nos.

X. RESEARCH PAPER PUBLISHED : NIL

Number of research paper published :

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

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