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		
ICAR-KRISHI VIGYAN KENDRA, HIREHALLI, TUMAKURU-572 104	0816-2243175	0816-2243177	iihrkvk@gmail.com	www.iihrkvk.org.in

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

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

1.3. Name of the Programme Co-ordinator with phone & mobile No

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. N.Loganandhan		8277252099	loganandhan@gmail.com

1.4. Year of sanction: 24th, March 2009

1.5. Staff Details as on 31.03.2015

Sl. No.	Sanctioned Post	Name of the Incumbent	Designation	M/F	Discipline	Highest Qualification (for PC, SMS and Prog. Asst.)	Pay Scale	Basic Pay	Date of Joining KVK	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
1.	Programme Co-ordinator	Dr. N.Loganandhan	Programme Coordinator	M	Agril.Extn	Ph.D. Agriculture	37400-67000+9000	38800	02.08.2013	Permanent	Others
2.	SMS	Sri K.N. Jagadish	SMS (Agril.Extn.)	M	Agril.Extn.	M.Sc. Agriculture	15600 -39100+5400	18950	17.11.2009	Permanent	OBC
3.	SMS	Sri P.R.Ramesh	SMS (Soil Science)	M	Soil Science	M.Sc. Agriculture	15600 -39100+5400	18950	17.11.2009	Permanent	OBC
4.	SMS	Sri J.M.Prashanth	SMS (Horticulture)	M	Horticulture	M.Sc. Agri Horticulture	15600 -39100+5400	18950	24.11.2009	Permanent	Others
5.	SMS	Sri B. Hanumanthe Gowda	SMS (Plant Protection)	M	Plant Protection	M.Sc. Agriculture	15600 -39100+5400	18950	02.12.2009	Permanent	Others
6.	SMS	Mrs. RadhaR.Banakar	SMS (Home Science)	F	Home Science	M.Sc. Home Science	15600 -39100+5400	18950	05.12.2009	Permanent	Others
7.	SMS	Dr. Somashekhar	SMS (Plant Breeding)	M	Plant Breeding	Ph.D. Agriculture	15600 -39000+5400	18950	07.12.2009	Permanent	Others
8.	Farm Manager	Sri H.D.Parashuram	Farm Manager	M	Horticulture	B.Sc.	9300 -34800+4600	14920	25.07.2013	Permanent	Others
9.	Prog. Asst. (Comp.)	Ms. Jyoti Appu Naik	Prog. Asst. (Comp.)	F	Information Science	B.E.	9300 -34800+4200	11470	01.10.2009	Permanent	PH
10.	Prog. Asst. (Lab Tech.)	Sri Shashidhara K N	Prog. Asst. (Lab Tech.)	M	Crop Physiology	M.Sc Agri	9300 -34800+4200	10130	17.10.2012	Permanent	SC
11.	Assistant	Vacant	Assistant				9300 -34800+4200	-			
12.	Jr.Stenographer	Mrs.VedaKurnalli	Jr.Stenographer	F	Stenographer	DCP	5200 -20200+2400	8770	17.02.2010	Permanent	Others
13.	Driver	Sri M.H.Ningappa	Driver	M	Driver	S.S.L.C.	5200 -20200+2000	7830	30.12.2009	Permanent	ST
14.	Driver	Sri Hemanth Kumar	Driver	M	Driver	S.S.L.C	5200 -20200+2000	7540	04.01.2010	Permanent	OBC
15.	Supporting Staff	Sri G.Manjanna	Supporting Staff	M	Supporting Staff	P.U.C.	5200 -20200+1800	5860	1.11.2011	Permanent	SC
16.	Supporting Staff	Vacant					5200 -20200+1800	-			

1.6. Total land with KVK (in ha) : 16.8 ha

S. 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

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	20.9.2012	283	5199683	-	-	-
2.	Farmers Hostel	ICAR	20.9.2012	305	6000000	-	-	-
3.	Staff Quarters							
	1							
	2							
4.	Demonstration Units							
	1							
	2							
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
Bolero Diesel Jeep	2009	596783	1,30,774	Good condition
Motor Cycle	2010	52658	33,698	
Honda – Aviator	2010	46025	25595	
Power Tiller	2010	1 42400	-	
Tractor	2011	560000	764.4	

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 2014-15

Sl. No.	Date	No. of Participants	No. of Absentees	Salient Recommendations	Action taken
1.	30.09.2014	25	0	Exchange programmes between two KVKs located in Tumakuru district is benefitting farmers of Tumakuru district, and this should be continued.	SMS (Horticulture) and SMS (Soil Science) Participated in the training Programmes organized by KVK Tiptur as Resource persons.
2.				Vegetable seedlings can be also be raised in pro-trays and given to farmers.	Production and sale of Protray based vegetable seedlings initiated for roof and kitchen garden.
3.				Flower crops can be promoted in plantations like Coconut, Areca nut, etc., and demos can be taken up in KVK Farm.	Flower crops like Tube rose, Marigold and Aster were taken up for OFT as well as KVK Farm.
4.				ARYA Programme could be intensified.	Vocational Training (Coconut friends, Mushroom Cultivation) and IFS Programmes are organized keeping Rural Youth in consideration.
5.				For sustainable profit, IFS has to be promoted.	
6.				Emphasis on Farmers' Producer Organization (FPO) is need of the hour.	Meetings in this regard were organized at Mangalvada village of Pavagada Tq; for Tamarind based FPO.
7.				Beekeeping programmes has to be conducted regularly and NABARD funded programme has to be supported by KVK.	One training was organized. Efforts were taken to cover entire KVK Farm with Honey bee boxes.
8.				Fodder Requirement in the country is 22 Lakh MT. But the supply is only 15 Lakh MT. This gap has to be met out in the future. In this direction, NIFTD is a good initiative.	Through NIFTD, it is demonstrated that green fodder yield was increased to the extent of 31.7% in NB Grass, 61.55% in Multicut fodder sorghum and 37.97% in fodder cow pea.
9.				Foot and Mouth disease has become a major problem. Through effective programs this can be controlled.	An awareness programme organized at D Nagenahalli in Collaboration with NIANP, Bangalore on 25th February 2015, One more awareness programme organized at Baraka village in Collaboration with NIANP, Bangalore on 12th December 2014 Meeting with State Animal husbandry department was held at u on various schemes of State Government.
10.				Market rate issue has to be addressed and the programmes which creates awareness about the prices of market has to be given	More than 15 Nos. of Training Programmes were organized in collaboration with marketing Board , Govt.of Karnataka in

				importance.	Tumakuru District.
11.				Programmes related to Drought mitigation and Post-harvest technologies need be given more focus	NICRA Project and an EDP Programme focus on Drought mitigation and PHT.
12.				High density planting in banana is a good technology, where farmers are to be given full package.	FLD was initiated on HDP in Banana with minimal critical inputs.
13.				Mass media approach has to be adopted for dissemination of the technologies.	KMAS, Radio and TV Programmes, Coverage in Local Newspapers are given due importance for dissemination of the technologies.
14.				The cooperation of Line department & NGO has to be taken to achieve the objective of the demonstration, training, etc.,	The Cooperation of All Line Departments and NGOs like MOTHER, AWARE, AVISKAR, SKRDP, WLARS, ORDER etc., is kept in good spirit for demonstration, training, etc.,
15.				Exposure visit for farmers have to be arranged.	Exposure visits were arranged during ICAR Foundation day, International Exhibition at BIEC, Bangalore.
16.				New varieties have to be included in the farmer's participatory seed production programmes.	Onion- Arka Kalyan, French bean- ArkaSuvidha and Okra-Arka Anamika seed production is being implemented in selected villages of Tumakuru District.
17.				Compiling the outcome of technologies disseminated through OFT's and FLD's is important.	First draft of Compilation is ready to be released as a book.
18.				Tumakuru is a major district growing Coconut, where water management is crucial. Technologies pertaining to this have to be demonstrated.	Water management related topics are covered in Coconut Friends training.
19.				New technologies of horticulture has to be established especially in Mango, Guava, etc.,	Efforts were taken to introduce new technologies like HDP in mango, Arka Rashmi in Guava, Graviola, Protected cultivation in vegetables and flower crops
20.				Seedlings of various fruit crops should be developed in KVK.	About 10000 seedlings have been produced and 5000 were sold so far
21.				Animal component has to be included in the KVK Programme including fisheries.	Efforts were taken to procure two Bullocks, two Jersey cows and to be used along with Bio-digester and Vermi-compost

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.	Dry Land Agriculture
2.	Dry Land Horticulture
3.	Dairy

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

S.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: Tumakuru	• 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

S. 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 - ha
	Red Sandy Loam	• Colour given by haematites or Yellow limonite's • 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
	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
	Shallow Black Soil	• Colour varying from dark brown to dark yellowish brown • Soil with more than 35 % 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

S. No	Crop	Area (ha)	Production (Tonnes)	Productivity (Kg /ha)
1	Rice	14868	98632	3003
2	Jowar	3334	329	798
3	Ragi	137730	308308	1795
	Maize	25191	57394	2777
4	M.Millets	2293	1494	1032
5	Redgram	10469	5604	308
6	Black gram	155	224	382
7	Horsegram	23598	12740	618
8	Avare	8083	8613	933
9	Greengram	9676	3334	327
10	Cowpea	3569	2993	607
11	Groundnut	83983	67923	530
12	Sesamum	378	453	596
13	Sunflower	1779	4007	1005
14	Castor	2621	2031	656
15	Niger	1068	308	250
17	Cotton	1385	2878	532
18	Sugarcane	2653	161452	103

(Source: District At a Glance-Tumakuru: 2013-14)

2.5. **Weather data**

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
April 14	30.50	34.89	19.65	73.47
May 14	86.00	34.09	20.89	77.16
June 14	77.00	31.97	20.87	94.97
July 14	58.75	29.1	20.46	94.98
August 14	147.25	29.42	20.3	96.68
September 14	162.50	29.75	19.66	97.67
October 14	210.5	29.58	19.30	98.32
November 14	22.0	28.75	15.85	97.5
December 14	11.25	28.44	16.00	95.71
January 15	5.25	29.26	14.58	95.65
February 15	0.0	31.94	14.67	87.82
March 15	11.0	34.06	18.08	88.84

*** Source: Automatic weather station at Hirehalli 2014-15(NICRA, CRIDA)**

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

Category	Population	Production	Productivity
Cattle			
Crossbred	141190	54	5.5745
Indigenous	448036	56	2.0671
Buffalo	241970	68	2.5382
Sheep	**meat 000 tons**		
Crossbred	6565		--
Indigenous	1061132	17.31	--
Goats	517763	16.60	--
Pigs			
Crossbred	144	0.23	--
Indigenous	7531		--
Rabbits	121	NA	--
Poultry	**egg production in lakhs**		
Hens		--	--
Desi	711273	273	--
Improved		71	--
Ducks			
Turkey and others			

