ICAR-KRISHI VIGYAN KENDRA, HIREHALLI TUMAKURU DISTRICT

ANNUAL REPORT 2018-19

(FOR THE PERIOD FROM 01 APRIL 2018 TO 31 MARCH 2019)

ICAR-KRISHI VIGYAN KENDRA
Hirehalli, NH-48, Tumakuru District
Karnataka - 572 168

ICAR-INDIAN INSTITUTE OF HORTICULTURAL RESEARCH
Hesaraghatta Lake Post
Bengaluru – 560 089, 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 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 Hesaraghatta Lake Post, Bengaluru-560 089	080-23086100	080-28466291	**director.iihr@icar.gov.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	nagarajan.loganandhan@icar.gov.in

1.4. Year of sanction: 24th, March 2009

1.5. Staff Position as on 31 March 2019

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M /F	Discipline	Highest Qualification (for PC, SMS and Prog. Asstt.)	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
1	Head/Senior Scientist	Dr. N.Loganandhan	Pr. Scientist & Head	M	Agril.Extn	Ph.D. Agriculture	Level 14	44,850	02.08.2013	Permanent	OBC
2	Scientist/SMS	Shri K.N. Jagadish	SMS Agril.Extn.	M	Agril.Extn.	M.Sc. Agriculture	Level 11	74,000	17.11.2009	Permanent	OBC
3	Scientist/SMS	Shri P.R.Ramesh	SMS Soil Science	M	Soil Science	M.Sc. Agriculture	Level 11	74,000	17.11.2009	Permanent	OBC
4	Scientist/SMS	Shri Prashanth J.M	SMS Horticulture	M	Horticulture	M.Sc. Agri Horticulture	Level 11	74,000	24.11.2009	Permanent	Others
5	Scientist/SMS	Dr. B. HanumantheGowda	SMS Plant Protection	M	Plant Protection	M.Sc. Agriculture	Level 11	74,000	02.12.2009	Permanent	Others
6	Scientist/SMS	Smt. Radha R.Banakar	SMS Home Science	F	Home Science	M.Sc. Home Science	Level 11	74,000	05.12.2009	Permanent	Others
7	Scientist/SMS	Vacant	-	-	-	-	-	-	-	-	-
8	Programme Assistant (Computer)	Shri.N.Jayasankar	Senior Technical Officer (Comp. – Lab.)	M	Computer Application	MCA	Level 10	69,000	15.06.2017	Permanent	OBC
9	Programme Assistant(Lab Tech.)	Shri Shashidhara K N	Senior Technical Assistant(Lab.)	M	Crop Physiology	M.Sc Agriculture	Level 6	41,100	17.10.2012	Permanent	SC
10	Programme Assistant/ Farm Manager	Shri. Muralidhar	Sr. Technician	M	Zoology	B.Sc (CBZ)	Level 3	27,900	11.06.2018	Permanent	OBC
11	Assistant	Shri.G.S.Ramakrishna	LDC	M	-	Diploma in Horticulture	Level 3	25,200	01.06.2018	Permanent	OBC
12	Jr. Stenographer	Smt.Veda Kurnalli	Jr.Stenographer	F	Stenographer	DCP	Level 4	31,400	17.02.2010	Permanent	Others
13	Driver - 1	Sri M.H.Ningappa	Driver	M	Driver	S.S.L.C.	Level 3	29,600	30.12.2009	Permanent	ST
14	Driver - 2	Vacant	-	-	-	-	-	-	-	-	-
15	SS-1	Vacant	-	-	-	-	-	-	-	-	-
16	SS-2	Vacant	-	-	-	-	-	-	-	-	-

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			
1.	Administrative Building							
2.	Farmers Hostel							
3.	Staff Quarters							
	1							
	2							

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Bolero Diesel Jeep	2009	596783	36,797	Good
Motor Cycle	2010	52658	10,574	Good
Honda – Aviator	2010	46025	2,449	Good
Power Tiller	2010	1 42400	21 Hours	Good
Tractor	2011	560000	1380 Hours	Good

C) Equipment & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Fax Machine	2010	21,381	Write off
Xerox Machine	2010	67,262	Good Condition
Camera Nikon – Digital	2010	24,950	Write Off
Computer with Accessories	2010	49,900	Write Off
White Board with Stand	2010	1,500	Good Condition

LCD Projector with Accessories	2010	1,00,000	Good Condition
LCD Projector with Accessories	2018	45,000	Good Condition
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
Fax Machine	2010	21,381	Write off

1.8. Details of SAC meeting conducted during 2018-19 from action plan

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
04.01.2018	48	Demonstration on improved agricultural practices in a single crop from seed to seed (Eg. In Onion, demonstration on 'Good Agriculture Practice' starting from seed to post harvest technologies) need to be done. (Action: SMS-Horti).	A plot of 0.1 ha demonstration on onion was taken up at KVK farm.	
		Mushroom *Rasam* powder need to be introduced at mid-day meal scheme with selected schools in collaboration with Women and Child welfare department. (Action: SMS-Home Science).	Technology fee paid and license was applied to IIHR. A trainee from KVK was also encouraged to apply. This financial year, it will be introduced in mid-day meal scheme	
		Arka Microbial consortium application is to be implemented in Front Line Demonstration (FLD) on pre and post-harvest management of Mango. (Action: SMS- Home Science).	Method Demonstration was taken up in the concerned Mango FLD. It was included in the ongoing Skill training for Mango grower also.	
		The results of impact study of Arka Microbial Consortium and Banana Special need to be communicated to Kissan channel.(Action: SMS-Agril.Extn).	AMC – 3,156 hits from IIHR website. About 4,878 and 1,090 hits from KVK YouTube channel, as this has more reach.	
		Dry land farmers are to be mobilized for training on custard apple cultivation (including pollination process at IIHR). (Action: SMS- Agril.Extn&Horti).	2019 April second week planned with Dr.Sakthivel, Principal Scientist, IIHR	
		Feedback of farmers covering all the pros and cons of technologies disseminated by KVK need to be documented. (Action: SMS-Agril.Extn).	Many such technologies are documented. Eg: Arka Kyathi – Feedback from Badavanahalli	
		Entrepreneurship development needs to be focused for rural youth. (Action: All SMSs).	Mushroom, Tamarind, Areca plate making, Nursery Techniques, Mango grower, FOCT – EDP activities were taken for rural youth	
		KVK need to support FPOs for their development through technology support. (Action: SMS- Agril.Extn).	Suvarnamuki FPO, Madhugiri, GramaChetna, Marikamapa FPOs, Koratagere are being supported with technical guidance	
		Organic carbon enrichment at KVK farm need to be provided along with the specific activities undertaken for this purpose (Eg: Details of FYM and Green manure applied in specific quantities). (Action: SMS- Soil Science).	About 225 tonne FYM and 45 tonne of green manure and 20,000 ltrs of Jeevamrutha are applied per year	
		A training programme of Home Science SMSs need to be implemented exclusively on processing aspects like post harvesting management, marketing	Orientation training programme on PHT for Home Science SMSs was held at KVK Hirehalli on 9th Feb., 2018. Experts from IIHR and GKVK were brought.	

		linkage etc., at KVK, Hirehalli. (Action: SMS- Home Science and Agril.Extn).		
		Feedback from customers who are visiting KVK/IIHR stalls in Kisan Mela need to be documented on the preference for specific technology products. (Action: SMS- Agril.Extn).	Feedback from farmers collected from NHF-2019 (Preference for Vegetable seeds, Guava seedlings, Coconut tree climbers are some of them)	
		A *Mela* on famer-innovators need be arranged at this KVK inviting all innovative farmers of the state under different categories. (Action: SMS-Agril.Extn).	All the preparation was carried out by the Head and SMS (Extn). ATARI will be taking up in this year.	
		One or two crop demonstrations covering all cultivation aspects shall be implemented at KVK farm. (Action: SMS- Horti).	Apart from Onion, Ridge gourd and Coriander crops were taken in 2018-19 in the KVK farm, covering all the cultivation aspects.	
		Redgram variety: GRG-811 characteristics and OFT results can be presented at ZREP meeting at Bengaluru to be included in the recommended PoP. (Action: SMS-PP)	Since last date was over by that time, it will be presented in the ZREP meeting of this year (2018-19)	
		Awardee farmers shall be invited as resource person for the training programme arranged by KVK. (Action: SMS- Agril.Extn).	UHS Bhagalkot and KVK arranged farmers to farmer training programme on 22-24th Feb, 2018 Value Addition in Millets. SHG members of Hallisiri was invited for training on Millet Value Addition on 13th June, 2018.	
		Needs/expectations of farmers that are visiting KVK need to be documented properly. (Action: SMS- Agril.Extn).	April 2018 – Jan 2019 – Needs/expectations of farmers visiting KVK was documented.	
		An assessment on spreading of technologies need to be documented. (Action: SMS- Agril.Extn).	SMS (Agril.Extn) has taken up impact analysis work in this regard, concerned to specific products of KVK.	
		Training programme on "Tree based farming system" need to be arranged at KVK in collaboration with Departments of Forestry, Tumakuru. (Action: SMS-Agril.Extn&Horti).	Training will be organized as a part of Krishi Mela to be organized by KVK in collaboration with ATMA in Feb 2019 last week.	
		Training programme on "Tree mulberry based farming system" need to be arranged at KVK in collaboration within Departments of Sericulture, Tumakuru. (Action: SMS- Agril.Extn&Horti).	Off-campus training was organised at TG Palya, Hebbur Hobli, taking assistance from Dr Balakrishna, DD, Sericulture Department on 20th July 2018.	
		Impact of Arka Microbial Consortium in doubling the farmers' income need to be documented. (Action: SMS-Agril.Extn& Soil Science).	A report was prepared and submitted to the present DDM, NABARD. A Video documentation on same topic was prepared and released by Honorable Agriculture Minister, GoI.	
		An information messages covering economical benefits of specific crops (Eg.Amla, Banana) need to be properly circulated through whatsapp group and other social / mass media channel to attract farmers and rural youth to take up particular activities. (Action: SMS-Agril.Extn and concerned SMSs).	Economical benefits due to value addition in Amla was documented in a Video format and made available in You Tube. The link for same has been provided in KVK website.	
		Awareness program on Coconut Neera shall be arranged to provide basic	In the FOCT training Programme (21st Jan to 14th Feb 2019), expert of	

		information about Neera to the district farmers (Action: SMS- Agril. Extn and Horti)	Neera was brought from Goa and expertise was shared. An awareness programme will be arranged in the upcoming Krish Mela	

