PART I - GENERALINFORMATION 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, HIREHALLI, TUMKUR-572 168	0816-2243792	0816-2243214	**iihrkvk@gmail.com**	**www.iihr.ernet.in**

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

Address	Telephone		E mail	Web Address
	Office	FAX		
INDIAN INSTITUTE OF HORTICULTURAL RESEARCH Hessaraghatta LakePost, Bangalore-560089	080-28466420	080-28466291	**director@iihr.ernet.in, iihrdirector@gmail.com**	**www.iihr.ernet.in**

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. L.B. NAIK	080-25449212	9449816584	

1.4. Year of sanction: 28th, March 2009

1.5. **Staff Position (as 31st March 2013)**

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 Co-ordinator	Dr. L.B.Naik	Principal Scientist &PC	M	Agronomy	Ph.D. Agronomy					
2.	SMS	Sri K.N. Jagadish	SMS (AgrilExtn.)	M	Agril.Extn.	M.Sc. Agriculture	15600 - 39100+5400	22950	17.11.2009	Permanent	OBC
3.	SMS	Sri P.R.Ramesh	SMS (Soil Science)	M	Soil Science	M.Sc. Agriculture	15600 - 39100+5400	22950	17.11.2009	Permanent	OBC
4.	SMS	Sri Prashanth J.M	SMS (Horticulture)	M	Horticulture	M.Sc. Agri Horticulture	15600 - 39100+5400	22950	24.11.2009	Permanent	Others
5.	SMS	Sri B. HanumantheGowda	SMS (Plant Protection)	M	Plant Protection	M.Sc. Agriculture	15600 - 39100+5400	22950	02.12.2009	Permanent	Others
6.	SMS	Ms. RadhaR.Banakar	SMS (Home Science)	F	Home Science	M.Sc. Home Science	15600 - 39100+5400	22950	05.12.2009	Permanent	Others
7.	SMS	Dr. Somashekhar	SMS (Plant Breeding)	M	Plant Breeding	Ph.D. Agriculture	15600 - 39000+5400	22950	07.12.2009	Permanent	Others
8.	Programme Assistant (Lab Tech.)/T-4	Mr Shashidhara K N	Programme Assistant (Lab Tech.)/T-4	M	Crop Physiology	M.Sc Agri	9300 - 34800+4200	13500	17.11.2012	Permanent	SC
9.	Programme Assistant (Computer)/ T-4	Ms. Jyoti Appu Naik	Programme Assistant (Computer)/ T-4	F	Information Science	B.E.	9300 - 34800+4200	14760	01.10.2009	Permanent	PH
10.	Prog .Assistant/ Farm Manager/T-4	Vacant	Farm Manager				9300 - 34800+4200				
11.	Assistant	Vacant	Assistant				9300 - 34800+4200				
12.	Jr.Stenographer	Smt.VedaKurnalli	Jr.Stenographer	F	Stenographer	DCP	5200 - 20200+2400	10520	17.02.2010	Permanent	Others
13.	Driver	Sri M.H.Ningappa	Driver	M	Driver	S.S.L.C.	5200 - 20200+2000	9260	30.12.2009	Permanent	Others
14.	Driver	Sri Hemanth Kumar	Driver	M	Driver	S.S.L.C	5200 - 20200+2000	8990	04.01.2010	Permanent	OBC
15.	Supporting staff	Sri P.Narayanappa	Supporting Staff	M	Supporting Staff	7th Standard	5200 - 20200+1800	9370	24.07.2009	Permanent	SC
16.	Supporting staff	Sri G.Manjanna	Supporting Staff	M	Supporting Staff	S.S.L.C.	5200 - 20200+1800	7210	1.11.2011	Permanent	SC

1.6. Total land with KVK (in ha.) : 16.08 ha.

Sl. No.	Item	Area (ha)
1	Under Buildings	1.6
2.	Under Demonstration Units	3.28
3.	Under Crops	10.70
4.	Orchard/Agro-forestry	0.50
5.	Others	-

1.7. Infrastructural Development:

A) Buildings

Sl. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	20.10.2012		-	-	-	
2.	Farmers Hostel	ICAR	20.10.2012	-	-	-	-	
3.	Staff Quarters	-	-					
	1							
	2							
	3							
4.	Demonstration Units							
a	Areca nut plate making	IIHR	10.11.2012	10 sq.mt	0.25			
b	Coconut Shredder	IIHR	10.11.2012	10 sq.mt	0.25			

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total Kms. Run	Present status
Bolero Diesel Jeep	2009	596783	85900	Good condition
Motor Cycle	2010	52658	22812	
Honda – Aviator	2010	46025	12598	
Power Tiller	2010	1 42400	840hrs	
Tractor	2011	560000	522 hrs	

C) Equipments &AV Aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Fax Machine	2010	21381	Good condition
Xerox Machine	2010	67262	
Camera Nikon – Digital	2010	24950	
Computer with Accessories	2010	49900	
White Board with Stand	2010	1500	
LCD Projector with Accessories	2010	100000	

1.8. Details SAC meeting conducted in 2012-13

Sl.No.	Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
1.	31.8.2012	25	08	Schemes like NHM, RKVY projects can be implemented effectively for farmers progress.(Dr. A.S.Sidhu , Director,IIHR,Bangalore)	Quality seeds are being produced & processed. These being sold in KVK at nominal prices
2.				Emphasized should be given on cluster basis for implementation of the FLD in the farmers field .(Dr V.S.Reddy , Principal Scientist, ZPD, Bangalore)	During ensuing year FLD's & OFT's are being conducted in cluster villages in each taluk.
3.				Farmer expressed about the higher cost fixed by KVK for the products like *Trichoderma* & *Pseudomonas* (Prabhakar , Farmer, SAC Member)	New product has been released at IIHR .(Arka Microbial Consortium) at affordable price of Rs 75/kg.
4.				Soil testing is not being done and suggested the Mobile Testing Unit at least for testing major Nutrients especially whenever problematic soils prevails.(Deputy Director of Sericulture Department)	New Soil Testing & Leaf Tissue Analysis Lab is being setup & will be operational at the earliest.
5.				Drip irrigation is being given major emphasis , in spite of this , scientifically Drip Irrigation is not being utilized ,for this he requested chalk out some programmes for scientific use of Drip Irrigation system.(Rammurthy**,** AWARE NGO)	Under CHD Programme,KVK SMS has been actively involved for implementation of programmes.
6.				Importance of Small Scale Industries for getting employment and also income, especially during drought situation(Annappa, Farmer)	New FLD's being proposed for generating income & self employment.
7.				Comprehensive Horticulture Development programme is being implemented through state Department of Horticulture. (Mr.N.Kumar Member ICAR)	All SMS's are actively involved in CHD Programme.
8.				• Impact analysis should be carried out for training programmes & method demonstrations to be included during training programmes. • Neem Seeds are available and can be utilized for the	• OFF Campus training programmes are being conducted. • Community based organizations will be set up at resource based village.

				Bio pesticide preparation encouraging & Mobilizing through community based organization.(Renu Mukunad , Progressive Farmer)	
9.				SRI method of Paddy cultivation in Tumkur needs to be promoted & group approach for various crop cultivation to tackle the labour problem (Veerabhadra ,DDM NABARD & Lavakumar,)	Aerobic Paddy Cultivation being demonstrated under FLD programme
10.				Suggested to give the generic name instead of the trade name of various Agriculture Chemicals. So that farmers also having choice to select his trade of interest. (Mr.N.Kumar**,** Member ICAR)	Recommendations to farmers are being given in generic name.
11.				Green peas - Magadi local is highly remunerative during festival & marriage season. It is susceptible to powdery mildew which needs to be addressed for new variety of peas with similar characteristics & resistant to powdery mildew.(Gowaramma , Farmer ,Pemmanahalli, SAC Member)	The same message has been conveyed to concerned breeder of IIHR, Bangalore.
12.				• Livestock components would have been included and also stressed integrated programmes has to be implemented rather than Horticulture. • Model Farmer has to be developed for dissemination of technologies. • In KVK's Farmers has to be made aware of all the Govt. sponsored schemes. • In OFT's and FLD's suggested to take the technologies of the other Agriculture related institutes rather than IIHR. • Programmes on Value Addition are to be included in the next academic programme.	• During implementation of IFS Programme components like Aquaculture (Fishery) as well as many agricultural field crops demonstrations are being conducted. • Techno agents are identified for the dissemination of technology. • Publication will be brought in collaboration with line departments. • Apart from IIHR technologies many technologies like new varieties & improved practices of different agricultural crops are being demonstrated.(Ragi ML-365, MAS-26, BRG-4 etc.) • New FLD's have been

				• District Officers of Animal Husbandry Department could be contacted and necessary suggestion may be taken to implement the programmes related to Animal Husbandry.(**Dr. R.S. Kulkarni** , Director of Extension , UAS, Bangalore)	proposed. • Awareness Camps will be conducted in collaboration with the Animal Husbandry Department.
				• Tumkur District is receiving low rainfall, animal husbandry could be the potential & assured source of income rather than crop husbandry for the Farmer. • In Sira promotion of Goat and Sheep Rearing can be encouraged. For implementing the Livestock Demonstration programme, KUVASF will come forward for implementing the technical programme for the KVK. • Joint Liability Groups approach could be a best option for promotion of rearing of animals like Goat, Sheep etc in the District. • On Cost basis: Soil and Water Testing is being done at the Hebbal Campus for identifying nutrient deficiency. This facility could be utilized by the farmers of the Tumkur District. (**Dr. K.N.Prabhudeva:** Director of Extension, KUVASF, Bidar)	• Under IFS Programme Animal Husbandry Component will be implemented. • Process was initiated in consultation with Veterinary Department. • Process was initiated in consultation with Veterinary Department. • The samples received by farmers of Tumkur district were analyzed through IIHR,Bangalore
				• Demonstration of all kinds of crops & Livestock Component can be included in the programme. • NBSS & LUP map could be utilized in broad to know the Soil Health Status of various parts of the district. • IFS Model can be developed in each Taluk, where a	• KVK instructional farm presently having 52 demonstrations of crops & enterprises. • The services of NBSS & LUP was utilized for mapping of soils of the district. • Two IFS models were made in Tumkur &

				Model Farmer has to be in touch with the KVK, every year, fund will be released and programmes can be implemented. • Bigger projects funded by external agencies may hamper the regular activities of the KVK. So based on the availability of man power, various projects can be accepted and implemented by the KVK. (**Dr V.S.Reddy** , Principal Scientist, ZPD, Bangalore)	Koratagere taluk • Due care was taken during the implementation