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

* Please provide latest data from authorized sources. Please quote the source

2.7 District profile has been **Updated** for 2014-15 Yes / No:**Yes**

2.8 **Details of Operational area / Villages**

Sl.No.	Taluk	Name of the block	Name of the Village	How long the Village is covered under operational area of the KVK (specify the years)	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1.	Tumakuru	Tumakuru Urdigere	Vaddarahalli Haraluru, Hirehalli, Kolihalli, Anupanahalli, Yallapura	3 Years	Groundnut, Maize, Paddy,Ragi, Redgram,Tomato, Brinjal,Mango,Sapota, Arecanut, Coconut, Banana Aster	Water Scarcity, Low Yield ,Old varieties, Poor Soil Management, Brinjal Shoot and Fruit Borer, Mono cropping	1.Integrated Crop Management 2.INM and Soil Test based Fertilizer application 3.Integrated Pest & Disease Management 4.Post harvest technology in Vegetables and Fruits
2.	Koratagere	Kollal	D, Nagenahalli, Baichanahalli, Vaddarahalli,	3 Years	Maize, Paddy, Ragi, Redgram, Tomato, Banana,Groundnut, Mango, Aster, Frenchbean, Brinjal & Marigold	Water scarcity, low yield, local variety, Delayed monsoon, Monocropping	1. Integrated Crop Management 2. INM and Soil Test based Fertilizer application 3. Integrated Pest & Disease Management 4. Post harvest technology in Vegetables and Fruits
3.	Madhugiri	Midigeshi	Hanumanthapura Siddapura, Midigeshi	3 Years	Groundnut, Ragi, Arecanut, Maize, Pomegranate, Tomato, Mango , Aster, Frenchbean, Brinjal, Marigold	Water scarcity, low yield, local variety, Delayed monsoon, Monocropping	1.Integrated Crop Management 2.INM and Soil Test based 3.Fertilizer application 4.Integrated Pest & Disease Management 5.Post harvest technology in Vegetables and Fruits
4.	Sira	Bukkapattna	Sakshihalli, Bukkapattana, Tuppadakona, Kumbarhalli,	3 Years	Groundnut, Papaya, Toamto,Ragi, Maize, Redgram, Arecanut, Pomegranate, Mango, Aster,Brinjal, Frenchbean, Marigold	Local Variety, Tikka Disease in Groundnut, Low Yield, Pest and Disease in Redgram , Water Scarcity	1.Varietal Evaluation 2.Integrated Crop Management

5.	Pavagada	Mangalvada	Arasikere,Madde	3 Years	Groundnut, Pomegranate, Ragi, Maize, Tomato, Redgram ,Tamarind, Mango	Water Scarcity, Low yield, Local varieties, Low Soil Fertility, Monocropping, Bacterial Blight and wilt in Pomegranate	1. Integrated Crop Management 2.Integrated Nutrient Management and Soil test based fertilizer application 3.Integrated Pest & Disease Management

2.9 Priority thrust areas

S. 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 Conservation
10.	Drudgery Reduction
11.	Income Generating Activities and Value Addition
12.	Child and Women Care and Balanced Nutrition
13.	Integrated Cropping System
14.	Propagation Techniques and Post Harvest in Fruits and Vegetables.

ART 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
04	03	12	09	16	16	119	81

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
76	48	2075	1189	353	1172	9330	35404

Seed Production (Qtl.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
16.80	13.47	59350	45580

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
-	-	5000	5720
		25000 (Nos.)	22333 (Nos.)

Others		Micro Nutrient Fertilizers (Kg)	
7		8	
Target	Achievement	Target	Achievement
Amla Candy-100 kg	15 kg	8000	8933
Amla Juice- 1000 ltrs	68 ltrs		

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.	Dryland farming	**Paddy**	Limited water		Combating Drought Vulnerability by Aerobic paddy cultivation MAS-26	-	-	-	5	0.14	-	-	-	-
2.	High yielding variety and cropping system	Ragi	Mono cropping		Addressing Drought Vulnerability by Drought tolerant Ragi ML -365	3	-	-	4	1.8	-	-	-	-
3.	ICM	Redgram	Low yield due to seed drill sowing		Enhancement of Red gram yield through demonstration of BRG-4 variety	1	-	-	3	0.75	-	-	-	-
4.	ICM	Banana	Low plant population, Low yield & income		Demonstration of High density planting of Banana	-	-	-	4	-	5200	-	-	-

5.	High Yielding variety	Papaya	Low Yield	-	Demonstration of High yielding variety Arka Prabhat in Papaya	-	-	-	5	-	1500	-	-	-
6.	Dryland farming	Jamoon	Water Scarcity		Demonstration of Dry land Horticulture crop	3	-	-	5	-	160	-	-	-
7.	INM	Arecanut	Splitting of nuts and low yield	-	Management of nut splitting in Arecanut	1	-	1	4	-	-	-	-	0.4
8.	ICM	Arecanut	Inefficient use of land, weed menace, low soil fertility, lower income	Assessment of Areca nut -French bean intercropping system for high soil fertility and higher income	-	-	-	-	5	0.65	-	-	-	-
9.	ICM	Mango	Inefficient use of land, weed menace, low soil fertility, lower income	Assessment of Redgram : Greengram (1:4) as a intercrop in Mango orchard for climate resilient agriculture	-	1	-	-	3	0.26-	-	-	-	-
10.	ICM	Groundnut	Low Yield, Foliar Disease	Assessment of groundnut varieties	-	-	-	-	3	1	-	-	-	-

11.	IDM	Pomegranate	Wilt problem, Bacterial blight	Evaluation of technology for management of Pomegranate wilt	-	2	-	-	5	-	-	-	5	3.5 ltrs
12.	INM	Tomato	1.Low nutrient use efficiency	-	Cost effective Arka Microbial Consortium for tomato production	1	-	1	5	-	-	-	-	10
13.	ICM		Water Scarcity & Weed Menace	-	Use of Polythene mulch in tomato	-	-	-	6	-	-	-	-	-
14.	IDM	Chilli	Damping of f Low seedling vigour	-	Demonstration of Seedpro – A microbial plant growth promoter against soil borne pathogens in Solanaceous Vegetable Crops	-	-	-	3	-	-	-	-	0.6
15.	IPM	Brinjal	Shoot and fruit borer		Bio- intensive Management Brinjal Shoot and fruit borer	-	-	-	5				2	500 trico cards 250 Ml
16.	Variety introduction	Tomato	Bacterial wilt, leaf curl & Low yield		Introduction of Arka Rakshak F1 hybrid in Tomato	-	-	-	4	0.002	-	-	-	-
17.	IPM	Mango	Mango Fruit Fly		Cost effective Eco friendly management of fruit fly through pheromone traps in Mango	-	-	-	5	-	-	-	-	30 Nos

18.			Stem Borer		Management of Mango Stem Borer by Sealer cum Healer	-	-	-	4	-	-	-	-	100
19.	Sustainable Farm Income through Seed Production	French Bean	Low quality seed	-	Seed production of French bean Var. Arka Suvidha	-	-	-	4	1.3	-	-	-	2
20.	Processing and Value addition	Mango	Post Harvest Losses		Demonstration on Mango Harvester, ripening chamber and Packing	1	-		3	-	-	-	-	-

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.	Combating Drought Vulnerability by Aerobic paddy cultivation MAS-26	UAS, Bengaluru	Paddy	-	5	-	-
2.	Addressing Drought Vulnerability by Drought tolerant Ragi ML -365	UAS, Bengaluru	Ragi	-	5	3	-
3.	Enhancement of Red gram yield through demonstration of BRG-4 variety	UAS, Bengaluru	Redgram	-	10	1	-
4.	Demonstration of High density planting of Banana	NRC, Tirachi	Banana	-	3	-	-
5.	Demonstration of High yielding variety Arka Prabhat in Papaya	IIHR, Bengaluru	Papaya	-	3	-	-
6.	Demonstration of Dry land Horticulture Crop	UHS, Bagalkote	Jamoon	-	1	3	-
7.	Management of nut splitting in Arecanut	CPCRI, Kasaragod	Arecanut	-	5	2	-
8.	Assessment of Areca nut -French bean intercropping system for high soil fertility and higher income	CPCRI, Kasaragod	Arecanut	3	-	-	-

9.	Assessment of Redgram:Greengram (1:4) as a intercrop in Mango orchard for climate resilient agriculture	IIHR, Bengaluru	Mango	3	-	1	-
10.	Assessment of groundnut varieties	UAS, Bengaluru	Groundnut	3	-	-	-
11.	Evaluation of technology for management of Pomegranate wilt	IIHR, Bengaluru	Pomegranate	3	-	2	-
12.	Cost effective Arka Microbial Consortium for Tomato production	IIHR, Bengaluru	Tomato	-	5	2	-
13.	Use of Polythene mulch in Tomato	IIHR, Bengaluru		-	4	-	-
14.	Arka Rakshak F1 Resistance to leaf curl, bacterial wilt, early blight in Tomato	IIHR, Bengaluru		-	10	-	-
15.	Demonstration of Seedpro – A microbial plant growth promoter against soil borne pathogens in Solanaceous Vegetable Crops	IIHR, Bengaluru	Chilli	-	5	-	-
16.	Bio- intensive Management Brinjal Shoot and Fruit borer	IIHR, Bengaluru	Brinjal	-	5	-	-
17.	Cost effective Eco friendly management of fruit fly through Pheromone Traps in Mango	IIHR, Bengaluru	Mango	-	5	-	-
18.	Management of Mango Stem Borer by Sealer cum Healer	IIHR, Bengaluru	Mango	-	5	-	-
19.	Seed production of French bean Var. Arka Suvidha	IIHR,Bengaluru	French bean	-	10	-	-
20.	Demonstration on Mango Harvester, ripening chamber and Packing	IIHR,Bengaluru	Mango	-	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	2	-	-	-	-	-	-	-	-	-
				3	1	1	-	62	10	10	3	-	-	-	-
				8	-	2		34	0	1	0	-	-	-	-
				2	-	1	-	-	-	-	-	-	-	-	-

				2	-	1	-	-	-	-	-	-	-	-	-
				1	-	-	-	133	29	11	4	-	-	-	-
				4	-	1	-	10	28	0	2	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	19	13	1	2	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3	-	-	-	-	-	-	-	111	19	9	2	-	-	-	-
				5	-	-	-	111	13	6	2	-	-	-	
				4	-	-	-	-	-	-	-	-	-	-	-
				8	-	2	-	-	-	-	-	-	-	-	-
				5	-	-	-	-	-	-	-	-	-	-	-
				4	-	1	-	-	-	-	-	-	-	-	-
				4	-	1	-	-	-	-	-	-	-	-	-
				5	-	-	-	-	-	-	-	-	-	-	-
				9	-	1	-	-	-	-	-	-	-	-	-
				1	-	-	-	44	3	3	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
Varietal Evaluation		1								1
Integrated Crop Management						1		1		2
Integrated Disease Management						1				1
Total		**1**				**2**		**1**		**4**

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) ha
Varietal Evaluation	Groundnut	Assessment of Groundnut varieties	3	3	1
Integrated Crop Management	Areca nut - French bean	Assessment of Areca nut -French bean intercropping system for high soil fertility and higher income and higher income	3	3	1.6
	Mango-Redgram+ Greengram	Assessment of Redgram:Greengram (1:4) as a intercrop in Mango orchard for climate resilient agriculture	3	3	1.6
Integrated Disease Management	Pomegranate	Evaluation of technology for management of Pomegranate wilt	3	3	1.8
Total			**12**	**12**	**6**