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	2,45,432

		• 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	

2.4. 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 2018	25	42.2	15.4	13
May 2018	136	40.9	17	18.5
June 2018	79	39.6	16.4	31.9
July 2018	40	35.8	17	27.6
August 2018	49	34.8	16.8	25.6
September 2018	135	37.4	14.4	22.8
October 2018	96	37.6	10.7	15
November 2018	25	39.2	8.7	10.7
December 2018	3	37	0	0
January 2019	2	35.5	0	0
February 2019	10	39.6	10.3	3.3
March 2019	0	41.4	11.3	4.2

* Source: KSNDMC, Bengaluru

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

Category	**Population**	**Production**	**Productivity**
Cattle			
Crossbred	63,704	54	5.5745
Indigenous	4,40,888	56	2.0671
Buffalo	2,17,528	68	2.5382
Sheep	**meat 000 tons**		
Crossbred	9		--
Indigenous	8,84,643	17.31	--
Goats	3,22,373	16.60	--
Pigs	-	-	-
Crossbred	905	0.23	--
Indigenous	12,411		--
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	1,306 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 maintained in the KVK has been **Updated** for 2018-19:**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	3	Maize	Downy mildew and *Turcicum* leaf blight, Stem borer incidence	IPDM
2.	Tumakuru Koratagere Pavagada	Kasaba Kasaba Nidagallu	Tanganahalli, Kadaranahalli K.T.Halli	3	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	3	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	3	Groundnut	Tikka Disease, leaf minor, low income	ICM
5.	Sira	Bellavi	Tippenahalli	3	Onion	Non availability of Rabi varieties, Poor storability	New varieties
6.	Tumakuru	Urdigere	Kadaranahalli	3	Mango	Mono-cropping, Low soil fertility, Low income	Intercropping
7.	Tumakuru	Kora	Mavukere	3	Mango	Lack of knowledge on improved production practices and PHT	ICM
8.	Sira	Bellavi	Kallambella, Tippenahalli	3	Musatard	Lack of suitable oilseed crop during Rabi season	New varieties
9.	Tumakuru Koratagere	Urdigere Kolala	Janapanahalli Tanganahalli	3	China Aster	Small size flowers, less shelf life & low yield	ICM
10.	Tumakuru Koratagere	Urdigere Kolala	Janapanahalli Vaddarahalli	3	Arecanut	Mono-cropping, Low soil fertility, *AnabeRoga*, Nut splitting, Low income	Nutrient Management
11.	Tumakuru Koratagere	Urdigere Kolala	Janapanahalli Tanganahalli	3	French bean	Mosiac disease, Rust, local varieties low yield	ICM
12.	Tumakuru Koratagere	Urdigere Kolala	Kadaranahalli, Tanganahalli	3	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	3	Nutrition garden	Lack of knowledge on nutrition garden and nutrition insecurity	Food and Nutrition Security
14.	Koratagere	Kolala	Tanganahalli	3	Ragi	Less acceptability of value added products from existing varieties due to brown colour	IGA
15.	Koratagere Pavagada	Kolala Nidugallu	Tanganahalli K.T.Halli	3	Okra	Higher incidence of Bhendi yellow vein Mosaic, Low yield	IDM
16.	Tumakuru	Urdigere	Kadaranahalli	3	Chilli	Low yield, Local varieties , Imbalanced nutrition, Disease incidence – Mosaic virus susceptible	ICM
17.	Madhugiri	Badavanahalli	Badavanahalli	3	Jasmine (Kakada)	Highly perishable, Low price during glut and Lack of knowledge on storage	PHT
18.	Pavagada Koratagere	Nidugallu Kolala	KT Halli Tanganahalli	3	Cucumber	Incidence of Downy mildew	IDM

2.9 Priority thrust areas

Sl. No	**Thrust area**
1.	High Yielding varieties / Hybrids
2.	Seed treatment with Bio fertilizers and fungicides
3.	Soil test based fertilizer application
4.	Integrated Nutrient Management
5.	Intercropping / Mixed / Multistoried cropping system
6.	Seed Production Techniques in Vegetables and field crops
7.	Integrated Pest & Disease Management
8.	Post harvest technology in Vegetables and Fruits
9.	Soil and Water 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 (2018-19)

3.A. Target and Achievements of mandatory activities

OFT				FLD			
1				2			
OFTs (No.)		Farmers (No.)		FLDs (No.)		Farmers (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
6	5	18	15	11	11	58	58

Training				Extension Programmes			
3				4			
Courses (No.)		Participants (No.)		Programmes(No.)		Participants (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
20	50	665	1988	349	262	1,12,440	40,975

Seed Production (Q)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
19.90	26.64	74,000	61,113

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
0	4	Neem and Pongamia Soap-4,000	4,969 Kg
		Sealer cum Healer-1,500	468 Kg
		AMC Powder –2,000	2,923 Kg
		AMC Liquid –2,000	3,625 Ltrs
		Lures-2,500	7,105 Nos
		Trap-2,500	3,687 Nos

3.B1. Abstract of interventions undertaken

Sl. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No.	Kg
01.	IDM	Cucumber	Severe Downy mildew incidence	Assessment on Management of Downy mildew in Cucumber	-	01	0	0	04	400 gms	0	0	No. Neem soap	Kg 5 Kgs
02.	IPDM	Maize	Severe Downy mildew and Turcicum leaf spot incidence	-	Integrated Pest and Disease Management in Maize	01	0	0	03	5 Kgs	0	0	Neem cake	250 Kgs
03.	IPDM	Bhendi	Severe YMV incidence		Integrated Pest and Disease Management in Bhendi	0	0	0	01	Seeds	5 Kgs	0	0	0
04.	Variety Evaluation	Mustard	Lack of suitable oilseed crop during Rabi season, high pungency	Assessment of Mustard varieties as oil seed crops	-	0	0	0	05	0.08	0	0	0	0
05.	Variety Evaluation	Onion	Non availability of Rabi variety, Poor storability and low yield	Assessment of onion varieties for rabi	-	0	0	0	06	0.09	0	0	0	0
06	PHT	Jasmine (Kakada)	Highly perishable, Low price during glut and Lack of knowledge on storage	Assessment of different storage methods to extend shelf life of Jasmine (Kakada)	-	0	0	0	03	0	0	0	0	0

07.	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	0	0	0	06	0	0	0	1	120
08.	Organic Farming	French Bean	Poor soil health and low soil fertility	-	Demonstration of Bio-rationals in French bean	3	0	0	05	0.5	0	0	1	10 lits
09.	ICM	Chilli	Low yield, Local varieties , Imbalanced nutrition, Disease incidence – Mosaic virus susceptible	-	ICM in Chilli	1	0	0	08	0.0015	0	0	0	15kg
10.	ICM	French Bean	Low yield, Use of local varieties, Non use of disease resistance varieties, Improper Nutrient Management	-	ICM in French Bean	1	1	0	05	0.20	0	0	0	20 kg
11.	ICM	China Aster	Small size flowers and diameter, less shelf life, less attractive colour and low yield	-	ICM in China Aster	02	0	0	06	0.0075	0	0	0	10 kg
12.	ICM	Arecanut	Mono-cropping, low nutrient status and low yield, button shedding, mites, stem bleeding, *Ganoderma* wilt, Pests	-	ICM in Arecanut	1	1	0	06	0.5	0	0	0	250 kg

13	Value addition	Ragi	Less acceptability of value added products from existing varieties due to brown colour	-	Demonstration of Finger millet Variety KMR 340 for Value Addition	01	0	0	05	5 kg	0	0	0	0
14.	Fodder	Fodder	Non availability of improved fodder varieties		CoFS 29	0	0	0	01	5 kg	0	0	0	0

3.B2. Details of technology used during reporting period

Sl.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
01.	Management of Downy mildew in Cucumber	IIVR, Varanasi	Cucumber	1	0	0	0
02.	Assessment of Mustard varieties as oil seed crops	IARI, New Delhi	Mustard	1	0	0	0
03.	Assessment of onion varieties for Rabi	DOG, Pune IIHR Bengaluru NHRDF Nasik	Onion	1	0	0	0
04.	Assessment of different storage methods to extend shelf life of Jasmine (Kakada)	UAS, Raichur and TNAu, Coimbatore	Kakada	1	0	0	0
05.	Assessment of different decomposer on Areca Husk	IIHR, Bengaluru UAS, Dharwad NCOF, Gaziabad	Decomposer	1	0	0	0
06.	Demonstration of Arka Actino-Plus (ACT) on Growth and Yield of Brinjal	IIHR Bengaluru	Brinjal	-	05	0	0
07.	Demonstration of Bio-rationals in French bean	UAS, Bengaluru	French Bean	-	05	03	0
08.	ICM in China Aster	IIHR, Bengaluru	China Aster	-	05	02	0
09.	ICM in Chilli	IIHR, Bengaluru	Chilli	-	05	01	1 Field day
10.	ICM in French bean	IIHR, Bengaluru	French bean	-	05	01	0
11.	ICM in Arecanut	CPCRI Kasargod	Arecanut	-	05	02	0
12.	Demonstration of Finger millet Variety KMR 340 for Value Addition	UAS, Bengaluru	Ragi KMR-340	-	05	01	0
13.	Integrated Pest and Disease Management in Maize	UAS, Bengaluru	MAH 14-5	-	05	01	0
14.	Demonstration of Fodder Sorghum CoFS 29	TNAVUS, Namakkal	CoFS 29	-	05	0	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
03	0	0	0	0	0	0	0	03	0	0	0	0	0	0	0
03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03	0	0	0	04	0	01	0	0	0	0	0	0	0	0	0
03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	04	0	01	0	71	08	11	05	0	0	0	0
0	0	0	0	04	0	01	0	45	06	13	04	0	0	0	0
0	0	0	0	04	0	01	0	24	02	05	01	48	04	11	0
0	0	0	0	03	0	02	0	19	02	02	0	0	0	0	0
0	0	0	0	03	0	02	0	38	04	06	02	0	0	0	0
0	0	0	0	05	0	0	0	26	0	5	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	05	0	0	0	0	0	0	0	0	0	0	0

PART IV - On Farm Trial(2018-19)

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

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management										
Varietal Evaluation		1			1					2
Integrated Pest Management										
Integrated Crop Management										
Integrated Disease Management						1				1
Small Scale Income Generation Enterprises										
Weed Management										
Resource Conservation Technology						1		1		2
Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique							1			1
Mushroom cultivation										
Total	**0**	**01**	**0**	**0**	**01**	**02**	**01**	**01**	**0**	**06**

