

University of Agricultural Sciences, Bangalore

**ICAR-Krishi Vigyan Kendra**  
Navile, Shimoga

**ANNUAL REPORT 2018-19**

(for the period April 2013 to March 2014)

**ICAR-KRISHI VIGYAN KENDRA**

Navile, Abbalagere Post, Shimoga – 577225  
Tele/Fax. No.08182-295516 E-mail:shimogakvk@gmail.com

## **PART I – GENERAL INFORMATION ABOUT THE KVK**

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

<b>KVK Address</b>	<b>Telephone</b>		<b>E mail</b>	<b>Web Address</b>
	<b>Office</b>	<b>Fax</b>		
ICAR-Krishi Vigyan Kendra, Savalanga Road, Navule, Shivamogga-577 204. Karnataka	08182- 267017	-	kvk.shivamogga@icar.gov.in shimogakvk@gmail.com	-

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

<b>Address</b>	<b>Telephone</b>		<b>E mail</b>	<b>Web Address</b>
	<b>Office</b>	<b>Fax</b>		
University of Agricultural and Horticultural Sciences, Savalanga Road, Navile, Shivamogga-577 204	08182- 267011	08182- 298008	<a href="mailto:vcuahss2014@gmail.com">vcuahss2014@gmail.com</a>	www.uah s.in

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

<b>Name</b>	<b>Telephone / Contact</b>		
	<b>Residence</b>	<b>Mobile</b>	<b>Email</b>
Dr. B. C. Hanumanthaswamy	9448255252	9480838976	<a href="mailto:bchswamy@gmail.com">bchswamy@gmail.com</a>

### **1.4. Year of sanction: 2000**

### 1.5. Staff position as on 31 March 2019

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M/F	Discipline	Highest Qualification (for PC, SMS and Prog. Asstt.)	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/OBC/ Others)
1	Head/Senior Scientist	Dr. B.C. Hanumanthaswamy	Senior Scientist and Head	M	Agril. Entomology	M.Sc.,(Agri. Entomology) Ph.D., PGDBA, PGDPP, PGDAEM	37400-67000	43250	22.12.2011	Permanent	OBC
2	Scientist/SMS	Mr. M. Basavaraja	Scientist (Agronomy)	M	Agronomy	M.Sc.(Agri.) (Agronomy)	15600-39100	30410	01.04.2018	Permanent	ST
3	Scientist/SMS	Dr. Jyoti M. Rathod	Scientist (Home Science)	F	Home Science	M.H.Sc. (Food and Nutrition), Ph.D., PGDAEM	15600-39100	27020	18.05.2007	Permanent	SC
4	Scientist/SMS	Dr. M. Ashok	Scientist (Animal Science)	M	Animal Science	M.V.Sc., Ph.D. PGDAEM	15600-39100	26000	18.05.2007	Permanent	OBC
5	Scientist/SMS	Dr. Sahana. S	Scientist (Agril. Extension)	F	Agril. Extension	M.Sc., (Agril. Extension), Ph.D., PGDAEM	15600-39100	26040	01.04.2018	Permanent	OBC
6	Scientist/SMS	Dr. Sarvajna B. Salimath	Scientist (Soil Science)	M	Soil Science	M.Sc., (Soil Science & Agricultural Chemistry), Ph.D., (Agriculture Physics), PGDAEM	15600-39100	24130	01.04.2018	Permanent	OBC
7	Scientist/SMS	Dr. Nagarajappa Adivappar	Scientist (Horticulture)	M	Horticulture	M.Sc.(Horticulture), Ph.D.(Horticulture), PGDIPR, PGDAEM	15600-39100	23220	01.04.2018	Permanent	OBC
8	Programme Assistant ( Lab Tech.)	Dr. Nagaraja R.	Programme Assistant (Lab)	M	Programme Assistant (Lab)	M.Sc.(Agri.) in Agricultural Microbiology, Ph.D. PGDAEM	9300-34800	13490	23.10.2010	Permanent	OBC
9	Programme Assistant (Computer)	Mrs. B. S. Geetha	Programme Assistant (Computer)	F	Programme Assistant (Computer)	M.Com., PGDCA, PGDHR, PGDAEM	9300-34800	13490	22.01.2011	Permanent	OTR
10	Farm Manager	<b>VACANT</b>									
11	Assistant	Mrs. Jyothi H.	Assistant	F	Assistant	B.A.	30350 - 58250	31100	01.04.2018	Permanent	SC
12	Jr. Stenographer	<b>VACANT</b>									
13	Driver - 1	Mr. N. Gopala	Lab Assistant	M	Driver (Jeep)	SSLC	21400-42000	23500	16.08.2012	Permanent	OBC
14	Driver - 2	Mr. K. H. Mohan	Driver (Tractor)	M	Driver (Tractor)	7 <sup>th</sup> Standard	27650-52650	32600	20.10.2008	Permanent	OBC
15	SS-1	<b>VACANT</b>									
16	SS-2	Mr. T. Chikkaiah	Assistant Cook cum caretaker	M	Cook cum caretaker	SSLC	18600-32600	22400	22.11.2018	Permanent	OBC

**1.6. Total land with KVK (in ha): 3.96 ha**

S. No.	Item	Area (ha)
1.	Under Buildings	0.86
2.	Under Demonstration Units	0.60
3.	Under Crops	2.00
4.	Orchard/Agro-forestry	-
5.	Others	0.50

**1.7. Infrastructural Development:**

**A) Buildings**

Sl. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	<b>Administrative Building</b>	ICAR	Oct. 2009	550	55	-	-	-
2.	<b>Farmers Hostel</b>	ICAR	Sept. 2012	305	33.33	-	-	-
3.	<b>Staff Quarters</b>	-	-	-	-	-	-	-
	1							
	2							
	3							
4.	<b>Demonstration Units</b>							
	1. Vermi Compost Unit	NCOF Ghaziabad	2008	-	1.25	-	-	-
	2. Poultry Unit	RKVY	2012	100 sq.m.	1.20	-	-	-
	3							
	4							
5	<b>Fencing</b>							
6	<b>Rain Water harvesting system</b>	-	-	-	-	-	-	-
7	<b>Threshing floor</b>	-	-	-	-	-	-	-
8	<b>Farm godown</b>	-	-	-	-	-	-	-

**B) Vehicles**

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Tractor with Trailer	2001	3,71,892.00	4365.3	Good condition
Jeep (Mahindra Bolero)	2017	8,00,000.00	32327	Good condition
Hero Honda Splendor+	2009	39,350.00	51050.6	Good condition
Honda Activa	2009	46,102.00	29053.3	Good condition

**C) Equipment & AV aids**

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Lap top and LCD	10/10/2007	100000	Scrapped
Mobile Display Board	7/29/2008	3360	Good Condition
Hakims mobile Pivot Stand	06/10/2008	2300	Good Condition
Hakims Data Press Board	06/10/2008	4400	Good Condition
Hakims Combination Board	06/10/2008	1800	Good Condition
Hakims 3 type rotation Book Stand	07/29/2008	3100	Good Condition
Hakims Display in minutes 4 board " double side stand	07/29/2008	8950	Good Condition

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Video Camera	02/05/2009	184000	Good Condition
LCD	02/05/2009	44990	Good Condition
Motorized Screen	02/05/2009	23000	Good Condition
Visual production Unit	02/05/2009	599500	Good Condition
Desk Top Computers (2 Nos.)	02/05/2009	46000	Scrapped
Lexmark Laser printers (2 Nos.)	02/05/2009	15645	Scrapped
Digital Copier cum network printer	02/05/2009	55125	Good Condition
Display board (15 Nos.)	02/05/2009	30000	Good Condition
Voltage Stabilizer (2 Nos.)	02/05/2009	5520	Good Condition
UPS " (CBTMPCS)	10/05/2010	26000	Scrapped
Canon Printer-2900B	01/22/2013	5524	Good Condition
HP Laser Printer	03/15/2010	19864	Good Condition
Sony digital Camera-DSC H-20 Sl.No.2348907	01/22/2013	17500	Good Condition
Sony digital Camera-DSC H-20 Sl.No.2285039	01/22/2013	9950	Good Condition
Panasonic Fax Machine (Sl. No.91CBA004235)	01/22/2013	8736	Good Condition
Generator (Genset-EXK-28005)	03/29/2011	59850	Good Condition
UPS	03/29/2011	38587	Scrapped
Photocopier	7/29/2008	92297	Scrapped
Acrylic name holder	07/29/2008	2800	Good Condition
Hakims Security Board (Flap type)	07/29/2008	3100	Good Condition
HP Scanner	03/15/2009	4000	Good Condition
Desk Top Computers (2 Nos.) HCL	01/22/2013	38600	Scrapped
Desk Top Computers (2 Nos.) HCL	01/22/2013	38169	Good Condition
Tubular Batteries of 120 AH (20/12V)	09/18/2015	50000	Good Condition
Information KIOSK (Touch screen)	02/05/2009	124519	Good Condition
Research Microscope	11/18/2008	66555	Good Condition
Digital Micro pipette set	09/15/2008	21180	Good Condition
Hot Air Oven	02/12/2009	24160	Good Condition
Laminar Air Flow	02/12/2009	54013	Good Condition
pH Meter	03/12/2009	6600	Good Condition
Autoclave	03/31/2009	28687	Good Condition
ELISA Reader	03/12/2010	147155	Good Condition
Incubator	03/18/2011	24425	Good Condition
21 Black Onida CTV-21	01/22/2013	8990	Scrapped
Bosch Gas Geyser	01/22/2013	7600	Good Condition
Shakthi Power Tiller and accessories	03/31/2010	131500	Good Condition
5 HP diesel engine pump and accessories	06/03/2010	18030	Good Condition
Portable agri sprayer	06/03/2010	9975	Good Condition
Tractor drawn implements, Trencher, ridger, marker	03/26/2011	86500	Good Condition
Tractor drawn 2 ferrow MB plough & Tractor drawn disk harrow	03/28/2011	88000	Good Condition
Power Tiller trailer	03/28/2011	48048	Good Condition
Tractor drawn water tanker " Chassis mounted 3500 ltr. Capacity, Water tank with resole tyre and heavy axel, Water Tanker	06/22/2011	99250	Good Condition

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Hand operated °C type areca leaf plate making machine.	06/21/2011	38850	Good Condition
Tractor mounted water pully	07/02/2011	32500	Good Condition
Tractor operated winnover	06/30/2011	20500	Good Condition
Chaff cutter with 2 HP ISI	08/26/2011	20500	Good Condition
Tractor drawn 5 furrow opener	08/26/2011	31000	Good Condition
Disk harrow	06/22/2013	1455	Good Condition
Pruning saw - °OM	09/12/2013	18723	Good Condition
Iron plough - 1 wing	12/19/2012	1600	Good Condition
Iron plough - 2 wings	12/19/2012	1900	Good Condition
AAS equipment & accessories	15.06.2016	1420000	Good Condition
V Guard Stabilizer	20.06.2016	2400	Good Condition
Battery 150 am with UPS	20.06.2016	54548	Good Condition
Studio master wireless	20.06.2016	3801	Good Condition
Podium Wireless mike	20.06.2016	6612	Good Condition
Aqua pearl RO+UV water purifier	30.06.2016	16157	Good Condition
Canon 226 DN Laser All-in-one printer (print/copy/ scan/duplex network)	26.09.2016	28000	Good Condition
HP Desktop computer Intel core-i3, 4 GB RAM, 1TB HDD, 20 monitor, key board & mouse	30.09.2016	96900	Good Condition
Dell Laptop, Core @ i3, 1 TB, 4GB RAM	04.10.2016	48500	Good Condition
Dell LCD Projector	04.10.2016	38500	Good Condition
Pulverizer	25.02.2017	29770	Good Condition
Bag Sealer	25.02.2017	21984	Good Condition
Weighing balance	25.02.2017	10076	Good Condition
Hot case	03.03.2017	17935	Good Condition
Deck Oven	03.03.2017	50640	Good Condition
Moulds & Trays	03.03.2017	8440	Good Condition
Extruder	09.03.2017	74425	Good Condition
Deep Fat Fryer	09.03.2017	20381	Good Condition
Godrej F/F Refrigerator	10.03.2017	26201	Good Condition
Usha Mixer Grinder	10.03.2017	5450	Good Condition
Kraft Chopper	10.03.2017	2490	Good Condition
Acrylic display name board	10.03.2017	12000	Good Condition
1 TB Hard Disk External	14.03.2017	5900	Good Condition
Sony 40" LED TV + stabilizer	16.03.2017	48500	Good Condition
Setup box	20.03.2017	2743	Good Condition
Canon Camera	20.03.2017	19408	Good Condition
Whirlpool Refrigerator + V Guard Fridge + stand	23.03.2017	26550	Good Condition
Samsung T 355 TAB – 4G	23.03.2017	18623	Good Condition

### 1.8. Details of SAC meeting conducted during 2018-19

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
12-12-2017	24	<p><b>1. Dr. P. Narayanaswamy</b>, Hon'ble Vice-Chancellor, UAHS, Shivamogga</p> <ul style="list-style-type: none"> <li>a) Suggested to produce large quantity of quality seedlings of areca, mango and papaya.</li> <li>b) Suggested to take programmes on acid soil management.</li> <li>c) Suggested to conduct more number of trainings on Bee keeping, Mushroom cultivation and protected cultivation.</li> <li>d) Suggested to conduct training programmes on processing and value addition in maize.</li> <li>e) Suggested to take training programmes on weed control</li> <li>f) Suggested to creat awareness among farmers regarding management of Hidimundige / Band disorder of arecanut.</li> <li>g) Suggested to takeup studies for comparision of qualities of areca husk compost with other compost.</li> <li>h) Suggested to analyze plant samples along with soil and water samples.</li> <li>i) Suggested to provide information to farmers on use of organic pesticides for the control of insect pests and diseases</li> <li>j) Suggested to provide information to farmers using information communication technologies</li> </ul>	<ul style="list-style-type: none"> <li>a) Production of areca and papaya seedlings were undertaken, during the year 2018-19, based on needs of the farmers mango seedlings will be produced.</li> <li>b) On 02-01-2018 conducted on campus training programme on Soil testing and acidic soil management for 32 farmers.</li> <li>c) (1) Short term certificate course on Bee Keeping was conducted from 22/01/2018 to 31/01/2018 (10 days) for 30 participants (2) On 08/01/2018 conducted training programme on Mushroom cultivation and value addition for 65 farmers (3) on 19/12/2017 conducted Protected cultivation for 124 farmers, farm women and rural youths.</li> <li>d) On 28/12/2017, training programme on Value addition in maize conducted for 45 farm women.</li> <li>e) During the year 2018-19, trainings on weed control will be organized.</li> <li>f) On 27/12/2017 conducted training programme on Plant protection in arecanut for 26 farmers</li> <li>g) Proposed and approved OFT on Assessment of areca husk compost on growth and yield of French bean for the year 2018-19 in an area of 0.50 ha.</li> <li>h) There is no facility to analyse the plant sample at SWTL.</li> <li>i) From 27-12-2017 to 29-12-2017 training programme on Organic farming for 30 farmers, from 05/02/2018 to 07/02/2018 training on Use of Bio-fertilizers and Bio-pesticides in vegetable crops conducted for 30 farmers.</li> <li>j) Providing short messages to registered 1850 farmers through farmers' portal.</li> </ul>	
		<p><b>2. Dr. M.J.Chandre Gowda</b>, Principal Scientist, ATARI, Bengaluru</p> <ul style="list-style-type: none"> <li>a) Suggested to undertake impact studies after conduct of Vocational trainings.</li> <li>b) Suggested to create awareness among farmers</li> </ul>	<ul style="list-style-type: none"> <li>a) Impact studies on vocational training on mushroom cultivation was published in Scientific journal-International journal of current microbiology and applied sciences during Sept. 2017.</li> <li>b) To overcome the lack of different green fodder source, proposed and approved 20 units of Establishment of Fodder Bank FLD for the year 2018-19.</li> <li>c) Conducted 3 off campus training on value addition in millets and</li> </ul>	

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
		<p>on fodder crops viz., legumes and fodder trees.</p> <p>c) Suggested to conduct training programmes in collaboration with line departments.</p> <p>d) Suggested to upload short films / success stories about two minutes on Integrated Farming System to the KVK portal.</p> <p>e) Suggested to undertake impact studies after completion of OFT and FLD programme.</p>	<p>importance of nutritional garden in collaboration with Department of Agriculture for 78 farmwomen. Conducted training on Flower cultivation in collaboration with department of Horticulture for 25 farmers and farm women. During the year 2018-19 more trainings with line departments will be conducted.</p> <p>d) Short films / success stories about two minutes on Integrated Farming System to the KVK portal will be uploaded.</p> <p>e) Planned to undertake impact studies of FLD and OFTs conducted for 3-4 years.</p>	
		<p><b>3. Dr. T. H. Gowda</b>, Director of Extension, UAHS, Shivamogga</p> <p>a) Suggested to take seed production in Arka Sharath variety of French bean.</p> <p>b) Suggested to conduct more and more number of trainings for women on value addition through method demonstrations.</p>	<p>a) Planned to take up seed production in French Bean variety Arka Sharath during 2018-19 in KVK demonstration plots.</p> <p>b) Conducted 5 off campus trainings on value addition in millets and mushroom were conducted for 211 farm women, and conducted one on campus training on maize through demonstrations for 46 farm women.</p>	
		<p><b>4. Sri N. Chandrappa</b>, Deputy Director, Woman and Child welfare Department, Shivamogga</p> <p>a) Conduct the training programmes on nutrition garden through self help groups.</p> <p>b) Suggested to conduct programmes for women on agriculture and allied activities in collaboration with the departments.</p>	<p>(a) &amp; (b) On 14/12/2017 and 15/12/2017 programmes on Processing and value addition in millets and importance of nutritional garden in collaboration with Department of Agriculture for 45 farm women. On 17/01/2018 conducted training on importance of nutrition garden and KVK activities for 29 farmers and farm women</p>	
		<p><b>5. Dr. M. Manjunatha</b>, Dean (Agri), College of Agriculture, Shivamogga,</p> <p>a) Suggested to create awareness to farmers on use of bio-pesticides for insect pest control.</p>	<p>a) Conducted progressive farmers to farmers training programme on Use of Bio-fertilizers and Bio-pesticides in vegetable crops from 05/02/2018 to 07/02/2018 for 30 farmers.</p>	
		<p><b>6. Dr. K. Manjappa</b>, ADR, ZAHRS, Shivamogga</p> <p>a) Suggested to conduct more number of off campus training programmes</p> <p>b) Suggested to conduct integrated farming system demonstrations in small farmers' fields.</p> <p>c) Suggested to conduct more number of trainings on animal husbandry.</p>	<p>a) During the year 2018-19 more number of off campus trainings will be organized.</p> <p>b) Conducted 19 Nos. of IFS demonstrations for small and marginal farmers of Shivamogga district under ICAR and State plan grants.</p> <p>c) On 12-01-2018 conducted Backyard poultry farming for 10 IFS farmers and organized technical seminar on Avian influenza (Bird flu) for 66 veterinary doctors of Shivamogga District on 27-01-2018.</p>	



Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
		<p><b>7. Dr. Shivakumar T.,</b> ADA, Department of Agriculture, Shivamogga</p> <p>a) Suggested to provide preventive measures for the management of Army worm</p> <p>b) Enquired about green gram seed availability at University since there is greater demand.</p>	<p>a) Providing preventive measures for management of Army worm through field visits and diagnostic visits with department of agriculture and farmers visited to KVK.</p> <p>b) Seeds of Green gram variety KKM-3 is available at University Seed Unit.</p>	
		<p><b>8. Sri Guru Channabasavanna,</b> Deputy Director, Department of fisheries, Shivamogga</p> <p>a) Suggested to make an arrangement for water testing laboratory to undertake fishery science activities.</p> <p>b) Suggested to conduct training programmes on fisheries in collaboration with department of fisheries</p>	<p>a) Water testing will be done at KVK for few parameters and for technical advice farmers were visiting to Department of Fisheries for fish farming.</p> <p>b) During the year 2018-19 trainings on fisheries will be organized in collaboration with department of fisheries .</p>	
		<p><b>9. Sri V. Nagaraju,</b> Deputy Director, Department of Sericulture, Shivamogga</p> <p>a) Suggested to conduct training programmes and create awareness among farmers on sericulture in collaboration with department.</p>	<p>a) During the year 2018-19 trainings on sericulture will be organized in collaboration with department.</p>	
		<p><b>10. Sri Satyanarayana Bhat,</b> Deputy Director, Department of Small scale industries and Commerce, Shivamogga</p> <p>a) Suggested to takeup precautionary measures against fungal infection of Areca leaf sheath bio-products during storage</p> <p>b) Suggested to create awareness among farmers regarding the assistance / benefits available from department of small scale industries through training programmes.</p>	<p>a) Training programme on eco-friendly bio-products of areca leaf sheath and proper storage of products for fetch good market price.</p> <p>b) During the training programmes awareness will be creating among farmers regarding the assistance / benefits available from department of small scale industries.</p>	
		<p><b>11. Sri H. G. Durgappa Angadi,</b> Progressive farmer, Sahasravalli, Shikaripura taluk</p> <p>a) Suggested to conduct more number of training programmes by visiting progressive farmers plot.</p> <p>b) Suggested to conduct training programmes on IFS so that farmers can double their income by adopting IFS.</p>	<p>a) During the year 2017-18, under the State Plan Grants, conducted 7 progressive farmers to farmers trainings on different aspects viz., Organic farming, intercrops in arecanut, use Bio-fertilizers and Bio-pesticides in vegetable crops, Ginger cultivation and participated farmers were taken to progressive farmers' field as exposure visit.</p> <p>b) Training programmes on IFS were conducted and established 19 Nos. of IFS demonstration units at farmers' field in Shivamogga district for small and marginal farmers under the ICAR and State plan grants during the year 2017-18</p>	

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
		<p><b>12. Sri Madan G. M.</b>, Progressive farmer, Thanikal, Thirthahalli taluk</p> <p>a) Suggested to increase the duration of training programmes.</p> <p>b) Suggested to conduct training programmes to create awareness on dairy and poultry.</p> <p>c) Suggested to provide information on weather based agricultural activities.</p>	<p>a) Conducting 3 days progressive farmers to farmers training programmes on different aspects and 10 days short term certificate training programmes on bee keeping and value addition in agriculture crops. During the year 2018-19 planned to conduct skill development training programme of one month duration on Poultry farming and bee keeping.</p> <p>b) On 12-01-2018 conducted Backyard poultry farming for 10 IFS farmers and organized technical seminar on Avian influenza (Bird flu) for 66 veterinary doctors of Shivamogga District on 27-01-2018. During the year 2018-19 more trainings on dairy and poultry will be conducted.</p> <p>c) Providing short messages to registered 1850 farmers through farmers' portal on cultivation of different crops.</p>	
		<p><b>13. Smt. Meenakshamma</b>, Progressive farm-women, Agasanahalli, Bhadravathi tq</p> <p>a) Suggested to conduct more training programmes for improvement of social and financial status of women organisations.</p>	<p>a) Proposed and approved EDP on Finger Millet Jaggery Cookies and EDP on value added Mango products to 10 women SHGs for the year 2018-19.</p>	
		<p><b>14. Smt. Nirmala</b>, Progressive Farm-Women, Melinahanasavadi, Shivamogga taluk</p> <p>a) Suggested to conduct off-campus training programme on value addition of milk.</p>	<p>a) During the year 2018-19 both on and off campus training and method demonstrations on value addition of milk, fruits, cereals, millets, vegetables and mushroom will be conducted.</p>	

## 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.	Rice based cropping system
2.	Maize based cropping system
3.	Pulses and oilseeds
4.	Arecanut and Coconut based cropping system
5.	Vegetables, fruits and spice crops cultivation
6.	Value addition
7.	Floriculture
8.	Dairying
9.	Poultry farming
10.	Sheep and goat rearing
11.	Apiary

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

S. No	Agro-climatic Zone	Characteristics
1.	Southern Transition Zone (Zone - 7)	<ul style="list-style-type: none"> <li>• The total geographical area of Southern Transition Zone (STZ) (Zone-7) is 13.09 lakh ha. Shivamogga, Bhadravathi and Shikaripur taluks of Shivamogga District comes under this zone. KVK, Navile, Shivamogga is located in this zone.</li> <li>• The zone 7 has varying altitude ranging from as low as 547 m. in the North to as high as 1050 m. in the South.</li> <li>• The soils of the zone are predominantly sandy soils, shallow to moderate deep, reddish brown to black in colour, slightly acidic in pH and low in organic matter. Soils are generally medium in fertility and respond well to irrigation, manuring and management practices.</li> <li>• The climate of the zone is basically tropical benefited by the two monsoons accounting for major part of the rainfall. The zone receives an average annual rainfall of 580.6 mm. The lowest minimum temperature ranges from 14.9°C (December) to 23.2°C (April) while the maximum temperature ranges from 28.4 °C (July) to 39.1 °C (April).</li> </ul>
2.	Hilly Zone (Zone - 9)	<ul style="list-style-type: none"> <li>• The total geographical area of hilly Zone (Zone-9) is 22.90 lakh ha. Soraba, Sagara, Thirthahally and Hosanagara taluks of Shivamogga District comes under this zone.</li> <li>• The zone - 9 has varying altitude ranging from as low as 700 to as high as 1050 m. above mean sea level.</li> <li>• The soils of the zone are predominantly sandy loamy or sandy clay loam soils, shallow to moderate deep, yellow, reddish brown to black in colour, low in cation exchange capacity, low in water holding capacity, moderately to highly acidic in pH, low in organic matter and deficient in zinc and boron. Generally, the soils are low in fertility and respond well to irrigation, manuring and management practices.</li> <li>• The climate of the zone is basically tropical benefited by the two monsoons accounting for major part of the rainfall. The zone receives an average annual rainfall of 2308 mm with a minimum of 922 mm and maximum of 3695 mm. The lowest minimum temperature of 100 °C will be observed during winter.</li> </ul>

S. No	Agro ecological situation	Characteristics
1	Lateritic gravelly soils with high rainfall based (Thirthahally, part of Hosanagara, Sagara and Soraba taluks)	Comparatively dense forest based, hilly tracks, moderate temperature region, high rainfall. The soils under this AES are yellow, reddish brown surface sandy loamy soils or sand clay loam texture. These soils are low in cation exchange capacity with medium water holding capacity and low in fertility status i.e. low in organic matter, and deficiency in zinc and boron. The Western Ghats regions are rich in flora and fauna. Medicinal plants and herbs like, Asana, Amla, Sandal, Anale, Sarpagandhi, Terminalia, Bixa, etc
2	Red loamy soil with medium rainfall (Parts of Sagara, Soraba, Shikaripura and Hosanagara)	This AES's comprises of medium rainfall area with medium temperature. The soils are medium, shallow to moderate deep with reddish brown to black in colour. Medium in water holding capacity, low in organic matter, only in some patches deficient in Zinc and Boron.
3	Red and Black mixed soils with medium rainfall (Parts of Shivamogga, Bhadravathi, Shikaripura)	The soils under this AES are derived from Ignatius rocks and montmorillonite clay with high in fertility status, high in water holding capacity and cation exchange capacity. These soils are deep and sufficient in micronutrients except some patches.
4	Irrigated red sandy with medium rainfall (Parts of Shivamogga and Bhadravathi)	Comparatively plain lands. Less vegetation, higher temperature. Soils of this situation are predominantly sandy soils, shallow to moderate deep, reddish brown to acidic in pH. Soils are medium in fertility level and respond well for irrigation, manuring and other management practices.

### 2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
1	Red Sandy	Red sandy soils are derived from acidic rock materials, reddish brown to dark reddish brown in colour and gravelly loamy sand to sandy loam in texture. They are neutral to acidic in reaction with low cation exchange capacity, low base saturation and low water holding capacity. The soils are well drained and respond well to irrigation, manuring and other management practices. These soils are found in the eastern parts of Shikaripur and entire Shivamogga and Bhadravathi Taluks.	Red gravelly loam – 61546 Red loamy – 22819 Red gravelly clay – 6357 Red gravelly mixed with deep black – 58849 Red clayey – 33904 Red gravelly clay – 14491 Red clayey – 14167 Laterite gravelly clay – 13524 Laterite clayey – 118301 Laterite gravelly clay – 19904 Black clayey – 22358 Alluvial loamy – 61133 Alluvial black clayey – 12087 Alluvial clayey – 25660 Forest brown clayey – 15441 Red gravelly clayey – 36446
2	Mixed Red and Black Soils	The soils are derived from igneous rocks and montmorillonite clay with high fertility status, high in water holding capacity and cation exchange capacity. The soils are deep and sufficient in micronutrients except in some patches. These soils are found in the eastern parts of Shikaripur and entire Shivamogga and Bhadravathi Taluks.	
3	Red loamy Soils	The soils are medium, shallow to moderate, deep with reddish brown to Black in colour. They are Medium in water holding capacity, low in organic matter, deficient in Zinc and Boron in some patches. These soils are found in	

S. No	Soil type	Characteristics	Area in ha
		the eastern parts of Sagar, Soraba, Shikaripur and Hosanagar Taluks.	
4	Lateritic gravelly soils	Laterite soils are derived from acidic igneous rocks, sand stones and sedimentary rocks, yellowish red to reddish brown in colour. They are dominated with kaolinite clay mineral. The soils are acidic with low cation exchange capacity and medium water holding capacity. These soils are found in the western parts of Shikaripur taluk, Thirthahalli and parts of Hosanagar, Sagar and Soraba Taluks.	

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

Sl. No	Crop	Area (ha)	Production (Metric tons)	Productivity (kg /ha)
<b>Field Crops</b>				
1.	Paddy	120629	394521	3332
2.	Hybrid Jowar	100	698	1918
3.	Bajra	2	5	1416
4.	Maize	47254	191117	3074
5.	Ragi	501	1115	1736
6.	Redgram	254	234	965
7.	Horse gram	50	19	541
8.	Black gram	83	32	602
9.	Green gram	920	182	197
10.	Avare	42	45	1008
11.	Cowpea	276	88	406
12.	Bengal Gram	11	36	806
13.	Groundnut	341	388	862
14.	Sunflower	842	1971	2241
15.	Safflower	11	6	828
16.	Caster	2	5	966
17.	Sesame	9	7	559
18.	Niger	5	28	262
19.	Flax seeds	1	1	308
20.	Cotton	845	1796	435
21.	Sugarcane	6736	583656	125000
22.	Tobacco	6	2	850

**Source:** Director of Economic and statistics

<b>Horticultural Crops</b>				
Sl. No	Crop	Area (ha)	Production (tons)	Yield (t/ha)
1.	Mango	3959	53065	30.40
2.	Banana	5204	138125	26.54
3.	Guava	17	340	20
4.	Sapota	693	9536	13.76
5.	Pineapple	1411	84660	60

Horticultural Crops				
Sl. No	Crop	Area (ha)	Production (tons)	Yield (t/ha)
6.	Pomegranate	9	90	10
7.	Jack	13	520	40
8.	Limes and lemon	10	250	25
9.	Sweet orange	3	54	18
10.	Pepper	1354	450.54	0.33
11.	Cardamom	376	56.35	0.14
12.	Tamarind	4.5	22.50	5
13.	Ginger	5892	58920	10
14.	Turmeric	38	570	15
15.	Cinnamom	2	0.3	0.15
16.	Vanilla	53	15.9	0.3
17.	Coconut	6500	715	0.11
18.	Arecanut	50820	72726	1.43
19.	Betelvine	150	2580	17.20
20.	Cocoa	509	305.4	0.6
21.	Oil Palm	617	1611	2.61
22.	Cashew	1226	1839	1.5
23.	Tomato	116	2650	22.84
24.	Brinjal	42	840	20
25.	Green chilli	138	1992	14.43

**Source:** Department of Horticulture, Shivamogga

### 2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)
		Maximum	Minimum	
April-18	62.4	36.7	22.7	64
May-18	154	34.3	22.1	70
June-18	145	29.2	21.7	85
July-18	154.2	28.0	21.5	87
August-18	174.2	27.4	21.3	88
September-18	82.4	31.1	20.5	75
October-18	134.8	31.5	19.8	70
November-18	5.2	31.4	17.7	64
December-18	3.6	31.2	17.2	66
January-19	0	31.5	13.2	53
February-19	3.4	34.2	17.4	50
March-19	2.2	36.6	18.9	49

**Source:** Meteorology Unit, UAHS, Shivamogga

## 2.6. Production and productivity of livestock, Poultry, Fisheries etc. in the district (2018)

Category	Population	Production	Productivity
Cattle			
<i>Crossbred</i>	521246	65.7 million ltr.	7.2 ltr.
<i>Indigenous</i>			
Buffalo	149515		3.5 ltr.
Sheep			
<i>Crossbred</i>	42772	4.61 lakh kg	18-19 kg
<i>Indigenous</i>			
Goats	59396	4.82 lakh / kg	15-16 kg
Pigs			
<i>Crossbred</i>	6165	3.25 lakh/kg	150 kg
<i>Indigenous</i>			40 kg.
Rabbits			1.5 kg
Poultry			
Hens		116 million eggs	290 eggs / year
<i>Desi</i>	1738774		70 eggs / year
<i>Improved</i>			130 eggs/year
Ducks	204		
Turkey and others	926		

Category	Area	Production	Productivity
Fish		5682 t/year	
<i>Marine</i>			
<i>Inland</i>			
Prawn			
Scampi			
Shrimp			

**Source:** Department of Animal husbandry and veterinary sciences and Department of fisheries

**2.7 District profile maintained in the KVK has been Updated for 2018-19: Yes / No : YES**

## 2.8 Details of Operational area / Villages

Sl. No.	Taluk	Name of the block	Name of the village	How long the village is covered under operational area of the KVK (specify the years)	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1.	Shivamogga	Holaluru	Sominakoppa	3	Arecanut, Banana, Maize, Red gram, vegetable crops; Ridge gourd, Loose flowers, Fodder crops, Fisheries, Poultry, Dairy farming	<ul style="list-style-type: none"> <li>• Lack of Knowledge on high yielding and disease resistant hybrids or varieties in vegetable and field crops</li> <li>• Nutrient deficiency, Nut splitting, inflorescence die-back, inflorescence caterpillar and Hidimundige in Arecanut</li> <li>• Infestation of Stem borer and Army worm in Maize</li> <li>• Less awareness of value addition in Maize</li> <li>• Slow degradation of areca husk, farmers are throwing and burning in public places.</li> <li>• Less awareness on areca husk composting method (1.25 t/ha Areca husk compost available) and unaware of Nutrients composition in areca husk compost</li> <li>• Non availability of required quantity and quality of FYM</li> <li>• High cost for FYM</li> <li>• Pseudostem Weevil, Sigatoka Leafspot and Panama Wilt in banana</li> <li>• Lack of new flower crops for</li> </ul>	<ul style="list-style-type: none"> <li>• Varietal introduction</li> <li>• Integrated nutrient management</li> <li>• Integrated Pest and Disease Management</li> <li>• Value addition</li> <li>• Resource conservation</li> <li>• Feed and fodder technology</li> <li>• Feed enrichment</li> </ul>



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
						garland making <ul style="list-style-type: none"> <li>• Lack of awareness on new varieties which affects the growth and productivity in composite fish culture</li> <li>• Low milk production and quality problems in dairy farming due to imbalanced energy and protein</li> <li>• Lack of awareness on new varieties in fisheries affects the growth and productivity</li> </ul>	
2.	Shikaripura	Hosuru	Nimbegondhi	5	Paddy, Arecanut, Ginger, Sunflower, Ground nut, Green gram, Black gram, vegetable crops; Tomato, Chilli, Leafy vegetables, Fodder crops, Poultry, Dairy farming	<ul style="list-style-type: none"> <li>• Low yield in paddy due to improper nutrient management and pest and disease incidence (Stem borer, leaf roller, blast, sheath blight)</li> <li>• Nutrient deficiency, Nut splitting, inflorescence die-back, inflorescence caterpillar, Hidimundige in Arecanut</li> <li>• Indiscriminate use of fertilizers and improper pest and disease management in ginger</li> <li>• Lack of leaf rust resistant and multicut variety in Amaranthus</li> <li>• Low yield and Less adoption of suitable hybrids in Chilli</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated nutrient management</li> <li>• Integrated Pest and Disease Management</li> <li>• Varietal introduction</li> <li>• Soil fertility management</li> <li>• Feed and fodder technology</li> <li>• Dairy management</li> <li>• Resource conservation</li> </ul>