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

Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Arecanut	Irrigated	Inefficient use of space, weed menace, low soil fertility, lower income from mono cropping	Assessment of Areca nut -French bean intercropping system for high soil fertility and higher income	3	TO1: Arecanut sole cropping	TO1: Arecanut yield Before Soil fertility status of the plot	1.11 t/ha/year Poor (N : 115 mg/kg P : 8.5 mg/kg K : 56 mg/kg) Organic Carbon (%) : 0.28	TO3 Recorded Highest production and income per unit area and increase in the organic carbon content	Farmers expressed the higher income obtained from adoption of French bean as intercrop with improved soil fertility status during Rabi /summer	-	-
					TO 2: Arecanut + Vegetable Cowpea	TO2: Cowpea parameter Plant height -cm pods/plant -No Length of pods -cm Cowpea yield -t/ha After Soil fertility status Arecanut Parameter	 60.2 50.6 14.8 2.75 Improved (N : 126 mg/kg P : 9 mg/kg K : 71 mg/kg) Organic Carbon (%) : 0.43 1.19 t/ha/year				
					TO 3: Arecanut + Vegetable French bean	TO3: French bean parameter Plant height-cm Pods/plant -No. Length of pods -cm French bean yield -t/ha After Soil fertility status Arecanut Parameter	 43.7 38.5 13.4 3.45 Improved (N : 151 mg/kg P : 9.5 mg/kg K : 90 mg/kg) Organic Carbon (%) : 0.5 5 1.20 t/ha/year				

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)	FP	Arecanut yield : 1.11	t/ha/year	Arecanut : 1,47,755	3.02
Technology option 2	UAS, Bengaluru	Arecanut yield : 1.19 Cowpea yield : 2.75	t/ha/year t/ha	Arecanut : 1,63,635 Cowpea : 30,750	3.26
Technology option 3	CPCRI, Kasargod	Arecanut yield : 1.20 French bean : 3.45	t/ha/year t/ha	Arecanut : 1,65,620 French bean : 53,150	3.47

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 Areca nut -French bean intercropping system for high soil fertility and higher income
2. Problem Definition : Inefficient use of land, weed menace, low soil fertility, lower income
3. Details of technologies selected for assessment:

Technology option 1 (Farmer's practice): Mono cropping
Technology option 2 : Areca nut + Vegetable Cowpea(0.8 ha)
Technology option 3 : Areca nut + Vegetable French bean (0.8ha)

4. Source of technology : **TO1:** FP**TO2:** UAS (B) **TO3:** CPCRI, Kasargod
5. Production system and thematic area :Irrigated and Cropping system
6. Performance of the Technology with performance indicators :

TO1: Arecanut yield: 1.11 t/ha/year
TO2: Arecanut yield: 1.19 t/ha/year + Cowpea yield: 2.75 t/ha
TO3: Arecanut yield: 1.20 t/ha/year + French bean yield: 3.45 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 : Highest bio mass production and income per unit area and increased in the organic carbon content in TO3
9. Constraints identified and feedback for research : Low market demand on vegetable cowpea
10. Process of farmers participation and their reaction : Group discussion and positive reaction by the farmers participation

2 .Mango											
Crop/ enterprise	**Farming situation**	**Problem definition**	**Title of OFT**	**No. of trials**	**Technology Assessed**	**Parameters of assessment**	**Data on the parameter**		**Results of assessment**	**Feedback from the farmer**	**Any refinement needed**	**Justification for refinement**
1	2	3	4	5	6	7	8		9	10	11	12
Mango	Rainfed	Low soil fertility, Monocropping, Lower income	Assessment of Red gram: Green gram (1:4) as a intercrop in Mango orchard for climate resilient agriculture	03	Mango Sole crop Mango + Horsegram Mango + Red gram - Green gram (1:4)	Yield q/ha Before Soil test Yield q/ha of intercrop After Soil test Yield q/ha of intercrops After Soil test	Technology Option I		Viciated due to delayed monsoon and poor germination			-
							Technology Option II					
							Technology Option III					

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)					
Technology option 2	UAS, Bengaluru				
Technology option 3	IIHR, Bengaluru				
Technology option 4					

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 Red gram: Green gram (1:4) as a intercrop in Mango orchard for climate resilient agriculture
2. Problem Definition : Low soil fertility, Mono-cropping, Lower income
3. Details of technologies selected for assessment :

Technology option 1 (Farmer's practice):
Technology option 2 : Mango + Horsegram
Technology option 3 : Mango + Red gram - Green gram (1:4)

4. Source of technology : UASB and IIHR Bengaluru
5. Production system and thematic area :
6. Performance of the Technology with performance indicators :

Technology option 1 (Farmer's practice): -
Technology option 2 : Mango + Horsegram
Technology option 3 : Mango + Red gram +Green gram (1:4)

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques : No Germination due to delayed monsoon
8. Final recommendation for micro level situation : -
9. Constraints identified and feedback for research : -
10. Process of farmer's participation and their reaction : -

3 . 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
Groundnut	Rainfed	Lower yield, foliar diseases & Smaller pod size	Assessment of groundnut varieties	03	TO1:FP-TMV-2	No of Pod/Plant	25.6	KCG-6 variety recorded higher yield compared to KCG-2 & TMV-2	KCG-6 also shown tolerant to foliar diseases compared to other two varieties.	-	-
						% of Foliar Disease Incidence	28.6				
					TO2:KCG- 2	No of Pod/Plant	32.2				
						% of Foliar Disease Incidence	15.4				
					TO3: KCG- 6	No of Pod/Plant	36.2				
						% of Foliar Disease Incidence	12.2				

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)	FP	5.71	qt/ha	8,104	1.53
Technology option 2	UAS, Bengaluru	7.08	qt/ha	14,209	1.90
Technology option 3	IHR, Bengaluru	7.82	qt/ha	17,224	2.11

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 groundnut varieties
2. Problem Definition : Lower yield, foliar diseases & Smaller pod size
3. Details of technologies selected for assessment :

Technology option 1 (Farmer's practice): TMV-2
Technology option 2 : KCG-2
Technology option 3 : KCG-6

4. Source of technology : UAS, Bengaluru
5. Production system and thematic area : Rainfed and High Yielding Variety
6. Performance of the Technology with performance indicators :

Technology option 1 (Farmer's practice): - TMV-2
Technology option 2 : KCG-2
Technology option 3 : KCG-6

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques :
8. Final recommendation for micro level situation : -
9. Constraints identified and feedback for research : -
10. Process of farmer's participation and their reaction : Group discussion and positive reaction by the farmers participation

4. Pomegranate

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
Pomegranate	Rainfed	Wilt problem	Evaluation of technology for management of Pomegranate wilt	03	FP-TO1: Application of FYM & Neem cake	% wilted plant % plants recovered	11 27.27	Application of Actinobacteria consortium was found very effective against the Pomegranate wilt	Formulation is very useful in controlling the disease with very low cost and eco friendly	-	-
					TO2:Drenching with Carbendazim @ 2gm/litre at 20 days interval.(20 litres of spray solution /plant – 3 times)	% wilted plant % plants recovered	9.5 73.68				
					TO3:Application of Actinobacteria consortium @20g/lt at 15 days intervals (5 times)	% wilted plant % plants recovered	9.5 84.21				

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)		9.32	t/ha	6,03,207	5.23
Technology option 2	UAS, Bengaluru	12.74	t/ha	8,68,416	6.74
Technology option 3	IIHR, Bengaluru	13.69	t/ha	9,57,150	7.93
Technology option 4					

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 : Evaluation of technology for management of Pomegranate wilt resilient agriculture
2. Problem Definition : Low soil fertility, Mono-cropping, Lower income
3. Details of technologies selected for assessment :

Technology option 1 (Farmer's practice): Application of FYM & Neem cake
Technology option 2 : Drenching with Carbendazim @ 2gm/litre at 20 days interval.(20 litres of spray solution /plant – 3 times)
Technology option 3 : Application of Actinobacteria consortium @20g/lt at 15 days intervals (5 times)

4. Source of technology :UAS, Bengaluru and IIHR, Bengaluru
5. Production system and thematic area :
6. Performance of the Technology with performance indicators :

Technology option 1 (Farmer's practice): Application of FYM & Neem cake
Technology option 2 : Drenching with Carbendazim @ 2gm/litre at 20 days interval.(20 litres of spray solution /plant – 3 times)
Technology option 3 : Application of Actinobacteria consortium @20g/lt at 15 days intervals (5 times)

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques :
8. Final recommendation for micro level situation : -
9. Constraints identified and feedback for research : -
10. Process of farmer's participation and their reaction : Group discussion and positive reaction by the farmers participation

4.D1. Results of Technologies Refined

Results of On Farm Trial -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 2014-15

Sl.No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
	Oilseeds													
1.	Cereals	Rainfed	Kharif-2014	Paddy	MAS-26		ICM	Combating drought vulnerability by Aerobic paddy cultivation	2	2	2	3	5	
2.	Millets	Rainfed	Kharif-2014	Ragi	ML-365		Drought Mitigation	Addressing Drought Vulnerability by Drought tolerant Ragi ML -365	3	3	1	4	5	
3.	Pulses	Rainfed	Kharif-2014	Redgram	BGR-4		ICM	Enhancement of Red gram yield through demonstration of BRG-4 variety	5	5	2	8	10	
4.	Vegetables	Irrigated	Kharif-2014	Chilli		Arka Samrat	IDM	Demonstration of Seedpro – A microbial plant growth promoter against soil borne pathogens in Solanaceous vegetable crops	1	1	1	4	5	
5.		Irrigated	Kharif-2014	Brinjal	Arka Shirish		IPM	Bio- intensive Management Brinjal Shoot and fruit borer	1	1	1	4	5	
6.			Kharif / Rabi 2014	Frenchbean	Arka Suvidha		Sustainable Farm Income through Seed Production	Seed production of French bean Var. Arka Suvidha	2	2	1	9	10	

7.			Rabi/ Summer	Tomato	Arka Rakshak		Variety introduction	Demonstration of Arka Rakshak F1 resistant to Leaf curl, Bacterial Wilt and Early leaf Blight in Tomato	2	2	2	8	10	
8.		Irrigated	Rabi-2014	Tomato			ICM	Use of Polythene mulch in tomato	1	1		4	4	
9.		Irrigated	Kharif-2014	Tomato		Private Hyd. Seed	INM	Cost effective Arka Microbial consortium for Tomato production	2	2	-	5	5	
10.	Fruits	Irrigated	Kharif-2014	Papaya	Arka Prabhat		Variety Introduction	Demonstration of High yielding variety Arka Prabhat in Papaya	1	1	1	2	3	
11.		Irrigated	Late Kharif, 2014	Banana	G-9, Yallakki		ICM	Demonstration of High density planting of Banana	1	1	1	2	3	
12.		Irrigated	Late Kharif, 2014	Jamoon	Dupdal		HYV	Demonstration of Dry land Horticulture Crop	0.4	0.4	0	1	1	
13.			Summer-2014				IPM	Cost effective Eco friendly management of fruit fly through pheromone traps in Mango	2	2	1	4	5	
14.			Summer-2014	Mango			IPM	Management of Mango Stem Borer by Sealer cum Healer	100 trees	100 trees	-	5	5	

15.							Drudgery Reduction & PHT	Mango Harvester, Ripening chamber and Packing	5 Nos	1 No.		1	1	
16.	Plantation Crops	Rainfed/ Irrigated	Kharif-2014	Arecanut	Hirehalli Tall		INM	Management of nut splitting in Arecanut	2	2	1	4	5	

