भाकृअनुप
ICAR




ANNUAL REPORT 2017-18

(Annual Review Meeting at ICAR-KVK, (BSS), Idukki District)
16th to 19th May 2018

भाकृअनुप
ICAR

ICAR-Krishi Vigyan Kendra

(ICAR-Indian Institute of Horticultural Research)
Hirehalli, NH-48, Tumakuru District
Karnataka – 572168
www.iihrkvk.org

भा.कृ.अनु.प.-भा.बा.अनु.सं.
ICAR-IIHR

CONTENTS

ICAR-KRISHI VIGYAN KENDRA, HIREHALLI TUMAKURU DISTRICT

ANNUAL REPORT 2017-18

(FOR THE PERIOD FROM 01 APRIL 2017 TO 31 MARCH 2018)

ICAR-Krishi Vigyan Kendra
Hirehalli, NH-48, Tumakuru District
Karnataka - 572168

ICAR-Indian Institute of Horticultural Research
Hessaraghatta Lake Post
Bengaluru - 560089, Karnataka.

PART I – GENERAL INFORMATION ABOUT THE KVK

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

KVK Address	Telephone		E mail	Web Address
	Office	Fax		
ICAR-KRISHI VIGYAN KENDRA, HIREHALLI, NH-48, TUMAKURU-572 168	0816-2243175/77	-	**kvk.tumakuru2@icar.gov.in headkvkh@iihr.res.in iihrkvk@gmail.com**	**www.iihrkvk.org**

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 Lake Post, Bengaluru-560 089	080-23086100	080-28466291	**director@iihr.res.in, iihrdirector@gmail.com**	**www.iihr.res.in**

1.3. Name of the Programme Coordinator 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 position as on 31st March 2018

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.	Senior Scientist & Head	Dr. N.Logannadhan	Pr. Scientist & Head	M	Agril.Extn	Ph.D. Agriculture	37400-67000 +10000	44,850	02.08.2013	Permanent	Others
2.	SMS	Sri K.N. Jagadish	ACTO (Agril.Extn.)	M	Agril.Extn.	M.Sc. Agriculture	15600 -39100 +6600	74,000	17.11.2009	Permanent	OBC
3.	SMS	Sri P.R.Ramesh	ACTO (Soil Science)	M	Soil Science	M.Sc. Agriculture	15600 -39100 +6600	74,000	17.11.2009	Permanent	OBC
4.	SMS	Sri Prashanth J.M	ACTO (Horticulture)	M	Horticulture	M.Sc. Agri Horticulture	15600 -39100 +6600	74,000	24.11.2009	Permanent	Others
5.	SMS	Sri B. Hanumanthe Gowda	ACTO (Plant Protection)	M	Plant Protection	M.Sc. Agriculture	15600 -39100 +6600	74,000	02.12.2009	Permanent	Others
6.	SMS	Mrs. RadhaR.Banakar	ACTO (Home Science)	F	Home Science	M.Sc. Home Science	15600 -39100 +6600	74,000	05.12.2009	Permanent	Others
7.	SMS	Vacant	SMS (Plant Breeding)	-	-	-	15600 -39000 +6600	-	-	-	-
8.	Farm Manager	Vacant	Technical	-	-	-	-	-	-	-	-
9.	Prog. Asst. (Comp.)	Mr.N.Jayasankar	Senior Technical Officer (Comp. – Lab.)	M	Computer Application	DOEACC B Level MDCA	15600 -39100 +5400	67,000	15.06.2017	Permanent	OBC
10.	Prog. Asst. (Lab Tech.)	Sri Shashidhara K N	Senior Technical Assistant(Lab.)	M	Crop Physiology	M.Sc Agri	9300 -34800 +4200	41,100	17.10.2012	Permanent	SC
11.	Assistant	Sri D.Krishnappa	Assistant	M	-	-	9300 -34800 +4600	53,600	02.05.2016	Permanent	Others
12.	Jr.Stenographer	Mrs.VedaKurnalli	Jr.Stenographer	F	Stenographer	DCP	5200 -20200 +2400	31,400	17.02.2010	Permanent	Others
13.	Driver	Sri M.H.Ningappa	Driver	M	Driver	S.S.L.C.	5200 -20200 +2000	29,600	30.12.2009	Permanent	ST
14.	Driver	Vacant	Driver	-	Driver	-	-	-	-	-	-
15.	Supporting Staff	Vacant	Supporting Staff	-	Supporting Staff	-	-	-	-	-	-
16.	Supporting Staff	Vacant	Supporting Staff	-	Supporting Staff	-	-	-	-	-	-

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

S. No.	Item	Area (ha)
1	Under Buildings	1.7
2.	Under Demonstration Units	2.95
3.	Under Crops	2.3
4.	Orchard/Agro-forestry	9.85
5.	Others	0

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							
2.	Farmers Hostel							
3.	Staff Quarters							
	1							
	2							
4.	Demonstration Units							
	1 Animal Shed	RFS-KVK	04.01.2018	300	99,800			
	2 Shade net	RFS-KVK	26.12.2017	196	40,000			
	3 AMC Liquid Unit	RFS-KVK	08.10.2017	-	95,000			
5	Fencing							
6	Rain Water harvesting system							
7	Threshing floor							
8	Farm godown							
9	Solar lights	IIHR	03.03.2018	-	6,46,713			
10	Toilet at farm	IIHR	01.01.2018	-	3,96,000			

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Bolero Diesel Jeep	2009	596783	33806	Good
Motor Cycle	2010	52658	5030	Good
Honda – Aviator	2010	46025	4502	Good
Power Tiller	2010	1 42400	112 Hours	Good
Tractor	2011	560000	1099 Hours	Good

C) Equipment & AV aids

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

Accessories			
LED TV	2017	64, 000	Good Condition
Public Address System	2017	20,000	Good Condition
R.O.S system	2017	72,000	Good Condition
Solar Hot Water System	2017	72,000	Good Condition

1.8. Details of SAC meeting conducted during 2017-18

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
28.03.2017	53	Grafted planting materials in selected 2-3 crops may be propagated at KVK farm	Grafted planting materials on Mango (Var:Alphonso) and Guava (Var:Arka Mridula, Arka Kiran) have been produced to the tune of 15000 each which will be sold during June-July, 2018	
		Performance of specific technologies with reference to controlling Bacterial blight in Pomegranate	A demonstration using AMC and ACT to control Bacterial blight Pomegranate has been initiated in the Gonihalli Village of Sira Taluk with the support from IIHR	
		Bee Keeping should be adopted in KVK farm	An order has been placed to bring in 10 honey bee boxes in the KVK farm	
		Spawn and Mushroom Production should be enhanced	About 5 Kg of Spawn and 10 Kg of Mushrooms were produced and sold to 50 persons so far. The demand at present is 50 Kg per week.	
		KVK should adopt more IIHR technologies at farmers' fields	FLDs on Tomato (Arka Samrat), French Bean (Arka Suvidha), AMC on Pomegranate, Arka Actino Plus on Brinjal (Arka Anand), China Aster (Arka Kamini), Mango (Whole IIHR package) and EDP on Dry flower decoration are the IIHR technologies that KVK took to farmers' fields	
		Programmes on Doubling Farmers' income to be conducted at KVK	STRATEGY MEET ON DOUBLING INCOME OF FARMERS was conducted on 30.10.2017 in collaboration with NABARD, Tumakuru	
		FPOs and DAESI members may be involved in disseminating IIHR technologies (in their curriculum and direct sale)	SMS's of KVK have included the IIHR technologies in their lectures to DAESI trainees. Awareness on them were created in the events organised by FPOs	
		More emphasis should be given for Animal husbandry related components	An Animal shed has been constructed at KVK farm. Fodder availability has been improved.	
		Practice of Dead furrows need to be advocated in farmers' fields	An FLD on Conservation furrow in Maize has been taken in 10 ha. area of Anupanahalli village of Udigere hobli, Tumakuru Taluk.	
		To control Wild boar, use of ITK may be tried in rural areas	Use of used colour sarees and traditional sound making plates by natural air was installed - An ITK used to ward off the wild boars was recommended to farmers in Chikkathimmanahatti village of Pavagada.	
		Soil health cards should be given to adopted villages	About 248 SHC were given to adopted villages	

		AMC should be produced in large scale	Since April 2017 to till date, 3170 Kg of AMC Powder and 337 litres of AMC Liquid were produced and sold, covering 50 numbers of farmers.	
		Millet production may be popularised among farmers	KVK took part in Millet mela organised by State Dept. during 16-17, Dec, 2017. Delivered lectures to enhance the production and marketing also produced 230 Kgs of Korale Seeds at KVK	
		KVK SMSs need to work on prioritized problems in cluster village as a multi-disciplinary team	Many such FLDs are organised. For Eg: Pre and Post harvest Management in Mango in which all the SMS's are involved in advocating a complete package to farmers in Mavukere village, Sirataluk	
		More number of training programmes may be given to SHGs on Value addition of Jack fruit.	Training was organised in May 5th 2017 and were taken to Jackfruit Mela organised by IIHR on 7th June 2017	
		Millet processing unit can be established at KVK premises.	A proposal has been received from Organic Federation of Tumakuru to put up a unit at KVK. Director, IIHR has extended his support	
		Technology backstopping may be given to the organised FPOs on concerned technologies.	FPOs like Marikamba, Grama Chetana, are being supported by KVK in technologies like ICM on Coconut, Arka Samrat etc.,	

PART II - DETAILS OF DISTRICT

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

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

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

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

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

2.3 Soil type/s

Sl. No.	Soil type	Characteristics	Area in ha
1.	Red Sandy Loam	• Colour given by hematite's 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
2.	Red Loam	• Colour given by oxides of iron • Poor in soil fertility • Low- medium Base Exchange capacity • Deficient in organic matter • Low water holding capacity • The pH ranges from slightly acidic or neutral • Low cohesion, plasticity & swelling	2, 04,093

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

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

Sl. No.	Crop	Area (ha)	Production (Metric tons)	Productivity (kg /ha)
1	Paddy	9,502	77,165	2,856
2	Maize	28,204	60,133	2,445
3	Ragi	1,71,527	2,29,290	1,594
4	Minor Millets	2,764	815	336
5	Rad gram	9,819	4,868	354
6	Horse gram	20,186	11,640	578
7	Field bean (Avare)	8,613	6,546	933
8	Ground nut	88,011	22,503	268
9	Coconut	1,45,660	12,885	0.09 t/ha
10	Areca nut	32,341	43,691	1.35 t/ha

* Source: Tumakuru District at a Glance 2014-15

2.5. Weather data

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
April 2017	38	39.9	25.5	83.1
May 2017	167	37.6	25.2	89.6
June 2017	63	32.2	23.2	95.5
July 2017	35	31.9	22.9	95.2
August 2017	117	31.5	23.3	97.8
September 2017	288	32.1	23.1	99.0
October 2017	232	31.9	21.6	97.4
November 2017	14	30.5	21.8	96.6
December 2017	3	31.6	20.2	92.2
January 2018	0	30.0	15.7	86.2
February 2018	6	31.9	17.2	76.5
March 2018	21	35.0	19.0	76.4

* Source: KSNDMC, Bengaluru

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

Category	Population	Production	Productivity
Cattle			
Crossbred	63704	54	5.5745
Indigenous	440888	56	2.0671
Buffalo	217528	68	2.5382
Sheep	**meat 000 tons**		
Crossbred	9		--
Indigenous	884643	17.31	--
Goats	322373	16.60	--

Pigs	**-**	-	-
Crossbred	905	0.23	--
Indigenous	12411		--
Rabbits	560	NA	--
Poultry	**Egg production in lakhs**		
Hens		--	--
Desi	6,42,382	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	**-**	**-**	**-**

Cattle				Buffaloes	Sheep	Goat	Pigs	Rabbits	Dogs	Others	Total Animals	Poultry
Indigenous	Exotic	Cross bred	Total									
302.7	-	224.3	527.0	181.1	1061.3	326.8	7.1	1.0	49.6	5.8	2160.1	533.8

* Source: www.tumkurzillapanchayat.in

2.7 District profile has been Updated for 2017-18 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 Koratagere	Urdigere Kolala	Kadaranahalli Tanganahalli	2	Maize	Downy mildew and *Turcicum* leaf blight, Stem borer incidence	IPDM
2.	Tumakuru Koratagere Pavagada	Kasaba Kasaba Nidagallu	Tanganahalli, Kadaranahalli K.T.Halli	2	Minor Millets	Lower income in Pigeon pea as a sole crop in rainfed condition. Pigeon pea is longer duration crop, prone to Biotic & Abiotic stresses leading to meager income. Interspace between rows of Pigeon pea underutilized for initial 70 days after sowing	Inter cropping
3.	Koratagere Sira Pavagada Madugiri	Kasaba Kasaba Nidugallu I D Halli	Tanganahalli, Balenahalli, K.T.Halli Muthyalammanahalli Veeranagenahalli	2	Pigeon pea	Use of local varieties High rate of Sterility Mosaic Disease (SMD) & wilt disease incidences resulted in reduced yield	ICM
4.	Koratagere Pavagada	Kasaba Nidugallu	Kadaranahalli K.T.Halli	2	Groundnut	Tikka Disease, leaf minor, low income	ICM
5.	Sira	Bellavi	Tippenahalli	2	Onion	Non availability of Rabi varieties, Poor storability	New varieties
6.	Tumakuru	Urdigere	Kadaranahalli	2	Mango	Mono-cropping, Low soil fertility, Low income	Intercropping
7.	Tumakuru	Kora	Mavukere	2	Mango	Lack of knowledge on improved production practices and PHT	ICM
8.	Sira	Bellavi	Kallambella, Tippenahalli	2	Musatard	Lack of suitable oilseed crop during Rabi season	New varieties
9.	Tumakuru Koratagere	Urdigere Kolala	Janapanahalli Tanganahalli	2	China Aster	Small size flowers, less shelf life & low yield	ICM