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

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

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

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

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

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

4.B. Achievements on technologies Assessed and Refined

4.B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trial covering all the Technological Options)
Integrated Nutrient Management					
Varietal Evaluation	Onion	Assessment of onion varieties for Rabi	3	3	0.6
	Mustard	Assessment of Mustard Varieties as Oilseeds crop	3	3	0.6
Integrated Pest Management					
Integrated Crop Management					
Integrated Disease Management	Cucumber	Assessment on Management of Downy mildew in Cucumber	03	03	1.20
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology	Mango	Assessment of suitable intercrops for Mango orchards	03	03	2.40
	Areca Husk	Assessment of decomposing cultures in compost preparation	03	03	NA
Farm Machineries					
Integrated Farming System					

Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique	Kakada	Assessment of different storage methods to extend shelf life of Jasmine (Kakada)	03	03	03 nos
Mushroom cultivation					
Total			18	18	4.8

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

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trial covering all the Technological Options)
Integrated Nutrient Management					
Varietal Evaluation					
Integrated Pest Management					
Integrated Crop Management					
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
Total					

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

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Evaluation of breeds				
Nutrition management				
Disease management				
Value addition				
Production and management				
Feed and fodder				
Small scale income generating enterprises				
Total				

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

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Evaluation of breeds				
Nutrition management				
Disease management				
Value addition				
Production and management				
Feed and fodder				
Small scale income generating enterprises				
Total				

4.C1.Results of Technologies Assessed

Results of On Farm Trial 1

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Source of technology	Yield	Unit of yield	Observations other than yield	Net Return Rs. / unit	BC Ratio	Remarks if any
1	2	3	4	5	6	7	8	9	10	11	12	13
Cucumber	Irrigated	Incidence of Downy mildew– 448ha affected in the district	Assessment on Management of Downy mildew in Cucumber	03	To1:Spray the crop with Metalaxyl + Mancozeb (0.2%) and Cymoxanil+ Mancozeb (0.2%)	UAS (B) & UHS, Bagalkot	28.10	Qtls /ha	Avg. Downy mildew disease severity – 24.96	65,512	2.40	More residue content
					To2:Seed treatment with Captan (2g/kg seeds) Spray of Mancozeb (0.2%) & Cymoxanil+Mancozeb (0.2%)	IIHR,Bengaluru	29.07	Qtls /ha	Avg. Downy mildew disease severity- 23.52	70,926	2.56	More residue and high Cost of Cultivation
					To3: 1. Seed treatment with Metalaxyl (2g/kg seeds) 2. *Trichoderma harzianum* enriched Farm Yard Manure (@ 1 kg / 100 kg FYM) application 3.Prophylactic Spray with Mancozeb (0.25%) followed by Spraying of Metalaxyl+ Mancozeb (0.25%) and Dimethomorph (0.1%)+ Mancozeb (0.2%)	IIVR,Varanasi	34.46	Qtls/ha	Avg. Downy mildew disease severity - 6.32	96,486	3.33	Integration of all the methods helps to reduce the disease incidence

4.C2. Details of Successfully completed / concluded technology assessment (support with necessary summary of data and photographs)

1. Title of Technology Assessed: Assessment on Management of Downy mildew in Cucumber

2. Performance of the Technology on specific indicators: IIVR technology consisting of Seed Treatment, *Trichoderma* Enriched FYM application and prophylactic spray with selected chemicals at critical stages found very effective in control of downy mildew disease of cucumber.
3. Specific Feedback from farmers: Seed Treatment, *Trichoderma* Enriched FYM application and prophylactic spray with selected chemicals found very effective, reduced cost and less residual content.
4. Specific Feedback from Extension personnel and other stakeholders: This technology was very good with no residual content since cucumber is consumed directly
5. Feedback to Research System based on results and feedback received: IIVR Technology can be included in the package of practices.

4.D1. Results of Technologies Refined

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Refined	Source of technology	Yield	Unit of yield	Observations other than yield	Net Return Rs. / unit	BC Ratio	Remarks if any
1	2	3	4	5	6	7	8	9	10	11	12	13
					T.O.1 (Farmers practice)							
					T.O.2							
					T.O.3							

4.D.2. Details of Technologies refined:

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

4.C1.Results of Technologies Assessed

Results of On Farm Trial 2

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Source of technology	Yield	Unit of yield	Observations other than yield	Net Return Rs. / unit	BC Ratio	Remarks if any
1	2	3	4	5	6	7	8	9	10	11	12	13
Mustard	Irrigated	Lack of suitable oilseed crop during Rabi season, high pungency	Assessment of Mustard Varieties as Oilseeds crop	02	TO1: Groundnut	UAS (B)	15.3	Qtls /ha	Per cent oil content 48.80	33,780	2.3	Low income
					TO2: PUSA 25	IARI, New Delhi	0.981	Qtls /ha	Per cent oil content 28.41	60,855	3.70	Less pungency
					TO3: PUSA 28	IARI, New Delhi	1.134	Qtls /ha	Per cent oil content 38.17	73,860	4.28	High yield & Less pungency
					TO4: PUSA 30	IARI, New Delhi	1.323	Qtls /ha	Per cent oil content 38.84	89,925	4.99	Less pungency
					TO5: PUSA 31	IARI, New Delhi	1.407	Qtls /ha	Per cent oil content 37.7	97,065	5.31	No pungency Good taste

4.C2. Details of Successfully completed / concluded technology assessment (support with necessary summary of data and photographs)

1. Title of Technology Assessed:Assessment of Mustard Varieties as Oilseeds crop
2. Performance of the Technology on specific indicators: Pusa 31 and Pusa 28 was found more profitable for Rabi season as compared to Check
3. Specific Feedback from farmers: Pusa 31 and Pusa 28 were found to be more profitable for Rabi season as compared to Ground nut. PUSA-28 is a short duration variety (115 days) suitable for erratic rainfall
4. Specific Feedback from Extension personnel and other stakeholders: Nil
5. Feedback to Research System based on results and feedback received: Non availability of potential rabi oil varieties.

4.D1. Results of Technologies Refined

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Refined	Source of technology	Yield	Unit of yield	Observations other than yield	Net Return Rs. / unit	BC Ratio	Remarks if any
1	2	3	4	5	6	7	8	9	10	11	12	13
					T.O.1 (Farmers practice)							
					T.O.2							
					T.O.3							

4.D.2. Details of Technologies refined:

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

Results of On Farm Trial 3

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Source of technology	Yield	Unit of yield	Observations other than yield	Net Return Rs. / unit	BC Ratio	Remarks if any
1	2	3	4	5	6	7	8	9	10	11	12	13
Onion	Irrigated	Non availability of Rabi variety, Poor storability Low yield	Assessment of Onion varieties for Rabi	03	TO1:Arka Niketan	IIHR, Bengaluru	228.2	Qtls/ ha	Purple blotch disease incidence (%) 12.96	90,879	3.19	Less Purple blotch incidence
					TO2: Bhima Shakti	DOG, Pune	231.04	Qtls/ ha	Purple blotch disease incidence (%) 19.07	82,086	2.97	High Purple blotch incidence
					TO3: NHRDF 3 red	NHRDF Nasik	234.32	Qtls/ ha	Purple blotch disease incidence (%) 16.33	94,661	3.32	High yield

4.C2. Details of Successfully completed / concluded technology assessment (support with necessary summary of data and photographs)

1. Title of Technology Assessed: Assessment of Onion varieties for Rabi
2. Performance of the Technology on specific indicators: NHRDF Red 3 recorded highest yield and income per unit area compare to Bhima shakti during Rabi Season, with higher bulb weight
3. Specific Feedback from farmers: NHRDF 3 red and Arka Niketan were found to be more profitable for Rabi season as compared to Bhima Shakti. Purple blotch incidence is less in Arka Niketan.
4. Specific Feedback from Extension personnel and other stakeholders : Nil
5. Feedback to Research System based on results and feedback received: Non availability of potential rabi /summer varieties and more storability

4.D1. Results of Technologies Refined

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Refined	Source of technology	Yield	Unit of yield	Observations other than yield	Net Return Rs. / unit	BC Ratio	Remarks if any
1	2	3	4	5	6	7	8	9	10	11	12	13
					T.O.1 (Farmers practice)							
					T.O.2							
					T.O.3							

4.D.2. Details of Technologies refined:

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

4.C1.Results of Technologies Assessed

Results of On Farm Trial 4

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Source of technology	Yield	Unit of yield	Observations other than yield	Net Return Rs. / unit	BC Ratio	Remarks if any
1	2	3	4	5	6	7	8	9	10	11	12	13
Kakada	-	Highly perishable, Low price during glut and Lack of knowledge on storage	Assessment of different storage methods to extend shelf life of Jasmine (Kakada)	03	TO1:Farmers practice	-	Shelf life (hrs) -28	Phyysiological lost in weight (%) - 61	Freshness Index(%)- 0	Colour retention Index (%)-0		
					TO2: 200µ polythene cover	TNAU, Coimbatore	80	16.10	90.2	80.6		
					TO3: 300µ polythene cover	TNAU, Coimbatore	82	13.83	92.6	86.4		
					TO4: 4 % Boric acid	UAS, Raichur	79	10.5	78.8	76,044		

4.C2. Details of Successfully completed / concluded technology assessment (support with necessary summary of data and photographs)

1. Title of Technology Assessed: Assessment of different storage methods to extend shelf life of Jasmine (Kakada)
2. Performance of the Technology on specific indicators: Flowers packed in 300 µ polythene cover recorded highest Shelf life, less Physiological lost in weight, more freshness and colour retention index followed by 200 µ polythene Cover.
3. Specific Feedback from farmers: 300 µ polythene cover is best suitable for packing.
4. Specific Feedback from Extension personnel and other stakeholders : Nil
5. Feedback to Research System based on results and feedback received: Nil

4.D1. Results of Technologies Refined

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Refined	Source of technology	Yield	Unit of yield	Observations other than yield	Net Return Rs. / unit	BC Ratio	Remarks if any
1	2	3	4	5	6	7	8	9	10	11	12	13
					T.O.1 (Farmers practice)							
					T.O.2							
					T.O.3							

4.D.2. Details of Technologies refined:

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

4.C1.Results of Technologies Assessed

Results of On Farm Trial 5 - On Going

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Source of technology	Yield	Unit of yield	Observations other than yield	Net Return Rs. / unit	BC Ratio	Remarks if any
1	2	3	4	5	6	7	8	9	10	11	12	13
Areca Husk	-	Unscientific disposal of Areca Husk	Assessment of decomposing cultures in compost preparation	03	TO1: Areca Husk + Cow dung slurry	Farmers Practice						
					TO2:Areca Husk + Decomposer	IIHR, Hesaraghatta						
					TO3:Areca Husk + Decomposer	UAS, Dharwad						
					TO4: Areca Husk + Waste decomposer	NCOF, Ghaziabad						