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
						<ul style="list-style-type: none"> <li>Sucking pests incidence, Indiscriminate use of pesticides, Low yield in tomato</li> <li>Low yield in ground nut due to higher pest and disease incidence</li> <li>Boron and zinc deficiency, leaf spot, bud necrosis, powdery mildew and low yield in sunflower</li> <li>In Cattles, Infertility due to non availability of timely artificial insemination in remote areas. Decreased fertility and less number of calves per animal in the life span.</li> <li>Non adoption of short duration pulse varieties for paddy fallows</li> </ul>	
3.	Thirthahalli	Agumbe	Thanikal	3	Arecanut, pepper, ginger, paddy, rubber, banana, Elephant foot yam, Poultry, Dairy farming	<ul style="list-style-type: none"> <li>Low yield, Susceptible to diseases in paddy</li> <li>Quick wilt, leaf rot, micro-nutrient deficiencies, Improper filling of spikes, irregular growth of berries, lower yield in pepper</li> <li>Infertility due to non availability of timely artificial insemination in remote areas. Decreased fertility</li> </ul>	<ul style="list-style-type: none"> <li>Integrated nutrient management</li> <li>Integrated Pest and Disease Management</li> <li>Varietal introduction</li> <li>Soil fertility management</li> <li>Feed and fodder technology</li> <li>Dairy management</li> <li>Poultry management</li> </ul>

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
						<p>and less number of calves per animal in the life span in cross bred cows.</p> <ul style="list-style-type: none"> <li>• Mal Nutrition and lack of Cognitive development in Preschool Children</li> <li>• Need of new breed in backyard poultry to increase the rural farmers' income</li> </ul>	<ul style="list-style-type: none"> <li>• Women and child care</li> </ul>
5.	Hosanagara	Ripponpet	Nanjuvalli	4	Paddy, arecanut, pepper, ginger, banana, green gram, black gram	<ul style="list-style-type: none"> <li>• Low yield due to Improper nutrient management in paddy</li> <li>• Non adoption of short duration pulse varieties for paddy fallows</li> <li>• Foot rot incidence and Low yield in pepper</li> </ul>	<ul style="list-style-type: none"> <li>• Varietal introduction</li> <li>• Resource conservation</li> <li>• Integrated Pest and Disease Management</li> <li>• Integrated nutrient management</li> </ul>

## 2.9 Priority thrust areas

S. No	Thrust area
1.	Integrated Crop Management
2.	Soil acidity management
3.	Integrated nutrient management
4.	Integrated pest and disease management
5.	Variety / hybrid introduction
6.	Quality seed / seedling production
7.	Fodder production and enrichment of dry fodder crops
8.	Value addition
9.	Post harvest technology
10.	Infertility management in dairy animals
11.	Poultry management
12.	Resource conservation

## **PART III - TECHNICAL ACHIEVEMENTS (2018-19)**

### 3.A. Target and Achievements of mandatory activities

OFT				FLD			
1				2			
OFTs (No.)		Farmers (No.)		FLDs (No.)		Farmers (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
6	6	24	24	13	13	111	111

Training				Extension Programmes			
3				4			
Courses (No.)		Participants (No.)		Programmes (No.)		Participants (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
40	48	1500	1876	20	23	15000	16032

Seed Production (Q)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
2.0	2.5	3000	3775

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

### 3.B1. Abstract of interventions undertaken

Sl. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No.	Kg
1.	Varietal evaluation	Paddy	Low yield, Susceptible to pest and diseases, non availability of improved red rice varieties	Assessment of Red Rice Varieties		4	2	-	Field visit=5, group discussion=1, Citizen's charter=8, Mobile Advisories=5,	0.84	-	-	-	-
2.	Hybrid introduction	Bhendi	Low yield, YVMV incidence, Inferior quality of fruits	Assessment of Bhendi hybrids for adoptability		1	-	-	FV =2, GD =1, CCC=5	0.01	-	-	-	-
3.	Integrated Pest Management	Tomato	Sucking pests incidence, Indiscriminate use of pesticides, Low yield	Management of sucking pests in Tomato		1	-	-	Field visit=8 GD =2, CCC=8	-	-	-	3	8.4
4.	Integrated Disease Management	Black pepper	Foot rot and Low yield	Management of foot rot in pepper		1	-	-	FV =3, CCC=8, MA=6,	-	-	-	3	216
5.	Organic manure	Areca husk compost	(1) Throwing and burning of areca husk in public places (2) Unawareness on nutrient composition in areca husk compost (3) Non availability of required quantity and quality of FYM (4) High cost for FYM	Assessment of areca husk compost on growth and yield of French bean		1	-	-	MD =1, FV=4, GD = 1, CCC=5, MA=4	0.1	-	-	-	-
6.	Nutritional management	Cross bred cows	Nutritional disorders due to imbalanced feeding in cross bred cows which causes lower milk yield, low milk SNF and Fat content, infertility and high concentrate feed cost at rural dairy farming system	Assessment of different concentrate Feed formulations in cross bred cows during peak production		4	2	2	FV=4, GD=2, MD=4, MA=5	-	-	-	-	-
7.	Integrated Pest and Disease Management	Paddy	Stem borer, leaf roller, blast, sheath blight	Integrated pest and disease management in paddy		3	-	-	FV=5, MD=2,	-	-	-	1	10 ltr.

Sl. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No.	Kg
8.	Variety Introduction	Paddy	Low yield, higher pest and disease incidence		Demonstration of paddy variety – KKP-5	2	-	-	FV=3, MA=4,	2.50	-	-	-	-
9.	Integrated Crop Management	Sunflower	Boron and zinc deficiency, leaf spot, bud necrosis, powdery mildew, low yield		Integrated Crop Management in Sunflower	1	-	-	FD =1, FV =2, CCC=3, MA=5, GD=1	-	-	-	-	-
10.	Resource conservation	Black gram	Non adoption of short duration pulse varieties for paddy fallows		Demonstration on black gram variety Rashmi (LBG – 625)	1	-	-	FV=2, CCC=2,AP=2	0.8	-	-	-	-
11.	Integrated Crop Management	French Bean	Non adoption of disease resistant and high yielding variety		Integrated Crop Management in French Bean	3	-	-	FD =2 FV = 8 GD =1 CCC=10, MA=11	0.65	-	-	-	-
12.	Integrated Crop Management	Tube rose	Flower size is smaller, less weight and susceptible to Nematodes		Integrated Crop Management in Tube Rose	1	-	-	FV=5, GD= 1 CCC=3, AP=2	2	-	-	-	-
13.	Integrated Crop Management	Black pepper	Quick wilt, leaf rot, micro-nutrient deficiency, Improper filling of spikes, irregular growth of berries, lower yield.		Integrated Crop Management in Pepper	2	-	-	FV=4, GD=1, CCC=4, AP=4	-	-	-	1	50
14.	Integrated Nutrient and Pest Management	Arecanut	Nutrient deficiency, Nut splitting, inflorescence die-back, inflorescence caterpillar		Integrated Crop Management in arecanut of Maidan area	2	-	-	FV=3, MD=1,GD =1, CCC=15, AP=10,	-	-	-	-	-
15.	Integrated Pest and Disease Management	Banana	Pseudostem Weevil, Sigatoka Leafspot and Panama Wilt		Integrated pest and disease management in Banana	1	-	-	Lecture delivered=1, FV=3, GD=1	-	-	-	-	-

Sl. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No.	Kg
16.	Infertility Management	Cross bred cows	Infertility due to non availability of timely artificial insemination in remote areas. Decreased fertility and less number of calves per animal in the life span		Estrous synchronization in Crossbred cows	5	2	1	FV=3, GD=1, MD=2, AP=2	-	-	-	-	-
17.	Fodder enrichment	Fodder enrichment	Decreased growth rate /stunted growth due to feeding of fodder without enrichment		Silage preparation in plastic drums to enhance the fodder quality	2	1	-	MD=4, GD=1, FV=2, AP=5	-	-	-	-	-
18.	Fodder production	Fodder cafeteria	Lack of different green fodder source, Low milk production and variation in quality of milk due to imbalanced energy and protein in the feed		Establishment of Fodder Cafeteria	4	1	-	FV=3, GD=1, AP=4	-	-	-	-	-
19.	Fish culture (Increasing the productivity and introduction of new variety)	Fisheries	Low growth and early maturity of common carp variety		Demonstration of 'Amur Carp' In poly-culture of fish	-	-	-	FV=3, GD=1, AP=3	-	-	-	-	-

FV=Field visit, GD=Group Discussion, AP = Advisories over phone, MD= Method demonstration, CCC= Citizen's Clients' Charter, FD=Field day

### 3.B2. Details of technology used during reporting period

S. No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
1.	Assessment of Red Rice Varieties	KAU, Thrissur and UAHS, Shivamogga	Paddy	4	-	6	Field visit=5,group discussion=1, Citizen's clients charter=8, Mobile Advisories=5,
2.	Assessment of Bhendi hybrids for adoptability	TNAU, Coimbatore, IIHR, Bengaluru	Bhendi	4	-	1	FV =2, GD =1, CCC=5
3.	Management of sucking pests in Tomato	UAS, Bengaluru, IIVR, Varanasi	Tomato	4	-	1	Field visit=8 GD =2, CCC=8
4.	Management of foot rot in pepper	UAS, Bengaluru, UAS, Dharwad	Black pepper	4	-	1	FV =3, CCC=8, MA=6,
5.	Assessment of areca husk compost on growth and yield of French bean	UAS, Bengaluru, UAHS, Shivamogga	Areca husk compost (French Bean)	3	-	1	MD =1, FV=4, GD = 1, CCC=5, MA=4
6.	Assessment of different concentrate Feed formulations in cross bred cows during peak production	KVAFSU, Bidar (POP), ICAR-NIANP, Bangalore	Cross bred cows	4	-	8	FV=4, GD=2,MD=4, MA=5
7.	Integrated pest and disease management in paddy	UAHS, Shivamogga	Paddy	-	10	3	FV=5, MD=2,
8.	Demonstration of paddy variety – KKP-5	UAHS, Shivamogga	Paddy	-	10	2	FV=3, MA=4,
9.	Integrated Crop Management in Sunflower	UAHS, Shivamogga	Sunflower	-	10	1	FD =1, FV =2, CCC=3, MA=5, GD=1
10.	Demonstration on black gram variety Rashmi (LBG – 625)	UAHS, Shivamogga	Black gram	-	10	1	FV=2, CCC=2,AP=2



S. No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
11.	Integrated Crop Management in French Bean	IIHR, Bengaluru	French Bean	-	8	3	FD =2, FV = 8 GD =1, CCC=10, MA=11
12.	Integrated Crop Management in Tube Rose	IIHR, Bengaluru	Tube rose	-	6	1	FV=5, GD= 1 CCC=3, AP=2
13.	Integrated Crop Management in Pepper	IISR, Calicut IIHR, Bengaluru	Black pepper	-	5	2	FV=4, GD=1, CCC=4, AP=4
14.	Integrated Crop Management in arecanut of Maidan area	CPCRI, Kasaragod	Arecanut	-	10	2	FV=3, MD=1,GD =1, CCC=15, AP=10,
15.	Integrated pest and disease management in Banana	UAHS, Shivamogga	Banana	-	8	1	Lecture delivered=1, FV=3, GD=1
16.	Estrous synchronization in Crossbred cows	NDRI, Bangalore ICAR- KVKs, Bangalore Rural And Namakal	Livestock	-	8	8	FV=3, GD=1, MD=2, AP=2
17.	Silage preparation in plastic drums to enhance the fodder quality	ICAR-NIANP Bangalore	Fodder	-	3	3	MD=4, GD=1, FV=2, AP=5
18.	Establishment of Fodder Cafeteria	TNAU-Coimbatore, IGFRI- Dharwad	Fodder	-	20 units	5	FV=3, GD=1, AP=4
19.	Demonstration of 'Amur Carp' In poly-culture of fish	KVAFSU, Bidar	Fisheries	-	3	-	FV=3, GD=1, AP=3

FV=Field visit, GD=Group Discussion, AP = Advisories over phone, MD= Method demonstration, CCC= Citizen's Clients' Charter, FD=Field day

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
3		1						172	30	34	7	22	6	2	5
4								2	17	1	6	14	2	1	2
2		2						2	17	1	6	23	3	4	2
4								35	2	8	-	15	2	2	1
2		1						30	-	16	-	12	1	1	1
												42	6	6	1
				9		1		58	16	8	5	11	1	0	1
				9	1							6	0	1	0
				10								31	1		
				10								6		1	
				6		2		70	21	28	8	94	17	3	8
				5		1			17		12	11	2	1	1
				5				35	2	8	-	15	1	1	
				5	3	2		34	5	4		31	4	1	0
				8				21	2	-	-	53	6	2	0
								20	-	1	-	23		1	1
								5	-	-	-	51	2	2	0
								52	3	7	1	13	2	1	0
								-	-	-	-				

## PART IV - On Farm Trial (2018-19)

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

Thematic areas	Cereals	Oil seeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management					1					1
Varietal Evaluation	1				1					2
Integrated Pest Management					1			1		2
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										
<b>Total</b>	<b>1</b>				<b>3</b>			<b>1</b>		<b>5</b>

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

Thematic areas	Cereals	Oil seeds	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										
<b>Total</b>										

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

Thematic areas	Cattle	Poultry	Piggery	Rabbit	Fisheries	TOTAL
Evaluation of Breeds						
Nutrition Management	1					1
Disease of Management						
Value Addition						
Production and Management						
Feed and Fodder						
Small Scale income generating enterprises						
<b>TOTAL</b>	<b>1</b>					<b>1</b>

**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						
<b>TOTAL</b>						

**4.B. Achievements on technologies Assessed and Refined :**

**4.B.1. Technologies Assessed under various Crops :**

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trial covering all the Technological Options)	
Integrated Nutrient Management	French Bean	Assessment of areca husk compost on growth and yield of French bean	3	3	<b>Area = 0.25 ha. (8 gunta/ trial)</b>	
					<b>Tech. Options</b>	<b>Details of technology</b>
					Tech. Option 1	FYM + RDF
					Tech. Option 2	Areca husk compost + 50% RDF
Varietal Evaluation	Paddy	Assessment of Red Rice Varieties	4	4	<b>Area = 1.20 ha</b>	
					<b>Tech. Options</b>	<b>Details of technology</b>
					Tech. Option 1	Kempusanna (120 days)
					Tech. Option 2	Shreyas (130 days)
Hybrid introduction	Bhendi	Assessment of Bhendi hybrids for adoptability	4	4	<b>Area = 1.8 ha</b>	
					<b>Tech. Options</b>	<b>Details of technology</b>
					Tech. Option 1	OH-940
					Tech. Option 2	COBH - 4
Integrated Pest Management	Tomato	Management of Sucking pests in tomato	4	4.0	<b>Area = 1.6 ha</b>	
					<b>Tech. Options</b>	<b>Details of technology</b>
					Tech. Option 1	Indiscriminate use of pesticides
					Tech. Option 2	Dimethoate 35 EC 1.75 ml/l NSKE 4% spray
Integrated Crop					Tech. Option 3 Installation of sticky trap, Neem soap spray 5 gm/l, <i>Leccanicillium leccanii</i> 0.2%, Emamectin Benzoate 5 SG 0.05 %	

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trial covering all the Technological Options)	
Management						
Integrated Disease Management	Black pepper	Management of Foot rot in pepper	4	4	<b>Area = 20 Vines / trial</b>	
					<b>Tech. Options</b>	<b>Details of technology</b>
					Tech. Option 1	Application of Bordeaux mixture
					Tech. Option 2	Drenching of Metalaxyl 8% + Mancozeb 64% WP @ 2 g/l (5-10/ / vine) and soil application of <i>Trichoderma</i> 50 g / vine.
Tech. Option 3	Soil application of Compost 20 kg. + Neem cake 1 kg. + Arka Microbial consortia 50 g / vine and covering with 200 gauge UV resistant polythene sheet @ 1.25 sqm/vine.					
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						
<b>Total</b>			<b>19</b>	<b>19</b>		

#### 4.B.2. Technologies Refined under various Crops : NIL

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

#### 4.B.3. Technologies assessed under Livestock and other enterprises :

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Evaluation of breeds				
Nutrition management	Cross Bred cows	Assessment of different concentrate Feed formulations in cross bred cows during peak production	10	10
Disease management				
Value addition				
Production and management				
Feed and fodder				
Small scale income generating enterprises				
<b>TOTAL</b>			<b>10</b>	<b>10</b>

**4.B.4. Technologies Refined under Livestock and other enterprises : NIL**

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



#### 4.C1. Results of Technologies Assessed

##### Results of On Farm Trial :

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	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
Paddy	Irrigated	Low yield, Susceptible to pest and diseases, non availability of improved red rice varieties	Assessment of Red Rice Varieties	4	T.O.1 : Kempusanna	(Farmers practice) :	47.43	q/ha	Stem borer incidence (%) = 6.8	31750	1.71	
									Blast incidence (%) = 4.2			
									Udubatta incidence (%) = 3.6			
									Plant height (cm) = 75.28			
									Productive tillers /m <sup>2</sup> = 259.33			
									Panicle length (cm) = 20.00			
					T.O.2 : Shreyas	KAU, Thrissur	67.43	q/ha	Stem borer incidence (%) = 3.5	61974	2.32	
									Blast incidence (%) = 2.4			
									Udubatta incidence (%) = 2.0			
									Plant height (cm) = 80.04			
									Productive tillers /m <sup>2</sup> = 317.66			
									Panicle length (cm) = 22.11			
					T.O.3 : Sahyadri Megha	UAHS, Shivamogga	60.69	q/ha	Stem borer incidence (%) = 5.4	52105	2.14	
									Blast incidence (%) = 3.0			
									Udubatta incidence (%) = 2.5			
									Plant height (cm) = 78.30			
									Productive tillers /m <sup>2</sup> = 293.33			
									Panicle length (cm) = 20.93			