10.	Tumakuru Koratagere	Urdigere Kolala	Janapanahalli Vaddarahalli	2	Arecanut	Monocropping, Low soil fertility, AnabeRoga, Nut splitting, Low income	Nutrient Management
11.	Tumakuru Koratagere	Urdigere Kolala	Janapanahalli Tanganahalli	2	French bean	Mosiac disease, Rust, local varieties low yield	ICM
12.	Tumakuru Koratagere	Urdigere Kolala	Kadaranahalli, Tanganahalli	2	Brinjal	Poor decomposed litters, Low nutrient use efficiency & soil fertility, Severe incidence of wilt & lower yield	INM
13.	Tumakuru Koratagere	Kasaba Guluru Urdigere Kasaba	Arakere, Mallenahalli Palasandra Hirehalli Reddykatte	1	Nutrition garden	Lack of knowledge on nutrition garden and nutrition insecurity	Food and Nutrition Security
14.	Koratagere	Kolala	Tanganahalli	2	Ragi	Less acceptability of value added products from existing varieties due to brown colour	IGA
15.	Koratagere Pavagada	Kolala Nidugallu	Tanganahalli K.T.Halli	2	Okra	Higher incidence of Bhendi yellow vein Mosaic, Low yield	IDM
16.	Tumakuru	Urdigere	Kadaranahalli	2	Chilli	Low yield, Local varieties , Imbalanced nutrition, Disease incidence – Mosaic virus susceptible	ICM
17.	Madhugiri	Badavan ahalli	Badavanahalli	2	Jasmine (Kakada)	Highly perishable, Low price during glut and Lack of knowledge on storage	PHT
18.	Pavagada Koratagere	Nidugallu Kolala	KT Halli Tanganahalli	2	Cucumber	Incidence of Downy mildew	IDM

2.8 **Priority thrust areas**

Sl. No	**Thrust area**
1.	High Yielding varieties / Hybrids
2.	Seed treatment with Bio fertilizers and fungicides
3.	Soil test based fertilizer application
4.	Integrated Nutrient Management
5.	Intercropping / Mixed / Multistoried cropping system
6.	Seed Production Techniques in Vegetables and field crops
7.	Integrated Pest & Disease Management
8.	Post harvest technology in Vegetables and Fruits
9.	Soil and Water Conservation
10.	Drudgery Reduction
11.	Income Generating Activities and Value Addition
12.	Child and Women Care and balanced nutrition
13.	Integrated Cropping System

PART III - TECHNICAL ACHIEVEMENTS

3.A. Details of target and achievements of mandatory activities

OFT				FLD			
1				2			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
3	3	9	8	11	11	103	103

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
47	54	1410	2204	333	657	10195	14975

Seed Production (Q)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
16.92	27.86	1.0 lakh	0.92 lakh

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
---	---	Neem and Pongamia Soap-3,000	1685
		Sealer cum Healer-1,000	689
		AMC Powder - 2,000	3786
		AMC Liquid -500 lit	612

B1. Abstract of interventions undertaken

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No.	Kg / Ltr
1	IPDM	Redgram	Sterility Mosaic and Wilt Disease	Assessment of Red gram varieties for disease tolerance & Higher yield	-	2	0	0	18	0.09	0	0	0	0
2	ICM	Pomegranate	Lack of awareness on application of nutrients and Higher incidence of wilt and BLB, Reduced yield up to 30-50 %.	-	ICM in Pomegranate	2	0	0	21	0	0	0	2	25
3	IPDM	Groundnut	Heavy damage due to wild boar Disturbing and uprooting of Groundnut plants	-	Management of Wild Boar in farming system	2	0	0	15	0	0	0	1	50
4	Variety Evaluation	Onion	Non availability of Rabi variety, Poor storability and low yield	Assessment of onion varieties for rabi	-	0	0	0	10	0.09	0	0	0	0
5	ICM	China Aster	Small size flowers and diameter, less shelf life, less attractive colour and low yield	-	ICM in China Aster	1	0	0	5	0.0075	0	0	0	5

6	ICM	Tomato	Weed menace, Low nutrient use efficiency and low yield, Water scarcity, soil borne diseases and pest incidence problem in vegetables cultivation	-	ICM in Tomato	0	0	0	8	0.001	0	0	0	17
7	ICM	French bean & Arecanut	Inefficient use of land, weed menace, low soil fertility, lower income	-	Areca nut + French bean intercropping system	1	0	0	6	0.4	0	0	0	5
8	Variety Evaluation	Mustard	Lack of suitable oilseed crop during Rabi season, high pungency	Assessment of Mustard varieties as oil seed crops	-	0	0	0	0	0.06	0	0	0	0
9.	Soil and Water Conservation	Maize	Mid season drought, Long dry spells and lower yield	-	Conservation furrow as a *insitu* moisture conservation to combat mid season drought in maize	2	1	0	0	0	0	0	0	0
10	INM	Brinjal	Poor decomposed litters, Low nutrient use efficiency & soil fertility, Severe incidence of wilt and lower yield	-	Demonstration of Arka Actino-Plus (ACT) on Growth and Yield of Brinjal	2	1	0	0	0	0	0	1	120
11	Organic Farming	French Bean	Poor soil health and low soil fertility	-	Demonstration of Bio-rationals in French bean	3	2	1	1	0	0	0	1	10,000

12	ICM	Coconut	Mono-cropping, low nutrient status and low yield, button shedding, mites, stem bleeding, Ganoderma wilt, Pests	-	ICM in Coconut	2	1	0	1	0.10	0	0	0	0
13	ICM	Mango	Lack of knowledge on improved production practices and PHT	-	Improved production practices and PHT in Mango	1	0	0	0	0	0	0	0	0
14.	Nutrition security	Vegetable crops	Non availability of vegetables, lack of knowledge on nutrition, high cost of vegetables	-	Nutrition garden in schools	10	05	0	0	2 seed kits /school	5-10 seedlings of Papaya and drumstick	0	0	0

3.B2. Details of technology used during reporting period

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
1	Introduction of GRG-811 variety in Redgram	UAS, Raichur	Redgram	1	0	2	17
2	ICM in Pomegranate	NRC Solapur, IIHR Bengaluru and UAS Dharwar	Pomegranate	0	1	2	18
3	Borep Technology for the control of Wild Boar	KAU Trissur	Groundnut	0	1	2	12
4	Assessment of Onion varieties for Rabi	DOG, Pune IIHR Bengaluru NHRDF Nasik	Onion	3	0	0	0
5	ICM in China Aster	IIHR, Bengaluru	China Aster	0	5	1	0
6	ICM in Tomato	IIHR, Bengaluru	Tomato	0	5	0	1
7	Areca nut + French bean intercropping system	IIHR, Bengaluru	French bean & Arecanut	0	5	1	0
8	Assessment of Mustard varieties as oil seed crops	IARI New Delhi	Mustard	1	0	0	0
9	Conservation furrow as a *insitu* moisture conservation to combat mid season drought in maize	UAS, Bengaluru	Maize	0	10	3	0
10	Demonstration of Arka Actino-Plus (ACT) on Growth and Yield of Brinjal	IIHR Bengaluru	Brinjal	0	10	3	0
11	Demonstration of Bio-rationals in French bean	UAS, Bengaluru	French Bean	0	5	6	1
12	ICM in Coconut	UAS, Bengaluru	Coconut	0	10	3	0
13	Improved production practices and Post harvest technologies in Mango	IIHR, Bengaluru	Mango	0	10	1	0
14	Nutrition garden in schools	UAS, Bengaluru	Vegetables	0	05 Schools	05	0

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
1	0	2	0	0	0	0	0	21	7	6	3	0	0	0	0
0	0	0	0	3	0	2	0	46	8	9	3	0	0	0	0
0	0	0	0	3	0	2	0	42	9	4	3	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	4	1	0	0	17	1	1	0	0	0	0	0
0	0	0	0	5	0	0	0	0	0	0	0	42	2	3	0
0	0	0	0	4	0	1	0	18	0	2	0	0	0	0	0
2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	6	1	3	0	35	6	5	0	0	0	0	0
0	0	0	0	7	0	3	0	41	5	1	4	0	0	0	0
0	0	0	0	4	0	1	0	110	0	15	2	55	0	5	0
0	0	0	0	7	0	3	0	43	2	10	0	38	0	7	0
0	0	0	0	4	1	5	0	26	0	14	0	0	0	0	0
0	0	0	0	4	1	0	0	155	140	38	35	0	0	0	0

PART IV - On Farm Trial

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

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
Integrated Crop Management	Coconut and flowers	Assessment of commercial flower crops in coconut based cropping system	3	3	0.4
	Onion	Assessment of onion varieties for rabi	3	3	0.4
	Mustard	Assessment of Mustard Varieties as Oilseeds crop	3	2	0.4
Integrated Disease Management	Redgram	Assessment of high yielding varieties of redgram for disease tolerance	3	3	0.4
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
Total			**12**	**11**	**1.6**

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

1 .Onion											
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
Onion	Rainfed	Non availability of Rabi variety, Poor storability Low yield	Assessment of Onion varieties for Rabi	03	TO1:Arka Niketan	TO1: Yield Qtl/ha Bulb weight-Grams Purple blotch incidence -%	221.90 61.30 18.31	Bhima Shakti recorded highest yield and income per unit area compare to Arka Niketan during Rabi Season.	Farmers expressed the positive performance of the Bhima Shakti and NHRDF 3 red during Rabi season.	-	-
					TO2: Bhima Shakti	TO2: Yield Qtl/ha Bulb weight-Grams Purple blotch incidence -%	270.70 64.35 25.32			-	
					TO3: NHRDF 3 Red	TO3: Yield Qtl/ha Bulb weight-Grams Purple blotch incidence -%	261.96 73.23 20.70			-	

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	IIHR, Bengaluru	Yield:221.90	Qtl/ha	73,597	2.51
Technology option 2	DOG, Pune	Yield :270.70	Qtl/ha	1,00,185	3.06
Technology option 3	NHRDF Nasik	Yield:261.96	Qtl/ha	96,415	3.02

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 Onion varieties for Rabi
2. Problem Definition : Non availability of Rabi variety, Poor storability and low yield
3. Details of technologies selected for assessment :

Technology option 1 Arka Niketan
Technology option 2 : Bhima Shakti
Technology option 3 : NHRDF 3 red

4. Source of technology : IIHR, Bengaluru, DOG, Pune and NHRDF Nasik
5. Production system and thematic area : Irrigated, Varietal Evaluation
6. Performance of the Technology with performance indicators during Rabi Season. : Bhima Shakti recorded highest yield and income per unit area compare to Arka Niketan
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques :-
8. Final recommendation for micro level situation : Bhima Shakti andNHRDF 3 Red varieties are suitable for Rabi Season.
9. Constraints identified and feedback for research : Non availability of potential rabi /summer varieties and more storability
10. Process of farmers participation and their reaction : Group discussion and positive reaction by the farmers participation

4.C1.Results of Technologies Assessed

Results of On Farm Trial

2. Redgram											
Crop/ enterprise	**Farming situation**	**Problem definition**	**Title of OFT**	**No. of trials**	**Technology Assessed**	**Parameters of assessment**	**Data on the parameter**	**Results of assessment**	**Feedback from the farmer**	**Any refinement needed**	**Justification for refinement**
1	2	3	4	5	6	7	8	9	10	11	12
Redgram	Rainfed	High rate of Sterility Mosaic Disease (SMD) and wilt disease incidences resulted in reduced yield	Assessment of high yielding varieties of Redgram for disease tolerance	03	FP-TO1: Local variety	% Disease incidence Yield(qtl/ha)	8.98 8.31	GRG-811 was found to be highly suitable for drought condition and SMD tolerant.	GRG-811 was superior than BRG-5, since it matures in only 130-140 days. It is a short duration variety	-	-
					TO2: BRG-5	% Disease incidence Yield(qtl/ha)	3.65 11.71				
					TO3:GRG 811	% Disease incidence Yield(qtl/ha)	3.56 12.45				

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)	-	8.31	Qtl/ha	22,376	1.96
Technology option 2	UAS, Bengaluru	11.71	Qtl/ha	37,371	2.38
Technology option 3	UAS, Raichur	12.45	Qtl/ha	41,713	2.56

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 high yielding varieties of Redgram for disease tolerance
2. Problem Definition : High rate of Sterility Mosaic Disease (SMD) and wilt disease incidences resulted in reduced Yield
3. Details of technologies selected for assessment :

Technology option 1 (Farmer's practice): Local variety
Technology option 2 : BRG-11
Technology option 3 : GRG-811

4. Source of technology : UAS, Bengaluru and UAS, Raichur
5. Production system and thematic area : Irrigated and Rainfed, Varietal Evaluation
6. Performance of the Technology with performance indicators : GRG-811 was found to be highly suitable for drought condition and SMD tolerant.
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 : Lack of SMD tolerant variety
10. Process of farmer's participation and their reaction : Group discussion and positive reaction by the farmers participation and it is suitable for Zone IV and V.