4.C2. Details of Successfully completed / concluded technology assessment (support with necessary summary of data and photographs)

1. Title of Technology Assessed: Assessment of decomposing cultures in compost preparation
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 and feedback received:

4.D1. Results of Technologies Refined

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Refined	Source of technology	Yield	Unit of yield	Observations other than yield	Net Return Rs. / unit	BC Ratio	Remarks if any
1	2	3	4	5	6	7	8	9	10	11	12	13
					T.O.1 (Farmers practice)							
					T.O.2							
					T.O.3							
					T.O.4							

4.D.2. Details of Technologies refined:

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 (2018-19)

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
	Oilseeds													
01.		Rainfed	Kharif	Groundnut	K-6	-	ICM	Demonstration of K-6 Variety	50	50	40	85	115	10
	Pulses													
02.		Rainfed	Kharif	Redgram	BRG-5	-	ICM	Demonstration of BRG-5 Variety, use of foliar micronutrient, use of pheromone traps, use of neem soap, Use of sticky traps	30	30	30	45	60	15
	Cereals													
03.		Irrigated	Kharif	Maize	-	MAH-14-5	IPDM	Demonstration *Turcicum* leaf blight and *Fusarium* Stalk rot tolerant hybrid: MAH-14-5 Seed treatment with Metalaxil M + Mancozeb (4g/kg of seeds) for Downy mildew Spraying of Chlropyriphos (2ml/ltr) for stem borer.	2	2	2	3	5	0
	Millets													
	Vegetables													
04.		Irrigated	Summer	Bhendi	-	Arka Nikitha	IPDM	Arka Nikitha -F1 hybrid (125 -130 days duration, tolerant to Bhendi yellow vein Mosaic and Yields 21-24 t/ha ,)	2	2	1	4	4	1

								AMC : Drenching @ 10ml /lit Vegetable Special- 2gm /lit at starts at flower initiation stage and regular 15 days interval						
05.		Irrigated	Rabi	Brinjal	-	Pvt Hybrid	IDM	Seed treatment with ACT- 10g/ 100g of seeds ACT- 20g/ litre of water and applied near root zone on 10th DAT	1	1	1	4	5	0
06.		Irrigated	Rabi	French Bean	Arka Suvidha	-	Organic Farming	Jeevamrutha- 2000 liter/ha	1	1	1	4	5	0
07.		Irrigated	Rabi	French Bean	Arka Arjun	-	Organic Farming	Arka Arjun AMC: 20g /lit Vegetable Special- 2gm /lit & Neem soap : @ 7 g/lit	1	1	2	3	5	0
08.		Irrigated	Rabi	Chilli	Arka Khyathi		ICM	Arka Kyathi -F1 hybrid- AMC 20g/lit Vegetable Special- 3gm /lit, Yellow sticky traps Neem Soap @7 gm /lit	1	1	1	4	5	0
	Flowers													
09.		Irrigated	Rabi	China Aster	Arka Kamini	-	ICM	Integrated crop Management in China Aster: Arka Kamini	1	1	1	4	5	0
	Ornamental													
	Fruit													
	Spices and condiments													
	Commercial													

	Medicinal and aromatic													
	Fodder													
		Irrigated	Rabi	Fodder Sorghum	CoFS 29	-	Fodder	Fooder Seeds CoFS 29 and AMC	1	1	1			
	Plantation													
10.		Irrigated	*Kharif*	Arecanut	Local	-	ICM	Neem cake-2kg per tree, French bean seeds-10kg/ acre, COC- 10g per lit water, Hexoconazole -3 ml per 125ml water	1	1	0	0	5	0
	Fibre													
	Dairy													
	Poultry													
	Rabbitry													
	Piggery													
	Sheep and goat													
	Duckery													
	Common carps													
	Mussels													

	Ornamental fishes													
	Oyster mushroom													
	Button mushroom													
	Vermicompost													
	Sericulture													
	Apiculture													
	Implements													
	Others (specify)													
11.	Value addition	Rainfed	Late kharif	Ragi	KMR-340	-	Value addition	Demonstration of Finger millet Variety KMR 340 for Value Addition	02	2	2	3	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												
01.		Irrigated	Kharif-2018	Maize	-	MAH-14-5	IPDM	Demonstration *Turcicum* leaf blight and *Fusarium* Stalk rot tolerant hybrid: MAH-14-5 Seed treatment with Metalaxil M + Mancozeb (4g/kg of seeds) for Downy mildew Spraying of Chlropyriphos (2ml/ltr) for stem borer.	Kharif-2018	M	M	L	Nil
	Millets												
	Vegetables												
02.		Irrigated	Summer	Bhendi	-	Arka Nikitha	IPDM	Arka Nikitha -F1 hybrid (125 -130 days duration, tolerant to Bhendi yellow vein Mosaic and Yields 21-24 t/ha ,) AMC : Drenching @ 10ml /lit Vegetable Special- 2gm /lit at starts at flower initiation stage and regular 15 days interval	Summer-2019	M	M	M	Cabbage
03.		Irrigated	Rabi	Brinjal	-	Private Hybrid	IDM	Seed treatment with ACT-10g/ 100g of seeds ACT- 20g/ litre of water and applied near root zone on 10th DAT	Rabi 2018	M	M	L	Red gram
04.		Irrigated	Rabi	French Bean	Arka Suvidha	-	Organic Farming	Jeevamrutha- 2000 liter/ha	Rabi 2018	L	L	M	Groundnut

05.		Irrigated	Rabi	French Bean	Arka Arjun	-	Organic Farming	Arka Arjun AMC: 20g /lit Vegetable Special- 2gm /lit & Neem soap : @ 7 g/lit	Rabi /Summer 2018-19	M	L	M	Ragi
06.		Irrigated	Rabi	Chilli	Arka Khyathi		ICM	Arka Kyathi -F1 hybrid-AMC 20g/lit Vegetable Special-3gm /lit, Yellow sticky traps Neem Soap @7 gm /lit	Rabi 2018	M	L	M	Ragi
	Flowers												
	Ornamental												
	Fruit												
	Spices and condiments												
	Commercial												
	Medicinal and aromatic												
07.	Fodder	Irrigated	Rabi	Fodder Sorghum	COFS 29	-	Fodder	Fodder COFS 29 seeds and AMC	Rabi 2018	M	M	L	Ragi
	Plantation												
	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																			
Groundnut	Demonstration of K-6 Variety	K-6	-	Rainfed	125	50	8.48	4.66	6.88	4.52	34.00	13,494	34,400	20,906	2.54	11,296	22,600	11,304	2.01
Pulses																			
Red gram	Demonstration of BRG-5 Variety, use of foliar micronutrient, use of pheromone traps, use of neem soap, Use of sticky traps	BRG-5	-	Rainfed	75	30	9.10	5.33	7.44	6.99	24.50	33,875	59,520	24,645	1.75	34,985	47,920	12,935	1.36
Cereals																			
Maize	Demonstration *Turcicum* leaf blight and *Fusarium Stalk rot* tolerant hybrid: MAH-14-5 Seed treatment with Metalaxil M + Mancozeb (4g/kg of seeds) for Downy mildew Spraying of Chlropyriphos (2ml/ltr) for stem borer.	-	MAH-14-5	Irrigated	5	2	83.65	72.64	80.17	70.62	15.53	43507.5	128280	84772.5	2.94	42230	113000	70770	2.67
Millets																			
Vegetables																			

Bhendi	Arka Nikitha - F1 hybrid (125 -130 days duration, tolerant to Bhendi yellow vein Mosaic and Yields 21-24 t/ha ,) AMC : Drenching @ 10ml /lit Vegetable Special- 2gm /lit at starts at flower initiation stage and regular 15 days interval	-	Arka Nikitha	Irrigated	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Brinjal	Demonstration of Arka Actino-Plus (ACT) on Growth and Yield of Brinjal	-	Arka Harshita	Irrigated	5	1	26.1	21.7	23.9	18.70	27.81	74,425	4,30,200	3,55,775	5.78	79,570	3,36,600	2,57,030	4.23
French Bean	Demonstration of Bio-rationals in French bean	Arka Suvidha	-	Irrigated	5	1	11.35	5.51	10.51	8.53	23.2	33,131	1,56,049	1,22,918	4.7	36,253	1,17,287	81,034	3.2
Chilli	Integrated crop Management in Chilli	-	Arka Kyathi	Irrigated	5	1	23.42	21.65	22.52	17.36	29.72	57,940	2,70,240	2,12,230	4.66	54,650	2,08,320	1,53,680	3.81
French Bean	Integrated Crop Management in French Bean - Arka Arjun	Arka Arjun	-	Irrigated	5	1	8.12	7.62	7.8	6.27	24.40	36,776	1,56,080	1,19,304	4.24	37,882	1,25,400	87,518	3.31
Flowers																			
China Aster	Integrated Crop Management in China Aster	Arka Kamini	-	Irrigated	5	1	7.58	7.24	7.43	6.08	22.20	34,320	1,33,740	99,420	3.90	36,850	1,09,476	72,626	2.97
Ornamental																			
Fruit																			
Spices and condiments																			
Commercial																			

Fibre crops like cotton																			
Medicinal and aromatic																			
Fodder	Demonstration of Fodder sorghum CoFS 29	CoFS 29	-	Irrigated	05	02	0	0	105.4	82.45	27.83	20,076	42,160	9,461	2.1	18,322	32,980	5,528	1.8
Plantation																			
Fibre																			
Others (pl.specify)																			
Ragi	Demonstration of Finger millet Variety KMR 340 for Value Addition	KMR-340	-	Rainfed	05	02	24.34	22.96	23.6	19.2	22.92	36,532	86,200	49,668	2.35	33,850	54,200	20,400	1.6

* 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**
-		
Turcicum leaf blight	2.03	21.13
Wilt (%)	6.0	17.0
Plant height (cm)	64.1	45.70
No. of fruits /plant	210	193
No. of pods /plant	35.60	28.80
No. of Flowers /plant	43.10	32.90