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
Black Pepper	Irrigated	Foot rot and Low yield	Managem ent of foot rot in pepper	4	T.O.1 : Application of Bordeaux mixture	Farmers' Practice	2.0	kg/ vine	Foot rot incidence (%) = 14.75	157750	2.83	
									Spikes / plant (Nos.) = 45.0			
					T.O.2 : Drenching of Metalaxyl 8% + Mancozeb 64% WP @ 2 g/l (5-10l / vine) and soil application of <i>Trichoderma</i> 50 g/ vine.	UAS, Bengaluru	2.37	kg/ vine	Foot rot incidence (%) = 7.50	196125	3.13	
									Spikes / plant (Nos.) = 53.0			
					T.O.3 : Soil application of Compost 20 kg. + Neem cake 1 kg. + Arka Microbial consortia 50 g / vine and covering with 200 gauge UV resistant polythene sheet @ 1.25 sqm/vine.	UAS, Dharwad	2.66	kg/ vine	Foot rot incidence (%) = 0.25	231478	3.49	
									Spikes / plant (Nos.) = 57.0			

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Source of technology	Yield	Unit of yield	Observations other than yield	Net Return Rs. / unit	BC Ratio	Remarks if any			
1	2	3	4	5	6	7	8	9	10	11	12	13			
Areca Husk Compost	Irrigated	1) Throwing and burning of areca husk in public places. 2) Unawareness on nutrient composition in areca husk compost 3) Non availability of required quantity and quality of FYM 4) High cost for FYM	Assessment of areca husk compost on growth and yield of French bean	2	T.O.1 : FYM + RDF	UAS, Bengaluru	174	q/ha	Plant Height (cm) = 63.10 Pod length (cm) = 15.5	213800	4.30				
					T.O.2 : Areca husk compost + 50% RDF	UAHS, Shivamogga	176	q/ha	Plant Height (cm) = 64.10 Pod length (cm) = 16.0	221300	4.66				
Tomato	Limited irrigation	1. Sucking pests incidence 2. Indiscriminate use of pesticides 3. Low yield	Management of sucking pests in Tomato	4	T.O.1 : Indiscriminate use of pesticides	Farmers' Practice	595	q/ha	White flies (No./leaf)= 12.37 Leaf hopper (No./leaf) = 5.25 Thrips (No./leaf) = 8.46	185771	2.66				
					T.O.2 : Dimethoate 35 EC 1.75 ml/l & NSKE 4% spray	UAS, Bengaluru	690	q/ha	White flies (No./leaf) = 4.12 Leaf hopper (No./leaf) = 2.17 Thrips (No./leaf) = 3.82	235761	3.04				
					T.O.3 : Installation of sticky trap, Neem soap spray 5 gm/l, <i>Leccanicillium leccanii</i> 0.2%, Emamectin Benzoate 5 SG 0.05 %	IIVR, Varanasi	762	q/ha	White flies (No./leaf) = 0.68 Leaf hopper (No./leaf) = 0.47 Thrips (No./leaf) = 0.84	263955	3.26				

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
Bhendi	Limited irrigation	Low yield, YVMV incidence, Inferior quality of fruits	Assessment of Bhendi hybrids for adoptability	4	T.O.1 : OH-940	Farmers' Practice				<b>IN PROGRESS</b>		
					T.O.2: COBH - 4	TNAU, Coimbatore						
					T.O.3 : Arka Nikhitha	IIHR, Bengaluru						
Livestock	-	Nutritional disorders due to imbalanced feeding in cross bred cows which causes lower milk yield, low milk SNF and Fat content, infertility and high concentrate feed cost at rural dairy farming system	Assessment of different concentrate Feed formulations in cross bred cows during peak production	4	T.O.1 : 1 Kg. Grains feeding + 20 kg. green fodder + 3 kg. dry fodder	Farmer's practice	8.25	l/ day/ cow	Milk fat % : 3-3.6	<b>IN PROGRESS</b>		
								Cost of feed per q. : 2000				
					T.O.2 : 4 kg. Balanced concentrate feed + 20 kg. Green fodder + 2 kg. Dry fodder	KVAFSU, Bidar (POP)	10.5	l/ day/ cow	Milk fat % : 3.3-3.9			
								Cost of feed per q. : 1972				
					T.O.3 : 4 kg. Balanced concentrate feed by using locally available ingredients (replacing 10% GNC with Karanj cake) + 20 kg. Green fodder + 3 kg. dry fodder	ICAR-NIANP, Bangalore	12.2	l/ day/ cow	Milk fat % : 3.4 - 4.2			
								Cost of feed per q. : 1866				

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

1.	Title of Technology Assessed	1.	Assessment of Red Rice Varieties
		2.	Management of foot rot in pepper
		3.	Management of Sucking pests in tomato
2.	Performance of the Technology on specific indicators	1.	<b>Technology Option (2)</b> : Shreyas red rice variety performing superior with respect to yield and yield attributing characters. Pest and disease incidence was also less compared to other two technologies.
		2.	<b>Technology Option (3)</b> : Soil application of Compost 20 kg. + Neem cake 1 kg. + Arka Microbial consortia 50 g / vine and covering with 200 gauge UV resistant polythene sheet @ 1.25 sqm/vine was effective. Incidence of Foot rot disease was very less and recorded higher yield compared to other two technologies.
		3.	<b>Technology Option (3)</b> : Installation of sticky trap, Neem soap spray 5 gm/l, <i>Leccanicillium leccanii</i> 0.2%, Emamectin Benzoate 5 SG 0.05 %. In this Technology, incidence of sucking pests was less compared to other two technologies which recorded highest B:C (3.26) ratio.
3.	Specific Feedback from farmers	1.	Farmers opined that, variety Shreyas gives higher yield, and fetches higher market price. Less pest and disease was noticed.
		2.	Foot rot incidence was less and yield was higher
		3.	Effective control of sucking pests viz., White flies, Leaf hopper, Thrips was observed by practicing Integrated Pest Management. Highest net return was recorded compared to other two technologies.
4.	Specific Feedback from Extension personnel and other stakeholders	1.	The paddy variety Shreyas is a high yielding variety and the farmers are readily accept to grow this variety
		2.	The technology option (3) is very effective for the management of foot rot, the farmers should take up this practice for the management of foot rot.
		3.	The bio-intensive management practices are helpful for the management of sucking pests and they are environmentally safer.
5.	Feedback to Research System based on results and feedback received	1.	Pest and disease tolerant red rice varieties are to be developed
		2.	Effective management practices are required
		3.	Biological control method should be investigated

#### 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	Net Return Rs. / unit	BC Ratio	Remarks if any
1	2	3	4	5	6	7	8	9	10	11	12	13
					T.O.1 (Farmers practice)							
					T.O.2							
					T.O.3							

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

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

## **PART V - FRONTLINE DEMONSTRATIONS (2018-19)**

### 5.A. Summary of FLDs implemented : 2017-18

SI No.	Category	Farming Situation	Season	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		Farmers (No.)		Farmers (No.)	
									Pro-posed	Actual	SC/ ST	Others	Small/ Marginal	Others
1.	Food science and nutrition	-		-	-	-	-	• Demonstration of nutritional garden	5	5	-	-	-	-

### 5.A. Summary of FLDs implemented

SI No.	Category	Farming Situation	Season	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		Farmers (No.)		Farmers (No.)	
									Pro-posed	Actual	SC/ ST	Others	Small/ Marginal	Others
1.	Oilseeds	Limited irrigation	Summer	Sunflower		DHM103	Integrated Crop Management	<ul style="list-style-type: none"> <li>• Bio-fertilizer (<i>Azospirillum</i> &amp; PSB) and <i>Trichoderma</i> enriched FYM application @ 8 t/ha</li> <li>• Seed treatment with Azatobactor 150 gm/ kg seeds</li> <li>• RDF : 90:90:50 kg. NPK / ha</li> <li>• Zinc Sulphate @ 10 kg / ha</li> <li>• 0.2 % Borax Spray at button opening stage</li> <li>• Hexaconazole 5 EC @ 1 ml / / for leaf spot</li> </ul>	4	4	-	10	6	4
2.	Pulses	Limited irrigation	Summer	Black gram	Rashmi (LBG-625)		Resource conservation	<ul style="list-style-type: none"> <li>• Demonstration of short duration black gram variety Rashmi (LBG – 625) in rice fallows</li> <li>• Seed treatment with bio-fertilizers</li> </ul>	4	4	-	10	6	4
3.	Cereals	Irrigated	Kharif	Paddy	JGL-1798		Integrated Pest and Disease Management	<ul style="list-style-type: none"> <li>• IPM-Cultural and mechanical methods</li> <li>• Spraying of Azadirachtin @ 2.5 ml//</li> <li>• Application of Fipronil 0.3 G @ 10</li> </ul>	4	4	1	9	5	5

SI 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
								kg/ac <ul style="list-style-type: none"> <li>• Seed treatment with Carbendazim 50 WP @ 4 g/kg of seeds</li> <li>• Poison bait (20 kg rice bran, 2 kg jaggery, 100 ml Monocrotophos)</li> <li>• Spraying of Propiconazole 25 EC @ 1 ml//</li> </ul>						
4		Irrigated	Kharif	Paddy	KKP-5		Variety introduction	Demonstration of Paddy variety – KKP-5	4	4	1	9	7	3
	<b>Millets</b>													
5	Vegetables	Irrigated	Kharif	French Bean	Arka Arjun		Integrated Crop Management	<ul style="list-style-type: none"> <li>• Demonstration of French Bean variety – ‘Arka Arjun’</li> <li>• Seed treatment with Rhizobium</li> <li>• Vegetable special – micro-nutrient mixture</li> <li>• Spraying of Azadiractine @ 2.5 ml//</li> <li>• COC – spraying @ 3 gm//</li> </ul>	1.6	1.6	2	6	6	2
6	Flowers	Irrigated	Kharif	Tube rose		Prajwal	Integrated Crop Management	<ul style="list-style-type: none"> <li>• Demonstration of Tube Rose hybrid– ‘Prajwal’</li> <li>• Bulb treatment with Carbendazim @ 4 kg / 1 kg bulb</li> <li>• Application of neem cake 25 kg / acre</li> <li>• Spraying of Azadiractine 2.5 ml/l for sucking pests</li> <li>• Hexaconazole 5% EC 1 ml//</li> </ul>	0.25	0.25	1	5	4	2
	<b>Ornamental</b>													
7	Fruit	Irrigated	Kharif	Banana	Putta-bale		Integrated Pest Management	<ul style="list-style-type: none"> <li>• Injection with Dimethoate 30 EC @ 5 ml in 5 ml of water</li> </ul>	3.2	3.2	-	8	5	3



SI 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
								<ul style="list-style-type: none"> <li>Spraying with Propiconazole 25 EC @ 1 ml// (3 times at 15 days intervals)</li> <li>Application of <i>Trichoderma</i> and <i>Pseudomonas</i> @ 50 gm/plant</li> <li>Drenching with Carbendazim 50 WP @ 2 g//</li> </ul>						
8	Spices and condiments	Irrigated	Kharif	Black pepper	Panniyur-1		Integrated Crop Management	<ul style="list-style-type: none"> <li>Soil test based fertilizer application</li> <li>'Pepper special' – micro nutrient mixture spray with 5 gm//. (1<sup>st</sup> spray during spike initiation with onset of monsoon, 2<sup>nd</sup> spray 2 months after first spray)</li> <li>Metalaxyl MZ 8% + Mancozeb 64% and Bordeaux mixture (1%) spray</li> <li>Drenching of Bordeaux mixtures and Arka microbial consortia 20 gm// (June &amp; September) for leaf rot and quick wilt</li> </ul>	2.5	2.5	-	5	4	1
	<b>Commercial</b>													
	Medicinal and aromatic													
9	Fodder	Irrigated	Kharif	Fodder	CoFS-29		Fodder production	Demonstration of CoFS 29, Cowpea and Sesbenia fodder tree as border crop	8	8	6	14	14	6
10	Plantation	Limited Irrigated	Summer	Arecanut	Tarikere local		Integrated Crop Management	<ul style="list-style-type: none"> <li>Application of FYM @ 20 kg/plant</li> <li>100g + 40g + 140 g NPK + 20g Borax / plant</li> <li>Spraying with Carbendazim 12% + Mancozeb 63 % WP @ 2.0 g// + Chlorpyrifos 20 EC @ 2.0 ml //</li> </ul>	2	2	2	8	7	3

SI 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
	Fibre													
11	Dairy			Cross bred cows			Infertility Management	Estrous synchronization by hormonal therapy and AI at estrous or heat period. Supplementation of minerals. Deworming, feeding based on production by using thumb rule, disease control measures and scientific rearing.	20 cows	20 cows	1	15	7	9
	Poultry													
	Rabbitry													
	Piggery													
	Sheep and goat													
	Duckery													
	Common carps			Fisheries										
	Mussels													
	Ornamental fishes													
	Oyster mushroom													
	Button mushroom													
	Vermicompost													
	Sericulture													
	Apiculture													
	Implements													
	Others (specify)													
12	Fodder	Irrigated	Kharif	Fodder sorghum	CoFS-29		Fodder enrichment	Enrichment of fodder by silage making and addition silage culture	5 units	5 Units	1	4	2	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	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Oilseeds	Limited irrigation	Summer, 2018-19	Sunflower		DHM103	Integrated Crop Management	<ul style="list-style-type: none"> <li>Bio-fertilizer (<i>Azospirillum</i> &amp; PSB) and <i>Trichoderma</i> enriched FYM application @ 8 t/ha</li> <li>Seed treatment with Azatobactor 150 gm/ kg seeds</li> <li>RDF : 90:90:50 kg. NPK / ha</li> <li>Zinc Sulphate @ 10 kg / ha</li> <li>0.2 % Borax Spray at button opening stage</li> <li>Spraying of Imidachlopid 200 SL (1 ml/l) for sucking pests</li> <li>Hexaconazole 5 EC @ 1 ml / l for leaf spot</li> </ul>	Summer, 2018-19	L	H	M	Maize
2	Pulses	Limited irrigation	Summer, 2018-19	Black gram	Rashmi (LBG-625)		Resource conservation	<ul style="list-style-type: none"> <li>Demonstration of short duration black gram variety Rashmi (LBG – 625) in rice fallows</li> <li>Seed treatment with bio-fertilizers (<i>Rhizobium</i> + PSB)</li> </ul>	Summer, 2018-19	L	H	M	Paddy
3	Cereals	Irrigated	Kharif, 2018-19	Paddy	JGL-1798		Integrated Pest and Disease Management	<ul style="list-style-type: none"> <li>IPM-Cultural and mechanical methods</li> <li>Spraying of Azadirachtin @ 2.5 ml/l</li> <li>Application of Fipronil 0.3 G @ 10 kg/ac</li> <li>Seed treatment with Carbendazim 50 WP @ 4 g/kg of seeds</li> <li>Spraying of Propiconazole 25 EC @ 1 ml/l</li> </ul>	Kharif, 2018-19	L	H	M	Paddy
4		Irrigated	Kharif, 2018-19	Paddy	KKP-5		Variety introduction	<ul style="list-style-type: none"> <li>Demonstration of Paddy variety – KKP-5</li> </ul>	Kharif, 2018-19	M	H	M	Maize, Paddy, Pulses

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	<b>Millets</b>												
5	Vegetables	Irrigated	Kharif, 2018-19	French Bean	Arka Arjun		Integrated Crop Management	<ul style="list-style-type: none"> <li>Demonstration of French Bean variety – 'Arka Arjun'</li> <li>Seed treatment with Rhizobium</li> <li>Vegetable special – micro-nutrient mixture</li> <li>Spraying of Azadiractine @ 2.5 ml//</li> <li>COC – spraying @ 3 gm//</li> </ul>	Kharif, 2018-19	M	H	M	Tomato
6	Flowers	Irrigated	Kharif, 2018-19	Tube rose		Prajwal	Integrated Crop Management	<ul style="list-style-type: none"> <li>Demonstration of Tube Rose hybrid– 'Prajwal'</li> <li>Bulb treatment with carbendazim @ 4 kg / 1 kg bulb</li> <li>Application of neem cake 25 kg / acre</li> <li>Neem Oil 2.5 ml/l for sucking pests</li> <li>Hexaconazole 5% EC 1 ml//</li> </ul>	Kharif, 2018-19	M	H	M	Marigold
	<b>Ornamental</b>												
7	Fruit	Irrigated	Kharif, 2018-19	Banana	Puttabale		Integrated Pest Management	<ul style="list-style-type: none"> <li>Injection with Dimethoate 30 EC @ 5 ml in 5 ml of water</li> <li>Spraying with Propiconazole 25 EC @ 1 ml// (3 times at 15 days intervals)</li> <li>Application of <i>Trichoderma</i> and <i>Pseudomonas</i> @ 50 gm/plant</li> <li>Drenching with Carbendazim 50 WP @ 2 g//</li> </ul>	Kharif, 2018-19	L	H	M	Ginger

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
8	Spices and condiments	Irrigated	Kharif, 2018-19	Black pepper	Panniyur-1		Integrated Crop Management	<ul style="list-style-type: none"> <li>• Soil test based fertilizer application</li> <li>• 'Pepper special' – micro nutrient mixture spray with 5 gm//. (1<sup>st</sup> spray during spike initiation with onset of monsoon, 2<sup>nd</sup> spray 2 months after first spray)</li> <li>• Metalaxyl MZ 8% + Mancozeb 64% and Bordeaux mixture (1%) spray</li> <li>• Drenching of Bordeaux mixtures and Arka microbial consortia 20 gm// (June &amp; September) for leaf rot and quick wilt</li> </ul>	Kharif, 2018-19	M	H	L	Areca, pepper
9	Commercial												
10	Medicinal and aromatic												
11	Fodder	Irrigated	Kharif, 2018-19	Fodder sorghum	CoFS-29		Fodder enrichment	<ul style="list-style-type: none"> <li>• Enrichment of fodder by silage making and addition silage culture</li> </ul>	Kharif, 2018-19	M	H	L	Maize
12	Fodder	Irrigated	Kharif, 2018-19	Fodder sorghum, Cowpea	CoFS-29, AV-5		Fodder production	<ul style="list-style-type: none"> <li>• Demonstration of CoFS 29, Cowpea and Sesbenia fodder tree as border crop</li> </ul>	Kharif, 2018-19	M	H	L	Waste land, Mango orchard
13	Plantation	Limited Irrigated	Summer, 2018-19	Arecanut	Tarikere local		Integrated Crop Management	<ul style="list-style-type: none"> <li>• Application of FYM @ 20 kg/plant</li> <li>• 100g + 40g + 140 g NPK + 20g Borax / plant</li> <li>• Spraying with Carbendazim 12% + Mancozeb 63 % WP @ 2.0 g// + Chlorpyriphos 20 EC @ 2.0 ml //</li> </ul>	Summer , 2018-19	M	H	M	Areca
	<b>Fibre</b>												