4.C1.Results of Technologies Assessed

Results of On Farm Trial

3 .Mustard											
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
Mustard	Irrigated	Lack of suitable oilseed crop during Rabi season, high pungency	Assessment of Mustard Varieties as Oilseeds crop	03	TO1: Local	TO1: Yield Qtl/ha Plant height-cm Pods per plant –Nos.	 9.20 120 232	Pusa 31 and Pusa 28 was found more profitable for Rabi season as compared to Local check	Farmers expressed Demo Mustard size is more compare to check	-	-
					TO2: PUSA 25	TO2: Yield Qtl/ha Plant height-cm Pods per plant –Nos.	 11.80 145 289			-	
					TO3 PUSA 28	TO3: Yield Qtl/ha Plant height-cm Pods per plant –Nos.	 15.30 148 316			-	
					TO4 PUSA 31	TO4 Yield Qtl/ha Plant height-cm Pods per plant –Nos.	 16.00 161 533				

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	UAS, Bengaluru	Yield: 9.20	Qtl/ha	52,750	3.52
Technology option 2	IARI, New Delhi	Yield : 11.80	Qtl/ha	72,150	4.20
Technology option 3	IARI, New Delhi	Yield: 15.30	Qtl/ha	1,00,150	5.50
Technology option 4	IARI, New Delhi	Yield:16.00	Qtl/ha	1,05,750	5.75

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 Mustard Varieties as Oilseeds crop
2. Problem Definition : Lack of suitable oilseed crop during Rabi season, high pungency
3. Details of technologies selected for assessment :

Technology option 1: Local
Technology option 2 : PUSA 25
Technology option 3 : PUSA 28
Technology option 4: PUSA 31

4. Source of technology :
   IARI, New Delhi
5. Production system and thematic area : Irrigated, Varietal Evaluation
6. Performance of the Technology with performance indicators: Pusa 31 and Pusa 28 was found more profitable for Rabi season as compared to Check
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques :- Farmers expressed Demo Mustard size is more compare to check
8. Final recommendation for micro level situation : PUSA 28 and PUSA 31 varieties are suitable for Rabi Season.
9. Constraints identified and feedback for research : Non availability of potential rabi varieties
10. Process of farmers participation and their reaction : Group discussion and positive reaction by the farmers participation

4.D1. Results of Technologies Refined : NIL

4.D.2. Details of Technologies refined: NIL

1. Title of Technology Refined
2. Performance of the Technology on specific indicators
3. Specific Feedback from farmers
4. Specific Feedback from Extension personnel and other stakeholders
5. Feedback to Research System based on results/feedback received

PART V - FRONTLINE DEMONSTRATIONS

5.A. Summary of FLDs implemented

Sl. No.	Category	Farming Situation	Season	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		Farmers (No.)		Farmers (No.)	
									Proposed	Actual	SC/ST	Others	Small/ Marginal	Others
1.	Oilseeds	Rain fed	Kharif	Groundnut (NMOOP)	K-6	-	ICM	Demonstration of K-6 Variety	50	50	44	81	32	93
2.														
3.	Pulses	Rain fed	Kharif	Redgram (NFSM)	BRG-5	-	ICM	Demonstration of BRG-5 Variety, use of foliar micronutrient, use of pheromone traps, use of neem soap, Use of sticky traps	20	20	22	103	88	37
4.	Cereals	Rain fed	Kharif	Maize	-	-	Soil & Water Conservation	Conservation furrow is opened at every alternative row	5	5	3	7	8	2
5.	Millets													
6.	Vegetables	Irrigated	Rabi	Tomato		Arka Samrat	ICM	Integrated crop Management in Tomato	1	1	0	2		
7.	Vegetables	Irrigated	Rabi	Brinjal	-	Arka Harshita	INM	Seed treatment with ACT- 10g/ 100g of seeds ACT- 20g/ litre of water and applied near root zone on 10th DAT	2	2	3	7	7	3
8.	Vegetables	Irrigated	Rabi	French Bean	Arka Suvidha	-	Organic Farming	Jeevamrutha- 2000 liter/ha	2	2	1	4	5	0
9.	Flowers	Irrigated	Rabi	China Aster	Arka Kamini	-	ICM	Integrated crop Management in China Aster	1	1	0	0	5	0
10.	Ornamental													
11.	Fruit	Irrigated	Rabi	Pomegranate	Bhagwa	-	ICM	INM and IPDM Package jointly developed by NRCP, IIHR and UAS, Dharwad	2	2	1	4	5	0
12.	Fruit	Rainfed	Rabi	Mango	-		ICM	Improved production practices and post harvest technology in mango	4	4	5	5	0	0
13.	Spices and													

	condiments													
14.	Commercial													
15.	Medicinal and aromatic													
16.	Fodder													
17.	Plantation	Irrigated	Rabi	French bean & Arecanut	Arka Suvidha	-	ICM	French bean intercropping in Arecanut orchard	1	1	0	2	3	0
18.	Plantation	Irrigated	Kharif	Coconut	Tiptur Tall	-	ICM	Neem cake-5kg per tree, French bean seeds-10kg/ acre, RDF, Gypsum-1kg/ tree, COC-10g per lit water, Hexoconazole -3 ml per 100ml water and Pheromone traps	2	2	3	7	8	2
	Fibre													
19.	Dairy													
20.	Poultry													
21.	Rabbitry													
22.	Piggery													
23.	Sheep and goat													
24.	Duckery													
25.	Common carps													
26.	Mussels													
27.	Ornamental fishes													
28.	Oyster mushroom													
29.	Button mushroom													

30.	Vermicompost													
31.	Sericulture													
32.	Apiculture													
33.	Implements													
34.	Others (Nutrition Gardens)	irrigated	Kharif and rabi	vegetables	-	-	Nutrition security	Nutrition garden in schools	05 sch o0ls	05 sch o0ls	0	0	0	0
35.	Others (Borep)	Rain fed	Kharif	Groundnut	TMV-2	-	IPDM	1.Tying of old coloured cloth pieces around the field. 2. Installation modified Nylon net 3. Installation of Borep-Wild bore repellent (2.5Kgs/Acre)	2	2	3	2	5	0

5.A. 1. Soil fertility status of FLDs plots, if analysed

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
	Oilseeds												
	Pulses												
	Cereals	Rainfed	Kharif 2017	Maize	-	-	Soil Conservation	Conservation Furrows	Kharif 2017	L	M	M	Ragi
	Millets												
	Vegetables	Irrigated	Rabi 2017	Brinjal	-	Arka Harshita	INM	Seed treatment with ACT- 10g/ 100g of seeds ACT- 20g/ litre of water and applied near root zone on 10th DAT	Rabi 2017	M	M	L	Redgram
	Vegetables	Irrigated	Rabi 2017	French Bean	Arka Suvidha	-	INM	Jeevamrutha- 2000 liter/ha	Rabi 2017	L	L	M	Groundnut

	Flowers												
	Ornamental												
	Fruit												
	Spices and condiments												
	Commercial												
	Medicinal and aromatic												
	Fodder												
	Plantation	Irrigated	Rabi 2016	French bean & Arecanut	Arka Suvidha	-	ICM	Areca nut + French bean intercropping system	Rabi 2017	M	M	L	-
	Plantation	Irrigated	Kharif 2017	Coconut	Tiptur Tall	-	ICM	Neem cake-5kg per tree, French bean seeds-10kg/ acre, RDF, Gypsum-1kg/ tree, COC- 10g per lit water, Hexoconazole - 3 ml per 100ml water and Pheromone traps	Kharif 2017	M	L	M	Coconut
	Fibre												

5.B. Results of FLDs

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	ICM in Groundnut	K-6	-	Rain fed	125	50	13.36	7.91	10.70	8.84	17.38	23,970	48,150	24,180	2.00	22,984	39,957	16,773	1.73
Pulses	ICM in Redgram	BRG-5	-	Rain fed	64	20	12.88	8.22	10.26	7.39	27.87	26,640	66,691	40,051	2.51	27,267	48,075	20,808	1.77
Cereals	**Conservation furrow as a insitu moisture conservation to combat mid season drought in maize**	-	Private Hybrid	Rainfed	10	5	39	31	35	28	25	18,505	45,505	27,000	2.45	16,209	36,409	20,200	2.24
Millets																			
Vegetables	Integrated crop Management in Tomato		Arka Samrat	Irrigated	5	1	632	595	612	539	13.5	73,450	3,06,000	2,32,550	4.17	83,980	2,69,500	1,85,520	3.20
Vegetables	Demonstration of Arka Actino-Plus (ACT) on Growth and Yield of Brinjal	-	Arka Harshita	Irrigated	10	2	29.5	19.5	24.5	19.7	24	54,412	2,45,012	1,90,600	4.50	63,707	1,97,507	1,33,800	3.1
Vegetables	Demonstration of Bio-rationals in French bean	Arka suvida	-	Irrigated	5	2	5.1	3.9	4.5	3.6	25	17,505	1,02,005	95000	5.8	21502	80,002	69,500	3.7
Flowers	Integrated Crop Management in China Aster	Arka Kamini	-	Irrigated	5	1	75.8	73.5	74.8	60.2	28	34,250	1,34,640	1,00,390	3.92	36,850	1,08,360	71,510	2.94

Ornamental																			
Fruit	ICM in Pomegranate	Bhaguva	-	Irrigated	5	2	9.56	7.98	8.74	6.66	0	1,27,845	5,24,520	3,96,674	4.10	1,39,025	3,99,960	2,60,934	2.87
Fruit	Improved production practices and PHt in mango	-	-	rainfed	10	4	9.20	7.4	8.30	6.10	36	90,000	3,32,000	2,42,000	3.69	80,000	1,83,000	1,03,000	2.28
Spices and condiments																			
Commercial																			
Fibre crops like cotton																			
Medicinal and aromatic																			
Fodder																			
Plantation	Areca nut + French bean intercropping system	Arka Suvidha	-	Irrigated	5	1	11.2 0	10.6 0	11.1 35	10.2 0	0	72,950 16,250	2,22,000 52,500	1,49,050 36,250	3.10	72,950	2,04,000	1,31,050	2.79
	ICM in coconut	Tiptur tall	-	Rainfed	10	2	6650	6050	6350	5860	8.4	34,512	69,862	35,350	2.02	32,755	64,465	31,710	1.97
Fibre																			
Others (Borep)	**Management of Wild Boar in Farming system**	TMV-2	-	Rain fed	5	2	9.66	8.45	8.98	7.06	21.38	22,827	44,869	22,042	1.96	19,599	29,652	10,052	1.51

Others (Vegetable Crops)	Nutrition garden in schools	IIHR	-	irrigated	05 Nos	0	586	275	450	No vegetable production	100%	27,800	39,100	11,300	1.40	24,680	24,680	0	1

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

** BCR= GROSS RETURN/GROSS COST

H – Highest Yield, L – Lowest Yield A – Average Yield

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

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**
Percent stem rot	8.28	18.54
Percent wilt incidence	4.11	11.14
Plant height in ft	**9.2**	**7.9**
Late blight incidence %	24.8	32.46
Plant height in ft	3.2	2.3
Plant height in cm	65	47
Flowers per plant-Nos.	43.2	32.8
Percent fruit blight	6.66	8.74
Fruit Weight in gms	230	195
Fruit infestation in %	5.20	14.30

Pods per plant-Nos.	35	NA
Percent Stem Bleeding	5.0	17.0
Percent damage in Pod filling stage	0.00	24.58
(A)Production (kg / month / school), (B) Amount Spent on vegetables (Rs. / month/ school), (C) Vegetables available (g. /child/day), (D) Vegetable consumption adequacy (%)	(A)90 (B)5560 (C) 97.5 (D) 24.37	(A)Nil (B)4930 (C)60 (D)15.00

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

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

** BCR= GROSS RETURN/GROSS COST

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

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

5.B.3. Fisheries

Type of Breed	Name of the technology demonstrated	Breed	No. of Demo	Units/ Area (m^2)	Yield (q/ha)				% Increase	*Economics of demonstration Rs./unit) or (Rs./m2)				*Economics of check Rs./unit) or (Rs./m2)			
					Demo			Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Common carps																	
Mussels																	
Ornamental fishes																	
Others (pl.specify)																	

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

** BCR= GROSS RETURN/GROSS COST

H-High L-Low, A-Average

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

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

5.B.4. Other enterprises

Enterprise	Name of the technology demonstrated	Variety/ species	No. of Demo	Units/ Area {m^2}	Yield				% Increase	*Economics of demonstration (Rs./unit) or (Rs./m2)				*Economics of check (Rs./unit) or (Rs./m2)			
					Demo			Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Oyster mushroom																	
Button mushroom																	
Vermicompost																	
Sericulture																	
Apiculture																	
Others (pl.specify)	EDP on Dried flower technology and Value addition	-	2 groups	Book marks(100 Nos.) Table mats -20 sets (6 pieces/set) Photo frames (100 Nos.) Pot pourri (100 Nos.)						650 6,000 14,000 6500	1,500 12,000 30,000 20,000	850 6,000 16,000 13,500	2.30 2.0 2.14 3.07	0			