Demonstration of Finger millet Variety KMR 340 for Value Addition (A) Plant height (cm), (B) Productive tillers (no.), (C) Straw yield (t/ha), (D) Malt price (Rs/kg), (E) Mixture (Rs/kg), (F) Papad (Rs/kg), (G) Laddu (Rs/kg), (H) Ragi Biscuit (Rs/kg)	(A) 118.6, (B) 6.2, (C) 5.16, (D) 200, (E) 250, (F) 250, (G) 300, (H) 350	(A) 110.7, (B) 4.86, (C) 4.82 (D) 160, (E) 220, (F) 200, (G) 250 (H) 300

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

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Yield (kg/animal)				% Increase	*Economics of demonstration Rs./unit)				*Economics of check (Rs./unit)			
					Demo			Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Dairy																	
Poultry																	
Rabbitry																	
Pigerry																	
Sheep and goat																	
Duckery																	
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

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 - NIL

Type of Breed	Name of the technology demonstrated	Breed	No. of Demo	Units/ Area (m^2)	Yield (q/ha)				% Increase	*Economics of demonstration Rs./unit) or (Rs./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	Oyster mushroom production, Value addition and Market linkage	-	6 Nos	-	295gm/kg bag	250	293	-	-	5,765	15,000	9,235	2.6	0	0	0	0
Button mushroom																	
Vermicompost																	

Sericulture																	
Apiculture																	
Others (pl.specify)	EDP on Tamarind Value addition, Branding and market linkage	-	2 SHGS	-	Without cleaning(check) Cleaned tamarind Tamarind thokku Lollipop			-	-	6,000 19,630 74,612	12,000 45,000 2,40,000	6,000 25,370 1,65,388	2.00 2.29 3.21	3,500	6,000	2,500	1.71

* 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**

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

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 Man days		% 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 labour saved(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	1	50	
2	Farmers Training	11	220	
3	Media coverage	5	-	
4	Training for extension functionaries	-	-	
5	Others (Please specify)	-	-	

PART VI – DEMONSTRATIONS ON CROP HYBRIDS(2018-19)

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																	
Brinjal	Demonstration of Arka Actino-Plus (ACT) on Growth and Yield of Brinjal	Arka Harshita	05	01	26.1	21.7	23.9	18.70	27.81	74,425	4,30,200	3,55,775	5.78	79,570	3,36,600	2,57,030	4.23
Okra																	
Onion																	

Potato																	
Field bean																	
Others (pl.specify) Chilli	Integrated Crop Management in Chilli	Arka Kyathi	05	01	23.42	21.65	22.52	17.36	29.72	57,940	2,70,240	2,12,230	4.66	54,650	2,08,320	1,53,680	3.81
Total																	
Commercial crops																	
Sugarcane																	
Coconut																	
Others (pl.specify)																	
Total																	
Fodder crops																	
Maize (Fodder)																	
Sorghum (Fodder)																	
Others (pl.specify)																	
Total																	

H-High L-Low, A-Average

*Please ensure that the name of the hybrid is correct pertaining to the crop specified

PART VII. TRAINING (2018-19)

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	1	15	0	15	0	0	0	15	0	15
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) Tree Mulberry	1	22	2	24	5	0	5	27	2	29
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										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques	1	14	0	14	14	0	14	14	0	14
Others (pl.specify) Propagation methods in fruit crops	1	25	0	25	5	0	5	30	0	30
c) Ornamental Plants										
Nursery Management										
Management of potted plants										

Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
d) Plantation crops										
Production and Management technology										
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	1	74	6	80	0	0	0	0	74	6
Integrated water management										
Integrated nutrient management	3	50	12	62	3	9	12	53	21	74
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology	1	73	0	73	2	0	2	75	0	75
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	1	0	20	20	0	0	0	0	20	20
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care	1	2	13	15	1	6	7	3	19	22
Others (pl.specify) Mushroom Training	4	49	29	78	15	10	25	64	39	103
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	**4**	69	9	78	5	0	5	74	9	83
Others (pl.specify)										
CapacityBuilding and Group Dynamics										
Leadership development										
Group dynamics	**1**	17	3	20	0	0	0	17	3	20
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	**20**	**410**	**94**	**504**	**50**	**25**	**75**	**372**	**187**	**491**

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	1	42	3	45	3	6	9	45	9	54
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify) Tree Mulberry	1	40	0	40	0	0	0	40	0	40
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	1	20	0	20	2	0	2	22	0	22
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl.specify)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques	1	28	8	36	5	0	5	33	8	41
Others (pl.specify) Dryland Horticulture	1	30	0	30	5	0	5	35	0	35
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
d) Plantation crops										
Production and Management technology	3	93	7	100	7	1	8	100	8	108
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	1	35	6	41	0	0	0	35	6	41
Integrated water management										
Integrated nutrient management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
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	7	0	407	407	0	257	257	0	664	664
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	1	0	14	14	2	2	4	2	16	18
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	2	41	4	45	10	0	10	51	4	55
Integrated Disease Management	2	46	7	53	17	4	21	63	11	74
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (pl.specify) Redgram	1	28	6	34	2	2	4	30	8	38
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	**3**	75	10	85	0	0	0	75	10	85
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	**25**	**478**	**472**	**950**	**53**	**272**	**325**	**531**	**744**	**1275**

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

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)										
TOTAL										

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

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)										
TOTAL										

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

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

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

Sl.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.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**	**2**	54	8	62	0	0	0	54	8	62
4	**Production of Inputs at site**										
5	**Methods of protective cultivation**										
6	**Others (pl.specify)**										
7	**Post harvest technology and value addition**										
7.a.	Processing and value addition	**1**	42	0	42	2	0	2	44	0	44
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	**3**	**96**	**8**	**104**	**2**	**0**	**2**	**98**	**8**	**106**

Details of sponsoring agencies involved

1.
2.
3.

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

Sl.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.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										

7.F. Details of Skill Training Programmes carried out by KVKs under ASCI

S. No.	Name of Job Role	Date of Start	Date of Assessment	Total Expenditure (Rs.)	No. of Participants									No of Participants passed assessment
					General			SC/ST			Grand Total			
					Male	Female	Total	Male	Female	Total	Male	Female	Total	
1	Friends of Coconut (FOCT)	21.01.2019 to 14.02.2019	26.03.2019	1,63,047	14	0	14	06	0	06	20	0	20	20
2.	Mango grower	21.01.2019 to 14.02.2019	27.03.2019	1,64,821	13	02	15	5	0	0	18	2	20	20

PART VIII – EXTENSION ACTIVITIES(2018-19)

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	4	697	81	778	157	50	207	55	30	85
KisanMela	1	18,800	8,000	26,800	2,000	200	2,200	1,200	110	1,310
KisanGhosthi	1	380	120	500	0	0	0	10	4	14
Exhibition	1	38	2	40	0	0	0	0	0	0
Film Show	13	284	23	307	100	16	116	27	0	27
Method Demonstrations	2	69	2	71	12	1	13	0	0	0
Farmers Seminar	0	0	0	0	0	0	0	0	0	0
Workshop	13	23	23	307	100	16	116	27	0	27
Group meetings	2	20	0	20	0	0	0	25	6	31
Lectures delivered as resource persons	37	1,141	899	2,040	41	142	183	17	5	22
Newspaper coverage	18	0	0	0	0	0	0	0	0	0
Radio talks	0	0	0	0	0	0	0	0	0	0
TV talks	5	0	0	0	0	0	0	0	0	0
Popular articles	1	0	0	0	0	0	0	0	0	0
Extension Literature	0	0	0	0	0	0	0	0	0	0
Advisory Services	47	1,946	298	2,244	143	95	238	167	61	228
Scientific visit to farmers field	47	231	47	278	43	15	58	10	0	10
Farmers visit to KVK	1	40	0	40	0	0	0	4	0	4
Diagnostic visits	62	207	51	258	17	3	20	21	9	30
Exposure visits	1	102	54	156	8	3	11	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	1	0	10	10	0	0	0	0	0	0
MahilaMandals Conveners meetings										
Celebration of important days (specify)										
a)Farmers Day	1	135	62	197	48	28	76	12	06	18
b)Mahila Kisan Diwas	1	0	50	50	0	0	0	0	02	02
c)World Soil Day	1	52	12	64	13	04	17	08	0	08
d)World Environment Day	1	35	18	53	11	07	18	06	05	11
e)International Yoga Day	1	22	06	28	07	0	07	08	04	12
Any Other (Specify)	0	0	0	0	0	0	0	0	0	0
Total	**262**	**24,222**	**9,758**	**34,241**	**2,700**	**580**	**3,280**	**1,597**	**242**	**1,839**

PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIAL (2018-19)

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	Indaf 7	NA	1.3900	5,560.00	53
Oilseeds						
Pulses						
Commercial crops						
	Arecanut Seed – Nos.	Hirehalli Tall	NA	45922	2,29,610.00	48
	Arecanut Seed (Degraded)- Nos.	Hirehalli Tall	NA	2112	42,240.00	03
Vegetables						
	Amaranthus	Arka Suguna	NA	0.0700	3,500.00	24
	Bottle Guard	Arka Bahar	NA	0.0165	1,650.00	07
	Brinjal	Arka Sirish	NA	0.0143	2,574.00	14
	Chilli	Arka Suphal	NA	0.0175	3,150.00	35
	French Bean	Arka Suvidha	NA	2.3135	57,837.50	29
	Okra	Arka Anamika	NA	0.0645	32,275.00	03
	Onion	Arka Kalyan	NA	7.3670	8,84,041.20	218
	Palak	Arka Anamika	NA	2.0942	83,770.00	2,014
	Pumpkin	Arka Surayamukhi	NA	0.1340	13,400.00	125
	Radish	Arka Nishanth	NA	0.0260	1,300.00	12
	Ridge Guard	Arka Sujatha	NA	0.0540	5,400.00	13
	Cow Pea	Arka Garima	NA	0.1100	2,750.00	06
	Tomato	Arka Meghali	NA	0.0085	1,700.00	02
Flower crops						
Spices						
Fodder crop seeds						
	Fodder Cowpea	Co 4	NA	0.1995	4,987.50	22
	Fodder Sorghum	CoFS 29	NA	0.4200	21,000.00	11
Fiber crops						
Forest Species						
Others (specify)						
	Little Millet	Local	NA	0.0300	240.00	06
	Browntop Millet	Local	NA	0.6900	5,520.00	03
	Mustard	Pusa 25	NA	4.4580	35,664.00	224
	Redgram	BRG 5	NA	4.4950	67,425.00	92
	Sunhemp	Local	NA	0.0240	192.00	02
	Vegetable Seed Kit (Nos.)			2406	3,60,900.00	1852
Total					**18,66,686.20**	**4818**