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

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of Soil			Previous crop grown
										N	P	K	
1.	Cereals	Rainfed	Kharif -2014	Paddy	MAS-26		ICM	Combating drought vulnerability by Aerobic Paddy cultivation	Kharif - 2014	M	L	M	Ragi
2.	Millets	Rainfed	Kharif-2014	Ragi	ML-365		Drought Mitigation	Addressing Drought Vulnerability by Drought tolerant Ragi ML -365	Kharif-2014	M	L	M	Cowpea
3.	Pulses	Rainfed	Kharif -2014	Redgram	BRG-4		ICM	Enhancement of Red gram yield through demonstration of BRG-4 variety	Kharif - 2014	M	M	L	Ragi
4.	Vegetables	Irrigated	Kharif-2014	Vegetables		Arka Samrat	IDM	Demonstration of Seedpro – A microbial plant growth promoter against soil borne pathogens in Solanaceous vegetable crops	Kharif-2014	M	L	M	Redgram
5.		Irrigated	Kharif -2014	Brinjal	Arka Shirish		IPM	Bio- intensive Management Brinjal Shoot and fruit borer	Kharif - 2014	M	M	L	Aster
6.		Irrigated	Kharif / Rabi 2014	French bean	Arka Suvidha		Sustainable Farm Income	Seed production of French bean Var. Arka Suvidha	Kharif / Rabi 2014	M	L	M	Ragi

							through Seed Production						
7.			Rabi/ Summer	Tomato	Arka Rakshak	Priva Hyd. Seed	Variety introduction	Demonstration of Arka Rakshak F1 resistant to Leaf curl, Bacterial Wilt and Early leaf Blight in Tomato	Rabi/ Summer				
8.		Irrigated	Rabi -2014					Use of Polythene mulch in Tomato	Rabi -2014	M	L	M	Ragi
9.		Irrigated	Kharif-2014				INM	Cost effective Arka Microbial Consortium for Tomato production	Kharif-2014	L	L	M	Aster
10.		Irrigated	Kharif -2014	Papaya	Arka Prabhat		HYV	Demonstration of High yielding variety Arka Prabhat in Papaya	Kharif - 2014	M	L	M	Ragi
11.		Irrigated	Late Kharif-2014	Banana	G-9, Yallakki		ICM	Demonstration of High density planting of Banana	Late Kharif-2014	M	M	L	Aster
12.		Rainfed	Late Kharif-2014	Jamoon	Dupdal		HYV	Demonstration of Dry land Horticulture crop	Late Kharif-2014	M	L	M	Ragi
13.	Fruits	Rainfed	Summer-2014	Mango	Alphanso		IPM	Cost effective Eco friendly management of fruit fly through pheromone traps in Mango	Summer-2014	M	L	L	-
14.		Rainfed	Summer-2014	Mango	Alphanso		IPM	Management of Mango Stem Borer by Sealer cum Healer	Summer-2014	M	L	L	-
15.		Rainfed		Mango	Alphanso		PHT	Mango Harvester, Ripening chamber and Packing		-	-	-	-
16.	Plantation	Irrigated	Kharif/Rabi	Arecanut	Local variety		INM	Management of nut splitting in Arecanut -	Kharif/ Rabi	M	L	M	-

5.B. Results of Frontline Demonstrations

5.B.1. Crops

Crop	Name of the Technology Demonstrated	Variety	Hybrid	Farming situation	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
							H	L	A										
Oilseeds																			
Cereals	Combating drought vulnerability by Aerobic paddy cultivation	MAS-26		Rainfed	10	2	37.8	35.2	36.3	32.1	13.10	19,922	34,028	14,106	1.7	18,102	21,646	3,544	1.2
Millets	Addressing Drought Vulnerability byDrought tolerant Ragi ML -365	ML-365		Rainfed	10	5	27.1	24.5	26.44	19.4	36.2	15,678	30,450	14,772	1.94	14,448	23,162	8,714	1.60
Pulses	Enhancement of Red gram yield through demonstration of BRG-4 variety	BRG-4		Rainfed	10	5	11.5	8.65	9.74	7.83	12.12	21574	48683	27109	2.27	21574	3,9130	17,556	1.82
Vegetables	Demonstration of Seedpro – A microbial plant growth promoter against soil borne pathogens in Solanaceous vegetable crops		Pvt. Hybrid	Irrigated	5	1	248.5	230.2	240.7	193.8	24.20	61,225	1,44,451	83,226	2.36	64,890	1,16,286	51,396	1.79

	Bio-intensive Management Brinjal Shoot and fruit borer	Arka Shirish		Irrigated	5	1	284	274	279.6	159.7	75.07	66,421	2,23,733	1,57,312	3.36	70,457	1,27,792	57,335	1.81
	Seed production of French bean Var. Arka Suvidha	Arka Suvidha		Irrigated	10	2	12.12	7.07	9.87	7.15	38.11	31,622	98,775	67,152	3.12	31, 622	71,540	39,917	2.26
	Demonstration of Arka Rakshak F1 resistant to Leaf curl, Bacterial Wilt and Early leaf Blight in Tomato		Arka Rakshak F1 Hybrid	Irrigated	10	2	345	225	290	173	67.63	44,625	1,48,250	1,03,625	3.35	50,650	86,250	35,600	1.70
	Use of Polythene mulch in tomato		Private Hyd. Seed	Irrigated	5	1	812.5	732.5	762.5	665	14.66	65,850	3,05,000	2,39,150	4.62	76,200	2,66,000	1,89,800	3.48
	Cost effective Arka Microbial consortium for tomato production		Private Hyd. Seed	Irrigated	5	2	533	490	516.8	436.4	18.42	63,120	2,10,020	1,46,900	3.3	60780	1,78,760	1,17,980	2.9
Fruits	Demonstration of High yielding variety Arka Prabhat in Papaya	Arka Prabhat		Irrigated	3	1	94.01	81.35	86.78 t/ha	75.26 t/ha	9.8	86,675	3,82,386	2,95,712	4.4	86,675	3,29,653	2,42,978	3.8
	Demonstration of High density planting of Banana	G9		Irrigated	3	1	Ongoing												

	Demonstration of Dry land Horticulture crop	Dupdal		Rainfed	1	0.4	Ongoing												
	Cost effective Eco friendly management of fruit fly through pheromone traps in Mango	Alphanso		Rainfed	5	2	Ongoing												
	Management of Mango Stem Borer by Sealer cum Healer	Alphanso		Rainfed	5	100 trees	Ongoing												
	Mango Harvester, Ripening chamber and Packing	Alphanso		Rainfed	1	1						4,500	1,20,000	1,15,500	-	0	56,000	56,000	-
Plantation	Management of Nut Splitting in Arecanut	Local		Irrigated	5	2	10.4	8.6	9.54	8.48	12.5	38,512	1,88,740	1,50,228	4.9	37,693	1,71,164	1,33,471	4.5

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		
Title	**Parameter with unit**	**Demo**	**Check**
Combating drought vulnerability by Aerobic paddy cultivation	Tillers/ plant -Numbers	41.4	28.6
Addressing Drought Vulnerability by Drought tolerant Ragi ML -365	Panicle weight - Grams	26.8	19.4
Enhancement of Red gram yield through demonstration of BRG-4 variety	Pods/plant-Numbers	120	92.7
Demonstration of Seedpro – A microbial plant growth promoter against soil borne pathogens in Solanaceous vegetable crops	Damping off -%	9.5	28.64
Bio- intensive Management Brinjal Shoot and fruit borer	shoot infestation -%	5.32	30.11

Seed production of French bean Var. Arka Suvidha	Pods/plant- Numbers	46	34
Demonstration of Arka Rakshak F1 resistant to Leaf curl, Bacterial Wilt and Early leaf Blight in Tomato	Disease Incidence (ELB) %	12	38
Use of Polythene mulch in tomato	Fruits /plant -Numbers	48	39
Cost effective Arka Microbial consortium for tomato production	Seedling Root length-cm	7.06	4.92
Demonstration of High yielding variety Arka Prabhat in Papaya	Fruits /plant -Numbers	48	32
Demonstration of High density planting of Banana	Plants / ha- Numbers	2080	1500
Demonstration of Dry land Horticulture crop Jamoon	Plant height -ft.	5.2	-
Cost effective Eco friendly management of fruit fly through pheromone traps in Mango	Male Flies attracted-Numbers	33	0
Management of Mango Stem Borer by Sealer cum Healer	Avg. length of healing of stem -cm	12.6	0
Mango Harvester, Ripening chamber and Packing	Income	-	-
Management of Nut Splitting in Arecanut	Nuts /bunch - Numbers	350.2	294.2

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 -Nil

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

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	5	520	-
2	Farmers Training	44	1091	-
3	Media coverage	8	-	-
4	Training for extension functionaries	4	98	-
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										
Tomato	Cost effective Arka Microbial Consortium for **T**omato production	Private hybrid	5	2	533	490	516.8	436.4	18.42	63,120	2,10,020	1,46,900	3.3	60780	1,78,760	1,17,980	2.9
	Use of Polythene mulch in Tomato	Private hybrid	5	1	812.5	732.5	762.5	665	14.66	65,850	3,05,000	2,39,150	4.62	76,200	2,66,000	1,89,800	3.48
	Demonstration of Arka Rakshak F1 resistant to Leaf curl, Bacterial Wilt and Early leaf Blight in Tomato	Arka Rakshak F1 Hybrid	10	2	345	225	290	173	67.63	44,625	1,48,250	1,03,625	3.35	50,650	86,250	35,600	1.70
Chilli	Demonstration of Seedpro – A microbial plant growth promoter against soil borne pathogens in Solanaceous Vegetable Crops	Private hybrid	5	1	248.5	230.2	240.7	193.8	24.20	61,225	1,44,451	83,226	2.36	64,890	1,16,286	51,396	1.79
Total			**25**	**6**	**1,939**	**1,677.7**	**1810**	**1468.2**	**124.91**	**2,34,820**	**8,07,721**	**83,226**	**13.63**	**2,52,520**	**86,250**	**86,996**	**9.87**

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										
Integrated Farming	1	22	0	22	0	0	0	22	0	22
Horticulture										
a) Vegetable Crops										
Off-season vegetables	1	18	9	27	0	0	0	18	9	27
b) Fruits										
c) Ornamental Plants										
d) Plantation crops										
Production and Management technology	3	83	83	166	6	2	8	89	85	174
e) Tuber crops										
g) Medicinal and Aromatic Plants										
Soil Health and Fertility Management										
Livestock Production and Management										
Animal Nutrition Management	1	92	2	94	6	1	7	98	3	101
Home Science/Women empowerment										
Women empowerment	1	0	37	37	0	0	0	0	37	37
Agril. Engineering										
Post Harvest Technology	1	41	3	44	1	0	1	42	3	45
Plant Protection										
Fisheries										
Production of Inputs at site										
Mushroom production	2	18	2	20	4	0	4	22	2	24
Capacity Building and Group Dynamics										
Agro-forestry										
TOTAL	**10**	**274**	**136**	**410**	**17**	**3**	**20**	**291**	**139**	**430**

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										
Integrated Crop Management	2	103	31	134	7	4	11	110	35	145
Others (pl.specify) Production management technology	2	56	6	62	4	1	5	60	7	67