## 5.B. Results of FLDs

### 5.B.1. Crops

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
							H	L	A										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Oilseeds Sunflower	<ul style="list-style-type: none"> <li>Bio-fertilizer (<i>Azospirillum</i> &amp; PSB) and <i>Trichoderma</i> enriched FYM application @ 8 t/ha</li> <li>Seed treatment with Azatobactor 150 gm/kg seeds</li> <li>RDF : 90:90:50 kg. NPK / ha</li> <li>Zinc Sulphate @ 10 kg / ha</li> <li>0.2 % Borax Spray at button opening stage</li> <li>Spraying of Imidachloprid 200 SL (1 ml/l) for sucking pests</li> <li>Hexaconazole 5 EC @ 1 ml / l for leaf spot</li> </ul>		DHM103	Limited irrigation	10	4	16.25	14.50	15.57	12.37	22.88	19008	70088	51079	3.68	17761	52538	34777	2.95
Pulses	<ul style="list-style-type: none"> <li>Demonstration of short duration black gram variety Rashmi (LBG – 625) in rice fallows</li> <li>Seed treatment with bio-fertilizers</li> </ul>	Rashmi (LBG-625)		Limited irrigation	10	4	9.36	7.87	8.61	7.37	16.82	18634	44931	26297	2.41	18042	36057	18015	1.99

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
							H	L	A	10									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Cereals	<ul style="list-style-type: none"> <li>IPM-Cultural and mechanical methods</li> <li>Spraying of Azadirachtin @ 2.5 ml//</li> <li>Application of Fipronil 0.3 G @ 10 kg/ac</li> <li>Seed treatment with Carbendazim 50 WP @ 4 g/kg of seeds</li> <li>Spraying of Propiconazole 25 EC @ 1 ml//</li> </ul>	JGL-1798		Irrigated	10	4	65	52	58.90	53.60	9.88	35500	126770	91220	3.58	36900	115220	78320	3.14
	<ul style="list-style-type: none"> <li>Demonstration of Paddy variety – KKP-5</li> </ul>	KKP-5		Irrigated	10	4	74.80	69.80	72.30	60.87	18.78	46750	125652	78902	2.68	44730	106657	61926	2.38
Millets																			
Vegetables	<ul style="list-style-type: none"> <li>Demonstration of French Bean variety – ‘Arka Arjun’</li> <li>Seed treatment with Rhizobium</li> <li>Vegetable special – micro-nutrient mixture</li> <li>Spraying of Agadiractin @ 2.5 ml//</li> <li>COC – spraying @ 3 gm//</li> </ul>	Arka Arjun		Irrigated	8	1.6	211.2	176.4	188.8	161.6	16.83	84170	333120	248950	3.96	80750	273460	192710	3.38

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
							H	L	A	10									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Flowers	<ul style="list-style-type: none"> <li>Demonstration of Tuberose hybrid– 'Prajwal'</li> <li>Bulb treatment with carbendazim @ 4 kg / 1 kg bulb</li> <li>Application of neem cake 25 kg / acre</li> <li>Spraying of Agadiractin 2.5 ml/l for sucking pests</li> <li>Hexaconazole 5% EC 1 ml/l</li> </ul>		Prajwal	Irrigated	6	0.25	152.3	107.7	131.7	95.90	37.33	102012	325933	223922	3.19	96964	253700	156736	2.61
Ornamental																			
Fruits	<ul style="list-style-type: none"> <li>Injection with Dimethoate 30 EC @ 5 ml in 5 ml of water</li> <li>Spraying with Propiconazole 25 EC @ 1 ml/l (3 times at 15 days intervals)</li> <li>Application of <i>Trichoderma</i> and <i>Pseudomonas</i> @ 50 gm/plant</li> <li>Drenching with Carbendazim 50 WP @ 2 g/l</li> </ul>	Puttabale		Irrigated	8	3.2	In Progress												



Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
							H	L	A	10									
Spices and condiments	<ul style="list-style-type: none"> <li>'Pepper special' – micro nutrient mixture spray with 5 gm/l. (1<sup>st</sup> spray during spike initiation with onset of monsoon, 2<sup>nd</sup> spray 2 months after first spray)</li> <li>Metalaxyl MZ 8% + Mancozeb 64% and Bordeaux mixture (1%) spray</li> <li>Drenching of Bordeaux mixtures and Arka microbial consortia 20 gm/l (June &amp; September) for leaf rot and quick wilt</li> </ul>	Panniyur-1		Irrigated	5	2.5	11.25	10.50	10.87	8.55	27.19	98350	314730	216380	3.22	81650	227550	145900	2.80
Commercial																			
Fibre crops like cotton																			
Medicinal & aromatic																			
Fodder	<ul style="list-style-type: none"> <li>Demonstration of CoFS 29, Cowpea and Sesbenia fodder tree as border crop</li> </ul>	CoFS-29, AV-5		Irrigated	20 unit	8	680	560	610	-		(3 cuttings) In Progress							

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)				
							Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
							H	L	A	11										13
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Plantation	<ul style="list-style-type: none"> <li>Application of FYM @ 20 kg/plant</li> <li>100g + 40g + 140 g NPK + 20g Borax / plant</li> <li>Spraying with Carbendazim 12% + Mancozeb 63 % WP @ 2.0 g// + Chlorpyrifos 20 EC @ 2.0 ml //</li> </ul>	Tarikere local		Irrigated	10	2	In Progress													
Fibre																				
Others (pl.specify)																				

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

<b>Major pest and disease management in Paddy</b>		
<b>Parameter with unit</b>	<b>Demo</b>	<b>Check</b>
Stem borer incidence (%)	16.1	33.5
Blast disease incidence (%)	2.05	13.15
Sheath blight incidence (%)	4.60	16.20
Leaf roller incidence (%)	12.80	23.40

<b>Demonstration of paddy variety – KKP-5</b>		
<b>Parameter with unit</b>	<b>Demo</b>	<b>Check</b>
Stem borer incidence (%)	4.44	10.20
Blast incidence (%)	2.60	8.80
Plant height (cm)	92	89
Productive tillers/m <sup>2</sup>	397	348
Panicle length (cm)	22.10	19.20

<b>Integrated Crop Management in Sunflower</b>		
<b>Parameter with unit</b>	<b>Demo</b>	<b>Check</b>
Bud necrosis incidence (%)	7.4	15.9
Ear Head Caterpillar incidence (%)	7.47	12.30
Downy Mildew incidence (%)	8.10	20.90

<b>Demonstration on Black Gram variety Rashmi (LBG – 625)</b>		
<b>Parameter with unit</b>	<b>Demo</b>	<b>Check</b>
YMD incidence (%)	9.55	19.90
Pod borer incidence (%)	8.70	16.63

<b>Integrated Crop Management in French Bean</b>		
<b>Parameter with unit</b>	<b>Demo</b>	<b>Check</b>
Pod length (cm)	17.17	15.41
Pod weight (gm)	12.49	10.47

<b>Integrated Crop Management in Tuberose</b>		
<b>Parameter with unit</b>	<b>Demo</b>	<b>Check</b>
Florets / spike (Nos.)	52.5	47.16
No. of Flowers / kg	13172	9598
Flower Yield (t/ha)	13.17	9.59

<b>Integrated Crop Management in Pepper</b>		
<b>Parameter with unit</b>	<b>Demo</b>	<b>Check</b>
Quick wilt incidence (%)	4.8	12.4
Leaf rot incidence (%)	6.0	20.8
Spike length (cm)	11.4	10.06

<b>Integrated pest and disease management in Banana</b>		
<b>Parameter with unit</b>	<b>Demo</b>	<b>Check</b>
Pseudostem Weevil incidence (%)	9.86	19.25
Sigatoka Leaf spot incidence (%)	6.86	18.12
Panama Wilt incidence (%)	4.81	14.16

### 5.B.2. Livestock and related enterprises

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Yield (kg/animal)			% Increase	*Economics of demonstration (Rs./unit)				*Economics of check (Rs./unit)						
					Demo				Check if any	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR		
					H	L	A												
Dairy	Enrichment of fodder by silage making and addition silage culture	Cross bred cows	8	8															
Poultry																			
Rabbitry																			
Pigerry																			
Sheep and goat																			
Duckery																			
Others (pl.specify)																			

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

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

### 5.B.3. Fisheries

Type of Breed	Name of the technology demonstrated	Breed	No. of Demo	Units/ Area (m <sup>2</sup> )	Yield (q/ha)			% Increase	*Economics of demonstration (Rs./unit) or (Rs./m2)				*Economics of check (Rs./unit) or (Rs./m2)						
					Demo				Check if any	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR		
					H	L	A												
Common carps	Demonstration of 'Amur Carp' In poly-culture of fish	Amur Carp	4	1															
Mussels																			
Ornamental fishes																			
Others (pl.specify)																			

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

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

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**5.B.4. Other enterprises : NIL**

Enterprise	Name of the technology demonstrated	Variety/ species	No. of Demo	Units/ Area {m <sup>2</sup> }	Yield				% Increase	*Economics of demonstration (Rs./unit) or (Rs./m2)				*Economics of check (Rs./unit) or (Rs./m2)				
					Demo			Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
					H	L	A											
Oyster mushroom																		
Button mushroom																		
Vermicompost																		
Sericulture																		
Apiculture																		
Others (pl.specify)	Demonstration of nutritional garden – 2017-18		5															
	Terrace garden - 2017-18		5															

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

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

**5.B.5. Farm implements and machinery : NIL**

Name of the implement	Cost of the implement in Rs.	Name of the technology demonstrated	No. of Demo	Area covered under demo in ha	Labour requirement in Mandays		% save	Savings in labour (Rs./ha)	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)					
					Demo	Check			Gross cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR		

**Data on additional parameters other than labour saved (viz., reduction in drudgery, time etc.) : NIL**

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

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

Sl. No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	4	129	(1) French Bean Variety Arka Arjun at Harogoppa (2) French Bean Variety Arka Arjun at Nimbegondi, (3) Field bean variety HA-4 at Hirekorahalli (4) Integrated Crop Management in Sunflower at Nimbegondi,
2	Farmers Training	11	591	Agronomic practices of fodder crops, Production technology of French, Bean variety 'Arka Arjun', Green fodder production technology and uses, Improved production technology of Tuberose, Estrous synchronization methods and their advantages, Importance of management of micronutrients in soil, Integrated crop management in arecanut of maidan areas, Integrated crop management in green gram, Integrated crop management in arecanut, Silage preparation in plastic drum, Feed management in livestock during summer,
3	Media coverage	18	-	Published in Vijayavani, Kannada Prabha, Hosa Diganta Daily papers
4	Training for extension functionaries	2	130	1) Nutritional perspective for augmenting livestock production – an approach to double the farmers' income and 2) Quality control of cattle and poultry feed and sample collection for legal cases for veterinary doctors of Shivamogga district
5	Others (Please specify			
	a) Field visits	25	78	Regular field visits to FLD plots
	b) Group discussions	5	47	(1) Soil sample collection method (2) Production technology of French Bean variety 'Arka Arjun' (3) Preparing field and soil sample collection (4) Soil sampling, application of Arka microbial consortia and pepper special (5) Soil sample collection and preparation of land for paddy transplanting
	c) Mobile advisories	-	-	-
	d) Method demonstration	1	3	Inflorescence dieback and inflorescence caterpillar control by spray insecticide and fungicide
	e) Farmers visit to KVK	8	25	Farmers visited to KVK to take critical inputs and information about technologies of FLD

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

### Demonstration details on crop hybrids

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demonstration	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)				
					Demonstration			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
					H	L	A											
<b>Cereals</b>																		
Bajra																		
Maize																		
Paddy																		
Sorghum																		
Wheat																		
Others (pl. specify)																		
<b>Total</b>																		
<b>Oilseeds</b>																		
Castor																		
Mustard																		
Safflower																		
Sesame																		

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demonstration	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demonstration			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Sunflower	<ul style="list-style-type: none"> <li>• Bio-fertilizer (<i>Azospirillum</i> &amp; PSB) and <i>Trichoderma</i> enriched FYM application @ 8 t/ha</li> <li>• Seed treatment with Azatobactor 150 gm/kg seeds</li> <li>• RDF:90:90:50 kg. NPK/ha</li> <li>• Zinc Sulphate @ 10 kg/ha</li> <li>• 0.2 % Borax Spray at button opening stage</li> <li>• Spraying of Imidachloprid 200 SL (1 ml/l) for sucking pests</li> <li>• Hexaconazole 5 EC @ 1 ml / l for leaf spot</li> </ul>	DHM-103	10	4.0	16.25	14.50	15.57	12.67	22.88	19008	70088	51079	3.68	17761	52538	34777	2.95
Groundnut																	
Soybean																	
Others (pl.specify)																	
<b>Total</b>																	
<b>Pulses</b>																	
Greengram																	
Blackgram																	
Bengalgram																	



Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demonstration	Area (ha)	Yield (q/ha)			Check	% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demonstration					Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Redgram																	
Others (pl.specify)																	
<b>Total</b>																	
<b>Vegetable crops</b>																	
Bottle gourd																	
Capsicum																	
Others (pl.specify)																	
<b>Total</b>																	
Cucumber																	
Tomato																	
Brinjal																	
Okra																	
Onion																	
Potato																	
Field bean																	
Others (pl.specify)																	
<b>Total</b>																	
<b>Commercial crops</b>																	
Sugarcane																	
Coconut																	
Others (pl.specify)																	
<b>Total</b>																	
Fodder crops																	
Maize (Fodder)																	

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demonstration	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demonstration			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Sorghum (Fodder)																	
Others (pl.specify)																	
Tube rose	<ul style="list-style-type: none"> <li>• Demonstration of Tube Rose hybrid– ‘Prajwal’</li> <li>• Bulb treatment with carbendazim @ 4 kg / 1 kg bulb</li> <li>• Application of neem cake 25 kg / acre</li> <li>• Spraying of Azadirachtin @ 2.5 ml/l for sucking pest</li> <li>• Hexaconazole 5% EC 1 ml/l</li> </ul>	Prajwal	6	0.25	152.3	107.7	131.7	95.90	37.33	102012	325933	223922	3.19	96964	253700	156736	2.61
<b>TOTAL</b>																	

## PART VII. TRAINING (2018-19)

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Crop Production</b>										
Weed Management	1	42		42	9		9	51		51
Resource Conservation Technologies	3	33	99	13	9	22	108	42	123	
Cropping Systems										
Crop Diversification										
Integrated Farming	1	10	12	22	3	3	6	13	15	28
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management	5	102	17	155	12	13	25	152	30	180
Soil and Water Conservation										
Integrated Nutrient Management	1	2	14	16		5	5	2	19	21
Production of organic inputs										
Others (pl.specify)										
<b>Horticulture</b>										
<b>a) Vegetable Crops</b>										
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) Use of bio-fertilizers in vegetable crops	1	2	17	19	1	6	7	3	23	26

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>b) Fruits</b>										
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)	1	1	11	12		5	5	1	16	17
Intercrops in arecanut										
<b>c) Ornamental Plants</b>										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
Flower production	2	21	20	41	4	14	18	25	34	59
Bee keeping										
<b>d) Plantation crops</b>										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
<b>e) Tuber crops</b>										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
<b>f) Spices</b>										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
<b>g) Medicinal and Aromatic Plants</b>										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl.specify)										
<b>Soil Health and Fertility Management</b>										
Soil fertility management	1	9	2	11	8	3	11	17	5	22
Integrated water management										
Integrated nutrient management	1	30		30	16		16	46		46
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers	1		12	12	1	8	9	1	21	22
Soil and water testing										
Others (pl.specify)										
<b>Livestock Production and Management</b>										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology	2	53	12	65	4		4	57	12	69
Production of quality animal products										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Others (pl.specify)										
Animal Husbandry practices	1	14	35	49	1	5	6	16	40	56
<b>Home Science/Women empowerment</b>										
Household food security by kitchen gardening and nutrition gardening	1	21	17	38	42	37	79	63	54	117
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	1	2	40	42		18	18	4	58	62
Women empowerment	1		24	24		10	10		34	34
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
<b>Agril. Engineering</b>										
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)										
<b>Plant Protection</b>										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Integrated Pest Management	1	35	2	37	8		8	44	4	48
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (pl.specify)										
Safe use of pesticides	1	29		29	4		4	33		33
<b>Fisheries</b>										
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)										
<b>Production of Inputs at site</b>										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
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)										
<b>CapacityBuilding and Group Dynamics</b>										
Leadership development										
Group dynamics										
Formation and Management of SHGs	2	12	36	48	10	17	27	22	53	75
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
<b>Agro-forestry</b>										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
Marketing strategies	1	31	15	46	22	11	30	53	26	79
ICT in agriculture	1	24	16	40	17	25	42	41	41	82
<b>TOTAL</b>	<b>30</b>	<b>473</b>	<b>401</b>	<b>791</b>	<b>171</b>	<b>202</b>	<b>447</b>	<b>686</b>	<b>608</b>	<b>1127</b>



**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
<b>Crop Production</b>										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management	2	52	2	54	1		1	53	2	55
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify)										
<b>Horticulture</b>										
<b>a) Vegetable Crops</b>										
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)										
Integrated Crop Management in French Bean	2	60	6	66	27	9	36	87	15	102
<b>b) Fruits</b>										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
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)										
<b>c) Ornamental Plants</b>										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
<b>d) Plantation crops</b>										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
<b>e) Tuber crops</b>										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
<b>f) Spices</b>										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
<b>g) Medicinal and Aromatic Plants</b>										