PART II - DETAILS OF DISTRICT

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

Sl. No.	Farming system/enterprise
1.	Dry Land Agriculture
2.	Dry Land Horticulture
3.	Dairy

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

Sl. No.	Agro-climatic Zone	Characteristics
1.	Central Dry Zone (Zone IV) Taluks: Koratgere, Madhugiri, Sira, Pavagada	• This zone covers an area of 4.74 Lakhs hectare • The Annual rainfall ranges from 454 and 718 mm, of which more than 55% received in Kharif season. • The elevation ranges from 639 and 1197m • Soils are red sandy loams in major areas, shallow to deep black in remaining areas. • The major crops grown are Ragi, Paddy,Redgram, Groundnut, Sunflower,Coconut, Arecanut, Mango, Banana, Tomato, Brinjal, Beans, Peas, Aster, Dairy
2.	Eastern Dry Zone (Zone V) Taluk: Tumkur	• This zone covers an area of 1.04 Lakh hectares. • The Annual rainfall ranges from 679 and 889 mm, of which more than 50% received in Kharif season. • The elevation is 818 m from sea level. • Soils are red loamy in major areas, shallow to deep black in remaining areas. • The major crops grown are Groundnut, Maize, Paddy, Ragi, Redgram, Tomato, Brinjal, Mango,Sapota, Arecanut,Coconut, Aster,Dairy

Sl. No.	Agro Ecological Situation	Characteristics
1.	Agro eco sub region-1	Hot moist, semiarid ESR with LGP 150-180 days (LGP-length of growing period)

2.3 Soil type/s

Sl. No.	Soil Type	Characteristics	Area in ha
1.	Red Sandy Loam	• Colour given by haematites or Yellow limonites • Poor in soil fertility • Low base exchange capacity • Deficient in organic matter • Low water holding capacity • The pH ranges from 5.5.-6.5 • Low cohesion, plasticity & swelling	6, 15,230
2.	Red Loam	• Colour given by oxides of iron • Poor in soil fertility • Low- medium base exchange capacity • Deficient in organic matter • Low water holding capacity • The pH ranges from slightly acidic or neutral • Low cohesion , plasticity & swelling	2, 04,093

3.	Shallow Black Soil	• Colour varying from dark brown to dark yellowish brown • Soil with more than 35 per cent clay and crack when dry. • High soil fertility • High base exchange capacity • High organic matter content • High water holding capacity • The pH ranges from 7.5 -8.5 • High cohesion, plasticity & swelling	2, 45,432

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

Sl. No.	Crop	Area (ha)	Production (Qtl.)	Productivity (Qtl /ha)
1.	Paddy	33508	1389241	41.46
2.	Ragi	192009	3828659	19.94
3.	Jowar	756	5503	7.28
4.	Maize	25026	630154	25.18
5.	Redgram	10192	83258	6.15
6.	Ground nut	93028	801421	5.60
7.	Sunflower	12092	55865	4.62
8.	Cotton	738	4087 bales	336 kg lint
9.	Banana	3907	129712 ton	33.2 ton
10.	Tomato	673	51821 ton	77 ton
11.	Brinjal	356	13884 ton	39 ton
12.	Tamarind	2278	21868 ton	9.6 ton
13.	Chilli	3199	37428 ton	11.7 ton
14.	Coconut	122469	13174.4 ton	46Nuts/palm/yr
15.	Arecanut	19044	26040 ton	10.62q/ha/yr

***Source: Dept of Agriculture, Tumkur &Tumkur at a Glance 2010-11**

2.5. Weather data

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
April 12	28.0	35.0	19.5	75.7
May 12	16.05	34.5	18.9	74.5
June 12	18.1	29.2	18.5	74.4
July 12	43.1	26.0	18.2	76.3
August 12	113.75	27.3	18.8	70.2
September 12	58.0	30.2	20.6	66.4
October 12	55.6	32.8	22.7	63.6
November 12	104.6	34.5	25.2	60.7
December 12	7.5	32.5	21.4	70.3
January 13	0	31.2	18.6	79.5
February 13	3.5	30.2	18.4	79.7
March 13	2.0	33.5	19.2	79.3
Total	**450.2**	**376.9**	**240**	**870.6**

*** Source: Automatic weather station at Hirehalli 2012-13 (NICRA, CRIDA)**

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

Category	Population	Production(Milk) 000 tons	Productivity(lt/animals)
Cattle			
Crossbred	63704	54	5.5745
Indigenous	440888	56	2.0671
Buffalo	217528	68	2.5382
Sheep		**Meat 000 tons**	
Crossbred	9		--
Indigenous	884643	17.31	--
Goats	322373	16.60	--
Pigs			--
Crossbred	905	0.23	--
Indigenous	12411		--
Rabbits	560	NA	--
Poultry	Egg production in Lakhs		
Hens	6,42,382	--	--
Desi		273	--
Improved		71	--
Category	**Area**	**Production**	**Productivity**
Inland(Fishes)	1306 ha	16,000 metric ton	650-700 kg/ha

***Source: Dept of Animal husbandry and veterinary 2010-11**

2.7 :District Profile has been updated for the 2012-13 Yes / No**: Yes**

2.8 : OPERATIONAL AREA DETAILS FOR THE YEAR 2012-13

Sl.No.	Taluk	Name of the Block	Name of the Village	How long the Village is covered under Operational Area of the KVK (specify the years)	Major Crops & Enterprises	Major Problem Identified	Identified Thrust Areas
1.	Tumkur	Udigere	Haralur, Kesaramadu, Beemasandra, Bairsandra, Gollahalli, Neralpur, Pemmanahalli, Sangapura, Doddathimmnapalya, Chikahalli, Beeranakallu, G.H.Palya&Belagumba	Two Year Six Months	Groundnut, Maize, Paddy, Ragi, Redgram, Tomato, Brinjal, Mango,Sapota, Arecanut, Coconut, Aster,Dairy	1. Use of local varieties and low yield. 2. No seed treatment 3.Poor soil and nutrient management 4. Tikka disease, root grub, Red and hairy caterpillar in Groundnut. 5. Zinc (Zn),Iron (Fe)deficiency in Maize and Zn in Paddy 6. Pod borer and sterile mosaic disease in red gram. 7.Shoot and fruit Borer in Brinjal 8. Powdery mildew and hoppers in Mango. 9. Lack of skill in nursery technique & management, 10.Lack of knowledge about importance of soil & water testing, 11. Lack of knowledge in pre and post harvest technology management. 12. Lack of knowledge for income generating activities, malnutrition and unhygienic practices. 13.Dropping and splitting of areca nuts	1.Popularization of HYV / hybrids 2. Seed production techniques in vegetables and field crops 3.Integrated Nutrient Management and Soil test based fertilizer application 4.Integrated Pest & Disease Management 5.Propagation techniques in fruits and vegetables 6.Income generating activities, 7.Value added products 8.Nutrition education and hygiene 9. Post harvest technology in vegetables and fruits

2.	Koratagere	Kymanhalli, Thovinakere	Chikvalli, Kymanhalli, Bidlot, Kodlahalli, D.Naganahalli, Chatnahalli,	Two Year Six Months	Maize, Paddy, Ragi, Redgram, Tomato, Sunflower, Banana, Groundnut, Mango, Sapota, Arecanut, Coconut, Aster, Dairy, Frenchbean, Brinjal & Marigold.	1. Use of local varieties and low yield. 2. No seed treatment 3. Poor soil and nutrient management 4. Tikka disease, root grub, Red and hairy caterpillar in groundnut. 5. Zn, Fe deficiency in Maize and Zinc in Paddy 6. Pod borer, and sterile mosaic disease in red gram. 7. Flower and Fruit dropping, Powdery mildew and hoppers in Mango . 8, Low yield in Banana 9. Dropping and splitting of areca nuts. 10. Lack of skill in nursery technique & management 11.lack of knowledge about importance of soil & water testing, 12.Lack of knowledge regarding pre and post harvest technology management. 13. Lack of knowledge in income generating activities, malnutrition and unhygienic practices. 14.Drudgery 15. Shoot and fruit Borer, Bacterial blight in Brinjal.	1.Popularization of HYV / hybrids 2.Seed Production Techniques in vegetables and field crops 3. Bud necrosis in sun flower 4. Management of saline soil in Paddy. 5.Integrated Nutrient Management and Soil test based fertilizer application 6.Integrated Pest & disease Management 7.Propagation techniques and post harvest in fruits and vegetables 8.Income generating activities, 9.Value added products 10.Nutrition education and hygiene 11.Drudgery reduction
3.	Madhugiri	Badavanhalli,	Badavanhalli,Siddapur, Siridragallu,Vadderahalli				

4.	Pavagada	Shilapur	Kotgudda, Shilapur, MugadalBetta,Arkyatanhalli	Two Year Six Months	Groundnut, Sunflower, Ragi, Maize, Paddy, Redgram, Tomato, Brinjal & Dairy,	1. Use of local varieties and low yield. 2. Moisture stress 3. No seed treatment 4. Poor soil and nutrient management 5. Tikka disease, collar rot, root grub in Groundnut. 6. Insufficient water for paddy cultivation 7. Pod borer and sterile mosaic disease in red gram. 8. Shoot and fruit Borer Bacterial blight in Brinjal. 9.Lack of knowledge about importance of soil & water testing, 10. Lack of knowledge in pre and post harvest technology management. 11. Lack of knowledge for income generating activities, malnutrition and unhygienic practices. 12.Drudgery	1. Popularization of HYV / hybrids 2. Soil and water conservation 3. Seed Production Techniques in field crops 3. Management of Bud necrosis in sun flower 4.Aerobic paddy cultivation 4.Integrated Nutrient Management and Soil test based fertilizer application 5.Integrated Pest & disease Management 6.Income generating activities, 8.Value added Products 9.Nutrition education and hygiene 10.Drudgery reduction.

