Indian Council of Agricultural Research, New Delhi
University of Agricultural and Horticultural Sciences, Shivamogga

ANNUAL REPORT 2017-18

(for the period 01-04-2017 to 31-03-2018)

Date :
16th to 19th May 2018

Venue :
KVK Idukki, Kerala

Editorial Credits

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ICAR-KRISHI VIGYAN KENDRA

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ICAR-KRISHI VIGYAN KENDRA
Shivamogga

ANNUAL REPORT : 2017-18

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University of Agricultural and Horticultural Sciences
Savalanga Road, Navile, Shivamogga-577 204, Karnataka.

PART I – GENERAL INFORMATION ABOUT THE KVK

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

KVK Address	Telephone		E mail	Web Address
	Office	Fax		
ICAR-Krishi Vigyan Kendra, Savalanga Road, Navule, Shivamogga-577 204. Karnataka	08182-295516, 267017	-	kvk.shivamogga@icar.gov.in shimogakvk@gmail.com	-

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

Address	Telephone		E mail	Web Address
	Office	Fax		
University of Agricultural and Horticultural Sciences, Savalanga Road, Navile, Shivamogga-577 204	08182-267011	08182-298008	vcuahss2014@gmail.com	www.uahs.in

1.3. Name of the Senior Scientist and Head with phone & mobile No

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. B. C. Hanumanthaswamy	9448255252	9480838976	bchswamy@gmail.com

1.4. Year of sanction : 2000

1.5. Staff position as on 31 March 2018

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.Hanumantha swamy	Senior Scientist and Head	M	Agril. Entomology	M.Sc.,(Agri. Entomology) Ph.D., PGDBA, PGDPP, PGDAEM	37400-67000	47800	12/22/2011	Permanent	General
2.	Scientist/SMS	Mrs.Jyoti M.Rathod	Scientist	F	Home Science	M.H.Sc. (Food and Nutrition)	15600-39100	30160	03/12/2007	Permanent	SC
3.	Scientist/SMS	Dr. M. Ashok [1]	Scientist	M	Animal Science	M.VSc., PGDAEM	15600-39100	29280	05/18/2007	Permanent	OBC
4.	Scientist/SMS	Ms.M.V.Rekha [2]	Scientist	F	Soil Science & Agril. Chemistry	M.Sc.,(Soil Science and Agricultural Chemistry)	-	30000	08/19/2015	Temporary	Others
5.	Scientist/SMS	Ms.G.B.Smitha[2]	Scientist	F	Horticulture	M.Sc.,(Horticulture)	-	30000	08/24/2015	Temporary	Others
6.	Scientist/SMS	Dr. Arun Kumar P.[2]	Scientist	M	Ag. Extension	M.Sc.(Agri),Ph.D.	-	35000	23/09/2016	Temporary	Others
7.	Scientist/SMS	Imran Khan H. S.[2]	Scientist	M	Plant Pathology	M.Sc. (Agri), Ph.D.	-	30000	27/09/2016	Temporary	Others
8.	Programme Assistant (Lab Tech.)	Mr. R. Nagaraja	Programme Assistant (Lab Tech)	M	Agril. Microbiology	M.Sc.(Agri.) in Agricultural Microbiology, PGDAEM	9300-34800	15670	10/23/2010	Permanent	OBC
9.	Programme Assistant (Computer)	Smt. B.S.Geetha	Programme Assistant (Computer)	F	Computer	M.Com., PGDCA, PGDHR	9300-34800	15670	01/22/2011	Permanent	General
10.	Farm Manager	**VACANT**									
11.	Assistant	**VACANT**									
12.	Jr. Stenographer	Smt. Usha, K [2]	Typist cum Computer Operator	F	Typist cum Computer Operator	M.A.	12720	12720	08/13/2007	Temporary	Others
13.	Driver - 1	Mr. N. Gopala	Driver (LV)	M	Driver (Jeep)	SSLC	11600-21000	12250	08/16/2012	Permanent	OBC
14.	Driver - 2	Mr. K.H. Mohan	Driver (Tractor)	M	Driver (Tractor)	7th Std.,	14550-26700	17200	10/20/2008	Permanent	OBC
15.	SS-1	Mr. Manjunatha B. M.	Messenger	M	Messenger	SSLC	9950	9950	09/21/2017	Temporary	OBC
16.	SS-2	Mr. T. Chikkaiah	Assistant Cook cum Caretaker	M	Cook cum caretaker	SSLC	10400-16400	11800	11/22/2008	Permanent	OBC