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST
H-High L-Low, A-Average

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

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

5.B.5. Farm implements and machinery

Name of the implement	Cost of the implement in Rs.	Name of the technology demonstrated	No. of Demo	Area covered under demo in ha	Labour requirement in Mandays		% save	Savings in labour (Rs./ha)	*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

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

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

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

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

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	07	456	
2	Farmers Training	20	610	
3	Media coverage	05	-	
4	Training for extension functionaries	-	-	
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										
Cereals																	
Bajra																	
Maize																	
Paddy																	
Sorghum																	
Wheat																	
Others (pl.specify)																	
Total																	
Oilseeds																	
Castor																	
Mustard																	
Safflower																	
Sesame																	
Sunflower																	
Groundnut																	
Soybean																	
Others (pl.specify)																	
Total																	
Pulses																	
Greengram																	
Blackgram																	
Bengalgram																	
Redgram																	
Others (pl.specify)																	

Total																	
Vegetable crops																	
Bottle gourd																	
Capsicum																	
Others (pl.specify)																	
Total																	
Cucumber																	
Tomato	Integrated Crop Management in Tomato	Arka Samrat	5	1	0	0	612	539	13.5	73,450	3,06,000	2,32,550	4.17	83,980	2,69,500	2,15,600	3.20
Brinjal																	
Okra																	
Onion																	
Potato																	
Field bean																	
Others (pl.specify)																	
Total																	
Commercial crops																	
Sugarcane																	
Coconut																	
Others (pl.specify)																	
Total																	
Fodder crops																	
Maize (Fodder)																	
Sorghum (Fodder)																	
Others (pl.specify)																	
Total			**5**	**1**	**0**	**0**	**612**	**539**	**13.5**	**73,450**	**3,06,000**	**2,32,550**	**4.17**	**83,980**	**2,69,500**	**2,15,600**	**3.20**

H-High L-Low, A-Average *Please ensure that the name of the hybrid is correct pertaining to the crop specified

PART VII. TRAINING

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management										
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify) organic farming in French bean	01	28	4	32	5	3	8	33	07	40
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop										
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation	01	32	6	38	8	4	12	40	10	50
Others (pl.specify)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit	01	32	2	34	4	2	06	36	04	40
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										

c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify) Flower crop production	01	14	2	16	3	0	03	17	2	19
d) Plantation crops										
Production and Management technology	01	22	3	25	5	2	07	27	5	32
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management										
Integrated water management										
Integrated nutrient management	2	52	7	59	10	8	18	62	15	77
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing	5	98	15	113	30	15	45	128	30	158
Others (pl.specify)										
Livestock Production and Management										
Dairy Management										

Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology										
Production of quality animal products										
Others (pl.specify)										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	01	14	5	19	4	2	6	18	7	25
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management										
Integrated Disease Management										

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

Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	**13**	**292**	**44**	**336**	**69**	**36**	**105**	**361**	**80**	**441**

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

Area of training	**No. of Courses**	**No. of Participants**								
		General			**SC/ST**			**Grand Total**		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management										
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify)Agromate Advisory services	01	38	4	42	0	0	0	42	0	42
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop										
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl.specify)										
b) Fruits										
Training and Pruning	01	22	5	27	5	0	5	27	5	32

Layout and Management of Orchards										
Cultivation of Fruit	02	28	6	34	7	3	10	35	9	44
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify) Flower crop production	01	16	3	19	2	0	2	18	3	21
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management										
Integrated water management										
Integrated nutrient management										

Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing	03	98	11	109	20	4	24	118	15	133
Others (pl.specify)										
Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology										
Production of quality animal products										
Others (pl.specify)										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										

Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management	02	92	0	92	13	0	13	105	0	105
Integrated Disease Management	03	98	11	109	19	10	29	117	21	138
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (pl.specify)										
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and										

fodder										
Production of Fish feed										
Mushroom production										
Apiculture										
Others (pl.specify)										
CapacityBuilding and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	**13**	**392**	**40**	**432**	**66**	**17**	**83**	**462**	**53**	**515**

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
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production	02	65	0	65	3	0	3	68	0	68
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production	08	265	32	297	42	20	65	307	52	359
Bee-keeping	01	42	3	45	9	4	13	51	7	58
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing	01	49	9	58	19	8	27	68	17	85
Post-Harvest Technology										

Tailoring and Stitching										
Rural Crafts	01	0	34	34	0	9	9	0	43	43
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify) Spawn production	02	68	7	75	18	4	22	86	11	97
TOTAL	**15**	**489**	**85**	**574**	**91**	**45**	**139**	**580**	**130**	**710**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology										

Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify) Commercial flower crop production	01	19	0	19	0	0	0	19	0	19
TOTAL	**01**	**19**	**0**	**19**	**0**	**0**	**0**	**19**	**0**	**19**

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	01	28	12	43	6	2	8	43	8	51
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology	01	16	4	20	8	3	11	20	11	31
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										

Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
Total	**2**	**44**	**16**	**63**	**14**	**5**	**19**	**63**	**19**	**82**

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

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

7.G. Sponsored training programmes conducted

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Increasing production and productivity of crops										
1.b.	Commercial production of vegetables										
2	**Production and value addition**										
2.a.	Fruit Plants										
2.b.	Ornamental plants										
2.c.	Spices crops										
3.	**Soil health and fertility management**										
4	**Production of Inputs at site**										
5	**Methods of protective cultivation**										
6	**Others (pl.specify)**Sujala III capacity building	10	265	40	307	62	20	82	327	60	387
7	**Post harvest technology and value addition**										
7.a.	Processing and value addition										
7.b.	Others (pl.specify)										
8	**Farm machinery**										
8.a.	Farm machinery, tools and implements										
8.b.	Others (pl.specify)										
9.	**Livestock and fisheries**										
10	**Livestock production and management**										
10.a.	Animal Nutrition Management										
10.b.	Animal Disease Management										
10.c	Fisheries Nutrition										
10.d	Fisheries Management										
10.e.	Others (pl.specify)										
11.	**Home Science**										
11.a.	Household nutritional security										
11.b.	Economic empowerment of women										
11.c.	Drudgery reduction of women										
11.d.	Others (pl.specify)										
12	**Agricultural Extension**										
12.a.	Capacity Building and Group Dynamics										
12.b.	Others (pl.specify)										
	Total	**10**	**265**	**40**	**307**	**62**	**20**	**82**	**327**	**60**	**387**

Details of sponsoring agencies involved

1.Dept. of Agriculture and Horticulture,Govt. of Karnataka

2.

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

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Commercial floriculture										
1.b.	Commercial fruit production										
1.c.	Commercial vegetable production										
1.d.	Integrated crop management										
1.e.	Organic farming										
1.f.	Others (pl.specify)										
2	**Post harvest technology and value addition**										
2.a.	Value addition										
2.b.	Others (pl.specify)										
3.	**Livestock and fisheries**										
3.a.	Dairy farming										
3.b.	Composite fish culture										
3.c.	Sheep and goat rearing										
3.d.	Piggery										
3.e.	Poultry farming										
3.f.	Others (pl.specify)										
4.	**Income generation activities**										
4.a.	Vermi-composting										
4.b.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.										
4.c.	Repair and maintenance of farm machinery and implements										
4.d.	Rural Crafts										
4.e.	Seed production										
4.f.	Sericulture										
4.g.	Mushroom cultivation										
4.h.	Nursery, grafting etc.										
4.i.	Tailoring, stitching, embroidery, dying etc.										
4.j.	Agril. para-workers, para-vet training										
4.k.	Others (pl.specify)										
5	**Agricultural Extension**										
5.a.	Capacity building and group dynamics										
5.b.	Others (pl.specify)										
	Grand Total										

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	7	332	74	406	28	16	44	4	2	6
Kisan Mela	3	1,445	220	1,665	40	20	60	48	28	76
Kisan Ghosthi	0	0	0	0	0	0	0	0	0	0
Exhibition	7	2,840	880	3,720	180	80	260	48	18	66
Film Show	30	1,225	124	1,348	116	34	150	13	11	24
Method Demonstrations	6	98	40	138	34	20	54	9	3	12
Farmers Seminar	2	220	24	244	21	6	27	16	4	20
Workshop										
Group meetings	1	16	0	16	4	0	4	2	0	2
Lectures delivered as resource persons	60	2,220	240	2,460	135	115	250	40	8	48
Newspaper coverage	10	0	0	0	0	0	0	0	0	0
Radio talks	3	0	0	0	0	0	0	0	0	0
TV talks	10	0	0	0	0	0	0	0	0	0
Popular articles	4	0	0	0	0	0	0	0	0	0
Extension Literature	1	0	0	0	0	0	0	0	0	0
Advisory Services	150	1,800	160	1,960	48	16	64	82	20	102
Scientific visit to farmers field	126	124	26	150	16	03	19	8	3	11
Farmers visit to KVK	150	550	150	700	42	16	58	15	3	18
Diagnostic visits	75	380	41	421	19	8	27	5	0	5
Exposure visits	11	445	155	600	45	15	60	0	0	0
Ex-trainees Sammelan	0	0	0	0	0	0	0	0	0	0
Soil health Camp	0	0	0	0	0	0	0	0	0	0
Animal Health Camp	0	0	0	0	0	0	0	0	0	0
Agri mobile clinic	0	0	0	0	0	0	0	0	0	0
Soil test campaigns	0	0	0	0	0	0	0	0	0	0
Farm Science Club Conveners meet	0	0	0	0	0	0	0	0	0	0
Self Help Group Conveners meetings	0	0	0	0	0	0	0	0	0	0
MahilaMandals Conveners meetings	0	0	0	0	0	0	0	0	0	0
Celebration of important days (specify) Mahila Kisan Diwas	1	0	50	50	0	7	7	05	03	08
Any Other (Specify)										
Total	**657**	**11,695**	**2,184**	**13,878**	**728**	**356**	**1,084**	**295**	**103**	**398**

PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIALS

9.A. Production of seeds by the KVKs

Crop category	Name of the crop	Name of the Variety	Name of the Hybrid	Quantity of seed (q)	Value (Rs)	Number of farmers to whom provided
Cereals (crop wise)	Ragi	ML 365		820	32,800	52
	Korale seeds	local		63.50	5,080	17
	Same	Local		29	2,320	9
Oilseeds						
Pulses	Redgram	BRG 5		376	56,400	16
Commercial crops						
Vegetables						
	Amaranthus	Arka Suguna		21.24	10,620	47
	Palak	Arka Anupama		43.90	17,560	33
	Chilli	Arka Suphal		5.37	9,666	24
	Brinjal	Arka Shirish		1.20	2,160	11
	Onion	Arka Kalyan		21.35	25,620	25
	Okra	Arka Anamika		11.30	5,650	37
	Tomato	Arka Megali		1.85	3,700	17
	Ridge gourd	Arka Sumit		4.05	4,050	16
	Pumpkin	Arka Suryamuki		12.40	12,400	30
	French Bean	Arka Suvidha		191.90	47,975	37
	Cowpea	Arka Garima		6.0	1,500	17
	Bottle gourd	Arka Bahar		1.65	1,650	11
	Radish	Arka Nishant		8.50	4,225	33
	Papaya Seeds	Arka Prabhat		0.16	16,000	03
	Seed kit (Nos.)	10 different vegetables		1604	2,40,600	179
Flower crops						
Spices						
Fodder crop seeds						
	Fodder maize seeds	-		26	2,600	100
	Fodder cowpea	-		4	1,000	03
	Sunhemp seeds	-		214	14,980	6
	Mucuna seeds	Arka Dhanavantari		17	1,360	6
Fiber crops						
Forest Species						
Others (specify)						
Total				**3484.37**	**5,19,916**	**729**

9.B. Production of planting materials by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Commercial						
Vegetable seedlings						
	Drumstick Seedlings			4,379	52,548	85
	Chilli seedlings	Arka Suphal		1,700	1,700	3
Fruits						
	Mango Grafts			2,718	1,08,720	73
	Guava Grafts			1,870	74,800	75
	Papaya Seedlings			3,059	30,590	115
	Lime seedlings			2,916	1,16,640	129
Other seedlings	Rose apple, Fig, Ramphal, Custard apple			1,509	43,100	271
Ornamental plants						
Medicinal and Aromatic						
Plantation						
	Arecanut	Hirehalli tall		59,225	17,39,370	204
		Sprouts		6,740	15,000	
	Coconut	Arsikere tall		1,482	1,18,560	67
Spices						
Tuber						
Fodder crop saplings	Cuttings	Napier Grass		6,100	6,100	9
Forest Species						
Others(specify)						
Total				**91,698**	**23,07,128**	**1,031**

9.C. Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	Number of farmers to whom provided
Bio Fertilizers	Arka microbial Consortium - Powder	3,786	4,85,796	402
	Arka microbial Consortium - Liquid	612	1,29,744	40
Bio-pesticide	Fruit fly traps	2,648	52,960	170
	Fruit fly lures	8,640	1,72800	520
Bio-fungicide				
Bio Agents	Neem Soap	1,261	3,15,250	252
	Pongamia Soap	424	89,040	84
	Sealer cum Healer	617	92,550	150
Others (specify) Micronutrient fertilizers				
	Banana Special	9,814	14,03,850	850
	Vegetable Special	10,400	14,72,700	1,120
	Mango Special	9,157	13,00,050	750
	Citrus Special	1,030	1,43,250	101
Others (Home Products)				
	Amla Candy	192	24,960	400
	Amla Squash (ltrs(	160	48,000	150
	Mushroom Spawn	126	10,080	30
	Ragi Malt	75	15,000	50
Total		**48,942**	**57,56,030**	**5,069**