9.B. Production of planting material by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Commercial						
			NA			
			NA			
			NA			
			NA			
			NA			
			NA			
Vegetable seedlings						
	Drumstick			2,265	33,975.00	22
Fruits						
	Mango		NA	1,544	1,08,080.00	39
	Pomello		NA	4	80.00	2
	Pomegranate		NA	66	2,640.00	8
	Rose Apple		NA	121	2,420.00	60
	Papaya		NA	3,852	46,224.00	12
	Tamarind		NA	666	46,620.00	52
	Amla		NA	53	2,120.00	12
	Guava		NA	3,310	2,31,700.00	62
	Jamun		NA	13	260.00	8
	Lime		NA	467	18,680.00	67
Ornamental plants						
			NA			
Medicinal and Aromatic			NA			
	Betelvine Cuttings		NA	47	470.00	12
Plantation						
	Coconut	Tiptur Tall	NA	2,805	2,24,400.00	42
	Arecanut		NA	24,310	7,29,300.00	38
	Arecanut Sprouts		NA	17,860	89,300.00	28
Spices						
Tuber						
Fodder crop saplings						
	Napier Grass Cuttings		NA	2,760	2,760.00	13
			NA			
Forest Species						
Others(specify)						
Total				**60,143**	**15,39,029.00**	**477**

9.C. Production of Bio-Products

Bio Products	Name of the bio-product	Quantity (q)	Value (Rs.)	Number of farmers to whom provided
Bio Fertilizers				
	AMC Powder	29.23	4,09,220	584
	AMC Liquid (Ltrs.)	3,625.00	9,06,250	604
Bio-pesticide				
	Neem Soap	37.46	9,73,960	1,110
	Pongamia Soap	12.23	2,56,830	624
	Sealer cum Healer	4.68	70,200	27
Bio-fungicide				
Bio Agents				
	Fruit Fly Lure (Nos.)	7,105.00	1,42,100	296
	Trap (Nos.)	3,687.00	73,740	360
Others (specify)				
	Banana Special	110.66	16,59,900	922
	Vegetable Special	114.03	17,10,450	1,267
	Mango Special	71.76	10,76,400	897
	Citrus Special	19.74	2,96,100	329
	Amla Candy (Kg)	130	39,000	200
	Amla Squash (Ltr)	359	46,670	60
	Ragi Malt (Kg)	442	88,400	1,200
	Mushroom Spawn (kg)	688	51,600	50
Total			**78,00,820**	**8,530**

9.D. Production of livestock

Particulars of Livestock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)	Halikar Bull	1	30,000	1
	Bannur Sheep	3	22,000	3
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		**4**	**52,000**	**4**

PART X – PUBLICATIONS, SUCCESS STORY, INNOVATIVE METHODOLOGY, ITK, TECHNOLOGY WEEK

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

I. Abstracts:

Hanumanthe gowda, B.. Ramesh, P.R., Jagadish, K.N., Prashanth J. M. and N. Loganandhan, 2018, Studies on IPM technology demonstration for sustainable and safe mango production in Tumakuru district of Karnataka Presented at International Conference on "Role of Soil and Plant Health in Achieving Sustainable Development Goals" held at Bangkok, Thailand on 21-25, Nov, 2018

II. Technical bulletin:

Hanumanthe gowda. B, Nandisha, P, Chandrasekhar, C. 2019, Handbook on framers friendly schemes of GOI- An Technical Bulletin (TB.No.01/2019) in Kannada Published by Director , IIHR.Pp:68

III. Extension folders:

Hanumanthe gowda. B, Ramesh.P.R., and Loganandhan. N, 2019 Improved cultivation practices in Groundnut . Folder No.23 of Krishi Viganana Kendra, Hirehalli *Published by Director, ICAR-IIHR*. Pp.06

Hanumanthe gowda. B, Jahir Pasha and Jagadish.K.. N, 2019 IPM in Groundnut . Folder No.24 of Krishi Viganana Kendra, Hirehalli *Published by Director, ICAR-IIHR*. 06

Hanumanthe gowda. B, Jahir Pasha and Shashidhar..K.. N, 2019 Groundnut diseases and their management. Folder No.25 of Krishi Viganana Kendra, Hirehalli *Published by Director, ICAR-IIHR*. 06

Hanumanthe gowda. B, Prashanth.J.M and Radha R Banakar 2019, Improved cultivation practices in Castor. Folder No.26 of Krishi Viganana Kendra, Hirehalli *Published by Director, ICAR-IIHR*. 06

IV. Popular articles:

Hanumanthe gowda. B, Ramesh,P.R and Loganandhan. N, 2018 In Kannada: Use of Organic formulations in agriculture. Published in *Krushi Vignana*, 42(1):5-9.

Hanumanthe gowda, B., Ramesh, P.R., and Loganandhan, N, 2019, Integrated fruit fly management in Mango Published in Prajapragathi Daily news paper on 28-03-2019.

Radha R.Banakar, Dr. Loganandan.N and Dr.Sangama, 2018. Dried flower techniques and value addition.In:Siri samruddi Kannada Quaterly magzine.BAIF, Tiptur, Volume 1, Issue 3, PP- 21-24

V. Book Chapters:

Prasanth J.M, Radha R Banakar and N Loganandhan, 2018, Dried flower techniques and Value addition, Published in Fruit and Flowers show, Department of Horticulture Tumakuru Issue 21-24.

N Loganandhan, Radha R Banakar and Prasanth J.M, 2018,Nutrition Garden Published in Fruit and Flowers show Department of Horticulture Tumakuru

Radha R Banakar, Prasanth J.M and N Loganandhan, 2018, Jack fruit Value addition, published in Fruit and Flowers show Department of Horticulture Tumakuru

(A) KVK Newsletter:**NIL**
Date of start:_____ Periodicity:_____Copies printed in each issue:_____

(B) Literature developed/published

Item	Number
Research papers- International	0
Research papers- National	0
Technical reports	6
Technical bulletins	1
Popular articles - English	0
Popular articles – Local language	3
Extension literature	4
Others (Pl. specify) Book Chapters	3
TOTAL	**17**

10.B. Details of Electronic Media Produced

S. No.	Type of media	Title	Details
	CD / DVD	**NIL**	**NIL**
	Mobile Apps	**NIL**	**NIL**
	Social media groups with KVK as Admin	**eHorticulture**	**180 members**
	Facebook account name	**iihrkvk**	**https://www.facebook.com/iihr.kvk**
	Instagram account name	**kvkiihr**	

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

1. High density planting in banana boosting the banana grower's profit.

Most of the farmers opined that banana is a highly risky crop for the small land holders. A few institutes have released different technologies for increasing the productivity of banana. High density planting with paired row Zig Zag is one such technology developed by ICAR -National Research Centre - Banana, Thiruchirapalli. This technology helps the farmers to earn higher profits from limited land resources.

In this connection, KVK Hirehalli has implemented a Front Line Demonstration (FLD) on High Density Planting of Banana with paired row method in the field of field Shri. Mahesh, progressive farmer from Makanahalli village of Tumakuru taluk. He was a banana farmer specialized in the cultivation of G-9 variety and Yelakki. His average annual income from banana farming was INR 1.47 lakhs /ha. KVK Hirehalli selected him as a beneficiary farmer for the FLD - High density planting in banana, a NRCB technology. The KVK trained him on the technology and he planted the banana at a spacing of 1.5 x 1.5 x 2.0 mt in a paired row with zig zag method of planting, unlike conventional planting of 2 x 2 mt.

In this HDP method he could plant 5200 plants per hectare in place of 2500, as in conventional method. Though in conventional method, bunch weight of planting was 20.5 kg, his productivity was 578 qt/ha only. Whereas in this HDP method, though the bunch weight was 17.2 kg (3 kg less than conventional), productivity was of 760 qt /ha (more than 180 kg than conventional), due to more number (almost double) of plants per hectare. This increased his income level to Rs. 3.82 lakhs / ha per annum with a B: C ratio 3.54.

Now Sri. Mahesh is following High Density Planting in banana with different varieties Viz., *Yelakki* bale, *Puttabale* etc., and earning more profit. High density planting helps the plants to utilize water and fertilizer more efficiently through increased root density and plants resist winds more effectively. Cost for staking was also considerably reduced, he said. Now, seeing the success of Sri. Mahesh, other farmers of the demonstrated area also want to cultivate banana in this method.

HDP in Grand Naine variety

HDP in Yelakki bale variety

2. Poly mulching helps small tomato grower harvest more

Summer season is a time of worry for most farmers across the country since water becomes an important, and much sought after commodity. Naturally we cannot expect them to dig a small pond to collect rainwater since it eats away into their cropping area. For such growers KVK, Tumakuru-II has introduced the poly mulching technology. This method is already in existence and proven in some parts of the country. It has helped small farmers cultivate vegetables well. Mulching is an age old practice of mixing dried leaves, twigs, stalk etc into the soil to improve its fertility condition and conserve moisture. It is common in organic cultivation methods. In modern conventional method 80 micron plastic mulch sheets are being used. The sheets are laid on the field by a machine on top of the furrows and seedlings are planted in small holes made on the sheets. Plastic sheets have been found to conserve soil moisture because the water that gets evaporated from the soil condenses on the lower part of the sheet as small droplets and falls back into the soil.

A small farmer, Saroja, from Deverayanapatna village in Tumakuru taluk, with one acre was encouraged to grow the tomato variety Arka Samrat released by Indian Institute of Horticultural Research (IIHR) under the guidance of Krishi Vigyan Kendra (KVK) Hirehalli, Tumakuru, Karnataka. A Front line demonstration was initiated in her plot to popularise this practice in the region.

The practice of mulching aids in moisture conservation, weed suppression and maintenance of soil structure. Mulches also improve the use efficiency of applied fertilizer and helped to minimize the incidences of pests and further virus diseases. She has harvested tomato 65 days after planting and got 32.50 ton marketable tomato per acre and sold at the market @ Rs.10 per kg which gave her total income of Rs. 3.25 lakhs per acre. The total cost of cultivation for tomato was Rs.60,000 per acre. Thus, she received a net profit of Rs. 2.65 lakh per acre. In this way, she got a total profit of Rs. 3.25 lakhs from his one acre land through tomato with poly mulch protection. Farmers of surrounding villages were very enthusiastic seeing the results of plastic mulching with drip irrigation. Farmers from the village are of the opinion that by following these two technologies, they can reduce the wastage of water & fertilizers and improve the yield almost double. The new technologies have reduced the water requirement by 50-70% and also reduced the cost of fertilizers. The incidence of pest and diseases has come down. The number of seedlings required for planting per acre also has come down by 25%. The fruits obtained were of better quality and colour, which fetched more prices in the market.