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

Sl. 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.	**Administrative Building**	ICAR	Oct. 2009	550	55	-	-	-
2.	**Farmers Hostel**	ICAR	Sept. 2012	305	33.33	-	-	-
3.	**Staff Quarters**	-	-	-	-	-	-	-
	1							
	2							
	3							
4.	**Demonstration Units**							
	1. Vermi Compost Unit	NCOF Ghaziabad	2008	-	1.25	-	-	-
	2. Poultry Unit	RKVY	2012	100 sq.m.	1.20	-	-	-
	3							
	4							
5	**Fencing**							
6	**Rain Water harvesting system**	-	-	-	-	-	-	-
7	**Threshing floor**	-	-	-	-	-	-	-
8	**Farm godown**	-	-	-	-	-	-	-
9								
10								

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Tractor with Trailer	2001	3,71,892.00	4466.60 Hrs	Good condition
Jeep (Mahindra Bolero)	2017	8,00,000.00	9594	Good condition
Hero Honda Splendor+	2009	39,350.00	45680	Good condition
Honda Activa	2009	46,102.00	28450	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
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

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
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
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

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
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 moniter, 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 2017-18 :

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
12-12-2017	24	**1. Dr. P. Narayanaswamy**, Hon'ble Vice-Chancellor, UAHS, Shivamogga a) Suggested to produce large quantity of quality seedlings of areca, mango and papaya. b) Suggested to take programmes on acid soil management. c) Suggested to conduct more number of trainings on Bee keeping, Mushroom cultivation and protected cultivation. d) Suggested to conduct training programmes on processing and value addition in maize. e) Suggested to take training programmes on weed control f) Suggested to creat awareness among farmers regarding management of Hidimundige / Band disorder of arecanut. g) Suggested to takeup studies for comparision of qualities of areca husk compost with other compost. h) Suggested to analyze plant samples along with soil and water samples.	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. b) On 02-01-2018 conducted on campus training programme on Soil testing and acidic soil management for 32 farmers. 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. d) On 28/12/2017, training programme on Value addition in maize conducted for 45 farm women. e) During the year 2018-19, trainings on weed control will be organized. f) On 27/12/2017 conducted training programme on Plant protection in arecanut for 26 farmers 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. h) There is no facility to analyse the plant sample at SWTL. 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.	

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
		i) Suggested to provide information to farmers on use of organic pesticides for the control of insect pests and diseases j) Suggested to provide information to farmers using information communication technologies	j) Providing short messages to registered 1850 farmers through farmers' portal.	
		2. Dr. M.J.Chandre Gowda, Principal Scientist, ATARI, Bengaluru a) Suggested to undertake impact studies after conduct of Vocational trainings. b) Suggested to create awareness among farmers on fodder crops viz., legumes and fodder trees. c) Suggested to conduct training programmes in collaboration with line departments. d) Suggested to upload short films / success stories about two minutes on Integrated Farming System to the KVK portal. e) Suggested to undertake impact studies after completion of OFT and FLD programme.	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. 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. c) Conducted 3 off campus training on value addition in millets and 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. d) Short films / success stories about two minutes on Integrated Farming System to the KVK portal will be uploaded. e) Planned to undertake impact studies of FLD and OFTs conducted for 3-4 years.	

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
		3. Dr. T. H. Gowda, Director of Extension, UAHS, Shivamogga a) Suggested to take seed production in Arka Sharath variety of French bean. b) Suggested to conduct more and more number of trainings for women on value addition through method demonstrations.	a) Planned to takeup seed production in French Bean variety Arka Sharath during 2018-19 in KVK demonstration plots. 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.	
		4. Sri N. Chandrappa, Deputy Director, Woman and Child welfare Department, Shivamogga a) Conduct the training programmes on nutrition garden through self help groups. b) Suggested to conduct programmes for women on agriculture and allied activities in collaboration with the departments.	(a) & (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	
		5. Dr. M. Manjunatha, Dean (Agri), College of Agriculture, Shivamogga, a) Suggested to creat awareness to farmers on use of bio-pesticides for insect pest control.	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.	