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										
Production and management technology										
Post harvest technology and value addition										
Others (pl.specify)										
<b>Soil Health and Fertility Management</b>										
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)										
<b>Livestock Production and Management</b>										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management	1	22		20	5	1	6	25	1	26
Feed and Fodder technology	3	66	3	51	17	1	18	64	4	87
Production of quality animal products										
Others (pl. specify)										
<b>Home Science/Women empowerment</b>										
Household food security by kitchen gardening and nutrition gardening	1	5	45	50	5	20	25	10	65	75
Design and development of low/minimum cost diet										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
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	1	4	21	25	2	2	4	6	23	29
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
<b>Agril. Engineering</b>										
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)										
<b>Plant Protection</b>										
Integrated Pest Management										
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (pl.specify)										
<b>Fisheries</b>										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
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)										
<b>Production of Inputs at site</b>										
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										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Others (pl.specify)										
<b>CapacityBuilding and Group Dynamics</b>										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
<b>Agro-forestry</b>										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
<b>TOTAL</b>	<b>10</b>	<b>209</b>	<b>77</b>	<b>266</b>	<b>57</b>	<b>33</b>	<b>90</b>	<b>245</b>	<b>110</b>	<b>374</b>

#### 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										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition	1		44	44		4	4	44	4	48
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing	1				14		14	14		14
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)										
<b>TOTAL</b>	<b>2</b>		<b>44</b>	<b>44</b>	<b>14</b>	<b>4</b>	<b>18</b>	<b>58</b>	<b>4</b>	<b>62</b>

#### 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)										
<b>TOTAL</b>										

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

Area of training	No. of	No. of Participants
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	Courses	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	2	48	22	100				48	22	70
Any other (pl. Specify)										
<b>Total</b>	<b>2</b>	<b>48</b>	<b>22</b>	<b>100</b>				<b>48</b>	<b>22</b>	<b>70</b>

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

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

### 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
<b>1</b>	<b>Crop production and management</b>										
1.a.	Increasing production and productivity of crops	1	10	15	25	5		5	15	15	30
1.b.	Commercial production of vegetables										
<b>2</b>	<b>Production and value addition</b>										
2.a.	Fruit Plants										
2.b.	Ornamental plants										
2.c.	Spices crops										
<b>3.</b>	<b>Soil health and fertility management</b>										
<b>4.</b>	<b>Production of Inputs at site</b>										
<b>5.</b>	<b>Methods of protective cultivation</b>										
<b>6.</b>	<b>Others (pl.specify)</b>										
<b>7.</b>	<b>Post harvest technology and value addition</b>										
7.a.	Processing and value addition										
7.b.	Others (pl.specify)										
	Bee keeping	3	61	7	68	15	11	26	80	14	94
<b>8</b>	<b>Farm machinery</b>										
8.a.	Farm machinery, tools and implements										
8.b.	Others (pl.specify)										
<b>9.</b>	<b>Livestock and fisheries</b>										
<b>10</b>	<b>Livestock production and management</b>										
10.a.	Animal Nutrition Management										
10.b.	Animal Disease Management										
10.c.	Fisheries Nutrition										
10.d.	Fisheries Management										
10.e.	Others (pl.specify)										
	Sheep and poultry farming	1				14		14	14		14
<b>11.</b>	<b>Home Science</b>										

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	
11.a.	Household nutritional security											
11.b.	Economic empowerment of women	1		24	24		10	10		34	34	
11.c.	Drudgery reduction of women											
11.d.	Others (pl. specify)											
<b>12</b>	<b>Agricultural Extension</b>											
12.a.	Capacity Building and Group Dynamics											
12.b.	Others (pl. specify)											
	<b>Total</b>	<b>5</b>	<b>61</b>	<b>31</b>	<b>92</b>	<b>29</b>	<b>21</b>	<b>50</b>	<b>94</b>	<b>48</b>	<b>142</b>	

#### Details of sponsoring agencies involved

##### 1. Government of Karnataka

#### 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	
<b>1</b>	<b>Crop production and management</b>											
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)											
<b>2</b>	<b>Post harvest technology and value addition</b>											
2.a.	Value addition											
2.b.	Others (pl.specify)											
<b>3.</b>	<b>Livestock and fisheries</b>											
3.a.	Dairy farming											
3.b.	Composite fish culture											

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
3.c.	Sheep and goat rearing	1				14		14	14		14
3.d.	Piggery										
3.e.	Poultry farming										
3.f.	Others (pl.specify)										
<b>4.</b>	<b>Income generation activities</b>										
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)										
<b>5</b>	<b>Agricultural Extension</b>										
5.a.	Capacity building and group dynamics										
5.b.	Others (pl.specify)										
	<b>Grand Total</b>	<b>1</b>				<b>14</b>		<b>14</b>	<b>14</b>		<b>14</b>

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

S. No.	Name of Job Role	Date of Start	Date of Assessment	Total Expenditure (Rs.)	No. of Participants									No of Participants passed assessment
					General			SC/ST			Grand Total			
					Male	Female	Total	Male	Female	Total	Male	Female	Total	
1														
2.														

## **PART VIII – EXTENSION ACTIVITIES (2018-19)**

### Extension Programmes (including extension activities undertaken in FLD programmes)

Nature of Extension Programme	No. of Programmes	No. of Participants (General)			No. of Participants SC / ST			No. of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Field Day	4	75	23	98	23	8	31	-	-	-
Kisan Mela	-	-	-	-	-	-	-	-	-	-
Kisan Ghosthi	-	-	-	-	-	-	-	-	-	-
Exhibition	7	1392	913	2305	613	456	1069	28	3	31
Film Show	6	111	34	145	32	11	43	54	13	67
Method Demonstrations	10	80	75	155	17	8	25	-	-	-
Farmers Seminar	-	-	-	-	-	-	-	-	-	-
Workshop	-	-	-	-	-	-	-	-	-	-
Group meetings	12	137	39	176	24	15	39	2	-	2
Lectures delivered as resource persons	16	857	470	1327	287	149	436	111	42	153
Newspaper coverage	-	-	-	-	-	-	-	-	-	-
Radio talks	6									
TV talks	8									
Popular articles	3									
Extension Literature	5									
Advisory Services	45	38	1	39	2	2	4	1	1	2
Scientific visit to farmers field	75	164	19	183	18	8	26	-	-	-
Farmers visit to KVK	194	277	8	285	19	3	22	-	-	-
Diagnostic visits	7	59	-	59	18	-	18	28	8	36
Exposure visits	11	169	49	218	55	7	62	5	-	5

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
Ex-trainees Sammelan	-	-	-	-	-	-	-	-	-	-
Soil health Camp	-	-	-	-	-	-	-	-	-	-
Animal Health Camp	5									
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)	9	350	400	750	226	229	455	20	3	23
Any Other (Specify)										
<b>TOTAL</b>	<b>423</b>	<b>3709</b>	<b>2031</b>	<b>5740</b>	<b>1334</b>	<b>896</b>	<b>2230</b>	<b>249</b>	<b>70</b>	<b>319</b>

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

### 9.A. Production of seeds by the KVKs

Crop category	Name of the crop	Name of the Variety	Name of the Hybrid	Quantity of seed (q)	Value (Rs)	Number of farmers to whom provided
Cereals (crop wise)						
Finger millet	Ragi	GPU-28 and GPU-67	-	0.75	2100	10
Oilseeds						
Pulses	Pigeon pea	BRG-5		0.70	5600	12
	Field bean	HA-4		0.10	500	5
	Horsegram			0.10	700	5
Commercial crops						
Vegetables						
Flower crops						
Spices						
Fodder crop seeds	Fodder Sorghum	CoFS-31		0.855	51075	10
Fiber crops						
Forest Species						
Others (specify)						
<b>TOTAL</b>				<b>2.505</b>	<b>59975</b>	<b>42</b>

### 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	PKM-1 and Bhagya		3207	38499	25
Fruits	Papaya		Thaiwan Red Lady	563	8415	15
Ornamental plants						
Medicinal and Aromatic						
Plantation						
Spices	Curry leaf	Suhasini		5	60	3
Tuber						
Fodder crop saplings						
Forest Species						
Others(specify)						
<b>Total</b>				<b>3775</b>	<b>46974</b>	<b>43</b>

### 9.C. Production of Bio-Products : NIL

Bio Products	Name of the bio-product	Quantity (q)	Value (Rs.)	Number of farmers to whom provided
Bio Fertilizers				
Bio-pesticide				
Bio-fungicide				
Bio Agents				
Others (specify)				
<b>Total</b>				



**9.D. Production of livestock : NIL**

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

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

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

(A) KVK Newsletter: **SPANDANA**  
Date of start: 2006 Periodicity: Quarterly Copies printed in each issue : 1000

(B) Literature developed/published

Item	Number
Research papers- International	-
Research papers- National	4
Technical reports	10
Technical bulletins	5
Popular articles - English	-
Popular articles – Local language	4
Extension literature	7
Others (Pl. specify)	
Training Manuals	3
<b>TOTAL</b>	<b>33</b>

### 10.B. Details of Electronic Media Produced : NIL

S. No.	Type of media	Title	Details
1.	CD / DVD		
2.	Mobile Apps		
3.	Social media groups with KVK as Admin		
4.	Facebook account name		
5.	Instagram account name		

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) INTEGRATED FARMING SYSTEM - Escalates the revenue

##### Background

**Mr. Durgappa Angadi** is an enthusiastic progressive and innovative farmer from Sahasravalli village in Shikaripura taluk of Shivamogga District, Karnataka State. He owns 1.95 hectares of land cultivating different crops viz., coccinia, maize, arecanut, rearing cattle and producing vermicompost. He attended a training organized by KVK during 2015 on Integrated Farming System.

##### KVK Intervention

After the KVK intervention, he started growing different intercrops in younger arecanut garden viz., banana, fodder crops and vegetable crops like drumstick, yard long bean, cluster bean, chilli and bitter gourd as main crops. He planted different forest species like teak, silver oak and melia dubia as border crops. Timely guidance by KVK scientists, he has produced and used the organic manures to

enrich the soil fertility, the bio-pesticides and botanicals for management of pest and diseases in different crops. He started subsidiary enterprises like bee keeping, fishery, backyard poultry and dairy units as income generating activities. By practicing IFS technology, he harvested the bumper yield in banana, vegetable crops and getting additional income from subsidiary enterprises. KVK is utilizing his service in IFS and organic farming related training programmes as resource person.

The economics of cultivation is presented in table

<b>Income realized from IFS unit</b>			
<b>Sl. No.</b>	<b>IFS components</b>	<b>Area / Nos.</b>	<b>Net profit (Rs. In lakhs)</b>
<b>I Before KVK intervention</b>			
1.	Maize	1.4 ha	0.87
2.	Arecanut	0.4 ha	1.50
3.	Coccinia	0.15 ha	1.40
4.	Cattle	1 H.F.	0.20
5.	Vermi compost	2 tonnes	0.07
<b>TOTAL</b>			<b>Rs. 4.04</b>
<b>II After KVK intervention</b>			
1.	Maize	0.4 ha	0.25
2.	Arecanut	0.4 ha	1.60
3.	Coccinia	0.15 ha	1.90
4.	Yard long bean	0.15 ha	0.65
5.	Ginger	0.4 ha	0.60
6.	Inter crop in younger arecanut with banana	0.4 ha	1.36
7.	Cattles	1 H.F. + 1 buffalo	0.33
8.	Honey bee colonies	8 unit	0.16
9.	Poultry	40 Nos.	0.11
10.	Fishery	15x15 mtr.	0.10
11.	Vermi compost	3 tonnes	0.10
<b>TOTAL</b>			<b>Rs. 7.16</b>

**Horizontal spread:** He disseminated the technologies and ICM practices to his neighbour farmers and surrounding villages. Totally 1520 farmers are benefited from the IFS technologies.

## **(2) Integrated Farming System – A Sustainable Life**

Mr. Mathews is a progressive, awardee and innovative farmer from baruve village in Hosanagara taluk of Shivamogga district of Karnataka state. He owns 0.60 hectare of land cultivating different crops like Elephant foot yam, tapioca, arecanut, coconut, pepper, rubber, banana, forest species, sheep rearing, goat rearing, rabbit rearing, backyard poultry, fish rearing in farm pond and producing vermi compost.

KVK intervention

After KVK intervention, he started growing intercrops in younger arecanut garden mainly banana and elephant foot yam. He planted different fruit crops like mango, sapota, jack fruit, guava and also planted different forest species like teak and neem as border crops. He started subsidiary enterprises like back yard poultry, bee keeping, fishery, sheep rearing and goat rearing as income

generating activities and also producing vermi compost. He harvested bumper yield in banana, elephant foot yam and getting additional income from subsidiary enterprises.

#### Income from IFS unit

Sl. No.	Components	Areas/Nos.	Net profit (Rs. In lakhs)
I.	Before KVK intervention		
1.	Arecanut	0.40 ha	
2.	Rubber	0.20 ha	0.40
3.	Coconut	15	0.08
4.	Goat	4	0.20
5.	Vermicompost	1 unit	0.07
<b>Total</b>			<b>0.75</b>
<b>After KVK intervention</b>			
1.	Intercrop in younger arecanut with banana	0.20 ha	0.80
2.	Intercrop in younger arecanut with elephant foot yam	0.20 ha	0.60
3.	Rubber	0.20 ha	0.40
4.	Coconut	15	0.08
5.	Goat	8	0.40
6.	Vermi compost	2 unit	0.14
7.	Sheep	1	0.06
8.	Poultry	50	0.10
9.	Fish	1 (10X 10 mt.)	0.10
10.	Rabbit	30	0.06
11.	Honey bee	2 box	0.04
<b>Total</b>			<b>2.78</b>

**Horizontal spread:** He disseminated the technologies and ICM practices to his neighbour framers and surrounding villages. Totally 215 farmers are benefited from this IFS technologies.

### 3. Success Story of KVK Nursery

During 2008-09 National Horticulture Mission (NHM) has sanctioned a project on Model Horticulture Nursery to KVK, Shivamogga. In this project different propagating structures viz., mist chamber, poly house and shed nets were constructed. The main objective of the project is to produce elite horticultural planting material for the needy farmers of the district. KVK, Shivamogga has taken initiative in production of different horticultural plants viz., mango, sapota, papaya, drumstick, vegetable seedlings, curry leaf and flowering plants. Among these different seedlings / grafts production, papaya and drumstick seedlings were major part because of demand by the farmers.

For successful horticulture crop production, supply of elite planting material and training to growers are very essential. In this regard, from 2010-11 to 2018-19 KVK conducted 23 training programmes on topics related to "Improved production technologies of papaya and drumstick". During the training programmes about 640 farmers/farm women / rural youth were trained. By realizing the immense scope and potentiality of growing papaya and drumstick as a sole / intercrop farmers purchased quality planting material from KVK, Shivamogga. Totally, 43063 drumstick (PKM-1 & Bhagya) seedlings of worth Rs. 4,77,515/- were sold to more than

128 farmers by covering an area of about 116 ha. as sole crop or intercrop in younger arecanut gardens. Similarly, 73192 papaya seedlings (Arka Surya and Taiwan-786) of worth Rs.9,11,445/- were sold to 149 farmers by covering in area of about 661 ha as intercrop in younger arecanut gardens. By growing papaya and drumstick as intercrops farmers have obtained Rs. 1,55,000/- and Rs. 1,45,000/- per ha respectively as a additional income in arecanut apart from protecting younger arecanut plants from scorching sun, reducing weed menace and creating better micro climate for areca growth. Due to concerted efforts of KVK intercropping of papaya and drumstick in younger areca gardens has spread to more than 520 ha in the district with an additional income of Rs. 8.5 to 10.0 crores.

## **2. Upliftment of farm families through Integrated Farming System Demonstration project by KVK.**

**Introduction :** Historically, India's crop production scenario has been dominated by food grains more especially cereals. The country has registered a declining trend in crop and livestock production and per head food production, while maintaining increase in cereal productivity over the past decade. Sustainable development in agriculture must include integrated farming systems with efficient soil, water, crop and pest management practices, which are environmentally sound, economically viable and socially acceptable. The future agricultural system should reorient from the single commodity system to food diversification approach for sustaining food production and income generation. Integrating crops and cropping systems, horticulture, livestock, sericulture, agro-forestry, aquaculture, etc., therefore, assume greater importance for conserving and recycling of farm resources to enhance farm productivity, which will reduce environmental degradation and maintain agricultural sustainability by providing nutritional and livelihood security. Realizing the importance of integrated farming system, Government of Karnataka under RKVY project supported financial assistance for implementing the IFSD project through Agricultural Universities. University of Agricultural Sciences, Bangalore has initiated integrated farming system through 12 KVKs, 3 EEUs and FTI, GKVK with the involvement of Scientists / Teachers working at ZARS / ARS and Colleges coming under different agro-climatic zones. KVK, Shivamogga is one of the implementing centre under UAS, Bangalore.

**Need for IFS :** A large gap exist between potential, on-farm and farmers yields of post crop varieties developed during the green revolution. FARMSCAPE (Farmers, Advisors, Researchers, Monitoring, Communication and Performance Evaluation) of programme of participatory transfer of technology with the farming community could be successful in translating technological development on the farmers' fields. Improving the productivity of the whole farm is of larger concern today than ever before for the reason of Total Factor Productivity (TFP). Although, the overall production of food grains and milk are the highest, the per hectare productivity is low. Thus, augmenting production through efficient

management of natural resources, human resources through IFS approach would meet the present requirement of livelihood security and farm profitability.

### **Objectives**

- To attain sustainable improvement in productivity and income by adopting IFS model.
- To ensure livelihood security of farm families and landless labourers in the project area.

**Location :** The programme was implemented in Konagavalli Gramapanchayath of Shivamogga Taluk. Total of 10 villages (1515 farm families) comprising 1058 agriculturists and 457 landless agricultural laborers were covered under the project.

**Duration :** The project was initiated in the year 2011-12. The total duration of project is three years.

### **Activities carried out under IFSD project.**

- Orientation about IFSD schedule to the data collecting volunteers.
- Collected bench mark information of IFSD villages (1515 families)
- Orientation on the PRA techniques to all the implementing staff of the project.
- Analysis of the collected data through outsourcing.
- Capacity building of farmers / farm women through various trainings, demonstrations and exposure visits.
- Distribution of critical inputs to the farmers as per their needs.
- Conduct of field days before harvest of the demonstration plot.
- Selection of model stake holders for showcasing / impact analysis
- Formation and strengthening of the commodity based association / agro service centres.