3. Onion Variety Arka Kalyan boosted farmers income

Onion (*Allium cepa* L.) is grown for both domestic consumption and export. Tumakuru district productivity (140 q/ha) is much lower than state productivity (180 q/ha), attributed partly to Bellary Red variety of onion which is predominantly grown. Delayed onset of monsoon and susceptibility of this variety to purple blotch disease during *Kharif* season also reduce yield and income. The shelf life of Bellary Red is also not up to the desired level (45 days only). Further, 60 per cent soils were low in organic matter and 40 per cent soils were saline.

Technology details:

Arka Kalyan variety of IIHR released in 2004 is suitable for *Kharif* and tolerant to purple blotch disease. Vegetable special as a micro-nutrient supplement ensures vigour during growth stage further insulating against pests and diseases.

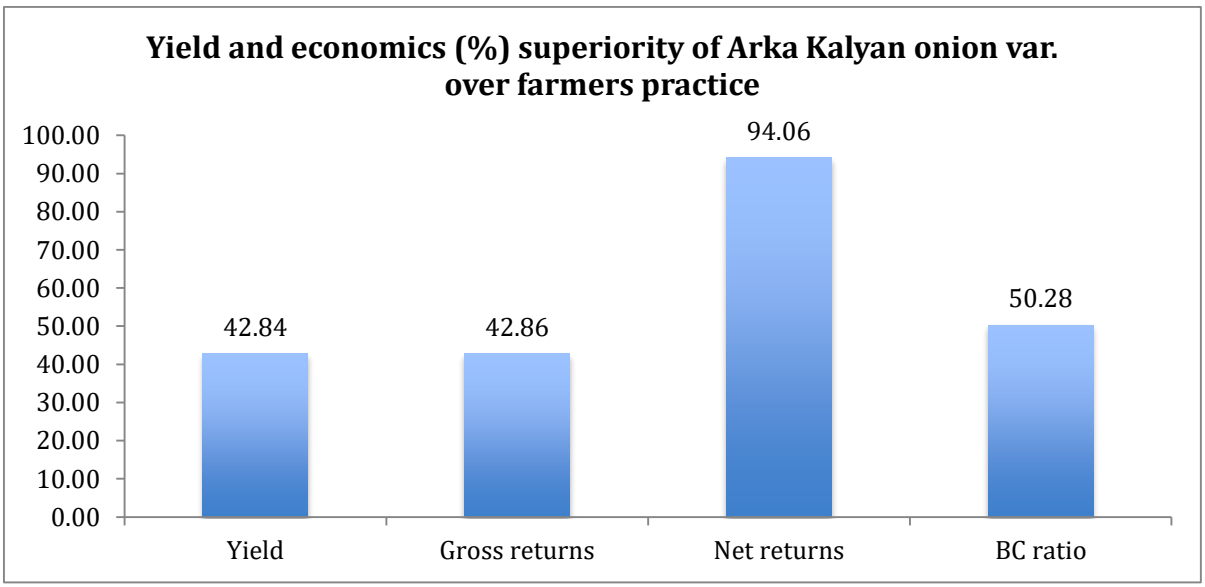
Yield and output details:

- Increase in yield (253.4 q/ha) by 42.84 per cent, over Bellary Red (177.3 q/ha).
- Reduction in the disease / pest incidence to the tune of 33per cent.
- Area under new variety increased to 170 acres by 75 farmers in 3 years.
- Additional production of 76 q/ha and additional income of Rs.80, 000/ha.

Within a few years of introduction, the variety occupied 20 per cent of onion area of 650 ha, 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: Yield and Economics of Arka Kalyan onion variety demonstrated in Tumakuru district

Particulars	Average Yield (t/ha)	Gross Cost (Rs./ha)	Gross Returns (Rs./ha)	Net returns (Rs./ha)	B:C ratio
Arka Kalyan	25.34	96,560	2,53,400	1,56,840	2.72
Bellary Red	17.74	96,560	1,77 ,380	80,820	1.91



Increasing onion farmers' income was possible through adoption of high yielding and disease resistant variety having better marketability. Improved variety demonstrated with drip irrigation, mulching, raised bed and other water management technologies added to variety performance. Mechanization in sowing through IIHR Onion Seed Drill (Manual and Mechanical) has the potential

to overcome the labour problem. Arka Kalyan onion can be stored in room temperature for four to five months without any quality deterioration. In addition, value addition to dehydrated slice, powder, and paste would also fetch more price for farmers. All these would contribute in doubling the farm income in due course.

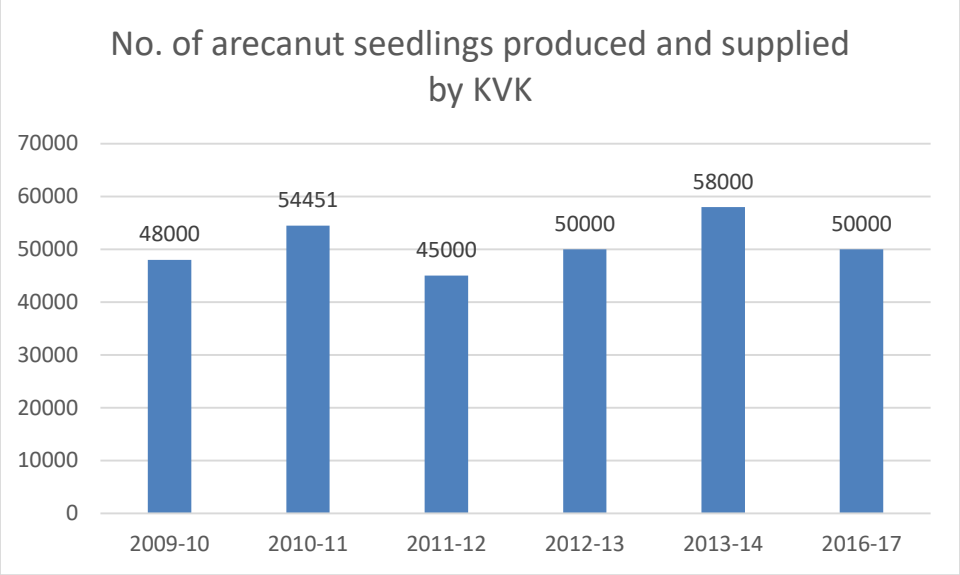
4. Doubling Farmers Income in Arecanut with intercrops and nutrient management

The arecanut palm is the source of common chewing nut, popularly known as betel nut or supari. In India it is extensively used and is very much linked to religious practices. India is the largest producer of arecanut and at the same time largest consumer also. Major states cultivating this crop are Karnataka (40 per cent), Kerala (25 per cent), Assam (20 per cent), Tamil Nadu, Meghalaya and West Bengal.

About 34,719 Hectares is under Arecanut in Tumakuru district in which Gubbi, Tumakuru and Sira taluks stand first, second and third, respectively. Several problems affect arecanut, among which, inflorescence dieback, button shedding and nut splitting are severely affecting yield and income. No systematic survey has been conducted to assess the crop loss caused by this disease.

Technology details:

Quality planting material of Hirehalli Tall Variety. Borax @ 30 g/tree along with recommended farm yard manure and fertilizers. Intercropping with cowpea, dolichos, French bean and Ridge gourd during Rabi. Need based use of insecticides and fungicides against common pests & diseases.



Yield and output details:

Area under quality planting material adopted in an area of 450 ha with Hirehalli tall variety. Nut splitting reduced to 3.4 per cent compared to 12 per cent in check plots. The yield obtained in demo plot was 9.54 q/ha, an increase of 12.5 per cent over farmers practice (8.48 q/ha).

Particulars	No of nuts /bunch	Per cent Nut splitting incidence	Yield (Qtl/ha)	Per cent Increase	Gross Cost (Rs/ha)	Gross Return (Rs/ha)	Net Income (Rs/ha)	Per cent increase in net income
Nutrient management demonstration	350.2	3.4	9.54	12.5	38,512	1,88,740	1,50,228	12.6
Check	294.2	12	8.48		37,693	1,71,164	1,33,471	

Crop management technologies adopted in 8000 ha by 2600 farmers. Additional income of Rs. 50,000 in case of French bean and Rs.35,000 in case of cow pea as an intercrop was obtained by practicing farmers. Soil health also enhanced with the increase in

organic carbon in the soil. Foot rot disease reduced to 12 per cent from 28 per cent. Before implementation, farmers were getting Rs.1,60,000 /ha. After KVK intervention, farmers realized Rs.2, 25,000/ha, an additional income of Rs. 65,000/ha.

Particulars	Footrot disease (Per cent)	Gross Cost (Rs/ha)	Gross Return (Rs/ha)	Net Income (Rs/ha)	Per cent increase in net income
Arecanut + intercrops (French bean)	12	74,000	2,99,000	2,25,000	40.6
Check	28	62,000	2,22,000	1,60,000	

Conclusion: Doubling Farmers Income is possible only through proper planning and adoption of advanced Package of Practices in which new technologies like high yielding and disease resistant varieties, marketability and post-harvest technological support are provided.

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

10 F. Technology Week celebration during 2018-19:**NIL**

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			

PART XI – SOIL AND WATER TEST

11.1 Soil and Water Testing Laboratory

A. Status of establishment of Lab :

1. Year of establishment :2014
2. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost	Status
1.	Spectrophotometer with accessories	1	1,81,260	**Working**
2.	Flame photometer	1	53,238	**Working**
3.	Analytical balance	1	28,625	**Working**
4.	Nitrogen Analyzer (Kjeldahl digestion and **distillation) with spare parts**	1	1,79,879	**Working**
5.	Shaker	1	45,800	**Working**
6.	Refrigerator	1	40,200	**Working**
7.	Oven	1	60,546	**Working**
8.	Hot Plate	1	18,893	**Working**
9.	Digestion Fume Chamber	1	99,501	**Working**
10.	Atomic Absorption Spectrophotometer	1	10,00,000	**Working**
11.	Centrifuge	1	58,404	**Working**
Total			**17,66,256**	

B. Details of samples analyzed since establishment of SWTL:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages
Soil Samples	11,224	5,612	2,815
Water Samples	8,808	4,425	2,500
Plant samples	332	175	85
Manure samples	0	0	0
Others (specify)	0	0	0
Total	**20,364**	**10,212**	**5,400**

C. Details of samples analyzed during the 2018-19:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages
Soil Samples	2,421	1,575	875
Water Samples	675	625	320
Plant samples	58	24	11
Manure samples	0	0	0
Others (specify)	0	0	0
Total	**3,154**	**2,224**	**1,206**

11.2 Mobile Soil Testing Kit

A. Date of purchase and current status

Mobile Kits	Date of purchase	Current status
1. Mobile Soil Testing Kit	1st March 2017	Not Working
2.		

