ICAR-KRISHI VIGYAN KENDRA, HIREHALLI TUMAKURU DISTRICT

ANNUAL REPORT 2019

(FOR THE PERIOD FROM 01 JANUARY 2019 TO 31 DECEMBER 2019)

ICAR-KRISHI VIGYAN KENDRA
Hirehalli, NH-48, TumakuruDistrict
Karnataka - 572168

ICAR-INDIAN INSTITUTE OF HORTICULTURAL RESEARCH
Hesaraghatta Lake Post
Bengaluru – 560089, Karnataka.

GENERAL INSTRUCTIONS

Please read the instructions very carefully before starting preparation of the report

- Annual report is the most important document for the KVK and it directly reflects the overall achievements pertaining to the reported period. Hence due care need to be given by each KVK while preparing the report.

- Period of Report is from 01 January 2019 to 31 December 2019

- Action photographs with relevant captions covering various activities of the KVK in High resolution should be submitted separately in a CD/DVD along with this report.

- Prepare Summary tables carefully tallying with the relevant portions of the main report on all aspects.

- Retain the blank column and rows as such and do not merge the cells. Please specify NIL, wherever not applicableor details are not available.

- Check the names of varieties and hybrids and specify in the report.

- Check the units and totals of each data table

- Extension activity under celebrations for each important day, please insert separate rows and give appropriate data separately. Clubbing of data should be avoided.

- Success stories/case studies should be supported with data tables, graphs and photos.

PART I –GENERALINFORMATION ABOUT THE KVK

1.1. Name and address of KVK withphone, 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 31st December 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	1,57,600	02.08.2013	Permanent	OBC
2	Scientist/SMS	Shri K.N. Jagadish	SMS Agril.Extn.	M	Agril.Extn.	M.Sc. Agriculture	Level 11	78,500	17.11.2009	Permanent	OBC
3	Scientist/SMS	Shri P.R.Ramesh	SMS Soil Science	M	Soil Science	M.Sc. Agriculture	Level 11	78,500	17.11.2009	Permanent	OBC
4	Scientist/SMS	Shri Prashanth J.M	SMS Horticulture	M	Horticulture	M.Sc. Agri Horticulture	Level 11	78,500	24.11.2009	Permanent	Others
5	Scientist/SMS	Dr. B. HanumantheGowda	SMS Plant Protection	M	Plant Protection	M.Sc. Agriculture	Level 11	78,500	02.12.2009	Permanent	Others
6	Scientist/SMS	Smt. RadhaR.Banakar	SMS Home Science	F	Home Science	M.Sc. Home Science	Level 11	78,500	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	71,100	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	43,600	17.10.2012	Permanent	SC
10	Programme Assistant/ Farm Manager	Shri. Muralidhar	Sr. Technician (Lab.)	M	Botany	B.Sc (CBZ)	Level 3	28,700	11.06.2018	Permanent	OBC
11	Assistant	Shri.G.S.Ramakrishna	LDC	M	-	Diploma in Horticulture	Level 3	26,000	01.06.2018	Permanent	OBC
12	Jr. Stenographer	Smt.VedaKurnalli	Jr.Stenographer	F	Stenographer	DCP	Level 4	33,300	17.02.2010	Permanent	Others
13	Driver - 1	Sri M.H.Ningappa	Driver	M	Driver	S.S.L.C.	Level 3	31,400	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	33,806	Good
Motor Cycle	2010	52658	2,244	Good
Honda – Aviator	2010	46025	55	Good
Power Tiller	2010	1 42400	27Hours	Good
Tractor	2011	560000	1436 Hours	Good

C) Equipment & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Xerox Machine	2010	67,262	Good Condition
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

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

1.8. Details of SAC meeting conducted during 2019 from action plan

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
11.02.2019	50	Implementation of DFI in Sujalaand NICRA adopted villages is to be ensured	DFI concept based activities have been implemented in one of the NICRA adopted village (Tanganahalli).	
		Demonstration Organic farming technologies at DurgadahalliCluster village need to be taken	Organic farming technologies like application of Jeevamrutha and suitable varieties like Arka Suvitha (French Bean) were introduced.	
		Crop wise constraints in DFI villages need be assessed	Bench mark survey of 50 farmers from each DFI village was collected including crop wise constraints. Interventions (based on assessing these constraints) will be carried out in the coming years.	
		ArkaPrajwal(Tuberose) need to be introduced in Pavagada cluster	A demonstration was taken up in Venkatapura village of Pavagada cluster. Based on the need of farmers, an FLD shall be proposed in 2020.	
		Replacement of TMV-2 with adequate support (Change in sieve in oil mill etc) need to be explored	HYVs of Groundnut from NRC Groundnut, Gujarat (DGMRB-24, DGMRB-32 and TG-37 A) were taken on OFT in 2019. The results could help us in deciding the options of replacement of TMV-2. On discussion with KOF officers, an information about TMV-10 (TNAU) was received. This could be tried on OFT in 2020.	
		Demonstration of K6 Groundnut varieties in Tumakuru Dist. need to be encouraged	Under CFLD, improved varieties of Groundnut (K6) was demonstrated in 20 ha.	
		Increase oil seed area by suggesting alternative crop under DFI	Pusa mustard varieties were introduced in selected areas under OFT in 2019. In collaboration with KOF and IARI, Regional Station,	

			Wellington (Tamil Nadu), further up scaling will be taken up in the coming years.	
		Improved New Maize varieties need to be introduced	New Maize variety (MAH-14-5) was introduced under FLD in 2019. Another new variety (MAH-14-138) from VC Farm, Mandya is to be taken in 2020 under Field Trials at KVK Hirehalli farm and farmers fields.	
		Armyworm control in maize and ragi needs to be given awareness by conducting campaigns in collaboration with Dept. of Agriculture	Awareness programmes, training activities were organized in collaboration with Dept. of Agriculture on 18/09/2019.	
		Decomposing method in arecanut husk need to be explored	An OFT on Decomposing Arecanut husk is under progress.	
		IFS concept can be encouraged in KVK	The IFS concept is already in practice in KVK farm. Every year minimum one additional component is being introduced. Farmers are also encouraged to take up IFS models.	
		Marvel grass fodder variety for demonstration can be tried	FLDs on Marvel grass, Hybrid Napier Bajara, Fodder Sorghum varieties were taken up in 2019.	
		FPO members needs to be invited to KVK for Knowledge sharing	Training programmes for Pavagada FPO were arranged during 15-16, Oct 2019 off campus.	
		Successful technologies of ICAR and IIHR need to be demonstrated at KVK farm	This is a continuous process of demonstration at KVK farm. However, in 2019 technologies (Improved varieties of flowers and medicinal plants) has given below were introduced to KVK farm. Centella - Arka Divya, Arka Prabhavi, Rose - Arka Swandesh, Arka Pride, Arka Savi, Arka Parimala, Tuberose - Arka Prajwal Crossandra- Arka Chenna, Arka Kanaka, Arka Ambar, Arka Shravya, Gladiolus- Arka Amar, Arka Gold, Arka KumKum, Arka Naveen	
		Vegetable seed production activities can be taken up in the identified farmers' fields.	French Bean (Arka Arjun) was introduced in to Badavanahalli village, Pavagada taluk under Vegetable Seed Production.	
		Demonstration of Betelvine of local varieties and also production of planting material can be considered	Planting materials of selected varieties of Betelvine, including local ones, are under production and sale to the needy farmers.	
		More training and awareness in collaboration with Horticulture dept. and also install more no. of bee hives at KVK instruction farm.	DDH was approached for more collaboration work with KVK in terms of training and awareness programmes. No. of beehives were increased from 4 to 15 in this year.	
		Medicinal crops like Lemon grass and Palma Rosa can be taken up in Pavagada villages as the alkaloid content is very rich in these crops are grown in this region.	FLDs on Lemon Grass (Krishna) and Palma Rosa (PRC-1.) were taken in DFI village of Pavagada in 2019. Further, awareness is being created to cover other areas under medicinal crops.	

PART II - DETAILS OF DISTRICT

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

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

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

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

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

2.3 Soil type/s

Sl. No	Soil type	Characteristics	Area in ha
1.	Red Sandy Loam	• Colour given by hematite's or Yellow limonite's • Poor in soil fertility • Low base exchange capacity • Deficient in organic matter • Low water holding capacity • The pH ranges from 5.5.-6.5 • Low cohesion, plasticity & swelling	6,15,230
2.	Red Loam	• Colour given by oxides of iron • Poor in soil fertility • Low- medium Base Exchange capacity • Deficient in organic matter • Low water holding capacity • The pH ranges from slightly acidic or neutral • Low cohesion, plasticity & swelling	2,04,093
3.	Shallow Black Soil	• Colour varying from dark brown to dark yellowish brown • Soil with more than 35 per cent clay and crack	2,45,432

		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**	
January 2019	43.7	35.5	-	55.78
February 2019	70.9	39.6	10.3	58.74
March 2019	13.2	42.0	11.3	56.16
April 2019	73.6	46.6	16.6	56.77
May 2019	105.1	42.3	-	56.18
June 2019	89.0	46.2	4.6	65.88
July 2019	104.1	36.4	13.1	69.80
August 2019	110.5	35.3	4.2	72.11
September 2019	144.5	36.3	-	66.41
October 2019	114.5	40.0	17.0	71.78
November 2019	63.5	34.9	11.4	69.60
December 2019	52.5	34.9	10.0	69.55

* Source: KSNDMC, Bengaluru

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

Category	**Population**	**Production**	**Productivity**
Cattle			
Crossbred	224.3		
Indigenous	302.7		
Buffalo	181.1		
Sheep			
Crossbred			
Indigenous	1061.3		
Goats	326.8		
Pigs			
Crossbred			
Indigenous	7.1		
Rabbits	1.0		
Poultry			
Hens			

Desi			
Improved	533.8		
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	-	-	-

* Source: www.tumkurzillapanchayat.in

2.7 District profile maintained in the KVK has been **Updated** for 2019:**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.	Sira Koratagere Madhugiri Pavagada	Bukkapattana Kolala Doddere	Kumabarahalli Chikkadoddavadi Rangapura Neralakunte	1	Maize	Downy mildew and *Turcicum* leaf blight, Stem borer incidence	IPDM
2	Madhugiri	Doddere	K P Halli	1	Onion	Non availability of Rabi varieties, Poor storability	New varieties
3	Sira Koratagere Madhugiri	Bukkapattana Kolala Doddere	Kumabarahalli Tanaganahalli Rangapura	1	Foxtail millet	Use of Local varieties, Lack of Knowledge on High yielding varieties and lack of knowledge on processing and value addition	New varieties
4.	Koratagere Madhugiri	Kolala Doddere	Vaddarahalli Rangapura	1	Musatard	Lack of suitable oilseed crop during Rabi season	New varieties
9.	Koratagere Madhugiri	Kolala Doddere	Tanaganahalli Rangapura	1	China Aster	Small size flowers, less shelf life & low yield	ICM
10.	Tumakuru Koratagere	Udigere Kolala	Chikkadoddavadi, Tanaganahalli	2	Arecanut	Mono-cropping, Low soil fertility, *AnabeRoga*, Nut splitting, Low income	Nutrient Management
11.	Tumakuru Koratagere Madhugiri	Udigere Kolala Doddere	Duragadahalli Tanaganahalli Rangapura	1	French bean	Mosiac disease, Rust, local varieties low yield	ICM
12.	Sira Madhugiri	Bukkapattana Doddere	Kumabarahalli Rangapura	1	Nutrition garden	Lack of knowledge on nutrition garden and nutrition insecurity	Food and Nutrition Security
13.	Sira Koratagere Madhugiri Tumakuru	Bukkapattana Kolala Doddere Udigere	Kumabarahalli Chikkadoddavadi Rangapura Kodigenahlli	1	Ragi	Low yield, Less acceptability of value added products from existing varieties due to brown colour	IGA
14.	Koratagere Pavagada	Kolala Nidugallu	Chikkadoddavadi Madhavarayanapalya	1	Okra	Higher incidence of Bhendi yellow vein Mosaic, Low yield	IDM