Horticulture										
a) Vegetable Crops										
b) Fruits										
Others (pl.specify) –Dry Land Horticulture	3	99	29	128	10	4	14	109	33	142
c) Ornamental Plants										
Others (pl.specify)-Organic Farming	1	30	2	32	1	0	1	31	2	33
d) Plantation crops										
Production and Management technology	2	68	83	151	4	2	6	72	85	157
e) Tuber crops										
f) Spices										
g) Medicinal and Aromatic Plants										
Soil Health and Fertility Management										
Soil fertility management	1	15	0	15	2	2	4	17	2	19
Soil and water testing	8	169	51	220	13	11	24	182	62	244
Livestock Production and Management										
Feed and Fodder technology	2	43	18	61	3	1	4	46	19	65
Home Science/Women empowerment										
Agril. Engineering										
Plant Protection										
Integrated Disease Management	1	27	1	28	3	0	3	30	1	31
Fisheries										
Production of Inputs at site										
Bio-fertilizer production	4	195	14	209	12	3	15	207	17	224
Capacity Building and Group Dynamics										
Agro-forestry										
TOTAL	**27**	**849**	**238**	**1087**	**62**	**29**	**91**	**911**	**267**	**1178**

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
Mushroom Production	1	9	0	9	1	0	1	10	0	10
TOTAL	**1**	**9**	**0**	**9**	**1**	**0**	**1**	**10**	**0**	**10**

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										
Integrated Pest Management	1	16	9	25	0	0	0	16	9	25
Integrated Nutrient management	1	9	9	18	0	0	0	9	9	18
Production and use of organic inputs	2	42	2	44	3	1	4	45	3	48
Livestock feed and fodder production	1	29	4	33	0	0	0	29	4	33
Total	**5**	**96**	**24**	**120**	**3**	**1**	**4**	**99**	**25**	**124**

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

7.G. Sponsored training programmes conducted

Sl. 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	22	0	22	0	0	0	22	0	22
2	Commercial production of vegetables	1	18	9	27	0	0	0	18	9	27
3	Post harvest technology and value addition	2	41	40	81	1	0	1	42	40	82
	Total	**4**	**81**	**49**	**130**	**1**	**0**	**1**	**82**	**49**	**131**

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

Sl. 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										
2	Others (pl.specify) Coconut Friends	1	18	0	18	2	0	2	20	0	20
3.	Others (pl.specify)Honeybee Keeping	1	24	0	24	2	0	2	26	0	26
	Grand Total	**02**	**42**	**0**	**42**	**04**	**0**	**04**	**46**	**0**	**46**

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	5	396	24	420	51	20	71	24	5	29
Kisan Mela	**4**	125	35	160	45	15	55	15	2	17
Kisan Ghosthi	-	-	-	-	-	-	-	-	-	-
Exhibition	14	22300	3000	25300	235	118	353	2592	675	3267
Film Show	11	112	32	144	32	13	45	132	4	17
Method Demonstrations	14	240	15	255	4	2	6	0	0	0
Farmers Seminar//Workshop										
Workshop										
Group meetings										
Lectures delivered as resource persons	47	2910	311	3221	42	8	50	89	20	109
Newspaper coverage	20									
Radio talks	5									
TV talks	3									
Popular articles										
Extension Literature	04									
Advisory Services	552	2320	325	2645	102	27	129	119	4	123
Scientific visit to farmers field	26	68	2	70	4	1	5	20	3	23
Farmers visit to KVK	397	1610	20	1630	75	8	83	-	-	-
Diagnostic visits	99	197	3	200	6	3	9	14	3	17
Exposure visits	4	142	18	160	8	3	11	7	2	9
Ex-trainees Sammelan	-									
Soil health Camp										
Animal Health Camp	2	42	13	55	8	2	10	6	2	8
Agri mobile clinic	0	0	0	0	0	0	0	0	0	0
Soil test campaigns										
Farm Science Club Conveners meet										
Self Help Group Conveners meetings	3	0	82	82	0	21	21		2	2
Mahila Mandals Conveners meetings										
Celebration of important days (specify)	8	142	47	184	36	10	46	62	10	72
Any Other (Specify) Special day celebrations										
Total	**1,218**	**30,604**	**3,927**	**34,526**	**648**	**251**	**894**	**3,080**	**732**	**3,693**

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 (Kg)	Value (Rs)	Number of farmers to whom provided
Cereals (crop wise)	Finger millet	ML 365		180	7,200	84
Vegetable crops	Tomato	Arka Meghali		12	24,000	8
Vegetable crops	Pumpkin	Arka Suryamukhi		45	36,000	11
Vegetable crops	Okra	Arka Anamika		102	51,000	13
Vegetable crops	Onion	Arka Kalyan		500	7,50,000	30
Vegetable crops	Radish	Arka Nishant		40	16,000	6
Vegetable crops	Cowpea	Arka Garima		50	12,500	12
Vegetable crops	French Bean	Arka Suvidha		200	50,000	77
Vegetable crops	Amaranthus	Arka Suguna		40	16,000	13
Vegetable crops	Palak	Arka Anupama		48	14,400	17
Vegetable crops	Vegetable Seed Kit			2,000 Nos.	2,00,000	1800
Fodder crops	Fodder Sorghum	CO(FS) - 29		95	47,500	2
	Fodder Cowpea	CO(FC) - 8		35	17,500	2
Total					**12,42,100**	**2085**

9.B. Production of planting materials by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Number	Value (Rs.)	No. of farmers to whom provided
Vegetable seedlings						
	Drumstick	PKM-1		750	7,500	14
Fruits						
	Mango	Alphanso, Badami		200	8,000	12
	Jamun	Gokak		100	4,000	13
	Guava	Pink Flesh, L-49, Mridula		250	10,000	7
	Lime	Seedless Lime		80	3,200	5
		Kazi Lime		400	8,000	44
	Amla	NA 4,5,7		450	18,000	14
Ornamental plants						
Flower crops	Tuberose	Prajwal, Vaibhav		22,000	44,000	1
Medicinal and Aromatic						
Plantation	Arecanut	Hirehalli Tall		3,000	60,000	23
	Arecanut Sprouts	Hirehalli Tall		17,500	87,500	
	Coconut	Arasikere Tall		850	68,000	19
Total				**45,580**	**3,18,200**	**152**

9.C. Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	No. of Farmers
Bio Fertilizers	Banana special	4,345	6,51,750	1,512
	Vegetable Special	2,066	3,00,900	852
	Mango Special	1,422	2,13,000	820
	Citrus Special	1,100	1,65,000	52
Bio-pesticide	NeemSoap	2,110	3,09,025	1,238
	Pongamia Soap	924	1,15,500	464
Bio-fungicide	Arka Microbial consortium	2,686	2,01,450	110
Bio Agents	Mango fruit fly traps-Nos.	8,763	1,75,260	730
	Mango fruit fly lures- Nos.	13,570	2,71,400	862
Others	Amla Juice (lts)	68	6,800	60
	Amla Candy	15	3,750	35
	Mushroom Spawn	276	16,560	123
Total		**37,345**	**24,30,395**	**6,858**

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.)
April –June 2014 100 copies
July-Sept 2014 100 copies

(B) Literature developed/published

Item	Title	Authors name	Number
Research papers	Water resource management to combat climatic vulnerability: A case study of D. Nagenahalli, Tumakuru, Karnataka.	Ramesh PR, Hanumanthegowda B, Praveenkumar, Loganandhan N and L.B.Naik	04
	Three years, seventy farm ponds, eighteen thousand cubic meters capacityâ€“ A success story from a NICRA village in Tumakuru district of Karnataka	Loganandhan N, Ramesh PR, Jagadish,KN, Prasanth JM, and L.B.Naik	
	Direct Marketing " A way forward for farmers, In: The ISEE National Seminar on Extension innovations and methodologies for market	N.Loganandhan, P.R.Ramesh, J.M.Prasanth, Somashekhar, K.N.Jagadish and L.B.Naik	

	Jalavayu parivarthan ke daur mein krishi vividheekaran ke madhyam se mahila sashaktikaran,	N.Loganandhan, Jagadish, K.N., Shankara, M.H	
Technical reports	IIHR Annual Report 2014-15 SAC Report NICRA Action Plan Report Action Plan Report	KVK Staff	04
News letters	ICAR News letter IIHR News Letter KVK News letter CRIDA News letter		04
TOTAL			**12**

10.B. Details of Electronic Media Produced

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

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

Success stories

1. **Multiple Cropping with Poly mulch and Drip Irrigation – A story worth to emulate**

	**Smt. Saroja G.C** W/o Ramachandraiah D.G. Devarayapattana Post, Tumakuru- 572106 Mobile: 9738230939

Smt.Saroja is a progressive women farmer from Devarayapatna village of Tumakuru district, Karnataka. She has graduated from Tumakuru and now grows vegetables and flowers in an area of 2 acres along with her husband. KVK, Hirehalli has introduced improved varieties of vegetables and flowers to her in the year 2013-14, in which she showed tremendous outcome.

The story started with the introduction of improved tomato variety – Arka Samrat under plastic mulching in her field. Tomato is an important commercial vegetable crop in India. Tomato farmers are facing problems due to the climate change which leads to outbreak of pest and diseases, drought situation, bore wells going dry, labour scarcity etc. In last 3-4 years major diseases like late blight and leaf curl have emerged as devastating problems for tomato crop. Subsequently cost of cultivation has also gone up and labour shortage has a major threat for farming community. Farmers are finding it difficult to cope up with the raised input costs and other related problems. Smt.Saroja is also not an exception from these predicaments.

To mitigate these problems, KVK (IIHR), Hirehalliinitiated a demonstration of the technology - Poly mulching with drip irrigation in tomato crop under Front Line Demonstration (FLD) during the year 2013-14 in her field. Earlier, she used to grow only ragi and paddy crops during the monsoon. She was unable to

cultivate the profit oriented crops due to the lack of technical knowhow and labour scarcity. She visited KVK, Hirehalli and discussed with scientists about cultivation of *tomato*. She was advised about the improved *tomato* production technology developed by IIHR Bengaluru with Hybrid Arka Samrat under poly mulching.

Keeping these suggestions in view, Smt. Saroja decided to go for summer tomato cultivation in her field. She planned for one acre and used the Hybrid Arka Samrat. She transplanted the tomato seedlings on raised beds with ploy mulch film laid with drip irrigation. She has followed package of practices with fertigation and plant protection recommendations as per the suggestions given by the SMS (Horticulture). She used to visit KVK, Hirehalli frequently for suggestions and regular visits were also made by the KVK Scientists to the FLD plot. The practice of mulching helped in moisture conservation, weed suppression and maintenance of soil structure. Mulches also improved the use efficiency of applied fertilizer and use of reflective mulches minimized the incidences of pests and viral diseases. She started harvesting tomato after 65 days after planting and got 32.50 tonnes of tomato per acre and sold them @ Rs.10 per kg. This resulted in a total income of Rs. 3.25 lakhs per acre. The total cost of cultivation for tomato was Rs.60,000 per acre. Thus, she earned a net profit of Rs. 2.65 lakh per acre (BC ratio 5.41). Farmers of surrounding villages were very impressed by the result of this technological intervention of plastic mulching with drip irrigation. Farmers from the village are of the opinion that by following these technologies, they can reduce the wastage of water and fertilizers and also increase the water use efficiency. The incidence of pests and diseases has come down. The number of seedlings required for planting one acre is also less because of the decreased seedling mortality. The fruits obtained are of better quality and colour, which fetched her more prices in the market.

The anticipated increase in income by usingpoly mulch in crops, especially of high value such as tomato, appropriately justifies the costs of plastic mulch and drip irrigation. However, use of plastic mulch may or may not impact the net profit in case of low value crops, considering the investment in mulching.