9.D. Production of livestock materials : NIL

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
Poultry				
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl.specify)				
Fisheries				
Fingerlings				
Others (Pl. specify)				
Total				

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

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

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

(B) Literature developed/published

Item	Title	Authors name	Number
Research papers	Impact of integrated fruit fly management module on the mango yield: An analysis through front line demonstrations.	Hanumanthe gowda,B., Ramesh, P. R., Shashidhar K. N. and Loganandhan N., 2017	*Pest Management in Horticultural Ecosystems, Vol. 22(2),* Pp *114-117*
	Biointensive management of brinjal shoot and fruit borer , *Leucinodes orbonalis* Guen.: Technology demonstration and impact	Hanumanthe gowda,B., Ramesh, P. R.,. and Prashanth.J.M.,2017	*Pest Management in Horticultural Ecosystems, Vol. 23(1),* Pp *60-63*
Technical reports			
News letters			
Technical bulletins	Manual on Integrated Farming System-Dryland Horticulture under Sujala Phase-III 2017-18	Prasanth, J.M., BH Gowda., Jagadish, KN., Ramesh, PR., and Loganandhan, N, 2017	Department of Horticulture, Govt. of Karnataka
Popular articles	In Kannada: Pasal Bima Yojana a boon to famers welfare	Hanumanthegowda.B, Ramesh,P.R and Loganandhan.N, 2017	Published in Prajapragthi daily news paper on 25 June,2017
	In Kannada: Integrated management of root grub in Arecanut	Hanumanthegowda.B, Ramesh,P.R and Prashnath.J.M, 2017	Published in Prajapragthi daily news paper on 27th Oct,2017
	In Kannada: Ragi Cutworm Management	Hanumanthegowda.B, Ramesh,P.R and Prashnath.J.M, 2017	Published in Viajayavani daily news paper on 6th Oct,2017
	In Kannada: Role of Organic formulations in agriculture	Hanumanthegowda.B, Ramesh,P.R and Loganandhan.N, 2017	Published in Negila Yogi .3:27
Extension literature	Banana Diseases and their Management.	Hanumanthegowda.B, Prashnath.J.M. Loganandhan.N, Jagadish, K.N., and Ramesh,P.R., 2017	Published by Director, IIHR.Pp:8
Others (Pl. specify) Abstracts	Studies on cultural and morphological characteristics of isolates of *Fusarium oxysporum* f.sp. *vasinfectum* causing Okra wilt.	Hanumanthegowda. Ramesh. P.R and Saifullah. M ,2017	International Symposium on Horticulture: Priorities and emerging trends held from 5-8 September 2017, at Bengaluru, India Pp:495
	Effect of climate resilient technologies in boosting of crop	Ramesh P. R, Hanumanthegowda B, Prashanth J. M and	Presented at International Symposium on Horticulture: Priorities and emerging trends

	productivity in Tumakuru district, Karnataka	Loganandhan. N, 2017	held from 5-8 September 2017, at Bengaluru, India. Pp:564.
	Management of sudden outbreak of Cutworm in Finger millet (*Eleusine coracana*) in Tumakuru District, Karnataka – an unique experience	Hanumanthe gowda. B, Loganandhan. N , Ramesh. P. R , Prashanth, J. M, and Jagadish. K.N, 2017	National Seminar of ISEE on Doubling Farmers Income and Farm Production through Skill Development and Technology Development held on 28-30th November,2017 BAU, Bhagalpur. Pp:135
TOTAL			

10.B. Details of Electronic Media Produced

S. No.	**Type of media (CD / VCD / DVD/ Audio-Cassette)**	**Title of the programme**	**Number**
1.	CD	Value addition in Amla BOON to Doubling Farmers income	50
2.	CD	Arka Microbial Consortium – A cost effective technology for doubling farmers income	50

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).

This will be considered only with suitable photos for further reporting/reference.

The Broad outline for the case study may be

1. INTEGRATED DISEASE MANAGEMENT OF BACTERIAL BLIGHT IN POMEGRANATE –WAYS TO DOUBLEING THE FARMERS' INCOME

Introduction: Pomegranate (*Punica granatum*), called as "fruit of paradise", is one of the major fruit crops of tropical and subtropical region of India. The fruit is grown for its attractive, juicy, sweet-acidic and fully luscious grains. The fruits are mainly used for dessert purposes. Being a "vital cash crop", it is grown in an area of 1.25 lakh hectares with 60.64 lakh tones of production in India and the area under the crop is also increasing very rapidly. Pomegranate occupies sixth place in the fruit export market of India, where it accounts for 50 per cent of the world pomegranate production and earns a foreign exchange to the tune of Rs. 270 crores. In Karnataka, it is grown in an area of 14,000 hectares with the production of 1.5 lakh tonnes and productivity of 10 tonnes per hectare. The most popular varieties suitable for processing and table purposes are Ganesh, Mridula, Arakta, Bhagwa, Kesar, G-137 and Khandar.

2. Situation and benchmark analysis/Problem statement: Successful cultivation of Pomegranate in recent years has met with different **traumas** such as pest and diseases. Among diseases bacterial blight caused by *Xanthomonas axonopodis* pv*. punicae* (Vauterin *et al.,* 1995) is a major threat. The survey conducted by National Research Centre on Pomegranate (NRCP) from 2005 to 2009 revealed that prevalence of blight incidence was mild to severe in all pomegranate growing areas of Karnataka and Maharashtra. Prevalence of Bacterial blight in Karnataka was 58.33%, in which 27.77% orchards had moderate blight and 33.05% orchards had mild infections (Anon. 2008, 2009). Yield losses due to Bacterial blight drastically reduced to 10,000 tonnes in the year 2007-08 from 1.18 million tonnes during the year 2003-04, in a span of just four years in Karnataka (Benagi and Ravi Kumar, 2009). In addition to this, cost of cultivation is one of the major concerns nowadays, because of indiscriminate use of pesticides for the control of pests and diseases, excess application of water soluble fertilizers etc. The Data collected in this regard showed that farmers were spending an amount of Rs.2.75 lakhs to 3.10 lakhs per crop compared to actual cost of cultivation of Rs.1.25-1.38 lakhs. Any successful plant protection measure depends on early detection of the disease followed by timely adoption of recommended control measures.

3. Technology details: A technology was developed by NRCP, Solapur and ICAR-IIHR, Bengaluru, to address the Bacterial blight of **Pomegranate**. The technology is integrated disease management schedule which include practices like orchard sanitation, avoidance of rainy season crop (*Mrig bahar*) and regulating the *Hasta bahar* crop, judicious sprays of antibiotics like Streptocycline (500 ppm) in combination with fungicides like Carbendazim (0.15%) or Mancozeb (0.2%) or Copper oxychloride (0.3%) or Bordeaux mixture (0.1%) at 15 days intervals based on the prevailing weather conditions recorded in the local meteorological unit. An FLD on Integrated Crop Management (ICM) in Pomegranate by implementing the above technology was conducted for three consecutive years (2014-17) during Rabi season in five farmers' fields of Sira and Pavagada Taluks of Tumakuru district. An extensive awareness cum field visit to every farmer of cluster village helped to reduce the cost of cultivation by avoiding the local quacks that were responsible for wrong advice of pesticides application. Capacity building programmes were conducted at different intervals and at different crop stages to highlight the importance of sprays to be taken up, particularly the dosage and method of chemical application. Further, periodical sprays were taken up depending on the prevailing weather parameters at different intervals and at different crop stages.

4. Yield and output details: The yield obtained in demo field was significantly superior over the control field which recorded the least yield of 6.88 t/ha, compared to demo field which recorded an average of 8.92 t/ha. The per cent increase in yield over control was recorded in demo field was 29.65 per cent. The benefit cost ratio recorded was 5.15 in Demo plot compare to check plot (2.15). The significant reduction in cost of

cultivation was recorded in demo plot compared to check plot. This is mainly because of drastic reduction in number of sprays and dosage of the unwanted chemicals.

Plot details	Yield Per ha In Qtls	% increase over control	Gross Cost In Rs.	Gross Returns In Rs.	Net Returns In Rs.	B:C ratio
Demo plot	8.92	29.65	1,29,800	6,69,000	5,39,200	5.15
Control plot	6.88		2,39,560	5,16,000	2,76,440	2.15

5. Income/profit and development: Successful demonstration of ICM in Pomegranate revealed that there was a drastic reduction in cost of cultivation, which was mainly because of judicious use of pesticides and water soluble fertilizers. KVK was very much **instrumental** in creating the awareness among the farmers by reaching 128 pomegranate growers in Tumakuru District by new extension tools like ICT. Among all, whatsapp played a major role by connecting all the individual farmers. There is a lot of scope to increase the income by value addition and export. A farmer would be getting nearly Rs.130/Kg in international market compared to Domestic market of Rs.75/Kg. The Bio-pesticides and Bio-fertilizers (Arka Microbial Consortium) produced by KVK and used by the farmers helped to reduce the cost of cultivation to a greater extent. KVK is also promoting Farmers producers Organization (FPO) for marketing to avoid local vendors who offer very less price.

6. Conclusion: Adoption of advanced recommended package of practices along with use of bio-fertilizers helped the farmers to reduce the cost of cultivation. Doubling Farmers' Income is very much possible in Pomegranate where farmer needs to take judicious decisions at every crop growth stage, keeping in mind the cost of inputs along with consistent liaison with government extension agency.

Demo plots at Pavagada taluk

2. Onion Variety: Arka Kalyan – A gain to garner

1. Situation analysis/Problem statement: Onion (*Allium cepa* L.) is one of the important commercial vegetable crops grown in India for both domestic consumption and export. In Tumakuru district of Karnataka state, Bellary Red variety of onion is predominantly grown in an area of 650 ha. (Dept of Horticulture, Govt. of Karnataka). But the productivity of the variety is 130 - 140 Qtls/ha, much lower than the state (180 Qtls/ha) and national average (160 Qtls/ha). The average income from Onion cultivation is Rs.85,000 to Rs.1,00,000 per

ha. In fact, successful onion production depends mainly on the selection of varieties that are adapted to different conditions imposed by specific environment. The main reasons behind this low productivity are - cultivation under rainfed condition, delayed on set of monsoon and non-adoption of high yielding varieties, particularly in the main *Kharif* season. This led to low yield and susceptible for purple blotch disease during *Kharif* season in Tumakuru District. The shelf life of Bellary Red is also not up to the desired level (60 days only). Further, analysis of soils in eastern dry zone, red sandy region revealed that about 40 per cent saline % soils and 60 per cent soils were low in organic matter. Due to these factors along with high fluctuations in the market rate, cultivation of onion has become almost a gambling among farmers.

2. Technology details: Arka Kalyan the onion variety released by ICAR-Indian Institute of Horticultural Research in the year 2004 is most suitable for *Kharif* season, tolerant to purple blotch disease which is found to be good to addressing the above mentioned issues effectively. ICAR-KVK under ICAR-IIHR has taken up many Front Line Demonstrations (FLD) in order to show the yield potential of this variety. An FLD on Integrated Crop Management (ICM) in Onion with technological inputs like Arka Kalyan variety, vegetable special as a micro-nutrient supplement and other plant protection measures, was conducted for three years (2014-17) during *kharif* season in the farmers' fields of Bukkapattana in Sira Taluk and Hosakere Madhugiri Taluks of Tumakuru district. The variety showed improved performance in case of quality parameters viz.,Colour (Pink rose colour), bulb shape, tolerant to pest/disease, tolerant to moisture stress, shelf life (3 to 4 months) etc., To support the cause, KVK has taken up participatory seed production activities as well in the farmers' fields (Hosakere, Madhugiri in 4 acres)

3. Yield and output details: The results showed an increase of 42.84 per cent in yield, over the local Bellary Red. (Arka Kalyan- 253.4/ha and Bellary Red 177.3/ha). There was a reduction in the disease / pest incidence to the tune of 33 per cent. Due to these reasons, the variety gained its adoption in an area of 170 acres by 75 numbers of farmers over a period of three years. Thus, the total production in the district had gained an additional 38 per cent by using Arka Kalyan in an area of 145 ha. Under seed production activity, there was a production of 12 qtls from an area of 4 acres. There has been an increase in the interest of farmers to take up seed production of Arka Kalyan, as an income generation activity.

4. Income/profit and development: In an area of one ha, there was an additional production of 76 Qtls and additional income of Rs.80,000 by growing Arka Kalyan. Considering the spread of technology over an area of 170 ha, there has already been an additional production (on an average) of 45 Qtls and income of Rs 40,000 for 56 farmers. If the technology spreads to the total 650 ha of onion cultivation, there could be a possibility of gain in production to the tune of 42 per cent and an additional income of Rs 76,000/ha/farmer. This is almost double the income of what the farmer gains on an average per ha.

Table: 1 : The table below shows the potential of the technology over the check.