15.	Sira Koratagere Madhugiri Pavagada	Bukkapattana Kolala Doddere Venkatapura	Kumabarahalli Anupanahalli Rangapura Kodigenahlli Venkatapura	1	Chilli	Low yield, Local varieties , Imbalanced nutrition, Disease incidence – Mosaic virus susceptible	ICM
16.	Madhugiri	Doddere	Badavanahalli	1	Jasmine (Kakada)	Highly perishable, Low price during glut and Lack of knowledge on storage	PHT
17.	Pavagada Koratagere	Venkatapura, Kolala	Madhavarayanapalya Tanganahalli	1	Cucumber	Incidence of Downy mildew	IDM
18	Pavagada	Venkatapura,	Venkatapura	1	Lemon grass	Erratic rainfall and delayed monsoon, high temperature and reducing ground nut area	New Varieties
19	Pavagada	Venkatapura,	Venkatapura	1	Palmrosa	Erratic rainfall and delayed monsoon, high temperature and reducing ground nut area	New Varieties
20	Sira Pavagada	Bukkapattana Venkatapura	Kumabarahalli venkatapura	1	Pomegranate	Bacterial blight, leaf spot disease, sucking pest problem	ICM
21	Koratagere Madhugiri Tumakuru	Kolala Doddere	Anupanahalli Rangapura Kodigenahlli	1	Paddy	Water stress, Neck blast, nutrient deficiency, weeds, Non awareness about aerobic paddy, Rat menace,	ICM
22	Koratagere Tumakuru	Kolala	Tanaganahalli Kodigenahlli	1	Fodder	Non availability of suitable fodder crop for higher yield	New Varieties
23	Sira	Bukkapattana	Kumabarahalli	1	Tamarind	Lack of knowledge on processing and value addition, low income	PHT

2.9 Details of Benchmark Information collected from DFI villages

Sl.No.	Taluk	Name of the block	Name of the village	Name of the Head of Household	Annual Gross Income (Rs.)	Annual Expenditure (Rs.)	Annual Net Income (Rs.)
Please see Annexure - 1							

2.10 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 Cropping Management
5.	Integrated Nutrient Management
6.	Integrated Pest & Disease Management
7.	Intercropping / Mixed / Multistoried cropping system
8.	Seed Production Techniques in Vegetables and field crops
9.	Post harvest technology in Vegetables and Fruits
10.	Soil and Water Conservation
11.	Drudgery Reduction among women
12.	Income Generating Activities and Value Addition
13.	Child and Women Care and balanced nutrition

PART III - TECHNICAL ACHIEVEMENTS (2019)

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
05	05	15	15	19	19	135	127

Training				Extension Programmes			
3				4			
Courses (No.)		Participants (No.)		Programmes (No.)		Participants (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
63	45	1895	1591	258	182	108780	50773

Seed Production (Q)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
13.20	14.90	0.70 lakhs	0.80 lakhs
2000 Nos (Seed Kit)	3823 Nos.		
5 (Mushroom Spawn)	8.64		

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
		Neem and Pongamia Soap-4,000	5977 Kg
		Sealer cum Healer-500	551 Kg
		AMC Powder –1000	1087 Kg
		AMC Liquid –2,000	5064 Ltrs
		Fruit fly traps -2500	16396 Nos
		Mango Special -2500	7375 kg
		Vegetable Special -3000	6812 kg
		Citrus special -1000	3434 kg
		Banana Special -3000	10337 kg
		Arka Borer Control Formulation-100	120 kg
Others			
Amla Squash – 500 lits	120 lits		
Amla Candy- 1 qt	0.44		
Ragi malt – 1 qt	0.78		

3.B1. Abstract of interventions undertaken

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No.	Kg
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	Organic farming	Composting	Delay and ineffective decomposing process in traditional methods	Assessment of decomposing cultures in compost preparation	-	-	-	-	02	-	-	-	50 ml	2 kgs
03	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
04.	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
05	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
06.	Organic Farming	French Bean	Poor soil health and low soil fertility	-	Demonstration of organic farming practices in French bean	3	0	0	05	0.5	0	0	1	10 lits
07	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

08	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
09	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	0.075	0	0	0	10 kg
10	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
11														
12	Fodder	Fodder	Non availability of improved fodder varieties		CoFS 29	0	0	0	01	0.005	0	0	0	0
13	Organic farming	Pomegranate	Low nutrient use efficiency & soil fertility, Severe incidence of blight and wilt and lower yield		Demonstration of AMC Liquid and ArkaActinoplus on Growth, Quality and Yield of Pomegranate	01	0	0	06	0	0	0	35 lit 8 Nos Pheromone traps	40 kg
14	Yield Enhancement	Ragi	Erratic rainfall and delayed monsoon, low yield, low income	-	Enhancement of Productivity of Finger millet by drought tolerant variety ML 365 Seeds - 12.5kg /ha. FYM 10 t/ha. Zinc Sulphate – 12.5 kg /ha. Borax 10kg / ha.	01	0	0	04	0.5	0	0	0	10 kg

15	Yield Enhancement	Paddy	Water scarcity, Reduced the paddy area, Low income, High cost	-	Demonstration of water saving Aerobic Paddy Paustic-9 Seeds -7.5kg /ha. FYM 10 t/ha. Green manure - 5t/ha. RDF 100:50:50 kg NPK / ha.	01	0	0	04	0.3	0	0	0	5 kg
16	ICM	Castor	Local variety, Low oil content and Less yield	-	DCH-177 Seeds 12.5kg/ha. FYM 5 t/ha. RDF 37.5:37.5:25 NPK kg/ha	01	0	0	03	0.5	0	0	0	0
17	HYV	Lemon grass	Erratic rainfall and delayed monsoon, high temperature and reducing ground nut area	-	Medium tall, high tiller and herb with high oil yielding Citral type High yield of bio mass (25-28 Mt/ha) with high oil yield (230-250 kg/ha). Suitable for plains FYM 10 t/ha., RDF 250:100:40 NPK kg/ha.	0	0	0	0	0	5000 Nos	0	0	0
18	HYV	Palmrosa	Erratic rainfall and delayed monsoon, high temperature and reducing ground nut area		PRC1 : High tall , high tiller and herb with high oil yielding Oil yield - 400 q/ha; Oil yield - 225 kg/ha, geraniol 75-80% FYM 10 t/ha., RDF 60:50:40 NPK kg/ha. @3 splits/year	0	0	0	0	0.001	0	0	0	0
19	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	0.005	0	0	0	0

19	Value addition	Foxtail	Reduction in area under minor millets due to lack of knowledge on nutritional value and non availability of processing units	-	Demonstration of Foxtail millet Variety DHFt 109-3 for Value Addition Seeds 10kg/ha. FYM 6.25 t/ha. RDF 40:40:0 NPK kg/ha.	01	0	0	05	0.5	0	0	0	0
20	IPDM	Maize	Downy mildew, Turcicum leaf blight and Stem borer incidence	-	Demonstration Turcicum leaf blight tolerant hybrid: MAH-14-5, FYM 10 t/ha. RDF 150:75:40 kg/ha. Application of Zinc Sulphate 10 kg/ha. Seed treatment with Metalaxil M + Mancozeb (4g/kg of seeds) for Downy mildew Poison Bait . Installation light traps.	01	0	0	05	0.3	0	0	0	50 kg
21	ICM	Redgram	Fusarium wilt, low yielding varieties	-	BRG-5 Seeds 12.5kg/ha. FYM 7.5 t/ha. RDF 25:50:25 NPK kg/ha. Sulpher 20 kg/ha. Zinc Sulphate 12.5kg/ha	01	0	0	06	0.5	0	0	0	0

22	IPDM	Bhendi	Higher incidence of Bhendi yellow vein Mosaic, Low yield	-	ArkaNikitha -F1 hybrid (125 -130 days duration, tolerant to Bhendi yellow vein Mosaic and Yields 21-24 t/ha,), RDF 125:75:62.5 NPK kg/ha. AMC : Drenching @ 10ml /lit Vegetable Special- 2gm /lit at starts at flower initiation stage and regular 15 days interval	01	0	0	04	0.075	0	0	0	20 kg
23	Fodder	Marvel grass	Non availability of suitable fodder crop for higher yield	-	Demonstration of Marvel Grass Perennial Fodder Dicanthiumannulatum	01	0	0	03	-	200 Nos	0	0	0
24	Fodder	Hybrid Napier	Non availability of suitable fodder crop for higher yield	-	Demonstration of Fodder Hybrid Napier	01	0	0	02	-	200 Nos	0	0	0

3.B2. Details of technology used during reporting period

S.No	Title of Technology	Source of technology	Crop/enterprise	No.ofprogrammes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
1	Assessment on Management of Downy mildew in Cucumber	IIVR, Varanasi	Cucumber	1	0	0	0
2	Assessment of Different Compost cultures in composting of Areca husk	IIHR, Bengaluru UAS, Dharwad NCOF, Gaziabad	Decomposer	1	0	0	0
3	Assessment of Mustard varieties as alternative oilseed crops	IARI, New Delhi	Mustard	1	0	0	0
4	Assessment of Onion varieties for Rabi	DOG, Pune IIHR Bengaluru NHRDF Nasik	Onion	1	0	0	0
5	Assessment of different storage methods to extend shelf life of Jasmine	UAS, Raichur and TNAU, Coimbatore	Kakada (Jasmine)	1	0	0	0
6	Demonstration of Organic farming practices in French bean	UAS, Bengaluru	French Bean	-	05	01	0
7	Demonstration of Chilli Variety ArkaHarita	IIHR Bengaluru	Chilli	-	05	01	0
8	Demonstration of in French Bean variety ArkaArjun	IIHR Bengaluru	French bean	-	05	01	0
9	Demonstration of China Aster variety ArkaArchana	IIHR Bengaluru	China Aster	-	05	01	0
10	Integrated Crop Management in Arecanut	CPCRI Kasargod	Arecanut	-	05	01	0
11	Demonstration of Finger millet Variety KMR 340 for Value Addition	UAS, Bengaluru	Ragi KMR-340	-	10	01	0

12	Demonstration of Fodder sorghum CoFS 29	TNAVUS, Namakkal	CoFS 29	-	05	0	0
13	Demonstration of AMC liquid and ArkaActino Plus on growth, quality and yield of Pomegranate	IIHR Bengaluru	Pomegranate	-	05	01	01
14	Enhancement of Productivity of Finger millet by drought tolerant variety ML 365	UAS, Bengaluru	ML 365	-	10	01	02
15	Demonstration of water saving Aerobic Paddy Paustic-9 5	UAS, Bengaluru	Poustic 9	-	05	01	0
16	Demonstration of Castor variety DCH-177	IIOR, Hyderabad	Castor -DCH177	-	10	0	0
17	Demonstration of Aromatic crop- Lemon grass – Krishna	CIMAP Bengaluru	Lemon grass	-	01	0	0
18	Demonstration of Aromatic crop- Palmarosa- PRC 1	CIMAP Bengaluru	Lemon grass	-	01	0	0
19	Demonstration of Foxtail millet Variety DHFt 109-3 for Value Addition	UAS Dharwad	DHFT-109 -3 Foxtail millet	-	10	0	0
20	Integrated Pest and Disease Management in Maize	UAS, Bengaluru	MAH 14-5 Maize	-	05	01	0
21	Demonstration of Redgram variety BRG-5	UAS, Bengaluru	BRG-5 Redgram	-	05	01	0
22	Integrated Pest and Disease Management in Bhendi	IIHR Bengaluru	Bhendi	-	05	01	0
23	Demonstration of Marvel Grass -Perennial Fodder Dicanthiumannulatum	NIANP, Bengaluru	Marvel grass	-	05	0	0
24	Demonstration of Fodder - Hybrid Napier	NIANP, Bengaluru	Hybrid Napier	-	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**
2	0	1	1	0	0	0	0	12	0	0	0	0	0	0	0
4	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	4	0	1	0	13	0	02	0	0	0	0	0
0	0	0	0	4	0	1	0	14	2	2	0	0	0	0	0
0	0	0	0	3	0	2	0	12	0	3	0	0	0	0	0
0	0	0	0	4	0	1	0	10	0	0	0	0	0	0	0
0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	7	0	3	0	0	17	0	03	0	0	0	0
0	0	0	0	4	0	1	0	22	0	8	0	219	60	15	6
0	0	0	0	7	0	3	0	15	0	03	0	36	6	2	0
0	0	0	0	4	0	1	0	13	0	02	0	0	0	0	0
0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0
0	0	0	0	4	0	1	0	12	0	2	0	0	0	0	0
0	0	0	0	4	0	1	0	13	0	4	0	0	0	0	0
0	0	0	0	1	0	4	0	0	0	0	0	0	0	0	0
0	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0
0	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0

PART IV - On Farm Trial(2019)

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		2			1					
Integrated Pest Management										
Integrated Crop Management										
Integrated Disease Management					1					
Small Scale Income Generation Enterprises										
Weed Management										
Resource Conservation Technology								1		
Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique							1			
Mushroom cultivation										
Total		**2**			**2**		**1**	**1**		**6**

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 Technological Options in a farm)
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
	Groundnut	Evaluation of drought tolerant varieties of Groundnut	6	6	7.2
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	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 Technological Options in a farm)
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

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.C1. 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: For high yield and less pungency, Pusa 31 variety is suitable. For erratic and low rainfall Pusa 28 is suitable

4.C2.Results of Technologies Assessed

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	Gross Return Rs. / unit	Net Return Rs. / unit	BC Ratio (Gross income/ Gross Cost)
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 Bhimashakti during Rabi Season, with higher bulb weight

3. Specific Feedback from farmers: NHRDF 3 red and ArkaNiketan were found to be more profitable for Rabi season as compared to Bhima Shakti. Purple blotch incidence is less in ArkaNiketan.