To reap more benefits from the investment made on mulch and drip irrigation, multiple cropping (growing a second or even third crop immediately after the previous crop) has become a common practice under plastic mulching. Rotation of *Solanaceous* crops with a leguminous crop could be a better option in this case. However, proper installation of a good quality plastic mulch and drip tube is absolutely necessary for successful multiple cropping. So, Smt. Saroja was suggested by the KVK to take up second crop as a french beans. She had harvested french bean after 55 days after sowing and gained 3.5 t/acre. She sold them at the rate of Rs.22/kg. The gross income was Rs.77, 000 consecutively, considering the quality of the mulch and drip tubes, she was suggested to go for a third crop – newly released variety of Marigold Arka Bangara from IIHR, propagated through cuttings, in the same polymulch with same spacing. In Marigold, 45 days after planting, she got 1800 kg and sold at the rate of Rs. 20/kg and gross income was Rs. 36,000. By this she earned a total net income of Rs. 0.92 lakh per acre.

Table – showing the income from all the three crops and in total

Sl. No.	Varieties	Yield	Net Returns (Rs./acre)
1.	Tomato Arka Samrat	32.50 t/acre	2,65,000/-
2.	French Bean –Pole beans	3.50 t/ acre	64,500/-
3.	Marigold- Arka Bangara	1800 kg /acre	27,500/-

She received innovative farm woman award from IIHR on her success during the recent ICAR foundation day–18th July 2014. Smt.Saroja is acting as a role model for nearby farm women to lead a successful career by following improved horticulture practices.


FLD Plot on Poly Mulching in Tomato – Arka Samrat


I crop - Tomato – Arka Samrat


II crop: French bean crop in same polymulch- Pole beans

III crop: Marigold crop - Arka Bangara

Felicitation during ICAR Foundation day

2. A lesson from a Mango Farmer

	**Sri. Revannasiddaiah** S/o Huchegowda, Neralapura Village, Tumakuru Taluk & District. Mobile: 9945465862

Sri. Revannasiddaiah, S/o Huchegowda, aged 67, is a Mango farmer from Neralapura village, Tumakuru District, Karnataka. Both husband and wife, studied up to S.S.L.C, are living in the village looking after their three acres mango orchard, while both the sons, educated are settled in Tumakuru and Hosakote. In the initial years, the farmer was in search of a suitable intervention for his three acres dry land farm. During 2003 he came into contact with Dr. B.M.C. Reddy, the then Director of Indian Institute of Horticultural Research (IIHR), Bengaluru. Based on his advice to go for Mango as a dryland horticulture intervention, he planted 74 grafted seedlings of Alphonso variety, initially in two acres of his land, in July 2004. Later in the year 2011, he purchased one more acre of adjacent land and continued mango cultivation in that land as well. Till 2009 he had contact with IIHR, Bengaluru and from 2010 onwards he came to know about the Krishi Vigyan Kendra (KVK), Hirehalli (under IIHR) at Tumakuru.

Dr. Reddy's package of practices (PoP) includes application of 60 kg of FYM, every year as a blanket application and 5 kg of oil cake mixtures (neem, pongamia, groundnut etc) at the root zone. In the additional one acre farm he applies 20 kg of FYM and half kg of oil cake mixture every year. He applies water using a water tanker only during the non-rainy period – November to May (7 months). About 40 litres of water is being applied to each tree once in 10 days.

In the year 2010 onwards, the KVK, Hirehalli helped him with some of the technological interventions, viz., Mucuna (Velvet bean) as an intercrop for green manure (On Farm Trial), Micro Nutrients Foliar Spray (Mango special) for uniform mango size and increase in yield and use of Pheromone trap for monitoring Mango Fruit Flies (Front Line Demonstration). He was advised to apply Mango Special (75g of Mango Special Powder + 2 medium size Lemons + One sachet shampoo in 15 litres of water) to his entire orchard on monthly interval. He installed about 12 fruit fly traps in his 2 acres.

In the year 2010, from the first bearing, he got a yield of 480 Kgs. That was when a contractor approached him for a rate contract. The contractor asked for Rs.8000 for the whole orchard. But, the farmer thought otherwise and decided to sell the mangoes on his own. He came into contact with Dr.Rajendra Keni, General Physician at Sadashivanagar, a posh locality in Bengaluru city. The Doctor was aware of the quality of his mangoes, which were ripened on traditional method using paddy straw, free from calcium carbide, safe for health. Initially the farmer sold mangoes at prevailing market price. Once customers tasted Nelarapura Mangoes from the orchard of Sri. Revannasiddiah, they came back asking for same quality mangoes because they were free from fruit flies and were naturally ripened and tasty. Customers themselves offered premium prices for the quality produce. So, the farmer found a good market and started selling them directly to the Doctor's family members and friends. The Doctor, in turn started prescribing these quality mangoes to his clients and other friends. Thus, Sri.Revannasiddaiah decided to sell the mangoes regularly to these customers, who were ready to pay premium prices. That year finally he got a gross return of Rs.40,000, five times more than what the contractor had asked for! The customers keep in touch with the farmer for quality mangoes every year.

During 2011, the yield was 2400 kg. This time 1020 kg of graded fruits were packed and sold @ Rs 500 per box (of 6 kg). The remaining 1380 kg were sold to a contractor for Rs.25,000 at farm price. Whereas, the farmer sold graded mangoes for a whopping amount of Rs.85,000. The yield also started increasing every year but price is kept at Rs.500 per box till 2013.

Table 1: Increase in income through direct marketing

Income through contractor			**Income through direct marketing**			Percentage increase in gross income
Production (kg)	Income(Rs.)	Average gross income per kg (Rs.)	Production (kg)	Income(Rs.)	Average gross income per kg (Rs.)	
1380	25000	18	1020	85000	83	361

In the year 2014, the bearing was comparatively less than the previous years and prices were also crashed due to some market related reasons. But, still he managed to sell them off for Rs.1,20,000. KVK has introduced Low Cost Mango Ripening Chamber to him. It is a small one cubic meter structure made of plastic pipes and polythene sheets. Mangoes (about 8 crates-1250 fruits) used to be kept in the chamber for 24 hours. In one cubic meter structure only 75 per cent of space for fruit was occupied. Inside the chamber, Ethylene solution (2%) and Sodium hydroxide (0.5 gms) were mixed and kept in a bowl. The controlled fumigation technique helped him to speed up the ripening process, whereas the dangers of using calcium carbide were completely avoided. In traditional ripening method, it used to take 10 days for ripening and change in colour. But using this low cost ripening technology, fruits are taken outside the chamber after 24 hours, and within 5 days they attain uniform colour. After keeping the mangoes for the specified period, he used to remove and pack them in used carton boxes. He sold 200 such boxes, each 6 kg of mangoes (in total 1200 kgs). On an average he sold them for Rs.100 per kg, which was much higher than the prevailing rate for Alphonso variety at that time. For transport to Bengaluru, all he invested was Rs.1400 per trip and in each trip he carried about 100 boxes. Thus the farmer made a fortune by producing and selling his mangoes by using simple technologies suggested by IIHR and KVK. His interview on Low Cost Mango Ripening Chamber Technology was telecasted in Doordarshan – Chandana channel on 12th& 13th of June 2014.

Sri. Revannasiddaiah earned about two lakhs rupees in a short period of time by following the methodologies suggested by KVK (IIHR) for production and post-harvest care of mangoes. Recently, he purchased a TVS Moped from this income. Now, he also motivates several other neighboring farmers to adopt the scientific cultivation and processing methods offered by the KVK.

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	Groundnut	Periodical drying of pods for 5 hours	To avoid the storage pest and Aspergillus
2	Betelvine	Application of Lime in the month of June/July	For management of root diseases
3	Maize, Groundnut	Erecting of Steel Plate all along the border.	To avoid the Wildbore

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 Bengaluru
- 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 : 22
ii. No. of farm families selected : 215
iii. No. of survey/PRA conducted : 03

10.H. Activities of Soil and Water Testing Laboratory

Status of establishment of Lab : **Established under NHM Scheme**

1. Year of establishment : 19.4.2014
2. List of equipment's purchased with amount :

Sl. No.	Name of Equipments	Qty	Amount (Rs.)
1	Spectrophotometer with accessories	1	1,81,260
2	Flame photometer	1	53,238
3	Analytical balance	1	28,625
4	Nitrogen Analyzer (Kjeldahl digestion and distillation) with spare parts	1	1,79,879
5	Shaker	1	45,800

6	Refrigerator	1	40,200
7	Oven	1	60,456
8	Hot plate	1	18,893
9	Digestion fume chamber	1	99,501
10	Atomic Absorption Spectrophotometer	1	10,00,000
11	Centrifuge	1	58,404
12	Glassware and miscellanies	-	99,279
13	Chemicals	-	1,34,465
Total			**20,00,00**0

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	**623**	**610**	**610**	**62300**
Water Samples	**414**	**408**	**408**	**20200**
Plant samples	**112**	**43**	**43**	**11200**
Manure samples				
Others (specify)				
Total	**1149**	**1061**	**1061**	**93700**

Details of samples analyzed during the 2014-15:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	**623**	**610**	**610**	**62300**
Water Samples	**414**	**408**	**408**	**20200**
Plant samples	**112**	**43**	**43**	**11200**
Manure samples				
Others (specify)				
Total	**1149**	**1061**	**1061**	**93700**

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

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

PART XI. IMPACT

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

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Micronutrient Management in Banana	145	90	168945	189064
ICM in French bean (ArkaSuvidha)	40	38	34500	54030
Enhancement of Productivity of Finger millet by drought tolerant variety ML 365	210	75	18350	35840
Popularization of Onion Arka Kalyan	80	45	33750	52810
Popularization of short duration Red gram Var-BRG-2	60	70	42102	56450
Foliar disease tolerant Ground nut variety GPBD-4	70	30	13845	21260
Arka Microbial consortium in Vegetable production	70	35	98000	135800

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 fruit fly control technology measures were not followed because of the leasing practices among the farmers. The awareness created and demonstrated on use of fruit fly trap (IIHR technology) at the appropriate time and for effective control of fruit fly at critical stage. Nearly 730 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 Vocational trainings on Coconut palm climbing and plant protection measures to the 20 rural youths and they were formed the groups as a coconut tree climbers and they are earning nearly Rs. 1200 to 2500/- per day with an average 60-75 palm climbing per day.

- Farmers have realized the importance of ICM technology (Vegetables) and only 35% of the IPM components are being voluntarily used by the farmers.