5.	Sira	Kataveeranahalli	Kataveeranahalli, Mudimadu, Chikkanahalli, Veerapura and Kamagondanahalli, Bevanahalli, Honnenahalli	Two Year Six Months	Groundnut, Maize, Paddy, Ragi, Cotton, Redgram, Vegetables Mango, Sapota, Arecanut, Coconut, Aster, Dairy & Brinjal	1. Use of local varieties and low yield. 2.No seed treatment 3.Poor soil and nutrient management 4. Tikka disease, root grub, Red and hairy caterpillar in Groundnut. 5. Zn, Fe deficiency in Maize and Zn in Paddy 6. Pod borer, and sterile mosaic disease in red gram. 7. Powdery mildew and hoppers in Mango. 8. Lack of skill in nursery technique & management, 9.Lack of knowledge about importance of soil & water testing, 10. Lack of knowledge regarding pre and post harvest technology management. 11. Lack of knowledge in income generating activities, malnutrition and unhygienic practices. 12.Dropping and splitting of areca nuts 13. Shoot and fruit Borer in Brinjal. 14. Leaf reddening, flower drop, Black arm, Sucking pest and Bollworms problem in cotton	1. Popularization of HYV / hybrids 2. Seed Production Techniques in vegetables and field crops 3.Integrated Nutrient Management and Soil test based fertilizer application 4.Integrated Pest & Disease Management 5.Propagation techniques and post harvest in fruits and vegetables 6.Income generating activities, 7.Value added Products 8.Nutrition education and hygiene 9. ICM in Cotton

2.9 Priority thrust areas

Sl. No.	Thrust area
1.	High Yielding Varieties / Hybrids
2.	Seed Treatment with Bio Fertilizers and Fungicides
3.	Soil Test Based Fertilizer Application
4.	Integrated Nutrient Management
5.	Intercropping / Mixed / Multistoried Cropping System
6.	Seed Production Techniques in Vegetables and Field Crops
7.	Integrated Pest & Disease Management
8.	Post Harvest Technology in Vegetables and Fruits
9.	Soil and Water Conversation
10.	Propagation Techniques in Fruits and Vegetables
11.	Drudgery Reduction
12.	Income Generating Activities
13.	Child and Women Care and balanced Nutrition
14.	Integrated Cropping System

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
03	03	11	11	19	19	207	207

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	77	1950	2630	950	1058	6680	8023

Seed Production (Qtl.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
10.00	12.47	100000	115850

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
-	-	1500	2318

3.B1. Abstract of Interventions undertaken based on Thrust Areas identified for the District as given in Sl.No.2.7

Sl. No.	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No.	Kg
1.	Soil and water conservation	Paddy	Salinity	-	Management of saline soils in paddy	1		1	6	1.25	-		2	8
	Soil and water conservation		Limited water		Aerobic paddy cultivation	2		2	3	0.07			2	4
2.	High yielding variety and cropping system	Ragi	Mono cropping		Drought Tolerant Ragi ML-365	2			6	1.25			2	20
3.	ICM	Maize	1.Zinc deficiency 2.Downy mildew and TLB disease 3.Low yield		Enhancing productivity through ICM	1			4	0.75				
4.	Integrated Pest& disease Management High Yielding varieties / Hybrids and Drudgery Reduction	Groundnut	Drudgery		Groundnut Decorticator	3			3	-			-	-
			1. Collar rot	Management of collar rot in groundnut		1			6	-			3	253
			1. Smaller seed size	Assessment of GPBD-5 a bold seeded variety					4	0.6			-	-
5.	ICM	Redgram	Low yield due to seed drill sowing		ICM in Redgram	1			5	1.5			4	1.375
	PHT		Storage Problem		Safe Storage of Pulses		1		5	-			-	-
6.	ICM	Mango	1.Flower & fruit dropping 2.Fruit fly 3.Powdery mildew		ICM in Mango	2			5	-			-	-

	Intercropping system		Mono - cropping in Mango		Mucuna as a intercrop in Mango	1			4	0.8			-	-
7.	ICM	Banana	1.Low plant population 2.Low yield & income	Paired row planting system & pit method in banana	-	1			4		5400		-	-
	INM		1.Lower bunch size and yield	-	Micronutrient management in Banana	1			5	-	-		-	-
8.	INM	Arecanut	1.Splitting of nuts and low yield	-	Management of nut splitting in Arecanut -	1			6	-	-		-	-
	IDM		AnabeRoga	-	Integrated Management of AnabeRoga	2		1	4	-	-		1	200
9.	INM	Tomato	1.Low nutrient use efficiency	-	Arka Microbial consortium for tomato production	1			5	-			1	10
	ICM		1.Local varieties 2. Bacterial blight and leaf curl	-	ICM in tomato	1			12	200 gms			3	512.2
10	IPM	Brinjal	1. Bacterial wilt 2. Low yield	-	ICM in Brinjal	1			4	375 gms			2	252
11	ICM	French Bean	1. Rust Disease 2. Low Yield	-	ICM in French bean	1			6	1.3			2	251
12	High yielding variety	Dolichos	1. Low yield	-	Popularization of Arka Vijay high yielding variety.				5	0.74			-	-
13	IPDM	Cabbage	1. Diamond Black Moth (DBM)	-	Integrated Pest Management in Cabbage	1			8	0.05			2 1	20 650 ml

3 B2. Details of technology used during reporting period

Sl.No.	Title of Technology	Source of technology	Crop/enterprise	No .of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
1.	Assessment of Groundnut Varieties	UAS, Dharwad	Groundnut	3		-	
2.	Management of Collar Rot Disease in Groundnut	UAS,Bangalore and PDBC,Bangalore		3		1	
3.	Ground nut Decorticator	UAS, Bangalore			3	3	
4.	ICM in red gram	UAS, Bangalore	Red gram		25	1	
5.	Safe Storage of Pulses				5	5	
6.	Mucuna (Medicinal plant) as Intercrop in Mango.	CHES, Hirehalli (IIHR,Bangalore)	Mucuna		5	1	
7.	Paired Row with Zigzag and pit method of Planting in Banana	UAS, Bangalore, NRC on Banana, Thirchi and	Banana	3		1	
8.	Management of Nut Splitting in Arecanut	UAS, Bangalore, CPCRI, Kasaragod	Arecanut		5	1	
9.	Arka Microbial Consortium for Tomato Production	IIHR,Bangalore,	Tomato		10	1	
10.	ICM in Tomato	IIHR,Bangalore,			10	1	
11.	Management of Saline Soils	UAS, Bangalore	Paddy		10	1	
12.	Aerobic Paddy Cultivation	UAS, Bangalore			4	2	
13.	Drought tolerant ML-365	UAS, Bangalore	Ragi		60	2	
14.	ICM in Maize	UAS, Bangalore	Maize		12	1	
15.	ICM in Mango	IIHR,Bangalore	Mango		5	2	
16.	Micro Nutrient in Banana	IIHR,Bangalore	Banana		10	1	
17.	IDM in Arecanut	CPCRI, Kasaragod	Arecanut		5	2	
18.	Popularization of Arka Vijay variety	IIHR,Bangalore	Dolichos		10	-	
19.	IPM in Cabbage	IIHR,Bangalore	Cabbage		10	1	
20.	ICM in Brinjal	IIHR,Bangalore	Brinjal		06	1	
21.	Integrated Crop Management in Frenchbean	IIHR,Bangalore	Frenchbean		10	1	
22.	Introduction of High Yielding Papaya Variety Arka Prabhath	IIHR, Bangalore	Papaya		05	1	

3.B2 contd..

No. of farmers covered															
OFT				**FLD**				**Training**				**Others (Specify)**			
General		**SC/ST**		**General**		**SC/ST**		**General**		**SC/ST**		**General**		**SC/ST**	
M	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**
9	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
2		1						13							
2		1						10		8	3				
					2		1	12	5	-	2				
				18	3	3	1	16	8	3	3				
					4		1	62	40	9	10				
				4		1						--	-	-	-
3								22							
				4		1		65		7		-			
				4	3	1	2	30		7					
				6		4									
				6	1	2	1	45	8						
				3		1		40		8					
				42	4	10	4								
				7	1	2	2	115	20	13	4				
				5				32	6	6					
				8	1	1		30		3					
				3		2		22	7	5	3				
				9		1		20							
				8		2		66		13	8				
				3	1	2		72	6	4					
				7		3		15		6					
				5				10		3					

PART IV - On Farm Trial

3 .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
Varietal Evaluation		1								**1**
Integrated Pest Management										
Integrated Crop Management										
Integrated Disease Management										
Total		**1**								**1**

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-Nil

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

4.B. Achievements on technologies Assessed and Refined

4.B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trail covering all the Technological Options)
Integrated Nutrient Management					
Varietal Evaluation	Groundnut	Assessment of Groundnut varieties	5	5	2
Integrated Pest Management					
Integrated Crop Management	Banana	Assessment of paired row and pit method of planting in Banana	3	3	1
Integrated Disease Management	Groundnut	Management of Collar Rot disease in Groundnut	3	3	2
Total			11	11	5

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

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

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

4. C1.Results of Technologies Assessed

1. Ground nut														
Crop/ enterp rise	**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 refineme nt needed**	**Justificati on for refinemen t**
1	2	3	4	5	6	7	8			9		10	11	12
								No of Pods/ plant	**Yield (qt./ha)**	GPBD-5 Variety performed better with more test weight compared to other two varieties	GPBD-5 seed has got lesser dormancy, because of which germination is noticed because of delayed harvest			
Ground nut	Rain fed	Old variety , low yield and small size kernals	Evaluation of groundnut varieties	**05**	Assessment of TMV-2,GPBD-4 and GPBD-5 varieties	No of pods/plant, yield and economics	TO1:FP ,TMV-2	8.40	10.35			NO	-	
							TO2: GPBD-4	13.60	12.36					
							TO3: GPBD-5	13.20	12.46					

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): TMV-2	-	10.35	Qt/ha	21350	2.06
Technology option 2 : GPBD-4	UAS,Dharwad	12.36	Qt/ha	27940	2.30
Technology option 3 : GPBD-5	UAS,Dharwad	12.46	Qt/ha	28460	2.82

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

1. Title of Technology Assessed : Assessment of TMV-2,GPBD-4 and GPBD-5 varieties
2. Problem Definition : low yield
3. Details of technologies selected for assessment :

Technology option 1: (Farmer's practice): TMV-2
Technology option 2 : GPBD-4
Technology option 3 : GPBD-5

4. Source of technology : UAS,Dharwad
5. Production system and thematic area : Rainfed and HYV
6. Performance of the Technology with performance indicators: No.of pods/Plant, Yield in kg/ha
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques
8. Final recommendation for micro level situation: GPBD-4 and GPBD-5 Performed well.
9. Constraints identified and feedback for research : Nil
10. Process of farmers' participation and their reaction: GPBD-5 & 4 are having market preference

2. Groundnut

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
							Technology Options	% Disease incidence	% Yield (Qt/ha)	Less disease incidence and increased yield	1.Effective control of disease and higher yield 2. *Pseudomonas* culture should be made available		
Ground Nut	Dryland	Severe incidence of Collar rot	Management of collar rot disease in groundnut	3	Recommended practice: ST with *Trichoderma* @ 4g/kg. ST with ***Pseudomonas fluorescens*** @4g/kg seeds & soil treatment with *Pseudomonas* @ 2.5kg&Neemcake @ 2.5q with FYM 5 tons/ha.	Per cent Diseases incidence. Per cent Discolored seeds Per cent Yield	Technology Option I	27.42	5.28				
							Technology Option II	17.89	8.43			Nil	Nil
							Technology Option III	11.49	11.42				

Contd...