### **Critical inputs supplied**

#### **I. Crop Component**

- 1) Cereals – Paddy, Ragi, Maize
- 2) Pulses – Black gram, Redgram, Green gram
- 3) Oil seeds – Groundnut

#### **II. Horticulture component**

- 1) Planting materials : Drumstick, papaya, mango, Coconut, sapota, curry leaf, lime.

#### **III. Animal component**

- 1) Sheep – (Bandur cross breed),
- 2) Poultry birds – Giriraja, Swarnadhara
- 3) Mineral mixture, feed additives and deworming agents

#### **IV. Other components**

- 1) Micro nutrients – Zinc sulphate, gypsum, Boron
- 2) Bio-Fertilizers
- 3) Foliar sprays
- 4) Mobile vermicompost unit with earthworms
- 5) Plant protection chemicals

6) Small Agricultural equipments

**V. Initiation of Commodity Based Associations (CBAs) / Agro Service Centres (ASCs)**

In order to provide inputs at desired level and also interlink the sale of produce two CBAs/ ASCs were started in two villages of the project area. Each CBA is having 15 members and the members contributed Rs.1.00 lakh. Seed money of Rs. 1.00 is contributed from the project to each of the CBA.

**Impact of the IFSD project**

- 1) Seed replacement with improved varieties of crops
- 2) Increase in yield of crops (8-10 %) due to use of supplied critical inputs
- 3) Improvement in soil health by use of micronutrients, bio-fertilizers and organic fertilizers (Vermi Compost)
- 4) Improvement in long term assets of farming communities through Horticulture plant seedlings.
- 5) Additional income to the landless labourers and small farmers through rearing of sheep and poultry birds.
- 6) Increase in knowledge, skill development through capacity building programmes and exposure visits.

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

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

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

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

Period of observing Technology Week : From 20-11-2018 to 24-11-2018  
 Total number of farmers visited : 673  
 Total number of agencies involved : 5  
 Number of demonstrations visited by the farmers within KVK campus : 40

**Other Details**

<b>Types of Activities</b>	<b>No. of Activities</b>	<b>Number of Farmers</b>	<b>Related crop/livestock technology</b>
Gosthies	-	-	-
Lectures organized	14	673	Soil and water conservation in agriculture and horticultural crops; Subsidiary enterprises for enhancing farmers' income - Mushroom Cultivation, Bee Keeping - Vermi Compost ; Livestock entrepreneurship for rural livelihood security - Poultry - Sheep - goat farming; Nutritional importance and value addition in millets ; ICT and marketing strategies in agriculture produce
Exhibition	1	673	Seeds and planting materials, fruits and vegetable crops, agriculture crops, horticulture crops, farm equipments and implements, medicinal plants, honey bee instruments, fertilizers, manures, animal husbandry equipments and instruments, value added products
Film show	10	673	Protected cultivation, Bee keeping, Mushroom cultivation, Water management, Dairy management, Soil sampling, Poultry farming, Liquid manure preparation, Vermi-compost preparation, Composting methods
Fair	-	-	-
Farm Visit	7	673	KVK Demonstration plots, Terrace Garden, Kitchen Garden, SWT Lab, OFRC crop demonstration plots, Technology Park, Bakery / value addition equipments, IFS plot, Poultry unit, Fishery unit, Areca intercrop plot, paddy field
Diagnostic Practical	-	-	-
Supply of Literature (No.)	6 Nos.	673	Hydroponics, Tomato cultivation, Bee keeping, French Bean cultivation, mushroom cultivation, Obesity – cause and remedies
Supply of Seed (q)	2	8	Fodder seeds
Supply of Planting materials (No.)	3	40	Papaya, drumstick, curry leaf
Bio Product supply (Kg)	-	-	
Bio Fertilizers (q)	-	-	
Supply of fingerlings	-	-	
Supply of Livestock specimen (No.)	-	-	
Total number of farmers visited the technology week		673	



## PART XI – SOIL AND WATER TEST

### 11.1 Soil and Water Testing Laboratory

#### A. Status of establishment of Lab :

1. Year of establishment : 2006
2. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost	Status
1.	Conductivity meter	1 No.	7,400	Good
2.	Physical balance (KROY)	1 No.	12,000	Good
3.	Chemical balance (Shimadzu)	1 No.	48,900	Good
4.	Water distillation still	1 No.	48,850	Good
5.	Shaker	1 No.	27,600	Good
6.	Hot air oven	1 No.	20,000	Not working
7.	Magnetic stirrer with hot plate	1 No.	5,500	Good
8.	Spectrophotometer	1 No.	42,000	Good
9.	Flame photometer	1 No.	35,200	Good
10.	Macro digestion system	1 No.	52,118	Good
11.	Automatic distillation system	1 No.	85,232	Good
12.	Electronic Acid neutralizer scrubber	1 No.	23,909	Good
13.	Hot plate Rectangular	1 No.	9,600	Good
14.	Ind. & Comml.	1 No.	26,400	Good
15.	Refrigerator	1 No.	18,133	Good
16.	Digital Micro pipette set	1 No.	21,180	Good
17.	pH Meter	1 No.	6,600	Good
18.	Soil testing kit	1 No.	72,000	Good
19.	Electrical conductivity meter	1 No.	12,022	Good
20.	AAS with accessories	1 No.	14,20,000	Good
21.	UPS with battery	1 No.	54,548	Good
22.	LG Ikon split 3 star AC	1 No.	27,000	Good
23.	V-Guard stabilizer	1 No.	2,400	Good
24.	pH meter (MKV-1)	1 No.	10,305	Good
<b>Total</b>			<b>20,88,897</b>	

#### B. Details of samples analyzed since establishment of SWTL :

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages
Soil Samples	12498	8419	2877
Water Samples	4768		
Plant samples	33		
Manure samples	30		
Others (specify) Lime	43		
<b>Total</b>	<b>17372</b>	8419	2877

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

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages
Soil Samples	1793	1080	478
Water Samples	925	815	221
Plant samples			
Manure samples	1	1	1
Others (specify) Lime	5	2	2
<b>Total</b>	<b>2724</b>	<b>1898</b>	<b>702</b>

**11.2 Mobile Soil Testing Kit : NIL****A. Date of purchase and current status**

Mobile Kits	Date of purchase	Current status
1.		
2.		

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

	Progress during 2018-19	Cumulative progress
<b>Samples analyzed (No.)</b>		
<b>Farmers benefited (No.)</b>		
<b>Villages covered (No.)</b>		

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

Particulars	Date (s)	Villages (No.)	Farmers (No.)	Samples analyzed (No.)	Soil health cards issued (No.)
SWTL	-	702	1080	1793	1793
Mobile Soil Testing Kit	-	-	-	-	-

**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.	128	32	-	-	5	2

## PART XII. IMPACT

### 12.A. Impact of KVK activities (Not restricted for reporting period).

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Demonstration of photoperiod insensitive, less string, high yield French bean variety Arka Sharath	20	75%	1,22,710/- per ha.	2,48,950/- per ha.
Nitrogen use efficiency in paddy	5	40%	57,480/- per ha	77,400/- per ha
Inter-cropping of Field Bean variety Hebbal Avare-4 (HA-4) in younger arecanut gardens	10	30 %	-	31,578/- per ha
Management of arecanut root grub	5	45%	1,50,200/- Per ha	1,95,200/- per ha

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)

#### 11.B. Cases of large scale adoption

##### 1) Profitability and productivity enhancement of demonstrating farmers through leaf spot resistant groundnut variety GPBD – 4 for Shivamogga district

Shivamogga is one of the districts in Karnataka where groundnut is being grown both in *kharif* and summer seasons. As the district's groundnut growing area falls under southern transition zone with assured rainfall and prevalence of cloudy weather during cropping season of groundnut is very common. Under such climatic conditions occurrence of leaf spot disease in groundnut variety TMV-2 predominantly (released during 1960) quite obvious which results in substantial yield loss with reference to pod and haulm yield.

Over a period of time, the yields of TMV-2 have been gradually decreasing owing to various reasons *viz.*, non availability of pure seed, loss of genetic vigor in the available seed, small size of pods and kernels and susceptibility to pests and diseases owing to continuous cultivation and its removal from the government subsidy programme.

**The programme :** Understanding the need for an improved groundnut variety suitable to Shivamogga district, a programme on assessment of groundnut varieties was launched during 2005.

**The process :** To start with an awareness meeting was held with farmers. Farmers identified constraints in groundnut, production and also ways to mitigate them. Based on the problems and possible solutions it was decided to conduct frontline demonstrations in farmers field with improved variety GPBD - 4 released by UAS, Dharwad during 2005, which is having resistance to leaf spot disease.

#### **Intervention :**

KVK, Shivamogga conducted frontline demonstration on groundnut variety GPBD - 4 during the years 2005-06 to 2015-16 in summer / Kharif seasons involving 92 farmers in 11

years. Totally 92 demonstrations on groundnut crop in an area of 38.00 hectares by involving 92 farmers in all the ten years of demonstration were conducted in 3 taluks of Shivamogga district (Soraba, Shikaripura and Shivamogga taluks).

#### Output / results :

FLD results showed that GPBD-4 performed consistently better as the average pod yield of 92 demonstrations in an area of 38.00 ha. ranged from 19.37 to 28.94 q/ha. There was 16.02 % increase in pod yield in demonstrated groundnut GPBD - 4 variety which was found economically superior with higher BC ratio of 3.55 against the lower BC ratio of 3.03 in TMV-2. Incidence of leaf spot disease was not noticed in GPBD-4 as compared to severe incidence of 60 % in local check (TMV-2)

#### Outcome

Field days in all the years in collaboration with Department of Agriculture were conducted for larger spread of this variety. Printed literature was also provided to the needy farmers. Performance of this variety was also published in local print and electronic media. For promoting this better variety across the district, Department of Agriculture took interest in spreading the variety along with Karnataka Oil Federation (KOF).

#### Following are some of the efforts made to spread the variety

- ✓ Identification of farmers interested in this new variety
- ✓ Supply of foundation seeds by KVK to its contact farmers through IFSD programme
- ✓ Procuring the seeds from farmers and distributing to other farmers through FLD
- ✓ Giving wide publicity through news letter and media

By summer 2016, the variety has spread to 52 villages extending over an area of 1800 acres. It is very appreciable to note the sustained performance of GPBD - 4 groundnut variety even in adverse conditions and the increasing demand for the seed.

**Table 1: Yield performance of groundnut varieties demonstration under FLD programme in Shivamogga district of Karnataka**

Year	Name of the block / village	Variety	No. of demonstration	Area (ha)	Pod Yield			
					Demonstration		Check	% increase in yield
					Maximum	Average	Average	Average
2005-06	Bedarahosally, Shivamogga Tq.	GPBD - 4	12	4.80	31.80	28.94	23.38	23.78
2006-07	Devikoppa, Soraba Tq.	GPBD - 4	12	4.80	37.50	26.25	22.25	17.97
2007-08	Tumarikoppa, Soraba Tq.	GPBD - 4	12	4.80	30.00	24.75	19.87	24.55
2008-09	Mallapura, Soraba Tq.	GPBD - 4	12	4.80	27.50	23.55	19.37	21.57
2009-10	Begur, Shikaripura Tq.	GPBD - 4	12	4.80	29.12	26.08	22.27	17.10
2010-11	Haramghatta, Shivamogga Tq.	GPBD - 4	7	4.00	27.25	25.57	22.76	12.35
2011-12	Nimbegondi, Shikaripura Tq.	GPBD - 4	7	2.80	25.00	23.39	20.86	12.13

2012-13	Hirakasavi, Soraba Tq.	GPBD - 4	5	2.00	27.00	24.50	22.00	11.36
2013-14	Basavanaganguru, Soraba Tq.	GPBD - 4	5	2.00	27.00	24.50	22.00	11.36
2014-15	Halemugalagere, Shikaripura Tq.	GPBD - 4	5	2.00	27.00	24.50	22.00	11.36
2015-16	Eleneerukoppa, Shikaripura Tq.	GPBD - 4	3	1.20	22.00	20.66	18.33	12.71
<b>Total</b>			<b>92.00</b>	<b>38.00</b>	<b>28.29</b>	<b>24.79</b>	<b>21.37</b>	<b>16.02</b>

**Table 2: Cost economics of Groundnut varieties demonstrated under FLD programme in Shivamogga district**

Years	Demonstration			Control / check			B:C ratio	
	Total cost (Rs/ha)	Gross return (Rs/ha)	Net income (Rs/ha)	Total cost (Rs/ha)	Gross return (Rs/ha)	Net income (Rs/ha)	Demonstration	Check
2005-06	19000	54986	35986	19500	44422	24922	2.89	2.27
2006-07	19500	52500	33000	19750	44500	24750	2.69	2.25
2007-08	18150	53213	35062	19750	42720	22970	2.93	2.16
2008-09	18500	58875	40375	21500	48425	26925	3.14	2.21
2009-10	19560	69200	45700	17775	55675	37900	3.34	3.13
2010-11	17000	56254	39254	19000	50072	31072	3.30	2.63
2011-12	16000	81865	65865	17500	73010	55510	5.12	4.17
2012-13	18000	85750	67750	19000	77000	58000	4.76	4.05
2013-14	21250	74118	52868	195850	62700	43200	3.49	3.21
2014-15	21350	81660	60310	19950	74360	54410	3.82	3.73
2015-16	19666	71000	51334	17850	63666	45816	3.61	3.56
<b>TOTAL</b>	<b>18907</b>	<b>67220</b>	<b>47955</b>	<b>35220</b>	<b>57868</b>	<b>38680</b>	<b>3.55</b>	<b>3.03</b>

## 2. Green gram (KKM-3) – Better crop for paddy fallows

Krishi Vigyan Kendra, Shivamogga had demonstrated on the use of short duration green gram variety KKM-3 for paddy fallows under NFSM scheme. It was taken up in different clusters of Shivamogga district viz., Shikaripura, Shivamogga, Sagar taluks. Since 2015-16 and 2018-19 totally 275 demos covering an area of 275.00 acres.

Crop was sown during January under residual soil moisture after the harvest of paddy grown during Kharif. Available soil moisture facilitated better establishment and growth of the crop. During the demonstration period soil moisture reseeded soon as there was a high temperature. In spite of this, KKM-3 could yield filled grains due to its short duration nature. KKM-3 is a short duration green gram variety released during 2010-11. Along with the varietal introduction to farmer's fields several low cost technologies and precautionary measures were demonstrated as a capsule to make the farmer partners understand the concept of integrated crop management. Seeds were treated with bio-inoculates viz., *Rhizobium*, PSB and

*Trichoderma* @ 500 gm / 6 kg seeds per acre which were sufficient to sow in an acre area. Application of recommended dose of nutrients foliar spray of nutrients with water soluble fertilizers at flower initiation stage and prophylactic spray of PPC against pod borer and sucking pests were demonstrated. KKM-3 was compared with local check with 10-12 days longer duration. Green gram demonstration on paddy fallows was taken up with least inputs supply and with no irrigation facility. Green gram variety KKM-3 was accepted by farmer friends due its short duration and small, shiny seeds which fetches better price in the market compared to local check. Seeds produced were shared among fellow farmers with and / without payment.

Green gram and specially KKM-3 variety was accepted for this short duration which facilitates to take up and additional crop without leaving it fallow for the want of resources.

Green gram variety KKM-3 grow under paddy fallows was popularized to many farmers for the villages and the neighbouring villages through several extension activities like training, method demonstration, field visits, field day and by organizing a Krishimela on large scale. This encouraged fellow farmers of the villages to know the technology.

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

**1) Dissemination of improved variety of French bean through Frontline demonstration**

**Background**

The low productivity in French bean is due to non-adoption of high yielding and disease tolerant varieties. Even though many technologies for cultivation have been evolved for increasing the productivity but farmers have hardly adopted them. The present study on photo insensitive, stringless and high yielding French bean variety 'Arka Sharath' was conducted by Krishi Vigyan Kendra (KVK), Shivamogga in Karnataka.

**Interventions**

A total of 41 demonstrations were conducted in 41 farmers fields in an area of 16.6 ha from 2012-2017. To demonstrate the improved French bean production, the constraints were identified through participatory approach.

The data was collected from both FLD and farmers practice to know extension gap (Demonstration yield-Farmers yield), Technology gap (Potential yield-Demonstrated yield), Technology index (Potential yield-Demonstrated yield)/Potential yield x 100), per cent increase in yield and B:C. (Table-1)

**Table-1 : Comparison of improved French bean production practices and farmers practice.**

Sl. No.	Technology	Improved production practice	Farmers practice
1.	Seed rate (kg/ha)	40	50-60
2.	Seed treatment with Rhizobium	Followed	Not followed

3.	Use of improved variety	Arka Sharath / Arka Anoop	Local varieties
4.	Spacing (cm)	30 x 15	30 x 30
5.	Nutrient management (N:P:K kg/ha)	63 :100:75	100:50:50
6.	Integrated pest and disease management	Followed	Not followed
7.	Harvesting	50-55 days from sowing	60 days from sowing
8.	Post harvest management	Sorting and grading followed	Sorting and grading not followed

### Output / result

The results revealed that 2.50 to 19.17 per cent increase in yield over farmers practice with an average of 9.98 per cent. For the five years an average of 16.06 and 1.97 quintals of extension gap and technology gap were observed respectively. The extension gap ranging from 4.80 to 20.30 qha<sup>-1</sup> emphasizes the need to educate farmers through various means of adoption of improved techniques of production. The technology index varied from 2.50-4.75. The average technology index observed was 0.98 per cent during the five years of demonstration, which shows the performance of variety.

The results indicated that by adopting improved variety of French bean higher average B:C was recorded for five years of demonstration (3.59) compared to farmers practice (3.07).