4. Specific Feedback from Extension personnel and other stakeholders : Nil

5. Feedback to Research System based on results and feedback received: In Rabi season NHRDF 3 Red is performing better and storage life is also high.

4.C3.Results of Technologies Assessed

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	Gross Return Rs. / unit	Net Return Rs. / unit	BC Ratio (Gross income/ Gross Cost)	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	
Groundnut	Rainfed	Non availability of drought tolerant cultivars for the present rainfall erratic situation	Evaluation of drought tolerant varieties of Groundnut	03	K-6 variety	ANGARU, Hyderabad	8.44	Qtls / ha	Plant ht. (28.33) 100 Pod weight in gms(72.73gms)	42960	20413	1.91	
					DGRMB-24	DGR, Junagarh	12.35	Qtls / ha	Plant ht. (23.00) 100 Pod weight in gms(90.53 gms)	62862	39716	2.72	DGRMB-24 is found to be very promising in drought situation up to 45 days.
					DGRMB-32	DGR, Junagarh	11.13	Qtls / ha	Plant ht. (19.83) 100 Pod weight in	56652	34193	2.52	-

									gms(89.97 gms)				
					TG37A	DGR, Junagarh	9.75		Plant ht. (23.33) 100 Pod weight in gms(75.57 gms)	49628	27373	2.23	-

4.C3.Results of Technologies Assessed

1. Title of Technology Assessed:Evaluation of drought tolerant varieties of Groundnut
2. Performance of the Technology on specific indicators: DGRMB 24 and DGRMB 32are found to be drought tolerant varieties.
3. Specific Feedback from farmers: DGRMB 24 and DGRMB 32 were found to be more profitable for as compared to existing Ground nut K-6(115 days) and highly 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: DGRMB 24 is found to be drought tolerant variety, withstands well invulnerable situations

4.C4.Results of Technologies Assessed

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	27.56	Qtls /ha	Avg. Downy mildew disease severity – 25.41	59583	2.19	More residue content
					To2:Seed treatment with Captan (2g/kg seeds) Spray of Mancozeb (0.2%) & Cymoxanil+Mancozeb (0.2%)	IIHR,Bengaluru	29.87	Qtls /ha	Avg. Downy mildew disease severity-23.24	98222	2.86	More residue and high Cost of Cultivation
					To3: 1. Seed treatment with Metalaxyl (2g/kg seeds) 2. *Trichodermaharzianum* 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	33.42	Qtls /ha	Avg. Downy mildew disease severity - 7.78	108426	3.23	Integration of all the methods helps to reduce the disease incidence

4.C4. 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.C5. Details of Technologies Assessed:

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. C5. 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: Flowers packed in 300 µ polythene cover recorded highest Shelf life, less Physiological lost in weight and it is suitable for loose flowers.

4.D1. Results of Technologies Refined - NIL

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	Gross Return Rs. / unit	Net Return Rs. / unit	BC Ratio (Gross income/ Gross Cost)
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

PART V - FRONTLINE DEMONSTRATIONS (2019)

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													
	Pulses													
	Cereals													
		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	1	4	4	1
		Irrigated	Kharif	Paddy	-	Poustic 9	ICM	Demonstration of water saving Aerobic Paddy Paustic-9	1	1	1	4	5	0
	Millets													
		Rainfed	Late kharif	Ragi	ML 365	-	High yielding	Enhancement of Productivity of Finger millet by drought tolerant variety ML 365	4	4	3	7	7	3
	Vegetables													
		Irrigated	Summer	Bhendi	-	ArkaNikitha	IPDM	ArkaNikitha - F1 hybrid (125 -130 days	2	2	1	4	4	1

								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						
		Irrigated	Rabi	French Bean	ArkaSuvidha	-	Organic Farming	Jeevamrutha- 2000 liter/ha	1	1	1	4	5	0
		Irrigated	Rabi	French Bean	Arka Arjun	-	ICM	Arka Arjun AMC: 20g /lit Vegetable Special- 2gm /lit & Neem soap : @ 7 g/lit	1	1	2	3	5	0
		Irrigated	Rabi	Chilli	ArkaHarita		ICM	ArkaHarita -F1 hybrid- AMC 20g/lit Vegetable Special- 3gm /lit, Yellow sticky traps Neem Soap @7 gm /lit	1	1	1	4	5	0
	Flowers													
		Irrigated	Rabi	China Aster	ArkaArchana	-	ICM	Integrated crop Management in China Aster: ArkaArchana	1	1	1	4	5	0
	Ornamental													
	Fruit													
		Irrigated	Kharif	Pomegranate	Bhagva	-	Organic	Demonstration of AMC liquid and	2	2	1	2	0	3

							farming	ArkaActino Plus on growth, quality and yield of Pomegranate						
	Spices and condiments													
	Commercial													
	Medicinal and aromatic													
		Irrigated	Rabi	Lemon grass	Krishna	-	HYV	Demonstration of Aromatic crop- Lemon grass – Krishna	1	1	0	1	0	1
		Irrigated	Rabi	Palm rosa	PRC-1	-	HYV	Demonstration of Aromatic crop- Palmrosa- PRC 1	1	1	0	1	0	1
	Fodder													
		Irrigated	Rabi	Fodder Sorghum	CoFS 29	-	Fodder	Fodder Seeds CoFS 29 and AMC	1	1	1	4	5	0
		Irrigated	Rabi	Fodder Grass	Marvel grass	-	Fodder	Fodder Stem Cuttings	1	1	2	3	4	1
		Irrigated	Rabi	Fodder Sorghum	Hybrid Napier	-	Fodder	Fodder Stem Cuttings	1	1	2	3	4	1
	Plantation													
		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	5	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)													
	Value addition	Rainfed	Late kharif	Ragi	KMR-340	-	Value addition	Demonstration of Finger millet Variety KMR 340 for Value Addition	4	4	3	7	8	2
		Rainfed	Late kharif	Foxtail	DHFT 109-3	-	Value addition	Demonstration of Foxtail millet Variety DHFt 109-3 for Value Addition	4	4	5	5	7	3

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												
		Irrigated	Kharif 2019	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 2019	L	M	L	Ragi
		Irrigated	Kharif 2019	Paddy	-	Poustic 9	ICM	Demonstration of water saving Aerobic Paddy Paustic-9	Kharif 2019	L	M	M	Groundnut
	Millets												
		Rainfed	Late Kharif 2019	Ragi	ML 365	-	High yielding	Enhancement of Productivity of Finger millet by drought tolerant variety ML 365	Late Kharif 2019	M	M	L	Ragi
		Rainfed	Late kharif 2019	Foxtail	DHFT109-3	-	Value addition	Demonstration of Foxtail millet Variety DHFt 109-3 for Value Addition	Late kharif 2019	L	M	L	Foxtail
		Rainfed	Late kharif 2019	Ragi	KMR-340	-	Value addition	Demonstration of Finger millet Variety KMR 340 for Value Addition	Late kharif 2019	M	M	L	Ragi
		Rainfed	Late kharif 2019	Foxtail	DHFT 109-3	-	Value addition	Demonstration on Foxtail millet variety DHFT for value addition	Khariff	M	M	L	Foxtail
	Vegetables												
		Irrigated	Summer 2020	Bhendi	-	ArkaNikitha	IPDM	ArkaNikitha -F1 hybrid (125 -130 days	Summer 2020	M	M	M	Tomato

								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					
		Irrigated	Rabi 2019	French Bean	ArkaSharath	-	Organic Farming	Jeevamrutha- 2000 liter/ha	Rabi 2019	M	M	L	Ragi
		Irrigated	Rabi 2019	French Bean	Arka Arjun	-	ICM	Arka Arjun AMC: 20g /lit Vegetable Special- 2gm /lit & Neem soap : @ 7 g/lit	Rabi 2019	L	L	M	Groundnut
		Irrigated	Rabi 2019	Chilli	ArkaHarita		ICM	ArkaHarita -F1 hybrid- AMC 20g/lit Vegetable Special- 3gm /lit, Yellow sticky traps Neem Soap @7 gm /lit	Rabi 2019	M	L	M	Ragi
	Flowers												
		Irrigated	Rabi 2019	China Aster	ArkaArchana	-	ICM	Integrated crop Management in China Aster: ArkaArchana	Rabi 2019	M	L	M	Ragi
	Ornamental												
	Fruit												
		Irrigated	Kharif 2019	Pomegranate	Bhagva	-	Organic farming	Demonstration of AMC liquid and ArkaActino Plus on growth, quality and yield of Pomegranate	Kharif 2019	M	M	L	Nil
	Spices and condiments												
	Commercial												
	Medicinal and aromatic												
		Irrigated	Rabi 2019	Lemon grass	Krishna	-	HYV	Demonstration of Aromatic crop- Lemon grass – Krishna	Rabi 2019	L	M	M	Groundnut

		Irrigated	Rabi 2019	Palm rosa	PRC-1	-	HYV	Demonstration of Aromatic crop- Palmrosa- PRC 1	Rabi 2019	L	M	M	Groundnut
	Fodder												
		Irrigated	Rabi 2019	Fodder Sorghum	CoFS 29	-	Fodder	Fodder Seeds CoFS 29 and AMC	Rabi 2019	M	M	L	Ragi
		Irrigated	Rabi 2019	Marvel Grass	Marvel grass	-	Fodder	Fodder Stem Cuttings	Rabi 2019	M	M	L	Ragi
		Irrigated	Rabi 2019	Napier	Hybrid Napier	-	Fodder	Fodder Stem Cuttings	Rabi 2019	L	M	M	Nil
	Plantation												
		Irrigated	Kharif 2019	Arecanut	Local	-	ICM	Neem cake-2kg per tree, French bean seeds-10kg/ acre, COC- 10g per lit water, Hexoconazole -3 ml per 125ml water	Kharif 2019	M	M	L	Nil
	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 Return	Net Return	BCR	Gross Return	Net Return	BCR
							H	L	A								
Oilseeds																	
Pulses																	
Cereals																	

	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 Emamectin benzoate (0.4 gm/ltr) for Fall Army worm	MAH-14-5	-	Irrigated	05	2	88.64	63.46	78.84	73.98	6.56	138758	74258	2.15	130205	61605	1.90
	Demonstration of water saving Aerobic Paddy Paustic-9	Paustic-9	-	Irrigated	05	1	35.1	33.2	34.1	27.60	23.5	52173	26323	2.07	42228	16378	1.63
Millets																	
	Enhancement of Productivity of Finger millet by drought tolerant variety ML 365	ML 365	-	Rainfed	10	04	28.2	26.6	27.40	20.30	34.90	61650	39229	2.75	45675	23725	2.08
Vegetables																	

	ArkaNikitha - 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	-	ArkaNikitha -	Irrigated	05	02	225.2	184.0	206.62	178.84	15.53	206620	126060	2.56	178840	92276.00	2.07
	French bean seeds 40 kg, Neem soap 5gm /lit, Jeevamrutha- 2000 liter/ha	ArkaSharath	-	Irrigated	05	01	124.2	100.4	112.2	91.9	22.10	168300	135169	5.07	137850	101597	3.80
	Arka Arjun AMC: 20g /lit Vegetable Special- 2gm /lit & Neem soap : @ 7 g/lit	Arka Arjun	-	Irrigated	05	01	81	75	78	62.70	24.40	1,56,080	1,19,304	4.24	1,25,400	87518	3.31
	ArkaHarita -F1 hybrid- AMC 20g/lit Vegetable Special- 3gm /lit, Yellow sticky traps Neem Soap @7 gm /lit	ArkaHarita	-	Irrigated	05	01	231.20	21860	224.90	177.50	26.70	269880	211940	4.65	213000	157080	3.8
Flowers																	
	Integrated crop Management in China Aster: Arka Archana	Arka Kamini	-	Irrigated	05	01	76.72	71.88	74.3	60.8	22.2	1,33,740	99420	3.9	1,0,9476	72626	2.97
Ornamental																	