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
BAIF NGO, Tiptur	Trainings and Technical Information
ORDER NGO, Tumakuru	Trainings, FLD's and Technical Information
AWARE NGO, Tumakuru	Trainings
APART NGO Tumakuru	Organic Farming and Group Approach
MOTHER NGO Tumakuru	Seed Village Concept
UAS, Bengaluru	Trainings and FLDs
UAS, Dharwad	Trainings and FLDs
UHS, Bagalkote	Trainings and FLDs
Veterinary University,Bidar	Trainings and FLDs

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

Name of the scheme	**Role of KVK**	**Date/ Month of initiation**	**Funding agency**	**Amount (Rs. In** lakhs**)**
Technology demonstration component of NICRA	Demonstration of Interventions	January 2011	CRIDA, Hyderabad	83.79
Establishment Model Nursery at KVK Hirehalli	Production of quality planting material	March 2013	NHM	25

Participatory Vegetable Seed Production and Distribution System	Participatory Vegetable Seed Production in farmers field	March 2013	NHM	40
Krishi Bhagya Scheme	Construction of Farm Pond	January 2015	Govt. of Karnataka	2.5

12.C. Details of linkage with ATMA

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

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

Sl. No.	**Programmes**	**Nature of linkage**	**Funds received if any Rs. -**lakhs	**Expenditure during the reporting period in Rs. -**lakhs	**Remarks**
1	Participatory Vegetable Seed Production and distribution system under RKVY scheme	Quality seed production	40	20	

12. G Kisan Mobile Advisory Services

Month	**No. of SMS sent**	**No. of farmers to which SMS was sent**	**No. of feedback / query on SMS sent**
April 2014	3	1017	1
May	1	764	0
June	7	1217	2
July	5	1592	1
August	3	875	1
September	2	875	0
October	2	957	0
November	6	1018	2
December	5	1279	1
January 2014	3	1289	1
February	3	1017	0
March 2014	1	764	0
Total for the year 2014-15	**37**	**10883**	**9**

PART XIII- PERFORMANCE OF INFRASTRUCTURE IN KVK

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

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

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.	Cost of inputs	Gross income	
Cereals									
Ragi	16.6.2014	5.10.2014	0.4	ML-365	Seeds	180		7,200	
Spices & Plantation crops									
Areca nut	16.1.2015	-	-	Hirehalli Tall	Seedlings	3,000		60,000	
					Sprouts	17,500		87,500	
Coconut	13.8.2014	-	-	ArsikereTall	Seedlings	850		68,000	
Floriculture									
Tuberose	6.5.2014	28.12.2014	0.2	Prajwal, Vaibhav	Corms	22000		44,000	
Fruits									
Mango	-	-	-	Alphanso, Badami	Seedlings	200		8000	
Gauva	-	-	-	Pink Flesh, L-49, Mridula	Seedlings	250		10,000	
Lime	-	-	-	Seedless Lime	Seedlings	80		3,200	
	-	-	-	Kazi Lime	Seedlings	400		8,000	
Amla	-	-	-	NA 4,5,7	Seedlings	450		18,000	
Vegetables -Seeds in Kg									
Tomato	15.10.2014	15.2.2015	0.2	Arka Meghali	Seeds	12		24,000	
FrenchBean	18.10.2014	15.1.2015	1	Arka Suvidha	Seeds	200		50,000	
Okra	7.8.2014	21.12.2014	0.2	Arka Anamika	Seeds	102		51,000	
Onion	15.6.2014	15.3.2015	0.6	ArkaKalyan	Seeds	500		7,50,000	
Radish	15.6.2014	8.9.2014	0.2	Arka Nishant	Seeds	40		16,000	
Amaranthus	21.5.2014	22.8.2014	0.5	Arka Suguna	Seeds	40		16,000	
Cowpea	4.5.2014	6.8.2014	0.2	Arka Garima	Seeds	50		12,500	
Palak	15.11.2014	10.2.2015	0.2	Arka Anupama	Seeds	48		14,400	
Veg. Seed Kit				IIHR Varieties	Seeds Kit	2,000		2,00,000	
Drumstick				PKM-1	Seedlings	750		7,500	
Others (specify)Fodder crop seeds									
Fodder Sorghum	7.8.2014	11.11.2014	0.2	CO(FS) - 29	Seeds	95		47,500	
Fodder Cowpea	12.9.2014	4.1.2015	0.1	CO(FC) - 8	Seeds	35		17,500	

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

Sl. No.	Name of the Product	Qty-Kg	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1.	Banana Special	4,345	-	6,51,750	
2.	Vegetable Special	2,066		3,00,900	
3.	Mango Special	1,422	-	2,13,000	
4.	Citrus Special	1,100	-	1,65,000	
5.	NeemSoap	2,110		3,09,025	
6.	Pongamia Soap	924	-	1,15,500	
7.	Arka Microbial Consortium	2,686	-	2,01,450	
8.	Mango fruit fly traps	8,763-Nos.	-	1,75,260	
9.	Mango fruit fly lures	13,570-Nos.	-	2,71,400	
10.	**Others**				
11.	Amla Juice	68-ltrs		6,800	
12.	Amla Candy	15		3,750	
13.	Mushroom Spawn	276	-	16,560	

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

13.E. Utilization of hostel facilities

Accommodation available (No. of beds) : Yet to be Furnished

13.F. Database management

S.No	Database target	Database created
1.	Farmers Database	**Ongoing**
2.	Database for Technologies assessed and Refined	
3.	Frontline Demonstrations Database	
4.	Training Database	
5.	Database of Extension Programmes	
6.	Seeds and Planting Material Database	

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

Amount sanction (Rs.)	Expenditure (Rs.)	Details of infrastructure created / micro irrigation system etc.	Activities conducted					Quantity of water harvested in '000 litres	Area irrigated / utilization pattern
			No. of Training programmes	No. of Demonstrations	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)		
49,000	49,000	Farm Pond with Plastic lining	3	1	0	76	34	100000	1 ha
45,000	45,000	One Sprinkler set with 4 hp Disel Engine							

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 Bengaluru	3973	Current Account	185833018	560016024	CBIN 0283973
With KVK							

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

Sl. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	8315000	8315000	8314575
2	**Traveling allowances**	114000	114000	118378
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	50000	50000	49893
B	POL, repair of vehicles, tractor and equipment's	50000	50000	50000
C	Meals/refreshment for trainees (ceiling up to Rs.40/day/trainee be maintained)	20000	20000	20000
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	20000	20000	20000
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	215000	215000	215000
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	45000	45000	45000
G	Training of extension functionaries	10000	10000	10000
H	Maintenance of buildings	0	0	0
I	Establishment of Soil, Plant & Water Testing Laboratory	0	0	0
J	Library	0	0	0
K	IFS	10000	10000	10000
L	NIFTD	10000	10000	10000
M	FFS	10000	10000	10000
N	*Extension Activities*	10000	10000	10000
	TOTAL (A)	**8879000**	**8879000**	**8882846**
B. Non-Recurring Contingencies				
1	**Works**			
2	**Equipment's including SWTL & Furniture**			
3	**Vehicle** (Four wheeler/Two wheeler, please specify)			
4	**Library** (Purchase of assets like books & journals)			
TOTAL (B)		**0**	**0**	**0**
C. REVOLVING FUND		0	0	39,34,815
GRAND TOTAL (A+B+C)		**8879000**	**8879000**	**1,28,17,661**

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	662323	1494494	168242	1988575
April 2013 to March 2014	1988575	3735246	3287560	2436261
April 2014 to March 2015	24,36,261	49,60,840	39,34,815	34,62,286

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

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
N.Loganandhan	Programme Co-ordinator	Technology Management in Agriculture for KVK Professionals	NAARM, Hyderabad	9-11 June 2014
		Management Development Programme	NAARM, Hyderabad	10.11.2014 to6.12.2014
K.N.Jagadish	SMS-Agril. Extension	Participatory Impact Monitoring and Assessment (PIMA)	KVK Erode, Arepalayam Campus	19-24 November 2014
B.Hanumanthe Gowda	SMS-Plant Protection	Innovative approaches in Plant Disease Management	GBPUA &T, Pant Nagar, Uttarakhand	2-22 October 2014

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

- Dr. D.L.Maheshawar, Director, Dept. of Horticulture, Govt. of Karnataka, Dr. Eshwarappa & Dr. Prabhakar, Consultants to Dept. of Horticulture visited Krishi Vigyan Kendra in connection with Workshop to be held on 24th and 25th April 2014.
- Dr. A. R. Sadananda, Maize Seed Systems Specialist for South Asia & Dr. B.S.Vivek, Maize Breeder from International Maize and Wheat Improvement Centre (CIMMYTT) visited KVK Hirehalli on 8th May 2014.
- Sri.Shivanna, Ex-Minister, Tumakuru visited to KVK, Hirehalli on 17th
- Dr. A. R. Sadananda, Maize Seed Systems Specialist for South Asia & Dr. B.S.Vivek, Maize Breeder from International Maize and Wheat Improvement Centre (CIMMYTT) visited KVK Hirehalli on 6th August 2014.

- # SUMMARY FOR 2014-15

I. TECHNOLOGY ASSESSMENT

Summary of technologies assessed under various crops

Thematic areas	Crop	Name of the technology assessed	No. of trials
Varietal Evaluation	Groundnut	Assessment of Groundnut varieties	3
Integrated Crop Management	Areca nut -French bean	Assessment of Areca nut -French bean intercropping system for high soil fertility and higher income	3
	Mango-Redgram+Greengram	Assessment of Redgram:Greengram (1:4) as a intercrop in Mango orchard for climate resilient agriculture	3
Integrated Disease Management	Pomegranate	Evaluation of technology for management of Pomegranate wilt	3
Total			**12**

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	Thematic area	Name of the technology demonstrated	No. of KVKs	No. of Farmer	Area (ha)	Yield (q/ha)		% change in yield	Other parameters		*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
						Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Cereals	ICM	Combating drought vulnerability by Aerobic paddy cultivation		5	2	36.3	32.1	13.10	Tillers/ plant Numbers 41.4	28.6	19,922	34,028	14,106	1.7	18,102	21,646	3,544	1.2
Millets	Drought Mitigation	Addressing Drought Vulnerability by Drought tolerant Ragi ML -365		5	3	26.44	19.4	36.2	Panicle weight : grams 26.8	19.4	15,678	30,450	14,772	1.94	14,448	23,162	8,714	1.60
Oilseeds																		
Pulses	ICM	Enhancement of Red gram yield through demonstration of BRG-4 variety		10	5	9.74	7.83	12.12	Pods/plant - Numbers :120	92.7	21,574	48,683	27,109	2.27	21,574	3,9130	17,556	1.82
Vegetables	ICM	Demonstration of Seedpro – A microbial plant growth promoter against soil borne pathogens in Solanaceous vegetable crops		5	1	24.07 t/ha	19.38	24.20	Damping off -% :9.5	28.64	61,225	1,44,451	83,226	2.36	64,890	1,16,286	51,396	1.79
	IPM	Bio- intensive Management of Brinjal Shoot and fruit borer		5	1	27.96	15.97	75.07	shoot infestation %: 5.32	30.11	66,421	2,23,733	1,57,312	3.36	70,457	1,27,792	57,308	1.81
	Sustainable Farm Income through Seed Production	Seed production of French bean Var. Arka Suvidha		10	2	9.87	7.15	38.11	Pods/plant-Numbers:46	34	31,622	98,775	67,152	3.12	31, 622	71,540	39,917	2.26

	Variety introduction	Demonstration of Arka Rakshak F1 resistant to Leaf curl, Bacterial Wilt and Early leaf Blight in Tomato		10	2	290	173	67.63	Disease Incidence (ELB) %:12	38	44,625	1,48,250	1,03,625	3.35	50,650	86,250	35,600	1.70
	ICM	Use of Polythene mulch in tomato		4	1	762.5	665	14.66	Fruits /plant - Numbers :48	39	65,850	3,05,000	2,39,150	4.62	76,200	2,66,000	1,89,800	3.48
	INM	Cost effective Arka Microbial consortium for tomato production		5	2	516.8	436.4	18.42	Seedling Root length-cm : 7.06	4.92	63,120	2,10,020	1,46,900	3.3	60,780	1,78,760	1,17,980	2.9
Fruits	HYV	Demonstration of High yielding variety Arka Prabhat in Papaya		3	1	86.78 t/ha	75.26 t/ha	9.8	Fruits /plant - Numbers:48	32	86,675	3,82,386	2,95,712	4.4	86,675	3,29,653	2,42,978	3.8
	ICM	Demonstration of High density planting of Banana		3	1	Ongoing												
	HYV	Demonstration of Dry land Horticulture crop Jamoon		1	0.4	Ongoing												
	IPM	Cost effective Eco friendly management of fruit fly through pheromone traps in Mango		5	2	Ongoing												
	IPM	Management of Mango Stem Borer by Sealer cum Healer		5	100 trees	Ongoing												
	PHT	Mango Harvester, Ripening chamber and Packing		1	1	-	-	-	Income		4,500	1,20,000	1,15,500	-	0	56,000	56,000	-
Plantation	INM	Management of Nut Splitting in Arecsnut		5	2	9.54	8.48	12.5	Nuts /bunch, - Numbers:350.2	294.2	38,512	1,88,740	1,50,228	4.9	37,693	1,71,164	1,33,471	4.5
	Total																	