Technology Assessed	Source of Technology	Production (Qt/ha)	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):		5.28	Qt//ha	6484	1.78
Technology option 2: ST with *Trichoderma* @ 4g/kg.	UAS, Bangalore	8.43	Qt//ha	14704	2.65
Technology option 3: ST with *Pseudomonas flouroscense* @4g/kg seeds & soil treatment with *Pseudomonas* @ 2.5kg &neemcake @ 2.5q with FYM 5 tons/ha.	PDBC, Bangalore	11.42	Qt//ha	20676	2.83

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

1. Title of Technology Assessed: Management of collar rot disease in groundnut
2. Problem Definition :It mainly affects the trunk/stem portion of the plant. Rotting of the plant causes hindering the upward translocation. Since economic portion of the plant inside the soil and remain in the soil at the time of harvest
3. Details of technologies selected for assessment:

Technology option 1: (Farmer's practice)
Technology option 2 :Recommended practice: ST with *Trichoderma* @ 4g/kg.
Technology option 3 :Assessment: ST with *Pseudomonas fluorescence* @4g/kg seeds & soil treatment with *Pseudomonas* @ 2.5kg &neemcake @ 2.5q with FYM 5 tons/ha.

4. Source of technology: PDBC, Bangalore
5. Production system and thematic area: Rain fed situation and Disease management
6. Performance of the Technology with performance indicators: The lowest disease incidence and yield was recorded in Tech.Option-III and compared to Farmers practice and yield was 11.42 Qt//ha and 5.28 Qt//ha respectively.
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques:
8. Final recommendation for micro level situation: ST with *Pseudomonas fluorescence* @4g/kg seeds & soil treatment with *Pseudomonas* @ 2.5kg &neemcake @ 2.5q with FYM 5 tons/ha.
9. Constraints identified and feedback for Research: ----
10. Process of farmer's participation and their reaction: Alternate practice reduced the disease incidence and good crop stand and better yield

3 .Banana

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
Banana	Irrigated	Less population and low yield	Assessment of paired row and Pit method of planting	03	2.0 x1.2 x1.2mt paired row 3.6 x 1.8 m pit method	Bunch weight & Yield	Technology Options	Bunch Weight (kg)	Yield (Qt/ha)	T3 Accommodated more no of plants per unit area and recorded higher yield compared to others practices	Paired row method adopted for easy management and higher income per unit area	-	-
							Technology Option I	16.4	506				
							Technology Option II	22	498				
							Technology Option III	16.2	846				
							Technology Option IV	12.5	600				-

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)	-	506	Qt/ha	123705	2.57
Technology option 2	UAS B	498	Qt/ha	129450	2.86
Technology option 3	NRCB, Tiruchirapalli	846	Qt/ha	233360	3.22
Technology option 4	NRCB, Tiruchirapalli	600	Qt/ha	143070	2.48

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

1. Title of Technology Assessed: Assessment of paired row and pit method of planting in banana
2. Problem Definition : Low population and yield
3. Details of technologies selected for assessment :

Technology option 1 (Farmer's practice): 1.8 x1.8mt Local variety
Technology option 2 : 2.1 x2.1 mt
Technology option 3 : 2.0x1.2x1.2 mt
Technology option 4 : 3.6 x1.8 mt

4. Source of technology: NRCB,Tiruchirapalli
5. Production system and thematic area : Irrigated and Plant population
6. Performance of the Technology with performance indicators Bunch weight (kg) and higher yield (t/ha)
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques
8. Final recommendation for micro level situation : 2.0x 1.2x 1.2mt with paired row Zig Zag method
9. Constraints identified and feedback for research : -
10. Process of farmer's participation and their reaction: Paired row method adopted for easy management and higher income per unit area

4. D1. Results of Technologies Refined
Results of On Farm Trial –Nil

PART V - FRONTLINE DEMONSTRATIONS

5. A. Summary of FLDs implemented during 2012-13

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.	Cereals	Rainfed	Kharif 2012	Paddy	MAS-26		ICM	Aerobic Paddy cultivation	1	1		4	4	
2.		Irrigated	Kharif 2012	Paddy	IR30864		ICM	Management of Saline Soils	2	2	3	7	10	
3.		Irrigated	Kharif 2012	Maize		NAH-1137	ICM	ICM in Maize	5	5	4	8	12	
4.	Millets	Rainfed	Kharif 2012	Ragi	ML-365		Drought Mitigation	Drought resistance variety Ragi ML 365	10	10	14	46	60	
5.	Vegetables	Irrigated	Rabi-2012	Brinjal	-	Arka-Anand	ICM	ICM in Brinjal	1	1	2	4	6	
6.		Irrigated	Kharif 2012	Tomato	-	ArkaAnanya	ICM	ICM in Tomato	2	2	4	6	10	
7.		Irrigated	Kharif 2012	Tomato		Private Hybrid Seed	INM	Microbial consortium in tomato	2	2	3	7	10	
8.		Irrigated	Kharif 2012	Frenchbean	ArkaSuvidha		ICM	ICM in French bean	2	2	3	7	10	
9.		Irrigated	Rabi 2012	Dolichos	Arka Vijaya		Popularization of variety	Popularization of Arka Jay	2	2	1	9	10	
10.		Irrigated	Rabi 2012	Cabbage		Unnathi	IPM	IPM in Cabbage	2	2	2	8	10	
11.	Fruit	Rainfed	Summer 2013	Mango	Alphanso		ICM	ICM in Mango	1	1	-	5	5	
12.		Irrigated	Kharif 2012	Banana	G-9 and Yelliki		INM	INM in Banana	2	2	1	9	10	
13		Rainfed	Kharif 2012	Mucuna (Velvet beans)	Arka Dhanvantri		Cropping system	Mucuna (Medicinal plant) as Intercrop in Mango	2	2	1	4	5	
14		Irrigated	Kharif 2012	Papaya	Arka Prabhat		Variety Introduction	Introduction of High yielding variety Arka Prabhat	2	2		5	5	

15.	Plantation	Rainfed/ Irrigated	Kharif 2012	Arecanut	Hirehalli Tall		IDM	IDM in Areca nut	2	2	2	3	5	
16.			Kharif 2012	Arecanut	Local Variety		INM	Nut splitting in Areca nut	2	2	1	4	5	
17.	Implements (Groundnut Decorticator)	Rainfed	Rabi 2012	Ground nut	GPBD-4		Drudgery	Ground nut Decorticator	5 units	3 units	1	2	3	
18.	Others (specify)	Rainfed	Summer 2013	Redgram	Local		PHT	Safe storage of pulses	5 units	5 units	1	4	5	

5.A. 1. Soil fertility status of FLDs plots during 2012-13

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.	Cereals	Rainfed	Kharif 2012	Paddy	MAS-26		ICM	Aerobic Paddy cultivation	Kharif 2012	M	L	M	Ragi
		Irrigated	Kharif 2012	Paddy	IR30864		ICM	Management of Saline Soils	Kharif 2012	M	L	M	Diancha
		Irrigated	Kharif 2012	Maize		NAH-1137	ICM	ICM in Maize	Kharif 2012	M	L	M	Groundnut
2.	Millets	Rainfed	Kharif 2012	Ragi	ML-365		Drought Mitigation	Drought resistance variety Ragi ML 365	Kharif 2012	M	L	M	Cowpea
3.	Vegetables	Irrigated	Rabi-2012	Brinjal		Arka-Anand	ICM	ICM in Brinjal	Rabi-2012	M	L	M	Ragi
		Irrigated	Kharif 2012	Tomato		ArkaAnanya	ICM	ICM in Tomato	Kharif 2012	M	L	M	Cowpea
		Irrigated	Kharif 2012	Tomato		Private Hyd. Seed	INM	Microbial consortium in tomato	Kharif 2012	L	L	M	Aster
		Irrigated	Kharif 2012	Frenchbean	ArkaSuvidha		ICM	ICM in Frenchbean	Kharif 2012	M	L	M	Tomato
		Irrigated	Rabi 2012	Dolichos	Arka Vijay		Popularization of variety	Popularization of Arka Vijay	Rabi 2012	L	L	M	Ragi
		Irrigated	Rabi 2012	Cabbage		Unnathi	IPM	IPM in Cabbage	Rabi 2012	L	L	M	Maize
4.	Fruit	Rainfed	Summer 2013	Mango	Alphanso		ICM	ICM in Mango	Summer 2013	M	L	M	-
		Irrigated	Kharif 2012	Banana	G-9 and Yelliki		INM	INM in Banana	Kharif 2012	L	L	M	Tomato
		Rainfed	Kharif 2012	Mucuna (Velvet beans)	Arka Dhanvantri		Cropping system	Mucuna (Medicinal plant) as Intercrop in Mango	Kharif 2012	M	L	M	Field bean
		Irrigated	Kharif 2012	Papaya	Arka Prabhat		Variety Introduction	Introduction of High yielding variety Arka Prabhat	Kharif 2012	L	L	M	Banana

5.	Plantation	Rainfed/ Irrigated	Kharif 2012	Arecanut	Hirehalli Tall		IDM	IDM in Arecanut	Kharif 2012	M	L	M	-
		Irrigated	Kharif 2012	Arecanut	Local variety		INM	Nut splitting in Arecanut	Kharif 2012	M	L	M	
6.	Others	Rainfed	Rabi 2012	Ground nut	GPBD-4		Drudgery	Ground nut Decorticator	Rabi 2012	-	-	-	-
7.	Others	Rainfed	Summer 2013	Redgram	Local		PHT	Safe storage of pulses	Summer 2013	-	-	-	-