**(Table-2)**

Year	No. of demonstrations	Yield (q/ha <sup>-1</sup> )		Per cent increase over farmers plot	Potential yield (q/ha <sup>-1</sup> )	Extension gap (q/ha <sup>-1</sup> )	Technology gap (q/ha <sup>-1</sup> )	Tech index	B:C	
		Demo plot	Farmers Plot						DP	FP
2012-13	10	190.50	170.20	11.93	200.00	20.30	9.50	4.75	3.38	2.90
2013-14	12	195.00	190.20	2.50	200.00	4.80	5.00	2.50	3.17	2.80
2014-15	10	192.50	181.68	10.59	200.00	10.82	7.50	3.75	3.46	3.01
2015-16	4	204.55	193.50	5.71	200.00	11.00	-4.55	-2.27	4.5	3.9
2016-17	5	207.60	174.20	19.17	200	33.40	-7.60	-3.80	3.45	2.77
<b>Average</b>	<b>8.2</b>	<b>198.03</b>	<b>181.956</b>	<b>9.98</b>	<b>200</b>	<b>16.064</b>	<b>1.97</b>	<b>0.986</b>	<b>3.592</b>	<b>3.076</b>

### Outcome

The improved variety of French bean coupled with improved agronomic practices significantly increased the yield. Higher profitability and economic viability was noticed in demonstration plots apart from self satisfaction compared to the farmer's practice.

## 2. Impact of Demonstration on Arecanut Rootgrub Management

Arecanut is an important plantation crop grown in large scale in Malnad districts of Karnataka, particularly in Shivamogga. Farmers were getting low yield in spite of good cultivation practices. Although no major problems were observed in their cultivation,

observations indicated that the trees show the symptoms like tapering towards tip, short internodes and yellow colored little leaves. Based on the symptoms the trees were examined and effected roots were severely infested with rootgrubs.

### Intervention

The front line demonstration was conducted in farmers' field during August-September, 2012 to 2016 in Kouthi and Thoragodu villages of Sagar taluk, Shivamogga district. Regular farmers meeting, training programmes, field visit and group discussions were conducted which helped farmers in identifying the stages of pest, nature of damage, critical stages for intervention and enlighten the farmers the benefits of the demonstrated technology in reducing the root grub incidence. Based on symptoms the trees were uprooted and examined. The demonstration was conducted in severely affected arecanut gardens by imposing different treatments. The farmers practice included indiscriminate use of pesticides compared to selective insecticides followed in demonstration. The incidence (number of grubs / tree) of root grubs was recorded on 30 and 60 days after application of insecticides. In demonstration plot the management strategy included proper dosage, proper method and right time of application of neem cake @ 2 kg /tree and Imidachloprid @ 0.5 ml/ litre of water (3 litre solution/tree). The farmers practice included indiscriminate use of insecticides compared to selective insecticides followed in front line demonstration.

### Results

The results revealed that the farmers practice certainly experienced more number of grubs / tree as compared to demonstrated one. The demonstrated technology is effective compared to farmers practice mainly because of the intervention made at right time in August-September when the first instar grubs are in the upper surface of soil, Imidachloprid application by root absorption technique, neem cake application for effective repellent and antifeedent action against rootgrubs. In terms of number of grubs' reduction on the trees on 60 days after treatment, there was decrease over farmers practice to the extent of 88.95% in the trees receiving application of Imidachloprid + neem cake (Table-1).

Strategies	Method of application	Dose/ tree	Mean No. of grubs per tree during 5 years										Percent reduction over farmers' practice					Mean percent reduction
			30 Days after treatment					60 Days after treatment					2012	2013	2014	2015	2016	
			2012	2013	2014	2015	2016	2012	2013	2014	2015	2016						
Farmers practice	Broad casting and spraying	5-10 kg and 2-3 L/acre	7	6.2	6.5	5.1	5.1	9.4	8.23	8.5	7.6	7.6	-	-	-	-	-	
Demonstrated technology (Imidachloprid + neem cake application)	Root absorption + soil application	1.5 ml/tree 2kg / tree	2.5	2.3	1.8	1.7	1.7	0.86	0.42	0.8	1.2	1.2	90.85	94.9	90.59	84.21	84.21	88.95

The treatment effect was reflected in nut yields. The maximum yield was recorded in the trees where neem cake was applied and Imidachloprid was treated under demonstrated technology (10.48 q/ha) as compared to farmers practice (7.81 q/ha), registering an increase in yield of 27.97 per cent over farmers practice (Table-2).



Parameters	Demonstrated technology					Mean	Farmers practice					Mean
	2012	2013	2014	2015	2016		2012	2013	2014	2015	2016	
Average yield (q/ha)	10	10	10.8	12.1	9.5	10.48	6.75	8	8.5	9.4	6.4	7.81
Percent increase in yield over Farmers' Practice	32.5	25	27.06	28.72	26.56	27.97	-	-	-	-	-	-
Cost of production (Rs.)	65000	63000	62200	75400	47800	62680	55000	54000	52600	67000	41800	54080
Gross income (Rs.)	120000	200000	388800	314600	243000	253280	81000	160000	306000	244400	192000	196680
Net profit (Rs.)	55000	137000	326600	239200	195200	190600	26000	106000	253400	177400	150200	142600
B:C Ratio	1.84	3.14	6.25	4.17	5.06	4.09	1.47	2.96	5.82	3.65	4.57	3.69

The cost of production was slightly more under demonstration plot (Rs.62680/ha) in comparison to farmers practice (Rs.54080/ha). But net profit was more under demonstrated technology (Rs.190600/ha) compared to farmers practice with a lesser profit of Rs.142600/ha. The cost : benefit ratio obtained was 1:4.09 as against 1:3.69 in farmers practice (Table-2)

### Outcome

The study indicated that the trees in the treated gardens showing the symptoms of untapering towards tip, larger internodes, greenish colored healthy and normal sized leave and the garden was completely free from root grubs infestation.

### 3. Intercropping of Field bean variety Hebbala Avare-4 in younger arecanut

In Shivamogga arecanut is the major plantation crop covering an area of 54000 ha. Predominantly arecanut is grown as sole crop in some parts of district. Most of the farmers are not interested in putting effort or getting money from intercrops in younger Arecanut garden. Only their interest is in minimizing weed infestation, moisture conservation and fertility maintainance. They want easy ways for getting above results. Hence, field bean variety Hebbal Avare-4, a pulse crop can satisfy all the above requirements with minimum care and cost. As per the mandate of Krishi Vigyan Kendra, Shivamogga introducing the field bean crop as intercrop in younger arecanut garden.

This programme is important for the benefit the farmers because field bean variety Hebbal Avare-4 is pulse crop able to fix the atmospheric nitrogen in the soil and it needs less care and less susceptible to pod borer damage. This will reduce the weeds, reduces moisture loss and fallen foliage or green mulching will improves the soil fertility.

### KVK Intervention

Our KVK has conducted the front line demonstration on "Intercropping of Field bean variety Hebbal Avare-4 in younger arecanut garden".

**Outcome Impact:**

Farmer Sri Rangayya, Sominakoppa village of Shivamogga taluk not practiced intercropping in younger arecanut garden. He contacted KVK, Shivamogga scientists and enquired intercrops in younger arecanut garden and other pulse crops. Scientists were visited his field and suggested him to cultivate Field bean variety Hebbal Avare-4 during Kharif, 2016 and also laid demonstration trials (FLD) in his field. He earned net profit of Rs. 32,450/- by adopting the improved technology under the supervision of KVK scientists.

The other farmers of Sominakoppa village and the surrounding villages were inspired about the technology and showed their interest to take up the field bean variety Hebbal Avare-4 in younger arecanut garden.

**4. Impact of management of Heart rot disease in pineapple**

Pineapple is an economically important tropical fruit crop grown in different parts of Karnataka. In Shivamogga district it is grown in Sagara and Soraba taluks. Heart rot caused by *Phytophthora* sp. may lead to reduced crop yields and crop failures. The infection process and intensity of this disease mainly depends on the management practices undertaken. Knowledge on the symptoms, severity of the disease and management practices is very important. Hence, to impart the knowledge technology intervention has been carried out.

**Interventions:**

The front line demonstration was conducted in farmers' field during 2012-13, 2014-15 and 2015-16 in different villages of Soraba and Sagara taluks of Shivamogga district. Farmers were educated about the disease identification, symptoms, nature of damage; critical stages / intervention were briefed to the farmers. The benefits of technology demonstrated in minimizing the disease incidence was done through meetings, training programme, field visits and group discussions. The demonstrations were conducted in disease affected plots and the treatments were imposed. The farmers practice was included as check for comparison. The incidence of rotting of leaves and plants were recorded at 30 days interval after treatment imposition. In demonstration plots the management strategy includes soil application of *Trichoderma* enriched Neem cake @ 20 gm/hill + Sucker treatment with Metalaxyl MZ @ 0.3%, Drenching with Metalaxyl MZ. The farmers practice included Application of Bordeaux mixture and Mancozeb followed in front line demonstration.

**Results:**

The results revealed that the technology demonstrated minimized the incidence of heart rot disease when compared to farmers practice. The technology demonstrated was effective and was convinced by the farmers mainly because of the intervention made at the right time during the season. Treating the suckers with Metalaxyl – MZ @ 0.3% and application of *Trichoderma* enriched Neem cake @ 20 g/hill and drenching with Metalaxyl – MZ minimized the infection both in suckers and in soil. There was an increased in yield of

about 26.81 % when compared to farmers practice. There was a net return of about Rs. 377733/ha with B:C of 3.29 (Table-1).

The treatment imposed resulted in reduced rot incidence and increased in the yield. The maximum yield of 531 q/ha was a recorded when compared to 453 q/ha in farmers practice registering an increase in yield of 26.81% over farmers practice.

The net profit was more under demonstration technology (Rs. 377733/ha) compared to farmers practice with a lesser profit of Rs. 327906 / ha. The cost benefit ratio obtained was 1 : 3.29 as against 1:2.90 in farmers practice (Table-1).

Parameters	Demonstrated technology				Farmers practice			
	2012-2013	2014-2015	2015-2016	Mean	2012-2013	2014-2015	2015-2016	Mean
Yield % q/ha	495	505.4	498	499.46	340	435	419.6	398.2
% increase in yield	45.59	16.18	18.68	26.81	-	-	-	-
Cost of production (Rs.)	185000	184600	178400	182000	175000	180000	175000	176666
Gross returns (Rs.)	594000	606960	597600	599500	480000	522000	503520	501840
Net returns (Rs.)	409000	423400	419200	294500	305000	347000	331720	327906
B:C	3.2	3.32	3.35	3.29	2.8	2.98	2.93	2.90

## **PART XIII - LINKAGES**

### **13A. Functional linkage with different organizations**

Sl. No.	Name of organization	Nature of linkage
1.	Karnataka State Dept. of Agriculture	- Joint diagnostic survey - Joint implementation of FLD's - Bi-monthly workshops - Collaborative training programme under ATMA - Joint field visits - Demonstration under ATMA
2.	Karnataka State Dept. of Horticulture	- Joint diagnostic survey - Collaborative training under NHM project - Field visits - Technology Demonstration
3.	Karnataka state Dept. of Animal Health & Veterinary Sciences	- Collaborative training - Joint implementation of animal health camps, vaccination camps, mass deworming and nutrition management of dairy stock and calf management - Technology demonstration of Feed formulation etc.,
4.	Karnataka State Sericulture Dept.	- Collaborative training ; technology demonstration
5.	Karnataka State Dept. of Fisheries	- Technology demonstration and training under NFDB
6.	Dept. of Industries and commerce	- Collaborative training
7.	All India Radio	- Technology dissemination
8.	Doordarshan & Private TV Channels	- Technology dissemination
9.	Information and Broadcasting Dept.	- Technology dissemination & publicity
10.	Financial institutions like NABARD & Nationalized co-operative banks	- Formation of self help groups - Collaborative training programme

Sl. No.	Name of organization	Nature of linkage
11.	Input agencies	- Collaborative farmers training programme - Technology dissemination
12.	Self Help Group	- Technology dissemination & organizing training
13.	Non-Governmental Organisations	- Training programme
14.	Local village level youth clubs	- Organizing training programme & field demonstration
15.	Co-operative sectors viz., milk producers, co-operative society, water users co-operative society etc.,	- Health camps and training programmes
16.	College of Agriculture	Involving RAWEP in conducting - Training Programme - Method demonstration - Group meeting & field visits
17.	Dept. of marketing and Co-operation	- Awareness & training programme on go down schemes
18.	Department of Panchayath raj and rural development	Training
19.	Coconut development Board	Training
20.	Protection of Plant Varieties and Farmers' Rights Authority, New Delhi	Training
21.	UAHS, Shivamogga	Interaction Meet, Krishi Mela, Training, Seminar, Workshop
22.	Rural self employment training institute	Training

**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.)
Innovative programme	April-2018	State Government	9,50,000
Integrated Farming System	April-2018	State Government	5,00,000
Progressive Farmers to Farmers training programme	April-2018	State Government	3,75,000
Short terms certificate course	January-2019	State Government	2,00,000

13C. Details of linkage with ATMA

Coordination activities between KVK and ATMA

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	Meetings	Action plan, Review meeting	2	-	-
02	Research projects				
03	Training programmes	Krishi Abhiyana	7	-	-
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				
	Agripreneurs 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		
April 2018		1						1
May		2						2
June								
July								
August		1						1
September								
October						3		3
November								
December								
January 2019								
February								
March								
<b>TOTAL</b>		<b>4</b>				<b>3</b>		<b>7</b>

## **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	

### 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.	Cost of inputs	Gross income	
Cereals									
Ragi	15-08-2018	20-11-2018	0.1	GPU-28, GPU-67	TL	0.75	800	2100	
Pulses									
Pigeon pea	20-7-2018	10-12-2018	0.3	BRG-5	TL	0.70	1600	5600	
Field bean	08-7-2018	15-10-2018	0.1	HA-4	TL	0.10	150	500	
Horse gram	10-08-2018	12-10-2018	0.01	-	TL	0.10	100	700	
Oilseeds									
Fibers									
Spices & Plantation crops									
Floriculture									
Fruits									
Papaya	10-07-2018	-	0.01	Red lady taiwan	-	563 No.	2500	8415	
Vegetables									
Drumstick	20-08-2018	-	0.01	Bhagya, PKM-1	-	3207	8000	38499	
Others (specify)									
Curry leaves	15-08-2018	-	0.001	Sahasini	-	5	10	60	
Fodder Sorghum	10-07-2018	Multicut	0.1	CoFS-29	TL	0.85	4800	51075	

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

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	

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

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

**14E. Utilization of hostel facilities**

Accommodation available (No. of beds : 40 )

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
April 2018			
May			
June			
July	90	3	-
August	34	1	
September			
October			
November			
December	80	1	
January 2019	4	4	
February			
March			

**14F. Database management**

S.No	Database target	Database created
		Database created in MS Word and MS Excel for compilation of 1) OLRs 2) KVK Portal 3) Periodical reports

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

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

**PART XV - FINANCIAL PERFORMANCE****15A. Details of KVK Bank accounts**

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
With Host Institute	Canara Bank	S.M.Circle, Shivamogga	524	SB A/c	0524101038350	577015205	CNRB 0000524
With KVK	Canara Bank	S.M.Circle, Shivamogga	524	SB A/c	0524101032710	577015205	CNRB 0000524

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

<b>Sl. No.</b>	<b>Particulars</b>	<b>Sanctioned</b>	<b>Expenditure</b>
<b>21.1</b>	<b>(A) REVENUE (Recurring Contingencies)</b>		
21.1.1	<b>Pay &amp; Allowances</b>	12458000	11306719
21.1.2	<b>Traveling allowances</b>	55000	29457
21.1.3	<b>Contingencies</b>		
21.1.3.a	<i>Stationery, telephone, postage and other expenditure on office running, publication of Newsletter</i>	210000	210000
21.1.3.b	<i>POL, repair of vehicles, tractor and equipments</i>	160000	159000
21.1.3.c	<i>Food/refreshment for farmers/extension personnel @ Rs.150/person/day</i>	85000	84900
21.1.3.d	<i>Training material (need based materials and equipments for conducting the training)</i>	40000	49600
21.1.3.e	<i>Frontline demonstrations</i>	346000	345985
21.1.3.f	<i>On farm testing (OFTs)/Technology Assessment</i>	79000	78985
21.1.3.g	<i>Integrated Farming System (IFS) (Min. 5 Units)</i>	--	--
21.1.3.h	<i>Training of extension functionaries</i>	25000	25000
21.1.3.i	<i>Extension activities/services</i>	50000	49600
21.1.3.j	<i>Farmers' Field School</i>	--	--
21.1.3.k	<i>EDP (2 Nos.) / Innovative activities</i>	30000	29682
21.1.3.l	<i>Soil &amp; water testing &amp; issue of soil health cards</i>	20000	24800
21.1.3.m	<i>Maintenance of building</i>	50000	49900
21.1.3.n	<i>Farmers Conclave, KVK Conference</i>	--	
21.1.3.o	<i>Video production</i>	--	
21.1.3.p	<i>Library (Purchase of Journals, Periodicals, News Papers &amp; Magazines)</i>	5000	2878
	<b>Total Recurring</b>	<b>13613000</b>	<b>12446506</b>
<b>21.2</b>	<b>(B) CAPITAL (Non-Recurring Contingencies)</b>		
21.2.1	<b>Equipments &amp; Furniture</b>		
21.2.2	<b>Works</b>		
21.2.3	<b>Vehicle</b>		
21.2.3 a	Four wheeler (Replacement)		
21.2.4	<b>Library</b>		
	<b>Total Non Recurring</b>		
<b>21.3</b>	<b>(C) REVOLVING FUND</b>		
	<b>GRAND TOTAL (A + B + C)</b>	<b>13613000</b>	<b>12446506</b>



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

Year	Opening balance as on 1 <sup>st</sup> April	Income during the year	Expenditure during the year	Net balance in hand as on 1 <sup>st</sup> April of each year
April 2016 to March 2017	5.97	10.56	8.57	7.96
April 2017 to March 2018	7.96	8.71	6.41	10.26
April 2018 to March 2019	10.25	5.69	3.65	11.96

**16. Details of HRD activities attended by KVK staff**

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Dr. Ashok M.,	Scientist (Animal Science)	Animal science research ethics and jurispidance	Veterinary college, Shivamogga	20/09/2018 20/09/2018
Dr. Ashok M.,	Scientist (Animal Science)	Training of trainers	GKVK, Bengaluru	24/09/2019 26/09/2018
Dr. Arunkumar P.	Scientist (Agril.Extension)	Advances in climate resilient agro-techniques for enhancing crop productivity and sustainability	UAHS, Shivamogga	21/01/22019 25/01/2019
Dr. Jyoti M. Rathod	Scientist (Home Science)	A family approach to doubling farmers' income	UAS, Dharwad	16/01/2019 05/02/2019

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