Particulars	Bulb wt(g)	Ave. Yield (tons/ha)	% Increase	Gross Cost (Rs./ha)	Gross Returns (Rs./ha)	Net returns (Rs./ ha)	B:C ratio
Demonstration	99.50	25.34	42.84	96,560	2,53,400	1,56,840	2.72
Check (Bellary Red)	92.10	17.74		96,560	1,77 ,380	80,820	1.91

5. Conclusion: Doubling of Farmers' Income is possible only through proper planning and adoption of advanced Package of Practices in which new technologies like high yield and disease resistant variety, marketability and shelf life should be included. More crop per drop should be the mantra of farmers in adopting drip irrigation, mulching and other water management technologies. Use of mechanization in sowing seeds through IIHR Onion Seed Drill (Manual and Mechanical) can overcome the labour problem. During the market glut, Arka Kalyan onion can be stored in room temperature for four to five months without any quality deterioration. Post-harvest technology products like Dehydrated Slice, Powder, and Paste would also fetch more price for farmers. All these would contribute in doubling the farm income in due course.

Onion –Arka Kalyan Demo plot

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

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

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1	Groundnut	Tying of old Clothes, Installation of scare crow, Installation of empty tin with bell design , Application of phorate all along the borders	Management of Wild boar
2	Coconut	Fixing of old oil tin plate all around over middle of trunk.	To avoid the monkey and squirrels

-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

-Rural Youth

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

-Inservice 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: 17
ii. No. of farm families selected : 111
iii. No. of survey/PRA conducted : Nil

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 equipments 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	0	99,279
13	Chemicals	0	1,34,465
Total		**11**	20,00,000

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	10,055	8024	2380	11,40,000
Water Samples	7,352	5320	542	4,33,150
Plant samples	240	208	120	8,500
Manure samples	-	-	--	-
Others (specify)	-	-	-	-
Total	**17,647**	**13,552**	**3,042**	**15,81,650**

Details of samples analyzed during the 2017-18:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	1,360	1,225	624	2,72,000
Water Samples	1,137	1,050	320	1,13,700
Plant samples	17	12	08	3,400
Manure samples	-	-	-	-
Others (specify)	-	-	-	-
Total	**2,514**	**2,287**	**952**	**3,89,100**

Details of soil health cards issued during the 2017-18 :

Date (s)	Farmers participated	No. of Samples analyzed	Soil health cards issued	No. of Villages	Public representatives participated	
					MLA/Minist	Other Dignitaries/ Chief guests
05.12.17	45	45	45	05	-	Dr. Raghu Mohan Former Head NBSS&LUP Bengaluru
19.03.18	50	40	40	02	-	DDM NABARD

10.I. Technology Week celebration during 2017-18 Yes/No, If Yes : NO

Period of observing Technology Week: From to
Total number of farmers visited :
Total number of agencies involved :
Number of demonstrations visited by the farmers within KVK campus :

Other Details

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

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

A. Introduction of alternate crops/varieties

State	Crops/cultivars	Area (ha)	Number of beneficiaries

B. Major area coverage under alternate crops/varieties

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

C. Farmers-scientists interaction on livestock management

State	Livestock components	Number of interactions	No.of participants
Total			

D. Animal health camps organized

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

E. Seed distribution in drought hit states

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

F. Large scale adoption of resource conservation technologies

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

G. Awareness campaign

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

PART XI. IMPACT

11.A. Impact of KVK activities (Not 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)
Integrated crop management in Tomato	25	35	1,80,000	2,20,000
Enhancement of Productivity of Finger millet by drought tolerant variety ML 365	450	85	20,500	42,500

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

11.B. Cases of large scale adoption

Large Scale adoption of Foliar application - Arka Banana Special in farmer's field of Tumakuru district

IIHR, Bengaluru has conducted research in Banana growing fields. It has shown that yield reduction and poor fruit quality are mainly due to deficiency of micronutrients such as Zinc, Boron, Manganese, Iron, Copper etc.

KVK, Hirehalli has authorized license to produce and sell of Arka Banana Special, which is very popular among farmers for its genuine quality. For the benefit of farmers, KVK is selling at low price to reach out maximum the Banana growers across the Tumakuru district

Sl .No	Particulars	With Banana special		Without application of banana special		With Banana special		Without application of banana special	
		1st year	2nd year	1st year	2nd year	1st year	2nd year	1st year	2nd year
		G9		G9		Ellaki			
A.	Material inputs								
	Land preparation including trenching	14,283.33	0.00	14,283.33	0.00	13,340.00	0.00	13,340.00	0.00
1	FYM and Manures	26,358.33	0.00	26,358.33	0.00	25,600.00	0.00	25,600.00	0.00
2	Fertilizers	10,010.00	11,010.00	10,010.00	11,010.00	8,285.00	9,285.00	10,285.00	12,345.00
	N in kgs	140.18	145.18	140.18	145.18	140.4667	145.78	140.18	150.18
	P in kgs	92.48	98.78	92.48	98.78	77.08	78.89	85.48	95.48
	K in kgs	100.50	104.89	100.50	104.89	103.33	102.8	102.50	105.50
	Other nutrients in kgs	184.6	180.88	184.6	180.88	170.8		174.6	204.6
3	PPP chemicals	13,453.33	14,500.00	16,000.00	16,500.00	14,980.00	15,880.00	17,000.00	18,550.00
4	Seedlings	26,800.00	0.00	26,800.00	0.00	25,800.00	0.00	25,800.00	0.00
5	Cost of Banana special application	2,913.88	2,913.88			2,823.33	2,823.33		
	Sub total	90,905.00	25,510.00	93,451.67	27,510.00	88,005.00	25,165.00	92,025.00	30,895.00
B.	Labour costs								
	(Hired + Own)	19,200.00	11,700.00	20,800.00	13,300.00	19,565.00	12,065.00	18,565.00	12,500.00
	A+B)	1,10,105.00	37,210.00	1,14,251.67	40,810.00	1,07,570.00	37,230.00	1,10,590.00	43,395.00
C.	Interest on working capital	9,909.45	3,348.90	10,282.65	3,672.90	9,681.30	3,350.70	9,953.10	3,905.55
	Total costs	1,20,014.45	40,558.90	1,24,534.32	44,482.90	1,17,251.30	40,580.70	1,20,543.10	47,300.55
	Yield per bunch	63.33	64.50	52.00	52.80	13.75	14.00	9.90	10.11

	Yield per acre in Kgs	65,450.00	65,550.00	53,092.00	53,908.80	14,712.50	14,980.00	10,593.00	10,817.70
	Total Returns	4,18,880.00	4,26,075.00	3,39,788.80	3,45,016.32	3,82,525.00	3,89,480.00	2,75,418.00	2,81,260.20
	NR	2,98,865.55	3,60,525.00	2,86,696.80	2,91,107.52	3,67,812.50	3,74,500.00	2,64,825.00	2,70,442.50
	Returns per rupee of investment	3.49	10.51	2.73	7.76	3.26	9.60	2.28	5.95

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

- Infestation of Fruit flies in Mango was a major problem in mango growing area and proper fruit fly control technology measures were not followed because of the lease giving practices among the farmers. The awareness was created and use of fruit flies traps was demonstrated (IIHR technology) at the appropriate time and for effective control of fruit flies at critical stage. Nearly 2185 farmers adopted the technology and farmers realized that it is a low cost technology which is effective to control fruit flies in mango.

- As a result of on-campus Vocational trainings on Areca plate making to 70 rural youths, three of them have started installation of Areca plate making machine by Youths availing Mudhra loan. They are also providing employment to rural youths in their villages and an average Rs. 25,000 /- per month is the earning by the individual.

- Farmers have realized the importance of AMC technology (Vegetables). This low cost technology has enhanced the income by reducing the cost of production with quality and higher productivity.

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
Department of Animal Husbandry and Fisheries	Trainings and Technical Information
Department of Sericulture	Trainings,
Department of Women and Child Development	Trainings
BAIF NGO, Tiptur	Trainings and Technical Information
ORDER NGO, Tumakuru	Trainings, FLD's and Technical Information, FPOs
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
ICAR-NIANP, Bengaluru	Trainings
SKRDP Tumakuru district	Trainings, FPOs
DHAN Foundation	Trainings, Walkathon, Bhoosamruddhi scheme
AVISHKAR	Trainings, FPOs
IDF NGO	Trainings, FPOs
Uttam Grama Seva Trust	Training on Areca leaf plate making

NB The nature of linkage should be indicated in terms of joint diagnostic survey, joint implementation, participation in meeting, contribution received for infrastructural development, conducting training programmes and demonstration or any other

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

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Technology demonstration component of NICRA	January 2011	CRIDA, Hyderabad	8,20,000
Conservation Agriculture	February 2016	CRIDA, Hyderabad	26,000
Bhoosamruddhi Scheme	April 2016	ZP, Tumakuru	21,94,000

12.C. Details of linkage with ATMA

a) Is ATMA implemented in your district : YES

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

- Organised the Workshop on ATMA at KVK Hirehalli in the month 3rd March, 2018
- Designing of technical and training programmes for the year 2017-18

Coordination activities between KVK and ATMA

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	**Meetings**				
02	**Research projects**				
03	**Training programmes**				
04	**Demonstrations**				
05	**Extension Programmes**				
	Kisan Mela				
	Technology Week				
	Exposure visit	Sankalpa Se Siddi	01	01	-
	Exhibition				
	Soil health camps				
	Animal Health Campaigns				
	Others (Pl. specify) Farmers day	Farmers day	01	01	
06	**Publications**				
	Video Films				
	Books				
	Extension Literature				
	Pamphlets				
	Others (Pl. specify)				
07	**Other Activities** (Pl.specify)				
	Watershed approach				
	Integrated Farm Development				
	Agri-preneurs development				

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

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

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

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

12.F. Details of linkage with RKVY : Nil

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

12. G Kisan Mobile Advisory Services

Month	Message type (Text/Voice)	SMS/voice calls sent (No.)						Total SMS/Voice calls sent (No.)	Farmers (No.)
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprises		
April 2017	Text	1	0	0	0	0	0	1	1713
May	Text	4	0	0	0	1	0	5	1727
June	Text	0	0	1	0	0	0	1	1727
July	Text	3	0	0	0	1	0	4	1727
August	Text	1	0	0	0	2	0	3	1740
September	Text	0	0	0	0	1	0	1	1735
October	Text	3	0	0	0	0	0	3	1740
November	Text	1	0	0	0	2	0	3	1739
December	Text	1	0	0	0	0	0	1	1724
January 2018	Text	5	0	0	0	3	0	8	1786
February	Text	7	0	0	0	0	0	7	1790
March	Text	3	0	0	0	4	0	7	1790
Total		29	0	1	0	14	0	44	20938

PART XIII- PERFORMANCE OF INFRASTRUCTURE IN KVK

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

Sl. No.	Demo Unit	Year of establishment	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1.	Farm Machinery Custom Hiring Center under Bhoosamruddhi	2016	-	-	-	1	20,00,000	47,325	-

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 (kg).	Cost of inputs	Gross income	
Cereals									
Ragi	10.07.17	12.12.17	0.8	ML 365	Seeds	820	16,000	16,000	
Brown top millet	10.10.17	20.02.18	0.6	Local	Seeds	244	8500	40,000	
Same	15.07.17	18.11.17	0.4	Local	Seeds	50	1200	2320	
Pulses									
Vegetable Cowpea	18.10.17	08.02. 18	0.1	Arka Garima	Seeds	45	5,200	10,000	
Sunhemp	16.07.17	18.11.17	0.8	Local	Seeds	214	6800	16,800	
Oilseeds									
Fibers									
Spices & Plantation crops									
Areca nut		-	-	Hirehalli Tall	Seedlings	59,225			
					Sprouts	6,740			
Coconut		-	-	Arsikere Tall	Seedlings	1,482			
Fruits									
Mango	-	-	-	Alphanso,	Seedlings	2,718		78,000	
Guava	-	-	-	AS, Pink flesh, L-49	Seedlings	1,870		22,000	
Lime	-	-	-	Seedless	Seedlings	2,916		4,000	
Papaya Seedlings	-	-	-	Arka Prabhat	Seedlings	3,059		30590	
Others seedlings	-	-	-	Rose apple, Fig, Ramphal, Custard apple	Seedlings	1,509		43100	
Vegetables									
Drumstick	-	-	-	PKM-1	Seedlings	4,379	17,500	52548	
Chilli	-	-	-	Arka Suphal	Seedlings	1,700	350	1700	
Amaranthus	13.12.16	29.03.17	0.1	Arka Suguna		21.24		10,620	
Palak	11.10.17	10.02.18	0.2	Arka Anupama	Seeds	43.90		17,560	
Chilli						5.37		9,666	

Brinjal						1.20		2,160	
Onion	12.06.17	21.03.18	0.4	ArkaKalyan		350		4,20,000	
	25.06.17	18.03.18	0.2	Bhema Shakti		150		1,80,000	
Okra						11.30		5,650	
Tomato	05.11.16	30.03.17	0.05	ArkaMeghali		1.85		3,700	
French Bean	05.01.18	28.03.18	0.2	A Suvidha		191.90		47,975	
Bottle gourd	12.10.17	18.02.18	0.1	ArkaBahar	Seeds	1.65		1,650	
Radish	05.08.17	15.01.17	0.1	ArkaNishant	Seeds	8.50		4,225	
Veg Seed Kit (No.)	-	-	-	10 different vegetables		1604	70,000	2,40,600	
Others (specify)									