Fruit																	
	Demonstration of AMC liquid and ArkaActino Plus on growth, quality and yield of Pomegranate	Bhagva	-	Irrigated	05	01	101	91	96	81	18.50	672000	578850	7.2	526500	380100	3.40
Spices and condiments																	
Commercial																	
Fibre crops like cotton																	
Medicinal and aromatic																	
	Demonstration of Aromatic crop-Lemon grass – Krishna	Krishna	-	Irrigated	01	01											
	Demonstration of Aromatic crop-Palmrosa- PRC 1	PRC 1	-	Irrigated	01	01											
Fodder																	
	Fodder Seeds CoFS 29 and AMC	CoFS 29	-	Irrigated	10	1											
	Fodder Stem Cuttings	Marvel grass	-	Irrigated	10	1											
	Fodder Stem Cuttings	-	Hybrid Napier	Irrigated	10	1											
Plantation																	
	Neem cake-2kg per tree, French bean seeds-10kg/ acre, COC- 10g per lit water, Hexoconazole -3 ml per 125ml water in Arecanut	Local	-	Irrigated	05	1	11.7	10.10	10.90	9.40	15.90	250600	168250	3.04	197850	124100	2.68
Fibre																	

Others Value Addition																	
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
Foxtail millet	Demonstration of Foxtail millet Variety DHFt 109-3 for Value Addition	DHFt 109-3 fo	-	Rainfed	10	4											

* 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**
Aerobic Paddy - Plant Height (cm) Root length (cm)	137 27.3	121 22.9
Ragi- Plant Height (cm)	123	104
French bean -Plant Height (cm) Root length (cm)	63.7 16.1	42.9 12.3
Chilli -No. of fruits /plant	210	193
French bean- No. of pods /plant	35.60	28.80
China Aster-No. of Flowers /plant	43.10	32.90

Pomegranate – Wilt (%) Leaf Blight (%)	1.6 17.7	7.3 62.2
Arecanut - Anabe roga (%)	2	4
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	Name of the parameter with unit	Yield (kg/animal)				% Increase	*Economics of demonstration Rs./unit)			*Economics of check (Rs./unit)		
						Demo			Check if any		Gross Return	Net Return	** BCR	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)	Name of the parameter with unit	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./unit)			*Economics of check (Rs./unit)		
						Demo			Check if any		Gross Return	Net Return	** BCR	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}	Name of the parameter with unit	Yield				% Increase	*Economics of demonstration (Rs./unit) or (Rs./m2)			*Economics of check (Rs./unit) or (Rs./m2)		
						Demo			Check if any		Gross Return	Net Return	** BCR	Gross Return	Net Return	** BCR
						H	L	A								
Oyster mushroom																
Button mushroom																
Vermicompost																
Sericulture																
Apiculture																
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., 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	Name of the operation with unit	Labour requirement in Mandays		% save	Savings in labour (Rs./ha)	*Economics of demonstration (Rs./ha)			*Economics of check (Rs./ha)		
						Demo	Check			Gross Return	Net Return	** BCR	Gross Return	Net Return	** BCR

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

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

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

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

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	04	437	
2	Farmers Training			
3	Media coverage	04	-	
4	Training for extension functionaries	-	-	
5	Others (Please specify)	-	-	

PART VI – DEMONSTRATIONS ON CROP HYBRIDS(2019)

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 Return	Net Return	** BCR	Gross Return	Net Return	** BCR
					H	L	A								
Cereals															
Bajra															
Maize	Integrated Pest and Disease Management in Maize	MAH 14-5	05	1	79.84	76.89	78.84	73.98	6.56	138758	74258	2.15	130205	61605	1.90
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)															
Chilli	ICM in Chilli	Arka Harita	05	1	231.20	218.60	224.90	177.50	26.70	269880	211940	4.65	213000	157080	3.8
Bhendi	Integrated Pest and Disease Management in Bhendi	Arka Nikita	05	2	225.20	184.00	206.62	178.84	15.53	206620	126060	2.56	178840	92276.00	2.07
Total															
Cucumber															
Tomato															
Brinjal															

Okra															
Onion															
Potato															
Field bean															
Others (pl.specify)															
Total															
Commercial crops															
Sugarcane															
Coconut															
Others (pl.specify)															
Total															
Fodder crops															
Maize (Fodder)															
Sorghum (Fodder)															
Others (pl.specify)															
Total			15	4	536.24	479.49	510.36	430.32	48.79	615258	412258	9.36	522045	310961	7.77

H-High L-Low, A-Average

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

PART VII. TRAINING(2019)

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	2	17	53	0	0	0	0	17	53	70
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)										
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)										
Improved Vegetable Cultivation	1	22	0	6	0	0	0	22	0	22
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										

Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
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	1	25	0	3	0	4	0	25	4	29
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management										
Integrated water management										
Integrated nutrient management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
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)										
Improved Animal Husbandry Practices	1	80	22	0	0	0	0	80	22	102
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
Processing and Value Addition & Awareness on Nutrition Garden	1	0	20	0	0	0	0	0	20	20
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management										
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (pl.specify)										
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										

Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production										
Apiculture										
Others (pl.specify)										
CapacityBuilding and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths	1	17	3	0	0	0	0	17	3	20
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	**7**	**161**	**98**	**9**	**0**	**4**	**0**	**161**	**102**	**263**

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	1	23	0	2	2	0	0	25	0	25
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management										
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify)										
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	1	25	0	5	0	2	0	25	2	27
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	2	50	0	20	0	6	0	50	6	56
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
Commercial Floriculture	1	15	0	0	0	0	0	15	0	15
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	1	32	11	5	0	2	0	32	13	45
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management										
Integrated water management										
Integrated nutrient management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
Land Resurce Inventory	20	573	122	13	7	4	2	580	126	706
Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology										
Production of quality animal products										
Others (pl.specify)										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										

Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management	1	38	13	5	2	1	1	40	14	54
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (pl.specify)										
Integrated Pest and Disease Management	3	46	8	8	1	21	4	47	29	76
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										

Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production										
Apiculture										
Others (pl.specify)										
CapacityBuilding and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	**30**	**802**	**154**	**58**	**12**	**36**	**7**	**814**	**190**	**1004**

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

Area of training	**No. of Courses**	**No. of Participants**								
		General			**SC/ST**			**Grand Total**		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										

Mushroom Production	2	20	7	2	2	2	0	22	9	31
Bee-keeping	2	50	17	0	0	0	0	50	17	67
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	**4**	**70**	**24**	**2**	**2**	**2**	**0**	**72**	**26**	**98**

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

Area of training	**No. of Courses**	**No. of Participants**								
		General			**SC/ST**			**Grand Total**		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production										

Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
TOTAL										

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
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)										
Processing and Value Addition & Awareness on Nutrition Garden	1	0	20	0	0	0	0	0	20	20
Management of young plants/orchards	1	126	0	0	0	0	0	126	0	126
Drought Proofing methodologies	1	30	10	0	0	0	0	30	10	40
Household food security by kitchen gardening and nutrition gardening	1	20	20	0	0	0	0	20	20	40
Total	**4**	**176**	**50**	**0**	**0**	**0**	**0**	**176**	**50**	**226**

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

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

7.G. Sponsored training programmes conducted

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Increasing production and productivity of crops										
1.b.	Commercial production of vegetables										
2	**Production and value addition**										
2.a.	Fruit Plants										
2.b.	Ornamental plants										

2.c.	Spices crops										
3.	**Soil health and fertility management**										
4	**Production of Inputs at site**										
5	**Methods of protective cultivation**										
6	**Others (pl.specify)**										
7	**Post harvest technology and value addition**										
7.a.	Processing and value addition										
7.b.	Others (pl.specify)										
8	**Farm machinery**										
8.a.	Farm machinery, tools and implements										
8.b.	Others (pl.specify)										
9.	**Livestock and fisheries**										
10	**Livestock production and management**										
10.a.	Animal Nutrition Management										
10.b.	Animal Disease Management										
10.c	Fisheries Nutrition										
10.d	Fisheries Management										
10.e.	Others (pl.specify)										
11.	**Home Science**										
11.a.	Household nutritional security										
11.b.	Economic empowerment of women										
11.c.	Drudgery reduction of women										
11.d.	Others (pl.specify)										
12	**Agricultural Extension**										
12.a.	CapacityBuilding and Group Dynamics										
12.b.	Others (pl.specify)										
	Total										

Details of sponsoring agencies involved

1.
2.
3.

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

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Commercial floriculture										
1.b.	Commercial fruit production										
1.c.	Commercial vegetable production										
1.d.	Integrated crop management										
1.e.	Organic farming										
1.f.	Others (pl.specify)										
2	**Post harvest technology and value addition**										
2.a.	Value addition										
2.b.	Others (pl.specify)										
3.	**Livestock and fisheries**										
3.a.	Dairy farming										
3.b.	Composite fish culture										
3.c.	Sheep and goat rearing										
3.d.	Piggery										
3.e.	Poultry farming										
3.f.	Others (pl.specify)										
4.	**Income generation activities**										
4.a.	Vermi-composting										
4.b.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.										
4.c.	Repair and maintenance of farm machinery and implements										
4.d.	Rural Crafts										
4.e.	Seed production										

4.f.	Sericulture										
4.g.	Mushroom cultivation										
4.h.	Nursery, grafting etc.										
4.i.	Tailoring, stitching, embroidery, dying etc.										
4.j.	Agril. para-workers, para-vet training										
4.k.	Others (pl.specify)										
5	**Agricultural Extension**										
5.a.	Capacity building and group dynamics										
5.b.	Others (pl.specify)										
	Grand Total										

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

S. No.	Name of Job Role	Date of Start	Date of Close	Total Participants	No. of Participants									Date of Assessment	No of Participants passed assessment
					General			SC/ST			Grand Total				
					Male	Female	Total	Male	Female	Total	Male	Female	Total		
1	Mango grower	21.01.2019	14.02.2019	20	13	02	15	05	0	05	18	02	20	27.03.2019	16
2.	Friends of Coconut tree (FOCT)	21.01.2019	14.02.2019	20	17	0	17	03	0	03	20	0	20	26.03.2019	20

PART VIII – EXTENSION ACTIVITIES(2019)

8.1. 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	3	700	150	850	210	120	330	35	12	47
Kisan Mela	8	24549	9038	33587	2000	200	2200	1292	155	1447
Kisan Ghosthi	3	487	142	629	0	0	0	27	4	31
Exhibition	5	1598	447	2045	6	8	14	51	20	71
Film Show										
Method Demonstrations	3	6	3	9	1	1	2	0	0	0
Farmers Seminar	4	152	43	195	0	0	0	7	14	21
Workshop										
Group meetings	3	45	5	50	5	1	6	7	2	9
Lectures delivered as resource persons	13	2966	996	3962	25	33	58	130	63	193
Newspaper coverage	10	-	-	-	-	-	-	-	-	-
Radio talks	2	-	-	-	-	-	-	-	-	-
TV talks	3	-	-	-	-	-	-	-	-	-
Popular articles										
Extension Literature										
Advisory Services	53	2794	530	3324	186	134	320	285	155	440
Scientific visit to farmers field	42	156	31	187	55	24	79	7	4	11
Farmers visit to KVK										
Diagnostic visits	36	110	19	129	12	3	15	13	5	18
Exposure visits										
Ex-trainees Sammelan										
Soil health Camp										
Animal Health Camp										
Agri mobile clinic										
Soil test campaigns										
Farm Science Club Conveners meet										
Self Help Group Conveners meetings										
Mahila Mandals Conveners meetings										
Celebration of important days (specify)	7	246	65	311	0	0	0	55	13	68
Any Other (Specify)										
Bimonthly Meeting	2	0	0	0	0	0	0	75	40	115
Total	**197**	**33809**	**11469**	**45278**	**2500**	**524**	**3024**	**1984**	**487**	**2471**

8.2 Special Extension Programmes

Nature of Extension Programme	Date(s) conducted	No. of farmers (General)			No. of farmers SC / ST			No.of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Jal Shakti Abhiyan	24.08.2019	600	150	750	0	0	0	10	6	16
	28.08.2019	600	200	800	0	0	0	10	4	14
Fertilizer Use Awareness Campaign	22.10.2019	102	38	140	0	0	0	0	0	0
National Animal Disease Control Programme	11.09.2019	78	20	98	0	0	0	15	5	20
Tree Plantation Campaign	17.09.2019	27	0	0	0	0	0	4	0	0
Any other, Pl.specify										

PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIAL (2019)