5.B. Results of Frontline Demonstrations

5.B.1. Crops

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
							H	L	A										
Cereals	Aerobic Paddy Cultivation	MAS-26		Rainfed	4	1	42.2	32.4	35.1	32.3	8.67	19275	38882	19607	2.01	17351	22556	5205	1.299
Paddy	Management of Saline Soils	IR-30864		Irrigated	10	2			34.7	30.7	13.03	29526	35431	5905	1.19	26931	28678	1747	1.06
	ICM in Maize		NAH 1137	Irrigated	12	5	40.5	32.2	37.8	31.7	19.24	15360	36136	20776	2.35	14180	30890	16710	2.17
Millets	Drought resistance variety Ragi ML 365	ML-365		Rainfed	60	10	30.2	18.6	24.3	18.7	29.95	7250	12325	5075	1.71	6850	7535	685	1.1
Vegetables	ICM in Brinjal	-	ArkaAnand	Irrigated	6	1	220.6	208.5	202	185	9.19	39850	141400	101550	3.54	37450	111000	73550	2.96
	IPM in Cabbage	-	Unnati	Irrigated	10	2	22.5	12.8	18.7	15.6	19.87	32100	66200	34100	2.06	29800	56250	26450	1.88
	ICM in French Bean	A.Suvidha		Irrigated	10	2	145.8	92.6	124.37	96.58	28.77	45431	248740	203309	5.47	40887	152272	111385	3.72
	ICM in Tomato		ArkaAnanya	Irrigated	10	2	320.2	225.4	280.5	240.8	16.49	42500	132500	90000	3.12	35650	96320	60670	2.70
	Popularization of Arka Vijay	Arka Vijay		Rainfed	10	2	118.3	70.4	109.4	90.4	21.02	26515	109480	82965	4.12	23832	90400	66568	3.79
	Microbial consortium in Tomato		Private Hyb.	Irrigated	10	2	168.8	129.5	150.4	130.7	15.07	49850	101196	51346	2.03	44680	62552	17872	1.4
Fruit	ICM in Mango	Alphonso	-	Rainfed	5	1	Demo is in progress Results awaited												
	Micronutrient in Banana	G-9		Irrigated	10	2	322.4	232.6	268	241	11.20	99480	179064	79584	1.8	96330	158945	62615	1.65

	Mucuna (Medicinal plant) as Intercrop in Mango	Arka Dhanvantri		Rainfed	5	2	78.2	32.4	64	47	36.17	4300	5860	1560	1.36	3900	4080	180	1.04
	Introduction of High yielding variety Arka Prabhat	Arka Prabhat		Irrigated	5	2	Demo is in progress Results awaited												
Plantation	IDM in Areca nut	Hirehalli Tall		Irrigated	5	2	18.5	8.8	13.8	11.2	23.21	32450	128000	95550	3.94	30520	110000	79480	3.60
	Nut splitting in Areca nut	Local		Irrigated	5	2	18.2	9.2	13.5	12.2	10.66	37520	106932	69412	2.85	28960	55024	26064	1.9
Others - Safe storage method	Safe storage method of pluses	Red gram	-		3	3 units	-	-	0.01 % damage to stored grains after 6 months in demonstration	15.7 % damage to stored grains after 6 months of in local	-	-	-	-	-	-	-	-	-

** BCR= GROSS RETURN/GROSS COST
H – Highest Yield, L – Lowest Yield A – Average Yield

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

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

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

5. B.3. Fisheries -Nil

5. B.4. Other enterprises -Nil

5. B.5. Farm implements and machinery

Enterprise	Name of the technology demonstrated	Variety/ species	No. of Demo	Units/ Area {m^2}	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./unit) or (Rs./m2)				*Economics of check (Rs./unit) or (Rs./m2)			
					Demo A	Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Drudgery reduction	Drudgery reduction using groundnut decorticator		3 SHGs				-	250	1000	750	4.0	750	1000	250	1.33

Data on additional parameters other than laboursaved (viz., reduction in drudgery, time etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Local**
No. of labours employed per ha under demo for the crop period	**1**	**4**
No. of labours saved to cover one ha for the crop period	**3**	-
No. of rounds or operations in the crop period	**1**	-
Time (hr) saved to cover one ha	**20**	-

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

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Field days	06	693	
2	Farmers Training	30	925	
3	Media coverage	05	-	
4	Training for extension functionaries	03	95	
5	Others :			

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										
Cereals																	
Maize	ICM in Maize	NAH 1137	12	5	40.5	32.2	37.8	31.7	19.24	15360	36136	20776	2.35	14180	30890	16710	2.17
Vegetable crops																	
Tomato	ICM in Tomato	ArkaAnanya	10	2	320.2	225.4	280.5	240.8	16.49	42500	132500	90000	3.12	35650	96320	60670	2.70
Brinjal	ICM in Brinjal	ArkaAnand	6	1	220.6	208.5	202	185	9.19	39850	141400	101550	3.54	37450	111000	73550	2.96
Cabbage	IPM in Cabbage	Unnati	10	2	22.5	12.8	18.7	15.6	19.87	32100	66200	34100	2.06	29800	56250	26450	1.88
Total			**38**	**10**													

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										
Resource Conservation Technologies										
Cropping Systems	1	12	4	16		3	3	12	7	19
Integrated Farming	3	66		66	11		11	77		77
Seed production										
Integrated Crop Management	1	8	1	9	5	1	6	13	2	15
Soil and Water Conservation	3	18	26	44	30	11	41	48	37	85
Integrated water management	1	43	6	49	1		1	44	6	50
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	1	11		11	6		6	17		17

Off-season vegetables										
Others ICM in vegetables										
b) Fruits										
Cultivation of Fruit	4	86	1	87	13	-	13	99	1	100
Micro irrigation systems of orchards										
c) Ornamental Plants										
d) Plantation crops										
Production and Management technology	3	74	15	89	5	1	6	79	16	95
e) Tuber crops										
g) Medicinal and Aromatic Plants										
Soil Health and Fertility Management										
Soil fertility management										
Micro nutrient deficiency in crops										
Soil and water testing										
Livestock Production and Management										
Home Science/Women empowerment										
IGA	1	10	8	18	2	1	3	12	9	21
Value addition	3		70	70		16	16		86	86
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Agril. Engineering										
Small tools & implements	1		10	10		3	3		13	13
Post Harvest Technology	1	2	12	14	1	3	4	3	15	18
Fisheries										

Production of Inputs at site										
Seed Production in vegetables	3	46	13	59	4	4	8	50	17	67
Organic manures production										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics	3	55	5	60	8		8	63	5	68
Others ICT	3	54	8	62	73	7	80	127	15	142
Role of KVK in dissemination of improved technologies										
Mushroom production	1	2	4	6				2	4	6
Agro-forestry										
TOTAL	**33**	**487**	**183**	**670**	**159**	**50**	**209**	**646**	**233**	**879**

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										
Resource Conservation Technologies										
Cropping Systems										
Integrated Farming	1		8	8		1	1		9	9
Seed production										
Integrated Crop Management	2	6	13	19	30	21	51	36	34	70
Soil and Water Conservation	3	87	31	118	12	11	23	99	42	141
Integrated water management										
Others (pl.specify)-Organic Farming	1	43	14	57	9	5	14	52	19	71
Production and management technology	1	20		20	4		4	24		24

Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop										
Off-season vegetables										
Others ICM in vegetables										
b) Fruits										
Cultivation of Fruit	3	59	22	81	8	6	14	67	28	95
Micro irrigation systems of orchards										
Commercial fruit production	2	74	8	82	11		11	85	8	93
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Commercial floriculture	1	27	17	44	13	2	15	40	19	59
Export potential of ornamental plants										
d) Plantation crops										
Production and Management technology										
Plant Protection										
Integrated Pest Management	3	120	6	126	9	64	73	129	70	199
Integrated Disease Management	3	66	13	79	11	4	15	77	17	94
e) Tuber crops										
g) Medicinal and Aromatic Plants										
Soil Health and Fertility Management										
Soil fertility management	1	48	13	61				48	13	610
Micro nutrient deficiency in crops										
Balanced use of fertilizer	1	35	20	55	11	9	20	46	29	75
Nutrient use efficiency	2	60	24	84	11	5	16	71	29	100

Soil and water testing	1	25	15	40	5	3	8	30	18	48
Livestock Production and Management										
Home Science/Women empowerment										
IGA										
Value addition	2	69	63	132	18	9	27	87	72	159
Women empowerment	**1**		19	19					19	19
Location specific drudgery production										
Rural Crafts										
Women and child care										
Nutritional security	1		23	23		2	2		25	25
Agril. Engineering										
Small tools & implements	1	2	8	10	5	4	9	7	12	19
Post Harvest Technology	1	25	15	40	5	3	8	30	18	48
Fisheries										
Production of Inputs at site										
Seed Production in vegetables	2	62		62	8		8	70		70
Organic manures production	1	15		15	5	2	7	20	2	22
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics	2	28	15	43	2		2	30	15	45
Others ICT	1	3	28	31	1		1	4	28	32
Role of KVK in dissemination of improved technologies										
Mushroom production	2	28	8	36	8		8	36	8	44
Agro-forestry										
TOTAL	**39**	**902**	**383**	**1285**	**186**	**151**	**337**	**1088**	**534**	**1622**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Natural Resources management	01	43	6	49	1		1	44	6	50
TOTAL	**01**	**43**	**6**	**49**	**1**		**1**	**44**	**6**	**50**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total

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
Total										

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
Mushroom production	2	28	8	36	8		8	36	8	44
Productivity Enhancement in field crop	2	53		53	26	1	27	79	1	80
Total	**4**	**81**	**8**	**89**	**34**	**1**	**35**	**115**	**9**	**124**

7.G. Sponsored training programmes conducted –Nil

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	**Bee keeping**	1	15	4	19				15	4	19
	Grand Total	**1**	**15**	**4**	**19**				**15**	**4**	**19**

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	6	625	45	670	15	8	23			
KisanMela										
KisanGhosthi	5	1260	163	1423	186	20	206	102	31	133
Exhibition	2	550	120	670	55	28	83			
Film Show	1	25		25	2		2			
Method Demonstrations	15	80	48	128	16	22	38		4	4
Farmers Seminar/Workshop	1	95	15	110	10	4	14			
Workshop										
Group meetings										
Lectures delivered as resource persons	33	990	310	1300	63	11	74	30	17	47
Newspaper coverage	14									
Radio talks	16									
TV talks	5									
Popular articles	2									
Extension Literature	4									
Advisory Services	697	1200	280	1480	89	16	105	-	-	-
Scientific visit to farmers field	10	40		40	5		5			
Farmers visit to KVK	164	520	36	556	88	48	136	-	-	-
Diagnostic visits	65	220	45	265	32	14	46	12	4	16
Exposure visits	5	150	4	154	20		20			
Soil test campaigns										
Farm Science Club Conveners meet										

Self Help Group Conveners meetings	3	5	45	50		5	5			
MahilaMandals Conveners meetings										
Celebration of important days (specify)	5	120	40	160	15	20	35			
Any Other Publications Abstracts	2									
Total	**1058**	**5880**	**1151**	**7031**	**596**	**196**	**792**	**144**	**56**	**200**