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

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1	Banana Special	9,814		14,03,850	
2	Vegetable Special	10,400		14,72,700	
3	Mango Special	9,157		13,00,050	
4	Citrus Special	1,030		1,43,250	
5	Neem Soap	1,496		3,88,960	
6	Pongamia Soap	424		89,040	
7	Sealer cum Healer	790		1,18,500	
8	Arka Microbial consortium	3,786		6,15,540	
	Liquid AMC	612			
9	Mango fruit fly traps	2,648		2,20,760	
	Lures (Nos.)	8,640			
	Others				
10	Amla Candy	192		24,960	
11	Amla Squash (Lit)	160		48,000	
12	Mushroom Spawn	126		10,080	
13	Ragi Malt	75		15,000	

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

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	

13.E. Utilization of hostel facilities

Accommodation available (No. of beds)

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
April 2017			
May			
June			
July	10	1	
August	20	1	
September			
October			
November			
December	100	5	
January 2018	169	10	
February	40	3	
March			

13.F. Database management

S.No	Database target	Database created
1	Quick Book online Sales data management system	June 2017

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

Amount sanction (Rs.)	Expenditure (Rs.)	Details of infrastructure created / micro irrigation system etc.	Activities conducted					Quantity of water harvested in '000 litres	Area irrigated / utilization pattern
			No. of Training programmes	No. of Demonstrations	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)		

PART XIV - FINANCIAL PERFORMANCE

14.A. Details of KVK Bank accounts (from last year)

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	CBIN0283973
With KVK							

14.B. Utilization of KVK funds during the year 2017-2018(Rs. in lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	1,32,00,000	1,54,27,000	1,31,18,660
2	**Traveling allowances**	1,40,000		1,52,795
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	6,00,000		6,00,000
B	POL, repair of vehicles, tractor and equipments	5,00,000		5,00,000
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	2,45,000		2,45,000
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	75,000		75,000
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	2,75,000		2,75,000
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	62,000		62,000
G	Training of extension functionaries	25,000		25,000
H	Maintenance of buildings	0		0
I	Establishment of Soil, Plant & Water Testing Laboratory	25,000		25,000
J	Library	5,000		5,000
K	Extension Activities	50,000		50,000
L	Integrated Farming System	50,000		50,000
M	Farmer's Field School	30,000		30,000
N	EDP/Innovative activities	30,000		30,000
O	Farmers Conclave KVK conference	85,000		85,000
P	Video Production	30,000		30,000
TOTAL (A)		**1,54,27,000**	**1,54,27,000**	**1,53,58,455**
B. Non-Recurring Contingencies				
1	**Works**	0		0
2	**Equipments including SWTL & Furniture**	0		0
3	**Vehicle** (Four wheeler/Two wheeler, please specify)	0		0
4	**Library** (Purchase of assets like books & journals)	0		0
5				
TOTAL (B)		0		0
C. REVOLVING FUND		**0**		**0**
GRAND TOTAL (A+B+C)		**1,54,27,000**	**1,54,27,000**	**1,53,58,455**

14.C. Status of revolving fund (Rs. in lakh)

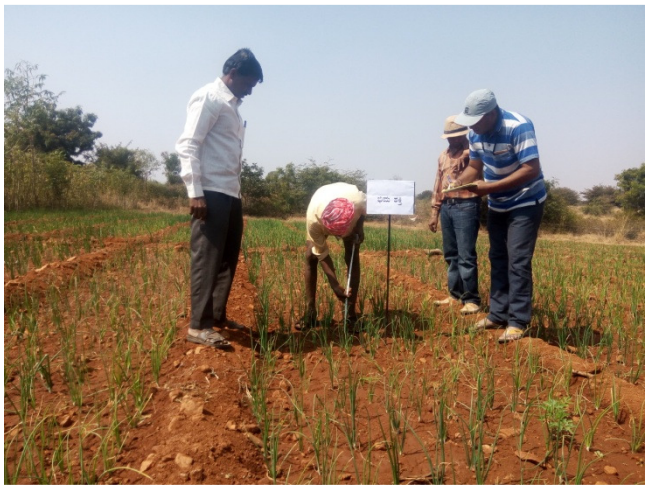
Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year
April 2014 to March 2015	24,36,261	49,60,840	39,34,815	34,62,286
April 2015 to March 2016	34,62,286	51,44,116	45,01,515	41,04,887
April 2016 to March 2017	41,04,887	70,14,523	63,06,760	48,12,650
April 2017 to March 2018	48,12,650	84,06,289	79,96,646	52,22,293

15. Details of HRD activities attended by KVK staff

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Sri P.R.Ramesh	SMS-Soil Science	Training Programme on Sujala III capacity development and identified as a master trainer	NBSS&LUP, Bengaluru	11th to 12th Jan, 2018
		Orientation training programme on Soil Science at on	NBSS & LUP,Bengaluru	06.02.2018
		Training programme on Mushroom Spawn Production.	IIHR Bengaluru	4.1.2018 to 6.1.2018
Prasanth JM	SMS Horticulture	Training Programme on Sujala III capacity development and identified as a master trainer	NBSS&LUP, Bengaluru	11th to 12th Jan, 2018
		Skill Development India and identified as a Master trainer.	UAS Bengaluru	17th to 19th, Feb, 2018
		Orientation training programme on IIHR technologies	IIHR Bengaluru	09.02.2018
K.N.Jagadish	SMS Agril.Extension	National Consultation on Farmer Organizations: Status and Prospects	ICAR-NIANP, Adugodi, Bengaluru	25-26 July, 2017
		Annual School on Grassroots Innovations	NIAS IISc Campus Bengaluru	10th to 18th Jan,2018

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

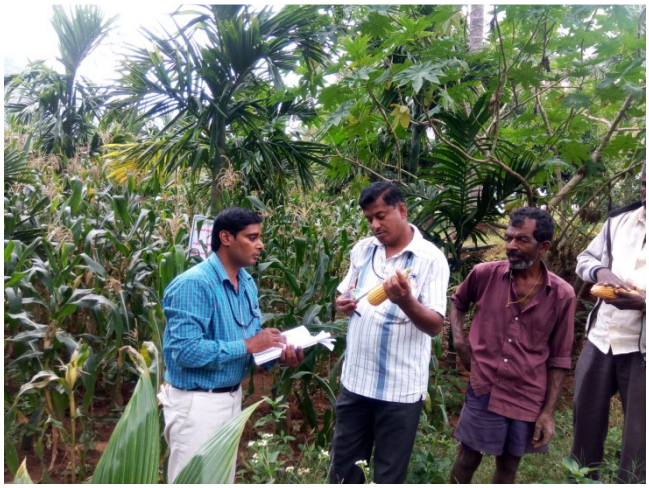
On Farm Testing



Onion - OFT Field Observation

Redgram - OFT Field Observation

Front Line Demonstrations



Maize:Furrow as a *insitu* moisture conservation

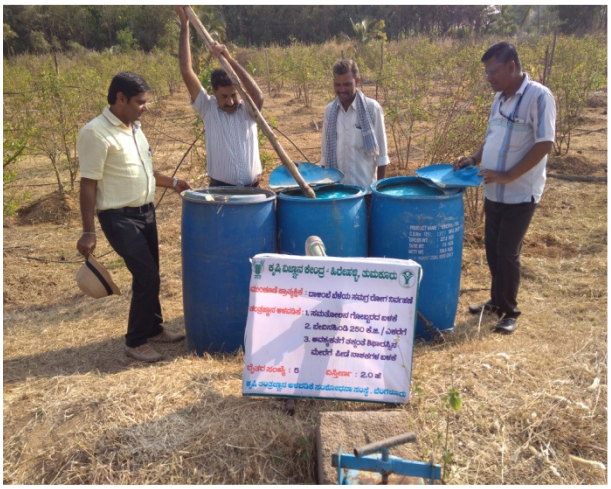
Arka Actino Plus (ACT) on Growth & Yield of Brinjal

Use of Bio-rationals in French bean

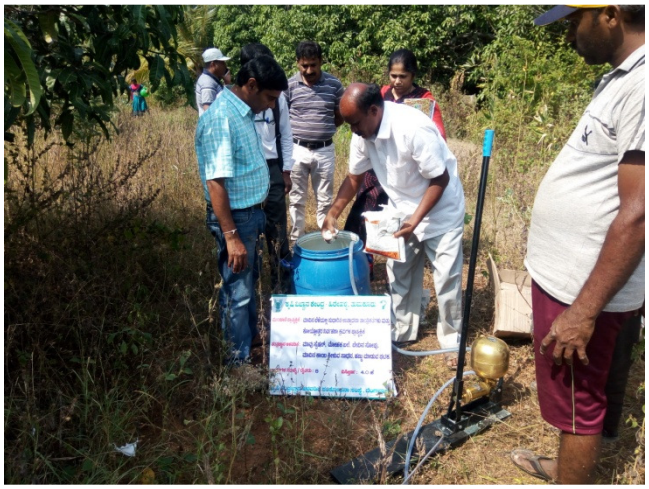
ICM in Tomato

Front Line Demonstrations

ICM in China Aster



ICM in Pomegranate

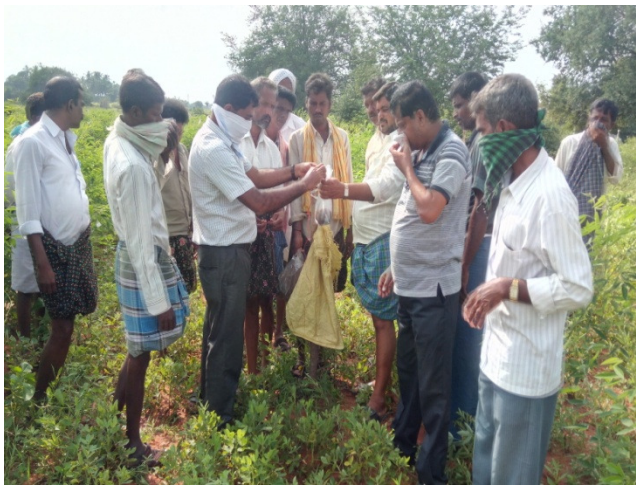


Improved production practices and PHT in Mango

ICM in Coconut

Arecanut + French bean Intercropping system

Nutritional Garden in Schools

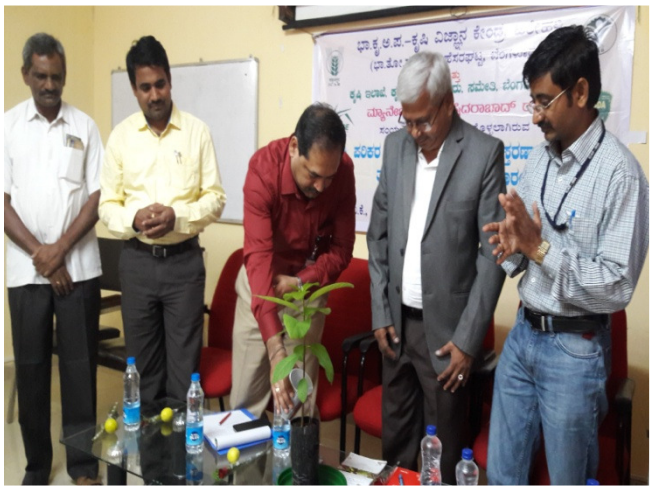


Management of Wild Boar in Farming System

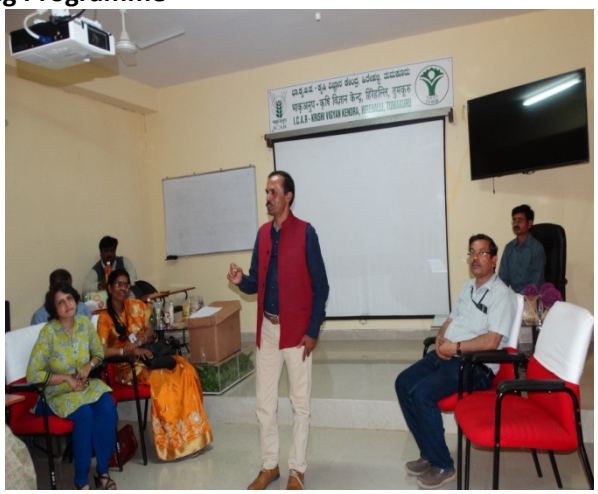
Dried Flower Technology and Value Addition

Training Programmes 2017-18 (Paid -On Campus)