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	KMR-340	-	0.60	360	12
	Ragi	Indaf-7	-	9.0	36000	180
	Ragi	ML-365	-	4.79	19160	145
Millets	Brown top millet (Korale)	Local	-	1.83	10980	36
	Little Millet (Same)	Local	-	0.14	1120	3
Oilseeds						
	Mustard	Pusa-3	-	0.30	24	3
Pulses						
	Red gram	BRG-5	-	4.30	32475	91
Commercial crops						
Vegetables						
	Amaranthus	Arka Suguna	-	1.60	800	5
	Bottlegourd	Arka Bahar	-	0.22	22000	6
	Brinjal	Arka Sirish	-	0.028	3708	10
	Chilli	Arka Suphal	-	0.050	990	3
	Tomato	Arka Meghali	-	0.065	1300	5
	Coriander	Arka Isha	-	0.25	10000	30
	French Bean	Arka Suvidha	-	48.50	12125	50
	Okra	Arka Anamika	-	10.76	5380	25
	Onion	Arka Kalyan	-	87.85	105421	50
	Palak	Arka Anupama	-	69.50	27800	20
	Pumpkin	Arka Suryamukhi	-	6.45	6450	10
	Radish	Arka Nishanth	-	0.80	400	2
	Ridge gourd	Arka prasanna	-	0.32	32200	15
	Cow Pea	Arka Garima	-	0.48	12000	10
	Vegetable Seed Kit (Nos.)	Mixed	-	3823	573450	1911
Flower crops						
Spices						
Fodder crop seeds						
	Fodder Cowpea	COFC-8	-	0.17	4250	17
	Fodder Sorghum	COFS-29	-	0.11	5750	12
Fiber crops						
Forest Species						
Others (specify)						
	Sunhemp (Kg.)	Local	-	0.024	168	2
	Mucuna (Kg.)	Arka Ashwini	-	0.01	80	1
	Arecanut Seed Nuts (Loose) – Nos.	Hirehalli Tall	-	39520	197600	28
	Arecanut Seed Nuts (Degraded)	Hirehalli Tall	-	21.12	42240	1
	Arecanut Seed Nuts (Auction)	Hirehalli Tall	-	-	440050	1
	Coconut (Auction)	Tiptur Tall	-	-	65000	1
Total						

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						
Vegetable seedlings						
	Drumstick Seedlings	PKM-1	-	2642	39630	8
Fruits						
	Papaya Seedlings	Arka Prabhath	-	2942	35304	6
	Acidlime Seedlings	Local	-	113	4520	15
	Tamarind Seedlings	PKM-1	-	494	34580	28
	Amla Grafts	NA7	-	642	44940	27
	Guava Grafts	Allahabad Safed, Arka Mridula and Arka Kiran	-	3083	215810	34
	Jamun Seedlings	Dhupadala	-	5	350	2
	Jackfruit Seedlings	Chandra Halsu	-	17	680	8
	Lime Seedlings	Balaji	-	1309	52360	33
	Mango Grafts	Alphanso, Mallika& Dashahari	-	3590	251300	28
	Pomello Seedlings	Devanahalli Local	-	369	14760	42
	Custard Apple Seedlings	Balnagar	-	37	2590	12
	Lakshmana Phala Seedlings	Local	-	119	4760	41
	Rose Apple Seedlings	Local	-	64	1280	22
	Sapota Grafts	Cricket Ball	-	164	11480	13
	Fig Seedlings	Poona	-	5	100	2
	Cherry Seedlings	Local	-	5	100	2
	Guava Root Stock	Local	-	40	1600	5
	Jackfruit Root Stock	Local	-	800	32000	2
Ornamental plants						
Medicinal and Aromatic						
	Betelvine Cuttings	Hirehalli Local	-	1476	7140	3
Plantation						
	Coconut Seedlings	Tiptur Tall	-	125	10000	4
	Arecanut Seedlings	Hirehalli Tall	-	5281	211240	18
	Arecanut Sprouts	Hirehalli Tall	-	18870	188700	26
Spices						
Tuber						
Fodder crop saplings						
	Napier Grass Cuttings	Napier	-	200	200	4
	Guinea Grass Cuttings	Guinea	-	100	100	2
Forest Species						
Others(specify)						
	Jamoon Scions	Dhupadala	-	10	20	1
	Guava Scions	Allahabad Safed	-	120	240	2
	Amla Scions	NA-5	-	10	20	1
Total				**41632**	**1165804**	**391**

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	10.80	152180	270
	AMC Liquid (`00 ltrs)	50.64	1266000	844
Bio-pesticide				
	Neem Soap	41.52	1079520	1250
	Pongamia Soap	18.25	383250	360
	Sealer cum Healer	5.51	99180	13
	Arka Borer Control Formulation	1.20	21600	14
Bio-fungicide				
Bio Agents				
	Fruit Fly Traps (Nos.)	4633	92660	722
	Fruit Fly Lures (Nos.)	11518	230360	798
	Fruit Fly Trap Set (Nos.)	49	4900	11
Others (specify)				
Micro Nutrient Formulation	Banana Special	103.37	1550550	1292
	Vegetable Special	68.12	1021800	1135
	Mango Special	73.75	1106250	1229
	Citrus Special	34.34	515100	858
Home Care Products	Amla Candy (Nos.)	221	13260	125
	Amla Squash (Ltrs.)	114	14820	80
	Amla Peeling Powder (Kg.)	4	2000	2
	Ragi Malt (Nos.)	271	13550	120
	Mushroom Spawn	6.80	51000	25
	Mushroom (Kg.)	0.5	50	**1**
	Drumstick Powder (Kg.)	4	200	3
Total				

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				
Bullock	Hallikar	1	30000	1
Sheep	Bannur	3 (119 Kg.)	35700	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**	**65700**	**4**

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

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

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

Newsletter materials have been included in the KVK Website (www.iihrkvk.org), the number of hits in 2019 is 5596

(B) Literature developed/published

Item	Number
Research papers- International	
Research papers- National	
Technical reports	
Technical bulletins	1
Popular articles - English	
Popular articles – Local language	2
Extension literature	4
Others (Pl. specify)	
Book	1
Research Abstracts	7
TOTAL	**15**

10.B. Details of Electronic Media Produced

S. No.	Type of media	Title	Details
	CD / DVD	ICAR-KVK Hirehalli : A glance	Activities of KVK
	Mobile Apps	NIL	
	Social media groups with KVK as Admin	eHorticulture Whatsapp Group	Knowledge sharing and diagnosis of pest & disease based on images shared by farmers.
	Facebook account name	iihrkvk https://www.facebook.com/iihr.kvk	Dissemination of IIHR Technologies and KVK Updates and Activities
	Twitter	https://twitter.com/iihrkvk	Dissemination of IIHR Technologies and KVK Updates and Activities
	Instagram account name	kvkiihr	Dissemination of IIHR Technologies and KVK Updates and Activities

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. Success Story of an IFS farmer

Farmer Shri.Rudraiah is a 75 years old person involved in farming since 50 years. He resides in Chikkahalli village of Korategere taluk in Tumakuru District. He used to own 2 acre farm, in which he used to cultivate Arecanut, Coconut and Ragi (MR-6 variety). In the year 2017, the KVK staff advised him to go for Integrated Farming System (IFS). Based on their advise has taken another 1.5 acre land on lease. Presently, in the total area of 3.5 acres, he cultivates Arecanut and Coconut (1.5 acre) with banana as intercrop, China Aster (0.5 acre), Kakada Jasmine (0.25 acre), Ragi (1 acre) and Rose (0.25 acre). He has only one bore well as a source of irrigation to meet the water requirement of his entire land. He also maintains 2 cows (HF-16 ltrs per day and Jersy-6 ltrs per day) and 2 goats. Apart from following the cropping pattern suggested by the KVK, he also adopted new varieties and other technological products as given below.

He introduced Ragi ML-365 variety in place of MR-6 variety by which his yield increased from 22 qtl to 28 qtl per ha. As far as China aster is concerned, he introduced Arka Kamini variety as per the advice of KVK. He also applied Banana special (Micronutrient formulation) to his banana crop and realized better fruit yield. He applied Vegetable special to other minor vegetables that he cultivate for his consumption. Further, he used Neem soap, AMC liquid for the growth promotion and plant protection related applications of all the crops in his field.

Due to the intervention as mentioned above, his net income got almost doubled over a period of 3 years (2017-2020) as given below:

Details	Gross Cost (Rs.)	Gross Income (Rs.)	Net Income (Rs.)	BCR
Before Intervention	1,55,000	2,88,000	1,25,000	1.81
After Intervention	2,30,000	4,40,000	2,10,000	1.91

2. Innovative Groundnut Seed Grower: For doubling the farm income

Groundnut is an important oilseed crop grown in kharif /summer in Tumakuru district. The farmers of Pavagada taluk have been growing this crop for many years with available local variety (TMV-2), which are ungraded, having low vigour, viability and susceptible to many of the pests& diseases. In addition to this, most of the farmers are not following the recommended package of practices which reflects on the yield & quality of groundnut. TMV-2 variety is very much susceptible for leaf spot and leaf miner and suffers yield loss up to 33%.

The Krishi Vigyan Kendra,Hirehalli, Tumakuru introduced newly developed variety K-6, released from Agricultural Research Station, Kadri, Andhra Pradesh, during the year 2015-16 in the village(Karikyathanahalli) of Pavagada taluk under NMOOP programme. Front line demonstration along with local check were laid out with improved variety (K-6) by following full package of practices. This demonstration plot showed better plant population with good vigour, more number of pegs and pods per plant, drastic reduction in leaf spot and leaf minerincidence, compared to control plot. The plant population was 93% in demonstration plot with good vigour, while it was 86% with low vigour in the local check. There was a clear 21.70 % increase in yield over the check that is normally grown by the farmers in this area. The beneficiaries are happy, because they could raise their income by Rs. 24180/ha by the improved package of practice.

Over the years, farmers have expressed great satisfaction on the performance of this variety with respect to traits such as higher yield, higher shelling percentage, good quality fodder, high oil content which fetches higher price (Rs.5500/q).

Details of technology	**Yield (q/ha)**	**% increase in yield**	**Gross Cost in Rs.**	**Gross Returns in Rs.**	**Net Returns in Rs.**	**B:C ratio**
Check	8.84	21.70	22,984	39,757	16,773	1.73
Demo	10.70		23,970	48,150	24,180	2.00

One of our FLD FarmersMr.Thipperangappa S/o Eramuddapa, Karikyathanahalli village, Nidagallu hobli, Pavgada taluk,has grown one acre of groundnut K-6 variety and got 5.3 qtls yield in the year 2016-17. He was very much impressed about the crop

stand even during the drought hit vulnerable situation. He used the same seeds during the summer-2017 and produced 24 qtls seeds. He had given these seeds to 24 farmers during Kharif-2018. Likewise he is producing the seeds every year and supplying to the farmers. So far, he supplied the seeds to 89 farmers during the year 2019-20.

Now, this variety is spreading like wild fire and farmers are requesting KSDA to supply the seeds through Raiatha Samparka Kendras. It has already replaced 22.50 % of the existing TMV-2 variety.

3. Successful Entrepreneur: SmtDraksyayini, Ganjalgunte, MadugiriTq

Ragi is the main staple food consumed by majority of the people in South Karnataka as it is major source of dietary carbohydrates. This is comparable to rice with regard to protein and fat and is superior to rice and wheat with respect to mineral and micronutrient contents. In order to develop the value added food products based on ragi, that can able to enrich the nutritional value and also beneficial for good health is the current need for the wellbeing of the society.Value addition and helps in creating jobs and thus plays a crucial role in the economic progress in the rural areas. In view of this, demonstrations were undertaken to enhance the income of finger millet growing farmers by increasing productivity by using improved varieties and strengthening the capacity of farming community for processing,value addition and market linkage.

ICAR- KrishiVigyan Kendra (IIHR) Tumakuru-had conducted EDP programme on Processing, Value addition, Branding and Market linkagein Ragi. To enhance the income of finger millet growing farmers by increasing productivity and for strengthening the capacity of farming community for value addition and marketing of value added products, demonstration was undertaken on EDP mode during 2016-17. Initially Active women self-help groups are identified and a series of training programmes were arranged to give hand-on experience on preparation of Ragi products (Ragi Malt, Ragi mixtures, Ragiladdu, etc), quality control measures, labelling and marketing linkage of the products. This was demonstrated to two groups at Thovinakere of KoratagereTaluk and Ganjalagunte of madhugiritaluk under EDP programme of KVK.

The result of value added products from ragi showed that, groups received higher income compared to selling ragi as it is.There has been an increase in the interest of other group members to take up processing and value addition to ragi as an income generation and entrepreneurial activity. The benefit cost ratio of different value added products (Table 2) ranges from 1.55 to 1.66, here just by processing and value addition the profit margin is up to 1.66 times and demand for these products is also more.