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	Unit of measurement	Quantity of seed (Kg)	Value (Rs)	Number of farmers to whom provided
Cereals	Finger millet	ML 365	Kgs	800	20000	70
Flower crops	Tuberose	Prajwal, Vaibhav	Number	60000	60000	3
Vegetable crops	Amaranthus	Arka Suguana	Kgs	150	45000	4
Vegetable crops	Drumstick	PKM 1	Kgs	4.85	12125	10
Vegetable crops	Frenchbean	Arka Suvidha	Kgs	350	35000	12
Vegetable crops	Okra	Arka Anamika	Kgs	16	4800	5
Vegetable crops	Frenchbean	Arka Komal	Kgs	100	10000	4
Vegetable crops	Radish	Arka Nishant	Kgs	8.5	2210	10
Vegetable crops	Chilli green	Arka Suphal	Kgs	100	100000	3
Vegetable crops	Chilli green	Arka Kyathi	Kgs	1.5	15000	4
Vegetable crops	Cowpea	Arka Garima	Kgs	16	1600	4
Vegetable crops	Onion	Arka Kalyan	Kgs	450	*315000	
Vegetable crops	Pumpkin	Arka Suryamukhi	Kgs	50	25000	
Total				**62046.85**	**645735**	**129**

* Under processing and grading

9.B. Production of planting materials by the KVKs

Crop category	Name of the crop	Variety / Hybrid	Unit of measurement	Number	Value (Rs.)	Number of farmers to whom provided
Ornamental plants	Bird of Paradise	IIHR	Number	1250	100000	10
Plantation crops	Arecanut	Hirehalli Tall	Number	50000	*750000	22
Fruit crops	Mango	Alphanso, Badami	Number	1000	*35000	10
Fruit crops	Guava	Pink Flesh, L-49, Mridula	Number	1000	*35000	12
Fruit crops	Lime	Seedless Lime	Number	100	3500	4
Fruit crops	Amla	NA 4,5,7	Number	1500	37500	10
Plantation crops	Coconut	Aresikere Tall	Number	1000	*80000	3
Ornamental plants	Bird of Paradise	IIHR	Number	1250	*100000	10
Spices	Betel vine	Bangal, Sweet Pan , Local	Number	22	132	3
Total				**57122**	**1141132**	**84**

*** Available in stock**

9.C. Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	Number of farmers to whom provided
Bio agents	*Trichoderma*	76	7600	40
	Pseudomonous	98	24500	60
Bio pesticide	Neem soap	1555	194375	98
	Pongamia soap	589	58900	84
Micro nutrient mixture	Banana special	1450	217500	190
Micro nutrient mixture	Vegetable special	888	111000	210
Mushroom spawn	Spawn	20	1000	15
Total		**4676**	**614875**	**697**

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.)

June - Aug- 2012 – 200 copies

(B) Literature developed/published

Item	Title	Authors name	Number
Research papers	1. Technology demonstration component D Nagenahalli NICRA village	PR Ramesh,Jagadish K.N., JM Prasanth and L.B.Naik	01
	2. Studies on influence of physiochemical properties of soil on growth and yield attributes of coleus Vettiveroedes	Mamatha, PR Ramesh, Desai & Sujith	01
Technical reports	IIHR Annual Report 2012-13 DARE Report Cabinet Report SAC Report NICRA Action Plan Report Amla Campaign Progress Report	KVK Staff	06
News letters	ICAR News letter IIHR News Letter KVK News letter CRIDA News letter		04
Technical bulletins	-	-	-
Popular articles	Mushroom cultivation Importance of Green leafy vegetables Importance of fruit jucies	Radha R Banakar, Somashaekar	03
Extension literature	Arecanut plate making machine French Bean production Value addition in ragi Mushroom cultivation	Radha Somashekar, Prasanth JM & KN Jagadish	04
Others (Pl. specify)	-		
TOTAL			**18**

10.B. Details of Electronic Media Produced

Sl. No.	Type of media (CD / VCD / DVD/ Audio-Cassette)	Title of the programme	Number
1.	--	-	-

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

Success stories

Title: Increased Productivity of Banana through Foliar Application of Banana Special

Background

Banana is second most important fruit crop of the district and it is grown mainly under pump set irrigation. The total area is 4929 ha. The planting is done in the month of June and January. The farmers of the district are not applying the recommended dose of fertilizers and they apply only DAP. It is also emphasize the micronutrient in the soil is very deficit particularly Zinc, Mg Fe and Ca. Due to the above facts there was a drastic reduction in yield to an extent of 30-35 per cent. Because of these problems farmers were getting an average yield of 20-25t/ha.

Interventions/Process/Technology

To overcome these problems and to get higher productivity in banana, the interventions were proposed under FLD during the year 2010 to 2013. Under this component IIHR Bangalore technology Banana Special was recommended 5 sprays @5 g/lit at 30 days interval starting from 5th month from the planting.

Impact

The impact of the assessment of recommended technology in banana cultivation in irrigated agro-ecosystem of Tumkur, the results have clearly indicated that by adoption of the above technology, the yield of the banana could be increased to an extent of average 15.33 %.

The demonstration of this technology have been widely publicized through different mass media's like news paper, radio & TV and widely used in the farmers training programme of the KVK.

Horizontal spread: Dissemination efforts made by this KVK with the proven results, the farmers of the district under irrigated agro-ecosystem are adopting different this technology to a greater extent (3012 ha).

Economics gains:

Performance indicators: 2012-13

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										
10	2	322.4	232.6	268	241	11.20	99480	179064	79584	1.8	96330	158945	62615	1.65

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

- NIL -

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

Sl. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1.	Coconut	Application of Tank Silt @ 50tons/ha	Supply of nutrients , better drainage and aeration
2.	Mango	Ragi and Paddy husk as a mulching material	To check evaporation and weed growth
3.	Coconut	Root feeding with neem oil	Reduction of stem bleeding

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

1. Identification of courses for farmers/farm women

- PRA technique and need analysis through individual & group discussion
- As per the suggestions and guidelines of members of SAC
- Discussion with the scientist of IIHR Bangalore
- Discussion with officials of line department

2. Rural Youth

- Survey and discussion
- Feedback from rural youths
- Periodical field visits

3. In service personnel

- Discussion with District and taluk level officers to know the areas of interest/choice of extension workers based on field problems
- Collaborative activities, meetings and discussions with line departments.
- SAC interactions
- Diagnostic visits

10. G. Field activities

i. Number of villages adopted: 25
ii. No. of farm families selected: 218
iii. No. of survey/PRA conducted : 03

10.H. Activities of Soil and Water Testing Laboratory

Status of establishment of Lab : Yet to be established

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

Details of samples analyzed so far since establishment of SWTL: Nil

Details of samples analyzed during the 2012-13:Nil

10.I. Technology Week celebration during 2012-13 : Conducted during October 2012

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

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: Nil

PART XI. IMPACT

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

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Micronutrient Management in Banana	60	85	158945	179064
ICM in French bean (ArkaSuvidha)	12	40	34500	54030
ICM in Brinjal (ArkaAnand)	10	20	81360	99220
Enhancement of Productivity of Finger millet by drought tolerant variety ML 365	60	90	15250	30540
Maximization of yield and low disease incidence by introduction of Maize hybrid- NAH 1137	12	20	30750	49310
Popularization of short duration Red gram Var-BRG-2	60	65	42102	56450
Foliar disease tolerant Ground nut variety GPBD-4	55	40	12930	20850
Arka Microbial consortium in Vegetable production	25	60	95000	125500

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

11.B. Cases of large scale adoption
(Please furnish detailed information for each case)
NIL

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

- Infestation of Fruit fly in Mango was a major problem in mango growing area and proper fruitfly control technology measures were not followed because of the leasing practices among the farmers. The awareness created and demonstrated on use of fruitfly trap (IIHR technology) at the appropriate time and for effective control of fruit fly at critical stage. Nearly 180 farmers adopted the technology and also farmers realized that it is a low cost technology which is effective to control fruitfly in mango.

- As a result of on-campus trainings on Improved compost production method and vermi-composting composting to the farmers 30 beneficiaries were adopted the composting method (26 Per cent) and use of bio fertilizers and decomposing microorganisms(*Pleurotus*) for composting enrichment.

- Farmers have realized the importance of ICM technology (Vegetables) and only 33% of the IPM components are being voluntarily used by the farmers.

- SHG group at Tumkur taluk underwent the training & started preparation of value added of Amla and ragi. A farm women group shown interest to start entrepreneurship on value added products of Ragi and Amla.

PART XII - LINKAGES

12.A. Functional linkage with different organizations

Name of organization	Nature of linkage
State Department of Horticulture	Trainings, FLD, Joint Diagnostic Survey
State Department of Agriculture	Trainings, FLD, Joint Diagnostic Survey
Watershed Department	Training and Collaborative Activities
Department of Animal Husbandry and Fisheries	Trainings and Technical Information
Department of Women and Child Development	Trainings
NBSS &LUP Bangalore	NRM and Survey
BAIF NGO, Tiptur	Trainings and Technical Information
ORDER NGO, Tumkur	Trainings, FLD's and Technical Information
AWARE NGO, Tumkur	Trainings
APART NGO Tumkur	Organic Farming and Group Approach
MOTHER NGO Tumkur	Seed Village Concept
UAS, Bangalore	Trainings and FLDs
UAS, Dharwad	Trainings and FLDs
UHS, Bagalkote	Trainings and FLDs
Veterinary University,Bidar	Trainings and FLDs

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

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Karnataka State Amla Campaign	July 2010	KaMPA	4.75 Lakhs
Technology demonstration component of NICRA	January 2011	CRIDA, Hyderabad	70 Lakhs
Integrated Mushroom Production Unit	June, 2011	NHM Karnataka	15 Lakhs
Establishment Model Nursery at KVK Hirehalli	March 2013	NHM	25 lakhs
Participatory Vegetable Seed Production and distribution system	March 2013	NHM	40 lakhs

Leaf Tissue analysis laboratory	March 2013	NHM	20 lakhs
vKVK	-	ICRISAT	-
Seed production in vegetables	March 2013	NHM	4 lakhs
Demonstration cum training on processing and value addition to Amla	March 2013	KaMPA	1.8 lakhs