Mushroom Training Programme



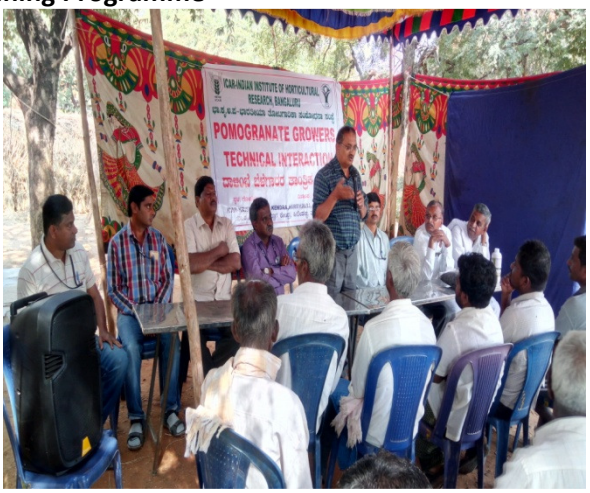
DAESI Batch II: Inauguration Programme



Home Scientists – Orientation Programme

OFF Campus Training Programme

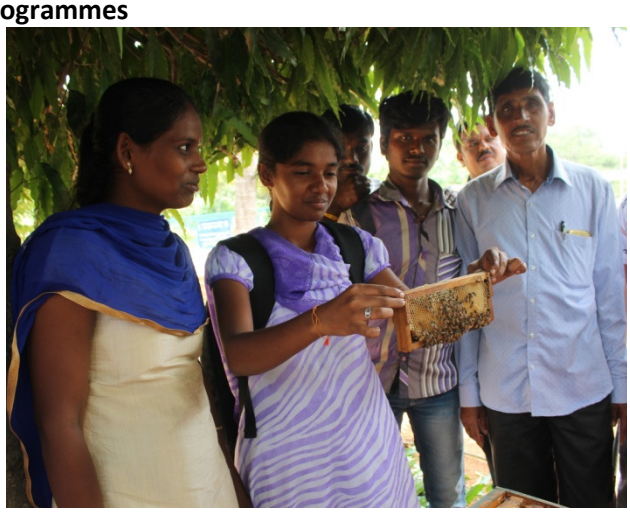
Jackfruit Value Addition



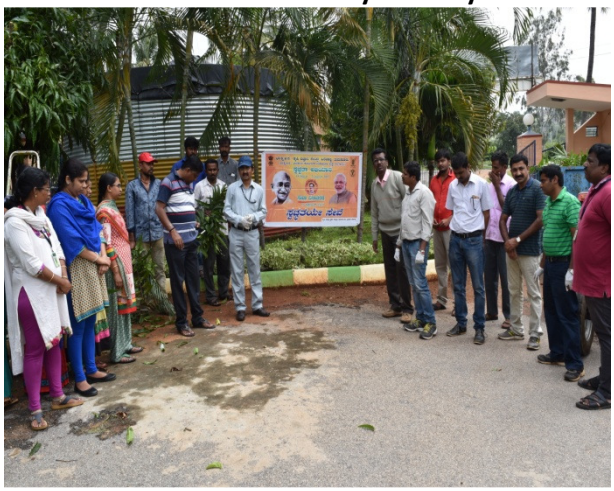
Use of AMC in Pomegranate

Special Programmes

International Honey Bee Day



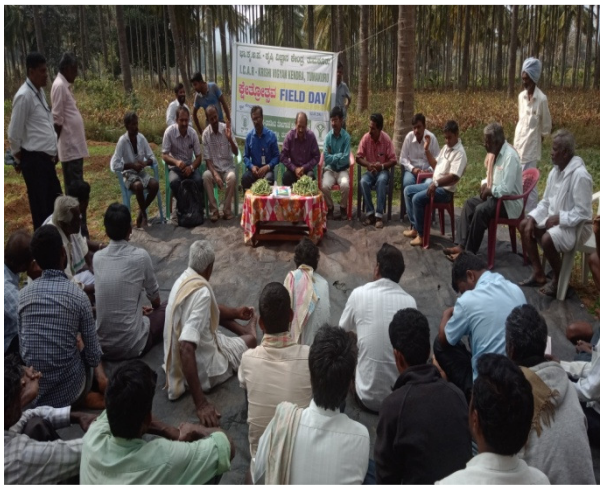
Participants on Honey Bee Day



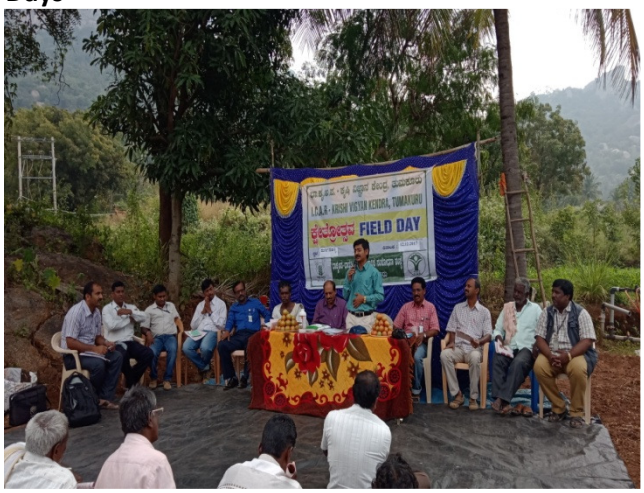
Swatch Bharat Abhiyan

Swatch Bharat Abhiyan

Field Days

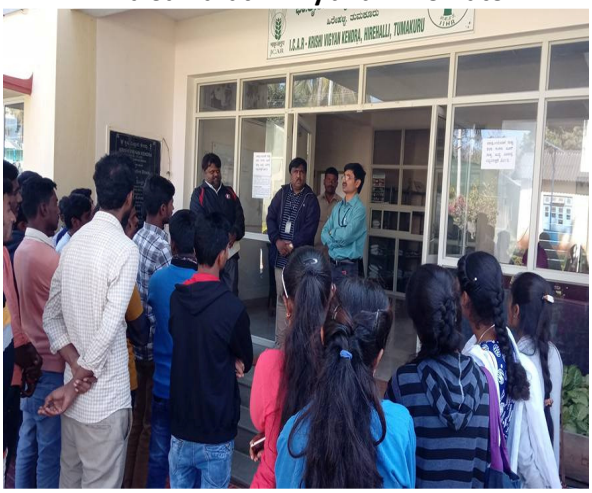


Use of Bio Rational in French Bean

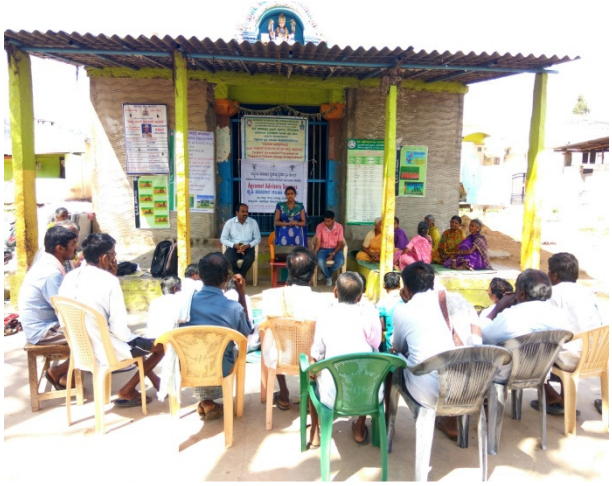


Arka Samarat F1 Hybrid in Tomato

Exposure Visit to Farmers Field



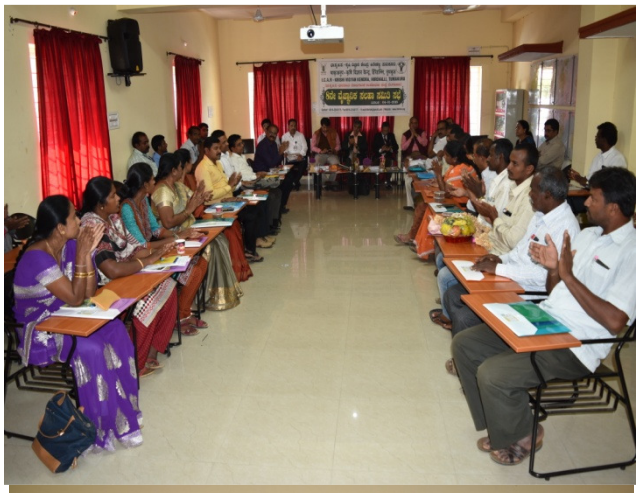
Exposure Visit to KVK Hirehalli

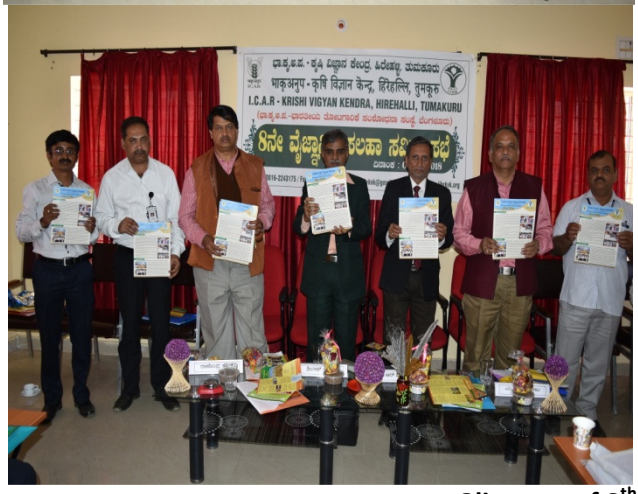


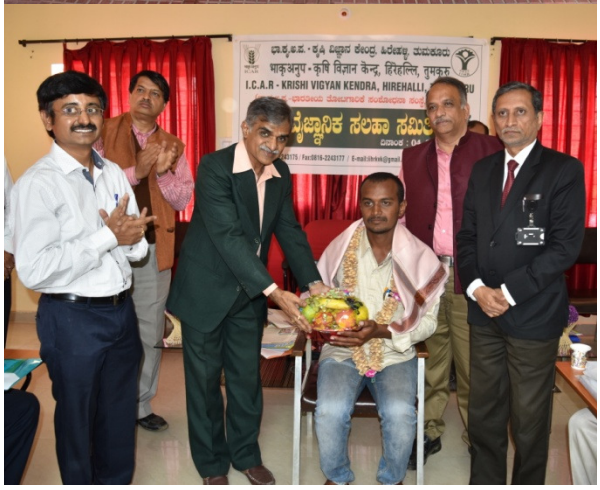
Agromet Advisory Services to Farmers

Integrated Value Chain in Veg. & Fruits

8th Scientific Advisory Meeting

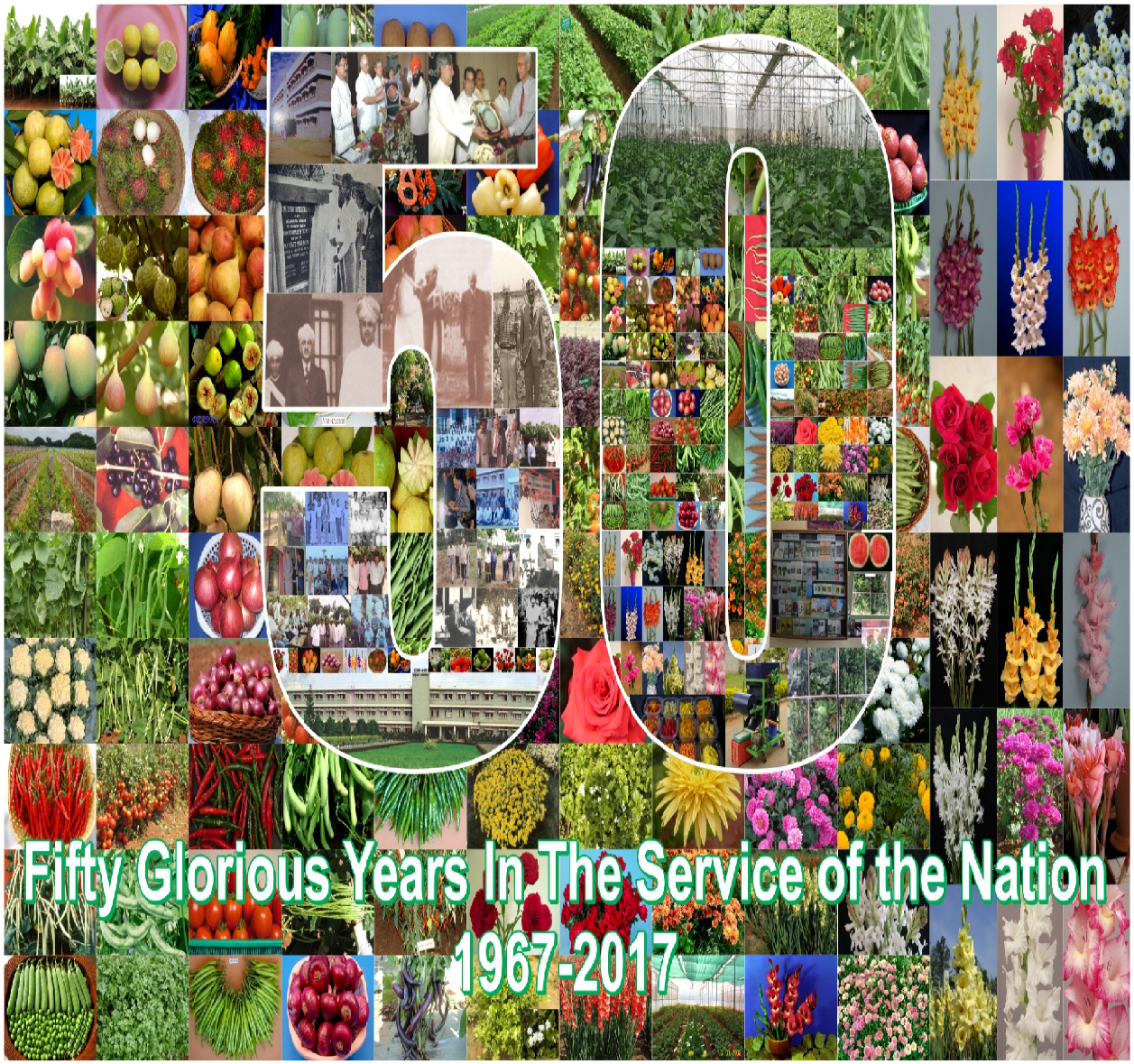






Glimpses of 8th SAC Meeting

ICAR – KVK (JSS Mysuru) & ICAR – KVK Waynad,Kerala – Cross Learning


Fifty Glorious Years In The Service of the Nation
1967-2017