Sl no	Products name	Cost/ kg	Qty produced in kg	Gross cost (Rs)	Gross income(Rs)	Net Income(Rs)	B:C Ratio
1	Ragi malt	200	200	18000	40000	22000	2.22
2	RagiLaddu	280	100	18000	28000	10000	1.55
3	Ragi Mixture	200	50	6000	10000	3500	1.66
4	Ragichakkali	180	100	11200	18000	3200	1.60

The value added products of Ragi were first commercialized by the SHGs during KrishiMelas, meetings, training progammesorganized by different government organizations and private organizations. Now they are preparing and giving to organic shops in Tumakuru as and when the order comes. 56 year old Smt. Drakshyinibelongs to Sharavati SHG group of Ganjalagunte village continuously involved in producing ragi malt. Till date she is able to produce 4-5 quintal of ragimalt and earning nearly Rs 8000-10,000/- every month. She started supplying to medical shops on order basis. Along with this she started producing Ragipapad and supplying during special occasions.

4. Successful Entrepreneur: Shri Ravish, Hosuru, Tumakurutaluk

Mushrooms are gradually becoming popular as they are rich in minerals, vitamins, very low on fat and sugar. They are good source of protein and contain many essential amino acids. It is also known to have medicinal value and certain varieties of mushrooms can inhibit growth at cancerous tumor. Leisure time can be utilized effectively by involving in mushroom cultivation enterprise. Mushroom production is labour and management intensive. The SHG's are in search of viable activities which are promising and giving good returns. Mushroom Production provides an excellent opportunity for viable economic activity as a source of income.

ICAR- KrishiVigyan Kendra (IIHR) Tumakuru-had conducted EDP programme on Oyster Mushroom production, Value Addition and Market linkage. To enhance the income of farmers, Demonstration was undertaken on EDP mode during 2018--19. Initially interested farmers/rural youth were identified and a training programmeon mushroom cultivation to give hand-on experience on production of mushroom, preparation of dried mushroom and its products,labelling and marketing linkage of the products. The result of this shown that mushroom production can be taken as income generation and entrepreneurial activity. Shri Ravish, 45 years old from Hosuru village, Guluruhobli, Tumakurutaluk, purchasing spawn from our KVK and producing oyster mushroom. He is producing nearly 150 to 200 kg oyster mushroom per batch(6-7 batch per year) and on an average he is getting additional income ofRs 8,000-10,000/. Along with this he is practicing organic farming and earning about 2-3 lakshs/year. Other source of income for his family is Honey bee keeping (Rs 35000-40,000/year) and from dairy sector (Rs 15,000-20,000/year).

Yield (gms)/Kg bag	Biological Efficiency (%)	Man hours (100 kg Production)	Production cost (Rs.)	Gross Income (Rs.)	Net income (Rs.)	BC Ratio
280	84.48	42	5,765	15,000	9,235	2.60

10.D. Give details of Innovative Methodology or Innovative Approach of Transfer of Technology developed and used during the year

1. **Direct sale of farmer produce :**
   Shri. Srinivas Reddy is a farmer from Madavarayanapalya village in Pavagada taluk, Tumakuru. He has been cultivating pomegranate in an area of 1 ha since 3 years. Last year KVK staff have advised him to take up organic farming methodologies that include application of Arka Microbial Consortium (AMC), Arka Actino plus, neem soap, etc. By following these practices, he was able to harvest about 35 tonnes of fruits in his field. In one of the meetings, he asked the support of KVK to sell his produces, as they are considered to be organic. KVK took up this challenge and started working on this process. Initially the sample of fruits from the farmers field were sent to pesticide referral lab of IIHR and the results were obtained that the residue level of objectionable chemicals were below the permissible limit. Later an effort was taken to sell his products directly to the consumers with organic tag. For this purpose help of the Director of IIHR was sought. He suggested to use the special vehicle designed by IIHR exclusively for this purpose. It is a vehicle with facilities like provision for keeping fruit crates, controlled humidity chambers, AV aids, etc. The farmer was asked to bring his products to KVK and later those produces were taken to IIHR to sell them directly to the staff IIHR and other visitors using the special vehicle. During December 2019, the sale process was organised at IIHR where in Director IIHR himself inaugurated the sale by buying first 1 kg of fruits from the farmer himself. Later, almost all the staff of IIHR and other visitors started buying the fruits from the farmer. This process continued for the 3 more days. Support was given at KVK as well by selling the fruits directly to the visitors and other department staff associated to KVK. By this process, the farmer was able sell 700 kg. of fruits @Rs.100/kg., getting a profit of Rs.70,000/-. Where in he sold the remaining fruits @Rs.60/Kg. in the local market. This is an example first of its kind where in the farmer was assisted not only to grow his crops using organic methods but also assisted to sell his products in an innovative manner using the special purpose vehicle of IIHR and also through KVK and other agricultural departments. The technologies like AMC, ACT, neem soap and sale vehicle developed by KVK and IIHR were used in this innovative manner to meet the needs of the farmer and the end consumer.

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

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK	Scientific Rationale

10 F. Technology Week celebration during 2019: 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 Practicals			
Supply of Literature (No.)			
Supply of Seed (q)			
Supply of Planting materials (No.)			
Bio Product supply (Kg)			
Bio Fertilizers (q)			
Supply of fingerlings			
Supply of Livestock specimen (No.)			
Total number of farmers visited the technology week			

10 E. Recognition and Awards: Please give details about National and State level recognition and awards

1. KVK was awarded with **Best NICRA KVK Award, 2019** in recognition and efforts in implementing the NICRA – Technology Demonstration component of ICAR by ICAR- Central Research Institute for Dry Land Agriculture, Hyderabad on 04.06.2019.

2. Dr. Loganandhan N, Prashanth J M and P R Ramesh, Scientists from ICAR- KVK Hirehalli werehonored with **VAMSHI PURSKAAR award 2019,** by Vamshi Academy of Music Trust, Rajajinagar, Bengaluru on 10.11.2019.

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 unit) with spare parts	1	1,79,879	Working
5	Shaker	1	45,800	Working
6	Refrigerator	1	40,200	Working
7	Oven	1	60,456	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
12	Glassware and miscellanies	-	99,258	-
13	Chemicals	-	1,34,465	-
Total			19,99,979	

B. Details of samples analyzed since establishment of SWTL:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages
Soil Samples	11,482	9,540	2,364
Water Samples	6,758	5,767	1,822
Plant samples	294	85	48
Manure samples	-	-	-
Others (specify)	-	-	-
Total	18,534	15,392	4,234

C. Details of samples analyzed during the 2019:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages
Soil Samples	1,853	1,312	1,021
Water Samples	695	628	583
Plant samples	63	51	32
Manure samples	-	-	-
Others (specify)	-	-	-
Total	2,611	1,991	1,636

11.2 Mobile Soil Testing Kit

A. Date of purchase and current status

Mobile Kits	Date of purchase	Current status
1.		
2.		

B. Details of soil samples analyzed during 2019 and since establishment with Mobile Soil Testing Kit:

	Progress during 2019	Cumulative progress
Samplesanalyzed (No.)	0	306
Farmers benefited (No.)	0	257
Villages covered (No.)	0	63

11.3 Details of soil health cards issued based on SWTL &Mobile Soil Testing Kit during 2019:

Particulars	Date (s)	Villages (No.)	Farmers (No.)	Samples analyzed (No.)	Soil health cards issued (No.)
SWTL	31.02.20	1,021	1,312	1,853	1,853
Mobile Soil Testing Kit		0	0	0	0

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	289	103	ZP-1, TP-1, GP-1	JDA, ADA, AO,	3	3

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)

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

1. e-Horticulture (Whatsapp Group): A quick solution for farmer on digital platform

Social media is a buzzword; rural areas are also making use of these platforms, perhaps, even in a more meaningful way. Such sites have also taken the fascination of farmers, who are ever eager to get hooked onto these sites for obtaining solutions to problems being faced by them. Perhaps a very few use such modern methods of information technology-Whatsapp such e-Horticulture Whatsapp group for dissemination of IIHR Technologies. eHorticulture has become another name for 'ready solution to the horticulture related problems faced by the farmers' from IIHR as well as State Agricultural University (SAU) and NGOs also. E-Horticulture experts have moved a step forward by effectively using social media sites like Facebook and WhatsApp for sharing information with progressive farmers, especially with the youth and entrepreneurs. E-Horticulture WhatsApp Group, has uploaded information regarding IIHR Technologies helped to solve the problem of farmers with low cost and eco-friendly technologies. This group is having a bounty of experts in the field of Horticulture and Agriculture. Who is doing yeomen service to the nation builders.

In the present day context of agriculture, farmers access to reliable, timely and relevant information has become very important. Farmers require access to more varied, multisource and context-specific information, related not only to best practices and technologies for crop production and weather, but also to inform about post harvest aspects, including processing, marketing, storage, and handling.

Mobile connectivity is a major boon towards reaching the farmers. Especially with recent advancement - the smart phones with WhatsApp is very useful in quickly responding to the specific problems faced and posted by the farmers on WhatsApp group like "e-Horticulture" where the group of experts with in no time respond to the problem posted by the farmer in the form of image or video or text. In the conventional extension tools, lot of time is required on the part of the extension functionary so as to reach the farmer.

Methodology

During the year 2015-16, e-Horticulture WhatsApp group was started by active 98 participants. Idea of whatsapp group found to be more useful, in providing quick solutions to farmer problem in digital form without much time by experts.Purposeful sampling is done and size of the respondent is 120 from the Whatsapp group *ie.*, e-Horticulture in which Smart Farmers, ADG, Retd. Professor and Principal Scientist, Senior Scientist, Scientist,Professor, Assoc. Professor, Asst. Professor , SMS and Techno-agents.

Table: 1 Profile of the Whatsapp Group "e-Horticulture"

Sl.No.	Particulars Age (Years)	No.of Scientist,Farmers and Techno Agents	Percentage
1.	20-30	30	25.0
2.	31 – 40	21	17.5
3.	41-50	32	26.6
4	50 and above	37	30.8
Educational Status			
1.	Primary educated	16	13.3
2.	Secondary Education	38	31.6
3.	Graduation	45	37.5
4.	Post-Graduation and above	21	17.5

Smart Farmers, ADG, Retd. Professor and Principal Scientist, Senior Scientist, Scientist, Professor, Assoc. Professor, Asst. Professor , SMS and Techno-agents

Today 165 participants are there in the e-Horticulture Whatsapp goup. In which 30.8 per cent fall in the age group of 50 and above. 26.6 per cent in the age group of 41 to 50. 25 per cent of the participants in the age group of 20 to 30 and 17.5 per cent of participants in between 31 to 40 Years. The group is having experienced experts in the field of Horticulture with highly qualified ie., Post – Graduation and above education from National and International renowned Universities.

Table:2 Findings and Discussion - Whatsapp Group "e-Horticulture"

Sl.No.	Particulars Age (Years)	No.of Scientist,Farmers and Techno Agents	Active	Observers	Left the Group or (Removed)
1.	20-30	30	32	65	2 (5)
2.	31-40	21	68	32	-
3.	41-50	32	64	35	1
4.	50 and above	37	75	25	-
Educational Status					
1.	Primary educated	16	13.3		
2.	Secondary Education	38	31.6		
3.	Graduation	45	37.5		
4.	Post Graduation and above	21	17.5		

Smart Farmers, ADG, Retd. Professor and Principal Scientist, Senior Scientist, Scientist, Professor, Assoc. Professor, Asst. Professor , SMS and Techno-agents

It is found that 50 and above age group is having 75 per cent active and 25 per cent observers and providing quick reply to the post at eHorticulture Whatsapp. 31 to 40 age group is having 68 per cent active participants and 32 per cent observers. Similarly 20 to 40 age group is having 32 per cent active participants and 65 per cent observers they are smart farmers who is looking for reliable information from the experts.

Table: 3 Problem Address by "e-Horticulture" Group

Sl.No.	Item	Percentage	Ranking
1.	New crop production & nursery techniques	69.2	4
2.	Quality Inputs availability	62.5	5
3.	Water management	34.2	8
4.	Pest and disease management	100	1
5.	Soil and Nutrient management	80	2
6.	Weather information	78.3	3
7.	Mechanization in agriculture	46.7	7
8.	Marketing information	59.16	6

Problem addressed by the e-Horticulture Whatsapp group were categories and given ranking based on the enquiry posted on digital plot form of whatsapp. It is found pest and disease management is given 1st rank followed by soil and nutrient management 2nd rank, weather information 3rd rank and water management was given 8th rank. It is understood that pest and disease is given highest importance by the smart farmers and least importance given to water management. Field problems are many but digital platform is helpful only in a few cases which needs quick attention by the farmers.

Conclusion:

WhatsApp is very useful in quickly responding to the specific problems faced and posted by the farmers on WhatsApp group like "eHorticulture" where the group of experts with in no time respond to the problem posted by the farmer in the form of image or video or text.