Livestock :NIL

Fisheries : NIL

Other enterprises : NIL

Women empowerment : NIL

Farm implements and machinery : NIL

Demonstration details on crop hybrids

Crop	Name of the Hybrid	No. of farmers	Area (ha)	Yield (kg/ha) / major parameter			Economics (Rs./ha)			
				Demonst-ration	Local check	% change	Gross Cost	Gross Return	Net Return	BCR
Tomato	Private hybrid	5	2	516.8	436.4	18.42	63,120	2,10,020	1,46,900	3.3
	Private hybrid	5	1	762.5	665	14.66	65,850	3,05,000	2,39,150	4.62
	Arka Rakshak F1 Hybrid	10	2	290	173	67.63	44,625	1,48,250	1,03,625	3.35
Chilli	Arka Samrat	5	1	240.7	193.8	24.20	61,225	1,44,451	83,226	2.36
Total		**25**	**6**	1810	1468.2	124.91	234820	807721	83226	13.63

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										
Integrated Farming	1	22	0	22	0	0	0	22	0	22
Horticulture										
a) Vegetable Crops										
Off-season vegetables	1	18	9	27	0	0	0	18	9	27
b) Fruits										
c) Ornamental Plants										
d) Plantation crops										
Production and Management technology	3	83	83	166	6	2	8	89	85	174
e) Tuber crops										
f) Spices										
g) Medicinal and Aromatic Plants										
Soil Health and Fertility Management										
Livestock Production and Management										
Animal Nutrition Management	1	92	2	94	6	1	7	98	3	101
Home Science/Women empowerment										
Women empowerment	1	0	37	37	0	0	0	0	37	37
Agril. Engineering										
Post Harvest Technology	1	41	3	44	1	0	1	42	3	45
Plant Protection										
Fisheries										
Production of Inputs at site										
Mushroom production	2	18	2	20	4	0	4	22	2	24
Capacity Building and Group Dynamics										
Agro-forestry										
TOTAL	**10**	**274**	**136**	**410**	**17**	**3**	**20**	**291**	**139**	**430**

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										
Integrated Crop Management	**2**	103	31	134	7	4	11	110	35	145
Others (pl.specify) Production management technology	2	56	6	62	4	1	5	60	7	67
Horticulture										
a) Vegetable Crops										
b) Fruits										
Others (pl.specify) –Dry Land Horticulture	3	99	29	128	10	4	14	109	33	142
c) Ornamental Plants										
Others (pl.specify)-Organic Farming	1	30	2	32	1	0	1	31	2	33
d) Plantation crops										
Production and Management technology	2	68	83	151	4	2	6	72	85	157
e) Tuber crops										
f) Spices										
g) Medicinal and Aromatic Plants										
Post harvest technology and value addition	1	44	3	47	3	1	4	47	4	51
Soil Health and Fertility Management										
Soil fertility management	1	15	0	15	2	2	4	17	2	19
Soil and water testing	8	169	51	220	13	11	24	182	62	244
Livestock Production and Management										
Feed and Fodder technology	2	43	18	61	3	1	4	46	19	65
Home Science/Women empowerment										
Agril. Engineering										
Plant Protection										
Integrated Disease Management	1	27	1	28	3	0	3	30	1	31
Fisheries										
Production of Inputs at site										
Bio-fertilizer production	4	195	14	209	12	3	15	207	17	224
Capacity Building and Group Dynamics										
Agro-forestry										
TOTAL	**27**	**849**	**238**	**1087**	**62**	**29**	**91**	**911**	**267**	**1178**

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
Mushroom Production	1	9	0	9	1	0	1	10	0	10
TOTAL	**1**	**9**	**0**	**9**	**1**	**0**	**1**	**10**	**0**	**10**

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
Integrated Pest Management	1	16	9	25	0	0	0	16	9	25
Integrated Nutrient management	1	9	9	18	0	0	0	9	9	18
Production and use of organic inputs	2	42	2	44	3	1	4	45	3	48
Livestock feed and fodder production	1	29	4	33	0	0	0	29	4	33
Total	**5**	**96**	**24**	**120**	**3**	**1**	**4**	**99**	**25**	**124**

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

Sponsored training programmes

Sl.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	22	0	22	0	0	0	22	0	22
1.b.	Commercial production of vegetables	1	18	9	27	0	0	0	18	9	27
2	**Production and value addition**										
3.	**Soil health and fertility management Balance use of fertilizers**										
4	**Production of Inputs at site**										
5	**Methods of protective cultivation**										
6	**Post harvest technology and value addition**	2	41	40	81	1	0	1	42	40	82
7	**Others (pl.specify)**										
8	**Farm machinery**										
9.	**Livestock and fisheries**										
10	**Livestock production and management**										
11.	**Home Science**										
12	**Agricultural Extension**										
	Total	**4**	**81**	**49**	**130**	**1**	**0**	**1**	**82**	**49**	**131**

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.f.	Others (pl.specify) Coconut Friends	1	18	0	18	2	0	2	20	0	20
2	**Post harvest technology and value addition**										
3.	**Livestock and fisheries**										
4.	**Income generation activities**										
4.k.	Others – Bee Keeping	1	24	0	24	2	0	2	26	0	26
5	**Agricultural Extension**										
	Grand Total	**02**	**42**	**0**	**42**	**04**	**0**	**04**	**46**	**0**	**46**

V. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	552	2774	123	2897
Diagnostic visits	99	209	17	226
Field Day	5	491	29	520
Group discussions				
Kisan Ghosthi				
Film Show	11	189	36	225
Self -help groups	3	113	2	115
Kisan Mela	4	215	17	232
Exhibition	14	25853	3267	29120
Scientists' visit to farmers field	26	75	23	98
Plant/animal health camps	2	65	8	73
Farm Science Club				
Ex-trainees Sammelan				
Farmers' seminar/workshop				
Method Demonstrations				
Celebration of important days	8	235	72	307
Special day celebration				
Exposure visits	4	171	9	180
Others (pl.specify)	-	-	-	
Total	**728**	30390	3603	**33993**

Details of other extension programmes

Particulars	Number
Electronic Media	0
Extension Literature	4
News Letter	4
Newspaper coverage	20
Technical Articles	1
Technical Bulletins	1
Technical Reports	4
Radio Talks	5
TV Talks	3
Animal health amps (Number of animals treated)	54
Total	**96**

PRODUCTION OF SEED/PLANTING MATERIAL

Production of seeds by the KVKs

Crop category	Name of the crop	Name of the variety (if hybrid pl. specify)	Quantity of seed (Kg)	Value (Rs)	Number of farmers to whom provided
Cereals (crop wise)	Finger millet	ML -365	180	7,200	84
Vegetable crops	Tomato	Arka Meghali	12	24,000	8
Vegetable crops	Pumpkin	Arka Suryamukhi	45	36,000	11
Vegetable crops	Okra	Arka Anamika	102	51,000	13
Vegetable crops	Onion	Arka Kalyan	500	7,50,000	30
Vegetable crops	Radish	Arka Nishant	40	16,000	6
Vegetable crops	Cowpea	Arka Garima	50	12,500	12
Vegetable crops	French Bean	Arka Suvidha	200	50,000	77
Vegetable crops	Amaranthus	Arka Suguna	40	16,000	13
Vegetable crops	Palak	Arka Anupama	48	14,400	17
Vegetable crops	Vegetable Seed Kit		2,000 Nos.	2,00,000	1800
Fodder crop seeds	Fodder Sorghum	CO(FS) - 29	95	47,500	2
	Fodder Cowpea	CO(FC) - 8	35	17,500	2
Total				**12,42,100**	**2085**

Production of planting materials by the KVKs

Crop category	Name of the crop	Name of the variety (if hybrid pl. specify	Number	Value (Rs.)	Number of farmers to whom provided
Vegetable seedlings					
	Drumstick	PKM-1	750	7,500	14
Fruits	Mango	Alphanso, Badami	200	8,000	12
	Jamoon	Gokak	100	4,000	13
	Guava	Pink Flesh, L-49, Mridula	250	10,000	7
	Lime	Seedless Lime	80	3,200	5
		Kazi Lime	400	8,000	44
	Amla	NA 4,5,7	450	18,000	14
Ornamental plants					0
Flower Crops	Tuberose	Prajwal, Vaibhav	22,000	44,000	1
Medicinal and Aromatic					0
Plantation	Arecanut	Hirehalli Tall	3,000	60,000	23
	Arecanut Sprouts	Hirehalli Tall	17,500	87,500	15
	Coconut	Arasikere Tall	850	68,000	19
Total			**45,580**	**3,18,200**	**167**

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	No. of Farmers
Bio Fertilizers	Banana special	4,345	6,51,750	1,512
	Vegetable Special	2,066	3,00,900	852
	Mango Special	1,422	2,13,000	820

	Citrus Special	1,100	1,65,000	52
Bio-pesticide	NeemSoap	2,110	3,09,025	1,238
	Pongamia Soap	924	1,15,500	464
Bio-fungicide	Arka Microbial consortium	2,686	2,01,450	110
Bio Agents	Mango fruit fly traps-Nos.	8,763	1,75,260	730
	Mango fruit fly lures- Nos.	13,570	2,71,400	862
Others	Amla Juice -Ltrs	68	6,800	60
	Amla Candy	15	3,750	35
	Mushroom Spawn	276	16,560	123
Total		**37,345**	**24,30,395**	**6,858**

Production of livestockand related enterprise materials: Nil

VI. DETAILS OF SOIL, WATER AND PLANT ANALYSIS 2014-15:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	**623**	**610**	**610**	**62300**
Water Samples	**414**	**408**	**408**	**20200**
Plant samples	**112**	**43**	**43**	**11200**
Manure samples				
Others (specify)				
Total	**1149**	**1061**	**1061**	**93700**

VIII. SCIENTIFIC ADVISORY COMMITTEE

Number of SACs conducted : 01
30.09.2014

IX.NEWSLETTER

Number of issues of newsletter published : 02
April – June, 2014 July –September ,2014

X. RESEARCH PAPER PUBLISHED

Number of research paper published : 04

1. Water resource management to combat climatic vulnerability: A case study of D. Nagenahalli, Tumakuru, Karnataka.
2. Three years, seventy farm ponds, eighteen thousand cubic meters capacityâ€“ A success story from a NICRA village in Tumakuru district of Karnataka
3. Direct Marketing " A way forward for farmers, In: The ISEE National Seminar on Extension innovations and methodologies for market
4. Jalavayu parivarthan ke daur mein krishi vividheekaran ke madhyam se mahila sashaktikaran,

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.)**
3	**1**	**0**	**76**	**34**

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