12.C. Details of linkage with ATMA

a) Is ATMA implemented in your district : Yes

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

Designing of technical and training programmes for the year 2012-13

Coordination activities between KVK and ATMA during 2012-13: Yes

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

Sl. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Constraints if any
1	Establishment Model Nursery at KVK Hirehalli	Supply of Quality planting materials	25 Lakhs	-	
2	Vegetable Seed Production	Supply of Quality seed materials	4 lakhs	-	
3	Leaf Tissue analysis laboratory	Soil, plant and water testing	20 lakhs	-	

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

12.F. Details of linkage with RKVY: Yes

Participatory Vegetable Seed Production and distribution system under RKVY scheme of Rs. 1.5 corer (40 lakhs realsed)

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 2012			
May			
June			
July			
August	3	350	04
September	3	350	05
October	2	350	-

November	2	350	3
December	2	350	4
January 2013	3	350	6
February	3	350	3
March	2	350	2

PART XIII- PERFORMANCE OF INFRASTRUCTURE IN KVK

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

Sl. No.	Demo Unit	Year of establishment	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	

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

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.	Cost of inputs	Gross income	
Spices & Plantation crops									
Coleus				K2	Cuttings				
Areca nut	Jan, 2012			Hirehalli Tall	Seedlings	50000		750000	
Coconut	Feb, 2012			ArsikereTall	Seedlings	1000		80000	
Bird of Paradise				-	Seedlings	1250		35000	
Alphanso, Badami					Seedlings	1000		35000	
Pink Flesh, L-49, Mridula					Seedlings	1000		3500	
Seedless Lime					Seedlings	100		37500	
NA 4,5,7					Seedlings	1500		35000	
Amaranthus	14.5.2012	22.8.12	0.2	Arka Suguana	Seeds	150 kg		45000	
Drumstick	-	2.8.2012	0.1	PKM 1	Seeds	4.85 kg		12125	
French Bean	18.10.2012	15.1.2013	0.1	Arka Suvidha	Seeds	350 kg		35000	
Bhendi	7.9.2012	21.1.2013	0.2	Arka Anamika	Seeds	16 kg		4800	
French Bean	2.11.2012	30.1.2013	0.5	Arka Komal	Seeds	100 kg		10000	
Radish	15.6.2012	8.9.2012	1.0	Arka Nishant	Seeds	8.5 kg		2210	
Chilli	21.5.2102	22.8.2012.	0.5	Arka Suphal	Seeds	100 kg		100000	
Chilli	20.10.2012	28.3.2013	0.1	Arka Kyathi	Seeds	1.5 kg		15000	

Betel vine	-	-	0.2	Bangal, Sweet Pan , Local	Seeds	22 Nos		132	
Cowpea	4.5.2012	6.8.2012	0.2	Arka Garima	Seeds	15 kg		1600	
Onion	18.6.2012	15.2.2013		Arka Kalyan	Seeds	450 kg		315000	
Pumpkin	8.6.2012	12.9.2012	0.1	Arka Suryamukhi	Seeds	50 kg		2500	

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

Sl. No.	Name of the Product	Qty.	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1.	NeemSoap	1555		194375	
2.	Pongamia Soap	589		58900	
3.	*Trichoderma*	76		7600	
4.	*Pseudomonas florescence*	98		24500	
	Others				
5.	Banana special	1450	80000	217500	
6.	Vegetable Special	888	50000	111000	
7.	Amla Juice	250 lit		25000	
8.	Amla Candy	100 kg		30000	
9.	AmlaSupari	10kg		3000	
10.	Ragi Malt	100kg		15000	
11.	Spawn	20 kg		1000	

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

13.E. Utilization of hostel facilities

Accommodation available (No. of beds)

13.F. Database management

Sl.No.	Database target	Database created
1.	Farmers Database	Ongoing
2.	Technology Inventory for the District	
3.	Database for Technologies assessed and Refined	
4.	Frontline Demonstrations Database	
5.	Training Database	

6.	Database of Extension Programmes	
7.	Seeds and Planting Material Database	
8.	KVK Inventory of Assets	

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	Central Bank of India	Hessaraghatta	-	-	-	-	-
With KVK	-	-	-	-	-	-	-

14.B. Utilization of KVK funds during the year 2012-13(Rs. in lakh)

Particulars	Sanctioned (Lakhs)	Released (Lakhs)	Expenditure (Rs.)
A. RECURRING ITEMS			
Pay and Allowances	52.35	52.35	5554964
Travelling Allowances	1.15	1.15	114962
CONTINGENCIES			
Stationary and office expenses	3.75	3.75	375000
POL and R & M of vehicles	3.35	3.35	335000
Vocational Training (Meals)	0.75	0.75	75000
Vocational Training (Training Materials)	0.75	0.75	75000
FLD (Other than oilseeds and pulses)	3.00	3.00	300000
On-Farm Testing	0.30	0.30	30000
Training of extension functionaries	0.25	0.25	25000
Library maintenance (Books)	0.05	0.05	5000
Building maintenance	0.25	0.25	25000
Farmers Field School	0.25	0.25	25000
Extension Activities	0.30	0.30	30000
TOTAL CONTINGENCIES	**13.00**	**13.00**	**1300000**
TOTAL RECURRING(A)	**66.50**	**66.50**	**6969926**

B. NON-RECURRING ITEMS			
Works (1st & 2nd Installment)			7771095.00
Vehicles			
Equipments & Office furnishing Furniture			
Library			
Office furnishing- Building			
Soil Testing Laboratory-Farmers Hostel			
TOTAL NON-RECURRING(B)	0	0	7771095
C. REVOLVING FUND			
C. TOTAL REVOLVING FUND (C)			
GRAND TOTAL (A+B+C)	**66.50**		**7771095**

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 2012 to March 2013	7,62,423	11,58,010	1,68,242	*22,56,917

* Including material available in stock

15. Details of HRD activities attended by KVK staff during 2012-13

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
P.R.Ramesh	SMS-Soil Science	Entrepreneurship on Institutional Technologies	IIHR, Bangalore	5.3.2012
K.N.Jagadish	SMS-Agril Exten.	Entrepreneurship on Institutional Technologies	IIHR, Bangalore	5.3.2012
P.R.Ramesh	SMS-Soil Science	Food Pollutant Evaluation for food safety & acidity	IIHR, Bangalore	18.05.2012
Radha R.Banakar	SMS-Home Science	Food Pollutant Evaluation for food safety & acidity	IIHR, Bangalore	18.5.2012
K.N.Jagadish	SMS-Agril Exten.	Expert System in Agriculture	UHS, Bagalkote	12.9.2012
J.M.Prashanth	SMS-Horti.	Expert System in Agriculture	UHS, Bagalkote	12.9.2012
P.R.Ramesh	SMS-Soil Science	Automatic Weather station training programme	CRIDA, Hyderabad	14-15 th sept. 2012

Jyoti Appu Naik	Computer Programmer	Expert System in Agriculture		24- 25 Sept..2012

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

- Dr. S. Ayyappan, Director General ICAR and Secretary DARE and Dr. S Prabhukumar accompanied DG on 20.10.2012 visited KVK Hirehalli and inaugurated the new KVK and Hostel buildings.
- Dr. N. Krishna Kumar DDG (Horticulture) visited KVK on 01.12.2012 and inaugurated the new Mushroom lab building

SUMMARY FOR 2012-13

I. TECHNOLOGY ASSESSMENT

Summary of technologies assessed under various crops

Thematic areas	Crop	Name of the technology assessed	No. of trials
Integrated Nutrient Management			
Varietal Evaluation	Groundnut	Assessment of Groundnut varieties	5
Integrated Pest Management			
Integrated Crop Management	Banana	Assessment of paired row and pit method of planting in Banana	3
Integrated Disease Management	Groundnut	Management of Collar Rot disease in Groundnut	3
		Total	**11**

Summary of technologies assessed under livestock-Nil

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	Name of the technology demonstrated	No of KVKs	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo H	Demo L	Demo A	Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Cereals	Aerobic Paddy Cultivation		4	1	42.2	32.4	35.1	32.3	8.67	19275	38882	19607	2.01	17351	22556	5205	1.299
Paddy	Management of Saline Soils		10	2			34.7	30.7	13.03	29526	35431	5905	1.19	26931	28678	1747	1.06
	ICM in Maize		12	5	40.5	32.2	37.8	31.7	19.24	15360	36136	20776	2.35	14180	30890	16710	2.17
Millets	Drought resistance variety Ragi ML 365		60	10	30.2	18.6	24.3	18.7	29.95	7250	12325	5075	1.71	6850	7535	685	1.1
Vegetables	ICM in Brinjal		6	1	220.6	208.5	202	185	9.19	39850	141400	101550	3.54	37450	111000	73550	2.96
	IPM in Cabbage		10	2	22.5	12.8	18.7	15.6	19.87	32100	66200	34100	2.06	29800	56250	26450	1.88
	ICM in French Bean		10	2	145.8	92.6	124.37	96.58	28.77	45431	248740	203309	5.47	40887	152272	111385	3.72
	ICM in Tomato		10	2	320.2	225.4	280.5	240.8	16.49	42500	132500	90000	3.12	35650	96320	60670	2.70
	Popularization of Arka Vijay		10	2	118.3	70.4	109.4	90.4	21.02	26515	109480	82965	4.12	23832	90400	66568	3.79
	Microbial consortium in Tomato		10	2	168.8	129.5	150.4	130.7	15.07	49850	101196	51346	2.03	44680	62552	17872	1.4
Fruit	ICM in Mango		5	1	Demo is in progress Results awaited												
	Micronutrient in Banana		10	2	322.4	232.6	268	241	11.20	99480	179064	79584	1.8	96330	158945	62615	1.65
	Mucuna (Medicinal plant) as Intercrop in Mango		5	2	78.2	32.4	64	47	36.17	4300	5860	1560	1.36	3900	4080	180	1.04
	Introduction of High yielding variety Arka Prabhat		5	2	Demo is in progress Results awaited												

Plantation	IDM in Areca nut		5	2	18.5	8.8	13.8	11.2	23.21	32450	128000	95550	3.94	30520	110000	79480	3.60
	Nut splitting in Areca nut		5	2	18.2	9.2	13.5	12.2	10.66	37520	106932	69412	2.85	28960	55024	26064	1.9
Others - Safe storage method	Safe storage method of pluses		3	3 units	-	-	0.01 % damage to stored grains after 6 months in demonstration	15.7 % damage to stored grains after 6 months of in local	-	-	-	-	-	-	-	-	-