- A majority of them were having smart phone with internet connection have Whatsapp
- Active in receiving farm related information through mobile phones updated knowledge and achieved.
- High literacy and possession of smart mobile phones can be tapped by KVKs to disseminate technologies
- IIHR KVK started e-Horticulture Whatsapp Group to reach the unreach and share the information by learning

2. Areca leaf based products: A successful case of market led extension among rural youth

Areca Palm (Areca catechu) is one of the major plantation crops of India. Among the states, Karnataka stands first with an area of 2.18 lakhs ha (62.69%). Among Karntaka, Tumakuru stands at fifth place with an area of 32,341 ha. Though Areca palm is known for its nuts, other products are also having their economic value. Especially the areca leaves are getting more demand nowadays, thanks to the recent ban on plastics in few states. But using the leaves for making products like plates and bowls has been in practice for quite some time. Sensing the present opportunity, ICAR-KVK, Hirehalli, Tumakuru has initiated a series of capacity building programmes way back in 2016-17.

Lack of opportunities for rural youth for income generation were discussed in many extension forums during 2015-16. Mushroom production, Bee keeping, Areca plate making were some of the areas that were considered to play vital role in this space. Accordingly, capacity building programmes were initiated at KVK level. Unlike other training programmes, decisions were made to provide post training hand holding support to the participants. Among these activities, capacity building programmes conducted on Areca leaf plate making happened to be more successful ones, making many rural youth entrepreneurs and paved ways for their employment and income generation.

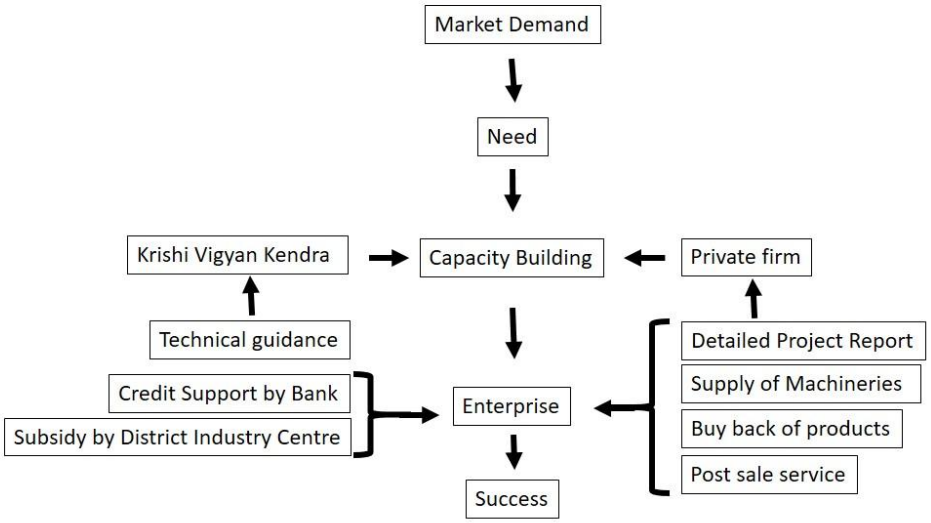
Market led extension

Market led extension approach deals with adequate supply of information by SWOT analysis of the market, establishing market and agro processing linkages, direct marketing, and capacity building in terms of improved production and post-harvest operations such as proper handling, grading, standardizing, value addition, packaging as well as storage and transport system (Ahmad Nafees and Slathia, 2011). Market led agriculture is defined as a market ward orientation of agriculture through extension by reaching farming community at their door steps along with appropriate technology (Gummagolmath, 2016). Establishing marketing and agro-processing linkages between farmers' groups, markets and private processors was presumed as one of the important roles of Agricultural Extension personnel.

During last six decades, emphasis was given on Production Led Extension (PLE). India became self-reliant on food production but the farmers at individual level are not realizing remunerative prices for their produce. They prone to sell their produce "As is where". Farmers need to transform themselves from producers to producers cum sellers(MANAGE, 2014).

When these capacity building programmes were designed, these conceptswere kept in mind by the KVK team. As far as areca plate making units were concerned, the demand was high for areca leaf based products in the market. Infact, the areca plantations of Tumakuru were known for their quality leaves, unlike other prominent areca growing districts of Karnataka. Since there was availability of quality materials and the demand for the finished goods as well, it was found to be an apt scenario to promote this enterprise as a market led extension model. A conceptual model, as given below, was designed to promote this venture among rural youth.

Conceptual frame work-market led extension in Areca plate enterprise



Methodology

During the year 2016-17, about 4 training programmes were organized at KVK, covering 121 participants. Among them 90 participants took up the trainings seriously, enquiring for further assistance to start the business. Further follow-up and guidance were given to them in terms of DPR (Detailed Project Report), guidance to reach banks and District Industries Centre for availing subsidy. Among them,21 participants utilized these services and started their units.Among them, ten have emerged as successful entrepreneurs.

Given below are the details of training programesorganized during 2016-17.

Particulars	**Details**
Duration	One day
Course fee	Rs.100/day/person
Contents	Production of plates and bowls from area leaves
Course materials provided	Detailed Project Report (DPR), Certificates
Number of trainings organized	Four
Total number of participants	121

For this purpose,an NGO called UttamSeva Trust and its subsidiary firm Deepam Eco Green, Chennai was involved. Proper approval from the Director, ICAR-IIHR was taken to work in collaboration with this NGO (On Public Private Partnership mode) in spearheading this activity.

A technology found to be more useful, would spread fast on its own without much time and extension support. This has happened in this case as well, to some extent. As there has been increase in the demand for ecological products, post plastic ban in few states, areca leaf products were also found themselvesin much need. Hence, apart from farmers, some of the entrepreneurs, IT employees as well, approached the Deepam Eco Green. Incidentally,Deepam Eco Green also played a role inproviding machineries and buying the finished goods back at the best market price. Some of the entrepreneurs, taking guidance from KVK, directly approached the firm and initiated their units.

An analysis was done with the 21 participants who initiated the enterprises. Given below are the details of the results on that analysis.

Particulars	**Numbers**	**Percentage**
Education Qualification		
Up to SSLC	5	23.8
PUC & Diploma	6	28.5
Degree	10	47.6
Bank support received		
Private Banks	3	14.2
Nationalized Banks	13	61.9
Own fund	5	23.8
Employment Generation		
Self + Up to 5 Nos. employees	18	85.7
More than 6 employees	03	14.2
Problems being faced		
Non-availability of raw materials	13	61.9
Labor shortage	18	85.7
High rental charges	7	33.3
Loan related formalities	7	33.3
Use of Areca plate waste		
Burning	2	9.5
Compost	8	38.1
Fodder Purpose	7	33.3
Mulching	6	28.5
Role played by KVK		
Training	14	66.6
Guidance	1	4.7
Training and Handholding (Guidance)	6	28.5

This approachwas found to be a successful one for the farmers and other entrepreneurs for developing their enterprises. Following this model, many such trainees developed their business and ten among them emerged as successful entrepreneurs. Given below are the brief notes of economicbenefits that two of those ten entrepreneurs, gained during their ventures.

Case 1: Sri. Yathisha B N

Name of the company	**Basaveshwara Areca Plates**
Date of opening the company	**14/10/2018**
Cost of Project	**Amount (Rs.)**
Shed	3,00,000
Machinery Cost	4,10,000
Equipment	30,000
Working Capital	40,000
Power Sanction	42,000
Miscellaneous	35,000
Total	**8,57,000**
Means of Finance	**Amount (Rs.)**
Bank Loan	2,00,000
Own Contribution	6,57,000
Pay Back Period	3 years
Interest	10.45%
Employees	04
Major Raw Materials	Areca Palm Leaf and Packing materials
Power Requirement	08 HP
Estimated Annual Sales Turnover	**Rs.9,50,000**
Fixed Expenditure	**Amount (Rs.)**
Salary	24,000
Food	2,000
Electricity Bill	6,000
Raw Materials	45,000
Miscellaneous	1,000
Loan Repayment (EMI)	4,250
Total	**82,250**
Variable Expenditure	**Amount (Rs.)**
Transport	2,500
Telephone	200
Administration	700
Total	**3,700**
Total Monthly Expenditure	**85,950**

Production Details					
Daily Production (One day - Single Shift)					
Size	**12 Inch Plate**	**10 Inch Plate**	**5 Inch Bowl**	**4 Inch Bowl**	**Total**
Rate per unit (Rs.)	3.2	2.2	0.80	0.80	
Total Unit (No.)	500	500	250	250	1,500
Total money earned (Rs.)	1,600	1,100	200	200	3,100
Monthly Production (26 days - Single Shift)					
Size	**12 Inch Plate**	**10 Inch Plate**	**5 Inch Bowl**	**4 Inch Bowl**	**Total**
Rate per unit (Rs.)	3.2	2.2	0.80	0.80	
Total Unit (No.)	13,000	13,000	6,500	6,500	39,000
Total money earned (Rs.)	41,600	28,600	5,200	5,200	80,600
Yearly Production (312 days - Single Shift)					
Size	**12 Inch Plate**	**10 Inch Plate**	**5 Inch Bowl**	**4 Inch Bowl**	**Total**
Rate per unit (Rs.)	3.2	2.2	0.80	0.80	
Total Unit (No.)	1,56,000	1,56,000	78,000	78,000	4,68,000
Total money earned (Rs.)	4,99,200	3,43,200	62,400	62,400	9,67,200
Sale Details					
Monthly Sales (12 hour per day)		**Units (No.)**		**Total Revenue (Rs.)**	

	58,500	1,20,900
Yearly Sales (12 hour per day)	**Units (No.)**	**Total Revenue (Rs.)**
	7,02,000	14,50,800
Profit Analysis	**Amount (Rs.)**	
TotalMonthly Expenditure	85,950	
Total Monthly Sales Revenue	1,20,900	
Profit - Monthly	34,950	
Profit - Yearly	4,19,400	

Case 2: Sri. Suresh N Gowda

Name of the company	**ShishirAgrotech**
Date of opening the company	**17/04/2018**
Cost of Project	**Amount (Rs.)**
Shed	Own
Machinery Cost	5,25,000
Equipment	13,000
Working Capital	50,000
Power Sanction	60,000
Miscellaneous	50,000
Total	**6,98,000**
Means of Finance	**Amount (Rs.)**
Bank Loan	4,20,000
Subsidy	1,50,000
Own Contribution	1,28,000
Pay Back Period	3 years
Interest	10.45%
Employees	5
Major Raw Materials	Areca Palm Leaf and Packing materials
Power Requirement	10HP
Estimated Annual Sales Turnover	**10,00,000**
Fixed Expenditure	**Amount (Rs.)**
Salary	28,000
Food	7,500
Electricity Bill	7,000
Raw Materials	46,800
Miscellaneous	2,000
Loan Repayment (EMI)	9,976
Total	**1,01,276**
Variable Expenditure	**Amount (Rs.)**
Transport	2,000
Telephone	1,000
Administration	2,000
Total	**5,000**
Total Monthly Expenditure	**1,06,276**

Production Details					
Daily Production (One day - Single Shift)					
Size	**12 Inch Plate**	**10 Inch Plate**	**6 Inch Bowl**	**5 Inch Bowl**	**Total**
Rate per unit (Rs.)	3.2	2.2	0.9	0.75	
Total Unit (No.)	500	500	250	250	1,500
Total money earned (Rs.)	1,600	1,100	225	188	3,113
Monthly Production (26 days - Single Shift)					
Size	**12 Inch Plate**	**10 Inch Plate**	**6 Inch Bowl**	**5 Inch Bowl**	**Total**
Rate per unit (Rs.)	3.2	2.2	0.9	0.75	
Total Unit (No.)	13,000	13,000	6,500	6,500	39,000
Total money	41,600	28,600	5,850	4,875	80,925

earned (Rs.)					
Yearly Production (312 days - Single Shift)					
Size	**12 Inch Plate**	**10 Inch Plate**	**6 Inch Bowl**	**5 Inch Bowl**	**Total**
Rate per unit (Rs.)	3.2	2.2	0.9	0.75	
Total Unit (No.)	1,56,000	1,56,000	78,000	78,000	4,68,000
Total money earned (Rs.)	4,99,200	3,43,200	70,200	58,500	9,71,100
Sale Details					
Monthly Sales (12 hour per day)		**Units (No.)**		**Total Revenue (Rs.)**	
		78,000		1,61,850	
Yearly Sales (12 hour per day)		**Units (No.)**		**Total Revenue (Rs.)**	
		9,36,000		19,42,200	
Profit Analysis		**Amount (Rs.)**			
Total Monthly Expenditure		1,06,276			
Total Monthly Sales Revenue		1,61,850			
Profit - Monthly		55,574			
Profit - Yearly		6,66,888			

Conclusion:

Areca plate based enterprise has been accepted by the farmers and youth as a successful enterprise. The experience of KVK showed that if proper hand holding support is given, apart from mere training, there is a great scope to promote this as a good business model under market led extension. Further, roles played by the private firm, banks and district industry center were also worth to be mentioned. By putting some extra effort, an entrepreneur can earn an average of Rs.40,000 per month as an additional income in this enterprise. Further, this venture helped the adjacent farmers also to earn some additional income by selling their leaves, which otherwise would go as waste. In addition, the waste that remained after making the leaves were also used for other useful purposes like animal feed, mulching etc. Hence, this model can be considered by the policy makers to promote as a successful enterprisethat caters to both economic and ecological needs in rural regions.