B. Details of soil samples analyzed during 2018-19 and since establishment with Mobile Soil Testing Kit:

	Progress during 2018-19	Cumulative progress
Samples analyzed (No.)	39	131
Farmers benefited (No.)	25	101
Villages covered (No.)	11	71

11.3 Details of soil health cards issued based on SWTL &Mobile Soil Testing Kitduring 2018-19:

Particulars	Date (s)	Villages (No.)	Farmers (No.)	Samples analyzed (No.)	Soil health cards issued (No.)
SWTL		875	1575	2421	2421
Mobile Soil Testing Kit		11	25	39	39

11.4 World Soil Health Day celebration

Sl. No.	Farmers participated (No.)	Soil health cards issued (No.)	VIPs (MP/ Minister/MLA attended (No.)	Other Public Representatives participated	Officials participated (No.)	Media coverage (No.)
1	80	60	1	4	6	2

PART XII. IMPACT

12.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)
Banana Special (For Ellakki banana)	45	66.7	2,64,825.00	3,67,812.50
AMC (For Tomato)	51	62.3	1,80,000.00	2,20,000.00
Neem Soap (Mango crop)	46	64	52,450.00	89,270.00

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

12.B. Cases of large scale adoption (Please furnish detailed information for each case with suitable photographs)

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

PART XIII - LINKAGES

13A. 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
Siddaganga Institute of Technology	Training on Soil Water Testing
Navya Disha	Trainings and FLDs

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

13B. List of 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	8,50,000

13C. Details of linkage with ATMA - NIL

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**				
	KisanMela				
	Technology Week				
	Exposure visit				
	Exhibition				
	Soil health camps				

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

13D. 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

13E. 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

13F. 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

13G. Kisan Mobile Advisory Services

Month	Message type (Text/Voice)	SMS/voice calls sent (No.)						Total SMS/Voice calls sent (No.)	Farmers benefitted (No.)
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprises		
April 2018	Text	4	0	0	1	1	0	6	1795
May 2018	Text	3	0	0	4	1	0	8	1791
June 2018	Text	1	0	0	2	3	0	6	1791
July 2018	Text	3	0	0	2	2	0	7	1792
August 2018	Text	7	0	0	0	1	0	8	1791
September 2018	Text	2	0	0	0	2	0	4	1791
October 2018	Text	5	0	0	0	0	0	5	1791
November 2018	Text	5	0	0	0	3	0	8	1794
December 2018	Text	1	0	0	0	3	0	4	1791
January 2019	Text	5	0	0	0	3	0	8	1791
February 2019	Text	3	0	0	1	4	0	8	1800
March 2019	Text	4	0	0	1	3	0	8	1932
Total		**43**	**0**	**0**	**11**	**26**	**0**	**80**	**21650**

PART XIV- PERFORMANCE OF INFRASTRUCTURE IN KVK

14A. Performance of demonstration units (other than instructional farm) – Mechanization Machineries purchased during 2018-19

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	-	-	-	02	20,00,000	50,375	-
2	Organic Nutrition Garden	2019	0.1	Arka Samrat	Tomato	46	1,380	2,445	
				Arka Garima	Cowpea	07			
				Arka Anupama	Palak	06			
				Arka Anand	Brinjal	37			
				Arka Suguna	Amaranthus	27			
				Arka Suvidha	French bean	12			
				Coriander leaves	Coriander	11			
				Pudina	Pudina	08			
				Arka Anamika	Okra	09			

Mechanization Machineries purchased during 2018-19

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Solar Pump sets	2019	13,79,922	Good Condition
Dhal Mill	2019	2,49,750	Good Condition
Flour Mill	2019	1,35,000	Good Condition
Multi crop thresher	2019	4,93,000	Good Condition
Mini tractor	2019	1,85,000	Good Condition
Big tractor	2019	6,61,696	Good Condition
Power tree trimmer	2019	74,000	Good Condition
Shrub master	2019	70,000	Good Condition
Cultivator	2019	48,000	Good Condition
Bund former	2019	49,000	Good Condition
Power weeder (Brush cutter)	2019	1,44,000	Good Condition
Rotovator	2019	90,000	Good Condition

14B. 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									
Brown top millet	15.10.18	22.02.19	0.5	Local	Seeds	150	6,200	12,000	
Pulses									
Oilseeds									
Mustard	08.08.19	13.11.19	0.4	Pusa 30	Seeds	155	3,800	12,400	
Fibers									
Spices & Plantation crops									
Areca nut		-	0	Hirehalli Tall	Seedlings	24,310		7,29,300	

					Sprouts	17,860		89,300	
Coconut		-	0	ArsikereTall	Seedlings	2,805			
Fruits									
Mango	-	-	0	Alphanso,	Seedlings	1,544		78,000	
Guava	-	-	0	AS, Pink flesh, L-49	Seedlings	3,310		22,000	
Lime	-	-	0	Kagzi	Seedlings	467		4,000	
Papaya Seedlings	-	-	0	Arkaprabhat	Seedlings	3,852		30,590	
Others seedlings	-	-	0	Rose apple, Fig, Ramphal, Custard apple Betel vine	Seedlings	304		43,100	
				Napier Grass	Cuttings	2,760		2,760	
Vegetables									
Drumstick	-	-	0	PKM-1	Seedlings	2,265	15,500	52,548	
Chilli									
Amaranthus	13.08.18	29.11.18	0.1	Arka Suguna	seeds	7.0	1,250	3,500	
Palak	12.10.18	15.02.19	0.6	Arka Anupama	Seeds	230.45	38,000	92,180	
Chilli									
Brinjal	15.10.18	25.01.19	0.1	Arka Shirish	Seeds	1.20	-	2,160	
Onion	14.06.18	17.03.19	0.6	Arka Kalyan		150		2,25,000	
French Bean	05.12.18	24.03.19	0.2	A Suvidha		231	26,250	57,750	
Bottle gourd	18.10.18	19.02.19	0.1	Arka Bahar	Seeds	1.65	525	1,650	
Veg Seed kit (No.)	-	-	0	10 different vegetables		2,604	85,000	3,60,900	
Others (specify)									

14C. Performance of production Units (bio-agents / bio pesticides/ bio fertilizers etc.,)

Sl. No.	Name of the Product	Qty (q)	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1	Banana Special	110.66	13,27,920	16,59,900	
2	Vegetable Special	114.03	13,68,360	17,10,450	
3	Mango Special	71.76	8,61,160	10,76,400	
4	Citrus Special	19.74	2,36,880	2,96,100	
5	Arka Microbial consortium- Powder	29.23	3,49,760	4,09,220	
6	Liquid (**Ltrs**)	3,625.00	7,61,554	9,06,250	
7	Mango fruit fly traps(**Nos**)	3,687.00	56,723	73,740	
8	Lures(**Nos**)	7,105.00	1,09,307	1,42,100	
9	Neem Soap	37.46	4,49,520	9,73,960	
10	Pongamia Soap	12.23	86,833	2,56,830	
11	Sealer cum Healer	4.68	50,544	70,200	

14D. 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	

14E. 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 2018	0	0	NIL
May	135	7	NIL
June	66	4	NIL
July	4	1	NIL
August	63	4	NIL
September	270	15	NIL
October	55	3	NIL
November	0	0	NIL
December	62	4	NIL
January 2019	47	3	NIL
February	0	0	NIL
March	43	3	NIL

14F. Database management - NIL

Sl.No	Database target	Database created
1		

14G. Details on Rain Water Harvesting Structure and micro-irrigation system - NIL

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 Demonstration s	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)		

PART XV - FINANCIAL PERFORMANCE

15A. Details of KVK Bank accounts

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
With Host Institute	State Bank of India	IIHR Hessaraghatta	41187	Current Account	37578009241	560002588	SBIN0041187
With KVK	-	-	-	-	-	-	-

15B. Utilization of KVK funds during the year 2018-2019(Rs. in lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	140.83	140.01	116.16
2	**Traveling allowances**	0.95	0.95	0.91
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	3.31	3.31	4.36
B	POL, repair of vehicles, tractor and equipments	2.75	2.75	3.70
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	1.25	1.25	1.25
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	0.25	0.25	0.41
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	1.78	1.78	1.78
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	0.51	0.51	0.51
G	Training of extension functionaries	0.25	0.25	0.25
H	Maintenance of buildings			
I	Extension Activities	0.50	0.50	0.50
J	Farmers Field Schools	0.30	0.30	0.30
K	EDP / Innovative Activities	0.30	0.30	0.30
L	Establishment of Soil, Plant & Water Testing Laboratory	0.25	0.25	0.25
M	Library	0.05	0.05	0.05
TOTAL (A)		**153.28**	**152.46**	**130.73**
B. Non-Recurring Contingencies				
1	**Works**	0	0	0
2	**Equipments including SWTL & Furniture**	0	0	0
3	**Vehicle** (Four wheeler/Two wheeler, please specify)	0	0	0
4	**Library** (Purchase of assets like books & journals)	0	0	0
TOTAL (B)		**0**	**0**	**0**
C. REVOLVING FUND		**0**	**0**	**0**
GRAND TOTAL (A+B+C)		**153.28**	**152.46**	**130.73**

15C. Status of revolving fund (Rs.) for the last three years

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year
April 2016 to March 2017	39,36,888	70,14,523	63,06,760	46,44,651
April 2017 to March 2018	46,44,651	75,51,234	89,62,321	32,33,564
April 2018 to March 2019	32,33,564	1,14,71,942	30,89,289	63,22,853

16. Details of HRD activities attended by KVK staff

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Dr.N.Loganandhan	Principal Scientist &Head	Study tour to ICAR-Institute, KVKs of Tamil Nadu	ATMA & TN KVKs	April 8-13,2018
Shri.K.N.Jagadish	SMS Agril.Extension			
Dr.B.Hanumanthe Gowda	SMS Plant Protection			
Shri JM Prasanth	SMS Horticulture	Master Training Programme on Friends of Coconut (FOCT)	UAS Bengaluru	24 to 26th September, 2018.
Shri P R Ramesh	SMS Soil Science	Master Training Programme on Mango Growers	UAS Bengaluru	24 to 26th September, 2018.
		Workshop on Water Management	IISC, Bengaluru	16th March 2019

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

NIL