** BCR= GROSS RETURN/GROSS COST

Livestock -Nil
Fisheries -Nil
Other enterprises -Nil
Women empowerment-Nil

Farm implements and machinery

Name of the implement	Crop	Name of the technology demonstrated	No. of KVKs	No. of Farmer	Area (ha)	Filed observation (output/man hour)		% change in major parameter	Labor reduction (man days)	Cost reduction (Rs./ha or Rs./Unit etc.,)
						Demonstration	Check			
Ground nut Decorticator	Groundnut	Drudgery reduction using groundnut decorticator		3 SHGs	1	20 hr	80hr		3	750

** BCR= GROSS RETURN/GROSS COST

Demonstration details on crop hybrids

Crop	Name of the Hybrid	No. of farmers	Area (ha)	Yield (kg/ha) / major parameter			Economics (Rs./ha)			
				Demonstration	Local check	% change	Gross Cost	Gross Return	Net Return	BCR
Cereals										
Maize	NAH 1137	12	5	37.8	31.7	19.24	15360	36136	20776	2.35
Vegetable crops										
Cucumber										
Tomato	ArkaAnanya	10	2	280.5	240.8	16.49	42500	132500	90000	3.12
Brinjal	ArkaAnand	6	1	202	185	9.19	39850	141400	101550	3.54
Others Cabbage	Unnati	10	2	18.7	15.6	19.87	32100	66200	34100	2.06
Total		**38**	**10**							

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										
Resource Conservation Technologies										
Cropping Systems	1	12	4	16		3	3	12	7	19
Integrated Farming	3	66		66	11		11	77		77
Seed production										
Integrated Crop Management	1	8	1	9	5	1	6	13	2	15
Soil and Water Conservation	3	18	26	44	30	11	41	48	37	85
Integrated water management	1	43	6	49	1		1	44	6	50
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	1	11		11	6		6	17		17
Off-season vegetables										
Others ICM in vegetables										
b) Fruits										
Cultivation of Fruit	4	86	1	87	13	-	13	99	1	100
Micro irrigation systems of orchards										
c) Ornamental Plants										
d) Plantation crops										
Production and Management technology	3	74	15	89	5	1	6	79	16	95
e) Tuber crops										
g) Medicinal and Aromatic Plants										

Soil Health and Fertility Management										
Soil fertility management										
Micro nutrient deficiency in crops										
Soil and water testing										
Livestock Production and Management										
Home Science/Women empowerment										
IGA	1	10	8	18	2	1	3	12	9	21
Value addition	3		70	70		16	16		86	86
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Agril. Engineering										
Small tools & implements	1		10	10		3	3		13	13
Post Harvest Technology	1	2	12	14	1	3	4	3	15	18
Fisheries										
Production of Inputs at site										
Seed Production in vegetables	3	46	13	59	4	4	8	50	17	67
Organic manures production										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics	3	55	5	60	8		8	63	5	68
Others ICT	3	54	8	62	73	7	80	127	15	142
Role of KVK in dissemination of improved technologies										
Mushroom production	1	2	4	6				2	4	6
Agro-forestry										

TOTAL	**33**	**487**	**183**	**670**	**159**	**50**	**209**	**646**	**233**	**879**

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										
Resource Conservation Technologies										
Cropping Systems										
Integrated Farming	1		8	8		1	1		9	9
Seed production										
Integrated Crop Management	2	6	13	19	30	21	51	36	34	70
Soil and Water Conservation	3	87	31	118	12	11	23	99	42	141
Integrated water management										
Others (pl.specify)-Organic Farming	1	43	14	57	9	5	14	52	19	71
Production and management technology	1	20		20	4		4	24		24
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop										
Off-season vegetables										
Others ICM in vegetables										
b) Fruits										
Cultivation of Fruit	3	59	22	81	8	6	14	67	28	95
Micro irrigation systems of orchards										
Commercial fruit production	2	74	8	82	11		11	85	8	93
c) Ornamental Plants										

Nursery Management										
Management of potted plants										
Commercial floriculture	1	27	17	44	13	2	15	40	19	59
Export potential of ornamental plants										
d) Plantation crops										
Production and Management technology										
Plant Protection										
Integrated Pest Management	3	120	6	126	9	64	73	129	70	199
Integrated Disease Management	3	66	13	79	11	4	15	77	17	94
e) Tuber crops										
g) Medicinal and Aromatic Plants										
Soil Health and Fertility Management										
Soil fertility management	1	48	13	61				48	13	610
Micro nutrient deficiency in crops										
Balanced use of fertilizer	1	35	20	55	11	9	20	46	29	75
Nutrient use efficiency	2	60	24	84	11	5	16	71	29	100
Soil and water testing	1	25	15	40	5	3	8	30	18	48
Livestock Production and Management										
Home Science/Women empowerment										
IGA										
Value addition	2	69	63	132	18	9	27	87	72	159
Women empowerment	**1**		19	19					19	19
Location specific drudgery production										
Rural Crafts										
Women and child care										
Nutritional security	1		23	23		2	2		25	25

Agril. Engineering										
Small tools & implements	1	2	8	10	5	4	9	7	12	19
Post Harvest Technology	1	25	15	40	5	3	8	30	18	48
Fisheries										
Production of Inputs at site										
Seed Production in vegetables	2	62		62	8		8	70		70
Organic manures production	1	15		15	5	2	7	20	2	22
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics	2	28	15	43	2		2	30	15	45
Others ICT	1	3	28	31	1		1	4	28	32
Role of KVK in dissemination of improved technologies										
Mushroom production	2	28	8	36	8		8	36	8	44
Agro-forestry										
TOTAL	**39**	**902**	**383**	**1285**	**186**	**151**	**337**	**1088**	**534**	**2171**

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

Area of training	**No. of Courses**	**No. of Participants**								
		General			**SC/ST**			**Grand Total**		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Natural Resources management	01	43	6	49	1		1	44	6	50
TOTAL	**01**	**43**	**6**	**49**	**1**		**1**	**44**	**6**	**50**

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

Area of training	**No. of Courses**	**No. of Participants**								
		General			**SC/ST**			**Grand Total**		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**

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
Total										

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
Mushroom production	2	28	8	36	8		8	36	8	44
Productivity Enhancement in field crop	2	53		53	26	1	27	79	1	80
Total	**4**	**81**	**8**	**89**	**34**	**1**	**35**	**115**	**9**	**124**

Sponsored training programmes -Nil

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	**Bee keeping**	1	15	4	19				15	4	19
	Grand Total	**1**	**15**	**4**	**19**				**15**	**4**	**19**

V. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	697	1585	-	1585
Diagnostic visits	65	311	16	327
Field Day	6	693		693
Group discussions				
Self -help groups	3	55		55

Exhibition	2	753		753
Scientists' visit to farmers field	10	45		45
Method Demonstrations	15	166	4	170
Celebration of important days	1	65	2	67
Special day celebration	5	195		195
Exposure visits	5	174		174
Total	**809**	**4042**	**22**	**4064**

Details of other extension programmes

Particulars	Number
Electronic Media	1
News Letter	1
News paper coverage	14
Technical Bulletins	
Technical Reports	6
Radio Talks	16
TV Talks	5
Others Research papers	2
Total	**45**

PRODUCTION OF SEED/PLANTING MATERIAL

Production of seeds by the KVKs

Crop category	Name of the crop	Variety /Hybrid	Unit of measurement	Quantity of seed	Value (Rs)	Number of farmers to whom provided
Cereals	Finger millet	ML 365	Kgs	800	20000	70
Flower crops	Tuberose	Prajwal, Vaibhav	Number	60000	60000	3
Vegetable crops	Amaranthus	Arka Suguana	Kgs	150	45000	4
Vegetable crops	Drumstick	PKM 1	Kgs	4.85	12125	10
Vegetable crops	Frenchbean	Arka Suvidha	Kgs	350	35000	12
Vegetable crops	Okra	Arka Anamika	Kgs	16	4800	5
Vegetable crops	Frenchbean	Arka Komal	Kgs	100	10000	4
Vegetable crops	Radish	Arka Nishant	Kgs	8.5	2210	10
Vegetable crops	Chilli green	Arka Suphal	Kgs	100	100000	3

Vegetable crops	Chilli green	Arka Kyathi	Kgs	1.5	15000	4
Vegetable crops	Cowpea	Arka Garima	Kgs	16	1600	4
Vegetable crops	Onion	Arka Kalyan	Kgs	450	*315000	
Vegetable crops	Pumpkin	Arka Suryamukhi	Kgs	50	25000	
Total				**62046.85**	**645735**	**129**

Production of planting materials by the KVKs

Crop category	Name of the crop	Variety / Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Ornamental plants	Bird of Paradise	IIHR	1250	100000	10
Plantation crops	Arecanut	Hirehalli Tall	50000	*750000	22
Fruit crops	Mango	Alphanso, Badami	1000	*35000	10
Fruit crops	Guava	Pink Flesh, L-49, Mridula	1000	*35000	12
Fruit crops	Lime	Seedless Lime	100	3500	4
Fruit crops	Amla	NA 4,5,7	1500	37500	10
Plantation crops	Coconut	Aresikere Tall	1000	*80000	3
Ornamental plants	Bird of Paradise	IIHR	1250	*100000	10
Spices	Betel vine	Bangal, Sweet Pan , Local	22	132	3
Total			**57122**	**1141132**	**84**

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	Number of farmers to whom provided
Bio agents	*Trichoderma*	76	7600	40
	Pseudomonous	98	24500	60
Bio pesticide	Neem soap	1555	194375	98
	Pongamia soap	589	58900	84
Micro nutrient mixture	Banana special	1450	217500	190

Micro nutrient mixture	Vegetable special	888	111000	210
Mushroom spawn	Spawn	20	1000	15
Total		**4676**	**614875**	**697**

Production of livestock and related enterprise materials-Nil

VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS2012-13-Nil

VIII. SCIENTIFIC ADVISORY COMMITTEE

Number of SACs conducted -01
31.8.2012

IX. NEWSLETTER

Number of issues of newsletter published -01
Jan –March 2012 (200 Copies)

X. RESEARCH PAPER PUBLISHED

Number of research paper published -02
1. Ramesh PR, Jagadish KN, Prasanth JM & LB Naik, 2013, Technology demonstration component D Nagenahalli NICRA village, *Farmers First, Soil and Conservation* National Conference held at Hebbal UAS Bangalore 14-16th March 2013
2. Mamatha, Ramesh, PR, Desai and Sujith,2013, Studies on influence of physiochemical properties of soil on growth and yield attributes of coleus Vettiveroedes, *Farmers First, Soil and Conservation* National Conference held at Hebbal UAS Bangalore 14-16th March 2013

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

Activities conducted				
No. of Training programmes	**No. of Demonstration s**	**No. of plant materials produced**	**Visit by farmers (No.)**	**Visit by officials (No.)**

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