References:

1. Ahmad Nafees and Slathia, 2011, Market Led Extension for Promoting Rural Entrepreneurship in India. Journal of Global Communication. 4(2) pp. 143-147
2. Gummagolmath, 2016, Market led Extension, In: Study material, Diploma in Agricultural Extension Services for Input Dealers (DAESI), NATIONAL INSTITUTE OF AGRICULTURAL EXTENSION MANAGEMENT (MANAGE), Hyderabad – 500030,pp.413.
3. MANAGE (National Institute of Agricultural Extension Management), 2014,(https://www.manage.gov.in/studymaterial/MLE-E.pdf),pp: 10.

PART XIII - LINKAGES

13A. Functional linkage with different organizations

Name of organization	**Nature of linkage**
ICAR-CRIDA, Hyderabad	Technology demonstration Component of NICRA and Conservation Agriculture projects
Zilla Panchayat, Tumakuru	Bhoosamruddhi Scheme
State Department of Horticulture	Trainings, FLDs, Joint Diagnostic Survey, Terrace Gardening, Exhibition, Advisories, Comprehensive Horticultural Development programme etc.
State Department of Agriculture	Trainings, FLDs, Joint Diagnostic Survey, Krishi Abhiyana, ATMA SREP programme, Demonstration, DATC Training, Exhibition, Organic and Millet Melas, Krishi Melas, Farmers Days and Advisories.
Department of Animal Husbandry and Fisheries	Trainings, FMD Awareness Programme, Exhibition etc.,

Department of Sericulture	Trainings, Exhibition, Demonstration etc.,
Department of Women and Child Development	Trainings and Kitchen Gardening
BAIF NGO, Tiptur	Trainings and Technical Information
ORDER NGO, Tumakuru	Trainings, FLD's, Technical Information and FPOs support
AWARE NGO, Tumakuru	Trainings on Roof garden
APART NGO, Tumakuru	Organic Farming and Group Approach
MOTHER NGO, Tumakuru	Seed Village Concept, FPO support
UAS, Bengaluru	Trainings and FLDs by Technology Backstopping
UAS, Dharwad	Trainings and FLDs by Technology Backstopping
UHS, Bagalkote	Trainings and FLDs by Technology Backstopping
ICAR-NIANP, Bengaluru	Trainings and for Technology Backstopping
SKRDP, Tumakuru district	Trainings, FPOs
DHAN Foundation NGO	Trainings, Walkathon, Bhoosamruddi scheme programmes
AVISHKAR NGO, Tumakuru	Trainings, FPOs
IDF NGO, Tumakuru	Trainings, FPOs
Uttam Grama Seva Trust, Chennai	Training on Areca leaf plate making
Directorate of Oilseeds Development, Hyderabad	NMOOP project – Groundnut and Castor
Directorate of Pulses Development, Bhopal	NFSM project- Redgram
National Horticulture Mission	Atomic absorption spectroscopy (AAS) and Mushroom Unit
NABARD, Tumakuru	AMC Unit – Production of Arka Microbial Consortium

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

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	ICAR-CRIDA, Hyderabad	850000
National Food Security Mission (NFSM)	April 2019	DOP Kanpur	270000
National Mission on Oil Seed and Oil Palm (NMOOP)	April 2019	DOOR Hyderabad	560000

13C. Details of linkage with ATMA

Coordination activities between KVK and ATMA - NIL

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	Meetings				
02	Research projects				
03	Training programmes				
04	Demonstrations				

05	**Extension Programmes**				
	Kisan Mela				
	Technology Week				
	Exposure visit				
	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		
January	Text	5	0	0	0	3	0	8	1791
February	Text	3	0	0	1	4	0	8	1800
March	Text	4	0	0	1	3	0	8	1932
April	Text	5	0	0	0	2	0	7	1932
May	Text	4	0	0	0	4	0	8	1793
June	Text	4	0	0	0	4	0	8	1932
July	Text	3	0	0	0	3	0	6	1934
August	Text	5	0	0	0	3	0	8	1938
September	Text	3	0	0	0	3	0	6	1939
October	Text	2	0	0	0	1	0	3	1943
November	Text	2	0	0	0	1	0	3	1943
December	Text	1	0	0	0	0	0	1	1943
Total		**41**	**0**	**0**	**2**	**31**	**0**	**74**	**22820**

PART XIV- PERFORMANCE OF INFRASTRUCTURE IN KVK

14A. Performance of demonstration units (other than instructional farm)

Sl. No.	Demo Unit	Year of establishment	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
									-
1	Organic Nutrition Garden	2019	0.1	Arka Samrat	Tomato	80	1,542	2,650	
				Arka Garima	Cowpea	30			
				Arka Anupama	Palak	25			
				Arka Anand	Brinjal	55			
				Arka Suguna	Amaranthus	22			
				Arka Suvidha	French bean	24			
				Coriander leaves	Coriander	15			
				Pudina	Pudina	60			
				Arka Anamika	Okra	35			

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									
Pulses									
Oilseeds									
Mustard	18.08.19	22.11.19	0.1	Pusa 30	Seeds	30	2100	3000	
Fibers									

Spices & Plantation crops									
Areca nut		-	0	Hirehalli Tall	Seedlings	5281		2,11,240	
					Sprouts	18870		188700	
Coconut		-	0	ArsikereTall	Seedlings	125		10000	
Fruits									
Mango	-	-	0	Alphanso,	Seedlings	3590		2,51,300	
Guava	-	-	0	AS, Pink flesh, L-49	Seedlings	3083		2,15,810	
Lime	-	-	0	Kagzi	Seedlings	1309		52360	
Papaya Seedlings	-	-	0	Arkaprabhat	Seedlings	2942		35304	
Others seedlings	-	-	0	Rose apple, Fig, Ramphal, Custard apple Betel vine	Seedlings	1461		43830	
				Napier Grass	Cuttings	200		200	
				Guinea Grass	Cuttings	100		100	
Vegetables									
Drumstick	-	-	0	PKM-1	Seedlings	2642		39630	
Chilli									
Amaranthus	12.08.19	26.11.19	0.1	Arka Suguna	seeds	1.60	1,250	3,500	
Palak	11.08.19	15.11.19	0.2	Arka Anupama	Seeds	69.59	18200	27800	
Brinjal	15.07.19	25.10.19	0.1	Arka Shirish	Seeds	2.8	2080	3708	
Onion	16.05.19	17.01.20	0.4	Arka Kalyan		87.85	35240	105421	
French Bean	05.12.18	24.03.19	0.2	A Suvidha		48.50	7850	12125	
Bottle gourd	18.08.19	14.12.19	0.2	Arka Bahar	Seeds	22	7000	22000	
Corinader	18.08.19	08.10.19	0.2	Arka Isha	Seeds	25	5500	10000	
Veg Seed kit (No.)	-	-	0	10 different vegetables		3823	465875	573450	
Others (specify)									

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

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1	Banana Special	10337	1188755	1550550	
2	Vegetable Special	6812	783380	1021800	
3	Mango Special	7375	845125	1106250	
4	Citrus Special	3434	394910	515100	
6	AMC powder	1087	119570	152180	
7	AMC liquid (**Ltrs.**)	5064	1038120	1266000	
8	Pheromone traps (**Nos.**)	16396	262336	327920	
9	Neem Soap	4152	497912	1079520	

10	Pongamia Soap	1825	232451	383250	
11	Sealer cum Healer	551	82562	99180	
12	Arka Borer Control Formulation	120	58290	21600	

14D. Performance of instructional farm (livestock and fisheries production)

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1	Sheep	Bannuru	Meat (Whole weight)	119 kg	28050	35700	
2.	Bull	Hallikar	Field Work	01 no.	25405	30000	

14E. Utilization of hostel facilities

Accommodation available (No. of beds) - **20**

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
January	47	2	
February	0	0	
March	43	2	
April	18	9	
May	35	2	
June	29	4	
July	69	12	
August	41	8	
September	40	2	
October	20	1	
November	58	2	
December	135	3	

14F. Database management - NIL

S.No	Database target	Database created

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 –SPECIAL PROGRAMMES

15.1 Paramparagath Krishi Vikas Yojana (PKVY)- NIL

Sl No.	Name of cluster village	Initial soil fertility status (Average of cluster village)				Facilities created for organic source of manure	Name of Crops cultivated	Variety	Organic inputs applied including bio-agents and botanicals treatment	Yield (q/ha)	Economics	
		Aval. N	Aval. P	Aval. K	OC %						Cost of cultivation (Rs/ha)	Net returns (Rs/ha)
1	1.											
	2.											
	3.											
	4.											
	5.											
2	1.											
	2.											
	3.											
	4.											
	5.											

15.2 District Agriculture Meteorological Unit (DAMU)- NIL

	Agro advisories			Farmers awareness programmes	
Sl No.	No of Agro advisories generated	No of farmers registered for agro advisories	No of farmers benefitted	No of programmes	No of farmers benefitted
1					
2					
3					
4					

15.3 Fertilizer awareness programme 2019

State	Name of KVK	Details of Activities/programme Organised	Number of Chief Guests	No. of Farmers attended program	Total participants
Karnataka	Tumakuru-2	Awareness programme for farmers on proper use of fertilizer at KVK Hirehalli on 22nd October 2019. Topics like imbalanced use of plant nutrients, reasons of decline ratio of soil to fertilizer application, New type of fertilizers, Use of soil health cards were covered.	5	142	147

15.4Seed Hub- NIL

Crops	*Variety*	*Year of release*	*Production*				*Remarks*
			Target (q)	*Area (ha.)*	*Actual Production (q)*	*Category (FS/CS)*	

15.5 CFLD on Oilseed : As per the excel sheet enclosed

15.6 CFLD on Pulses : - NIL

15.7 Krishi Kalyan Abhiyan - NIL

Type of Activity	Date(s) conducted	No. of farmers (General)			No. of farmers SC / ST			No.of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total

15.8 Micro-Irrigation- NIL

Type of Activity	Date(s) conducted	No. of farmers (General)			No. of farmers SC / ST			No.of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total

PART XVI - FINANCIAL PERFORMANCE

16A. 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	Hessaraghatta	041187	The Director, IIHR, Bengaluru	37578009241		SBIN0041187
With KVK							

16B. Utilization of KVK funds during the year 2018-19(Rs. in lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	16196000	8331067	
2	**Traveling allowances**	95000		91310
3	**Contingencies**		**791125**	
A	Stationery, telephone, postage and other expenditure on	250000		421545

	office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)			
B	POL, repair of vehicles, tractor and equipments	150000		223585
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	100000		71509
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	25000		0
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	265000		113603
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	40000		25065
G	Training of extension functionaries	25000		21546
	Extension Activities	25000		0
	EDP – Entrepreneurship Development Programme	30000		0
	Nutri Garden	25000		24760
H	Maintenance of buildings	0		0
I	Establishment of Soil, Plant & Water Testing Laboratory	25000		25000
J	Library	5000		0
TOTAL (A)				
B. Non-Recurring Contingencies				
1	**Works**			
2	**Equipment including SWTL & Furniture**			
3	**Vehicle** (Four wheeler/Two wheeler, please specify)			
4	**Library** (Purchase of assets like books & journals)			
TOTAL (B)				
C. REVOLVING FUND				
GRAND TOTAL (A+B+C)				

16C. Status of revolving fund (Rs. in lakh) 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 / 1st of January 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	1,15,25,942	90,27,856	57,31,650
January 2019 to December 2019	50,51,344	1,11,05,301	1,00,44,163	61,12,482

17. Details of HRD activities attended by KVK staff

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Dr.B.Hanumanthe Gowda	SMS (Plant Protection)	TOT training programme - ASCI	GKVK, Bangalore	Nov., 20-22, 2019
Smt. Radha R.Banakar	SMS (Home Science)	TOT training programme - ASCI	GKVK, Bangalore	Nov., 20-22, 2019

Shri.P.R.Ramesh	SMS (Soil Science)	Bio Fertilizer related aspects in FCO	ICAR-IIHR, Hesaraghatta	01.11.2019

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