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
		6. Dr. K. Manjappa, ADR, ZAHRS, Shivamogga a) Suggested to conduct more number of off campus training programmes b) Suggested to conduct integrated farming system demonstrations in small farmers' fields. c) Suggested to conduct more number of trainings on animal husbandry.	a) During the year 2018-19 more number of off campus trainings will be organized. b) Conducted 19 Nos. of IFS demonstrations for small and marginal farmers of Shivamogga district under ICAR and State plan grants. 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.	
		7. Dr. Shivakumar T., ADA, Department of Agriculture, Shivamogga a) Suggested to provide preventive measures for the management of Army worm b) Enquired about green gram seed availability at University since there is greater demand.	a) Providing preventive measures for management of Army worm through field visits and diagnostic visits with department of agriculture and farmers visited to KVK. b) Seeds of Green gram variety KKM-3 is available at University Seed Unit.	
		8. Sri Guru Channabasavanna, Deputy Director, Department of fisheries, Shivamogga a) Suggested to make an arrangement for water testing laboratory to undertake fishery science activities. b) Suggested to conduct training programmes on fisheries in collaboration with department of fisheries	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. b) During the year 2018-19 trainings on fisheries will be organized in collaboration with department of fisheries .	

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
		9. Sri V. Nagaraju, Deputy Director, Department of Sericulture, Shivamogga a) Suggested to conduct training programmes and create awareness among farmers on sericulture in collaboration with department.	a) During the year 2018-19 trainings on sericulture will be organized in collaboration with department.	
		10. Sri Satyanarayana Bhat, Deputy Director, Department of Small scale industries and Commerce, Shivamogga a) Suggested to takeup precautionary measures against fungal infection of Areca leaf sheath bio-products during storage b) Suggested to create awareness among farmers regarding the assistance / benefits available from department of small scale industries through training programmes.	a) Training programme on eco-friendly bio-products of areca leaf sheath and proper storage of products for fetch good market price. b) During the training programmes awareness will be creating among farmers regarding the assistance / benefits available from department of small scale industries.	
		11. Sri H. G. Durgappa Angadi, Progressive farmer, Sahasravalli, Shikaripura taluk a) Suggested to conduct more number of training programmes by visiting progressive farmers plot. b) Suggested to conduct training programmes on IFS so that farmers can double their income by adopting IFS.	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. 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	

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
		12. Sri Madan G. M., Progressive farmer, Thanikal, Thirthahalli taluk a) Suggested to increase the duration of training programmes. b) Suggested to conduct training programmes to creat awareness on dairy and poultry. c) Suggested to provide information on weather based agricultural activities.	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. 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. c) Providing short messages to registered 1850 farmers through farmers' portal on cultivation of different crops.	
		13. Smt. Meenakshamma, Progressive farm-women, Agasanahalli, Bhadravathi tq a) Suggested to conduct more training programmes for improvement of social and financial status of women organisations.	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.	
		14. Smt. Nirmala, Progressive Farm-Women, Melinahanasavadi, Shivamogga taluk a) Suggested to conduct off-campus training programme on value addition of milk.	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.	

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)	• 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. • 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. • 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. • 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).
2.	Hilly Zone (Zone - 9)	• The total geographical area of hilly Zone (Zone–9) is 22.90 lakh ha. Soraba, Sagara, Thirtthahally and Hosanagara taluks of Shivamogga District comes under this zone. • The zone - 9 has varying altitude ranging from as low as 700 to as high as 1050 m. above mean sea level. • 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. • The climate of the zone is basically tropical benefited by the two monsoons accounting for major part of the rainfall. The zone receives and 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.

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 soils 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
	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
	Mixed Red and Black Soils	The soils are derived from ignetious 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.	
	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 the eastern parts of Sagar, Soraba, Shikaripur and Hosanagar Taluks.	
	Lateritic gravelly soils	Laterite soils are derived from acidic ignetious 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)
Field Crops				
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 (2015-16)

Horticultural Crops

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
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 (2015-16)

2.5. Weather data

Month	Rainfall (mm)	Temperature ^{0}C		Relative Humidity (%)
		Maximum	Minimum	
Apr-17	53.6	37.8	22.6	56.2
May -17	102.6	35.0	22.8	68.3
June-17	113.6	29.8	22.2	81.6
July-17	136.4	28.9	21.6	82.5
August-17	56	29.3	21.8	84.7
September-17	186.6	30.6	21.8	82.9
October-17	84.6	31.4	20.7	79.6
November-17	6.4	31.8	18.1	68.6
December-17	0	31.4	16.3	69.3
January-18	0	32.0	15.4	71.3
February-18	0	34.3	17.7	80.7
March-18	6.8	36.4	19.2	72.0
TOTAL	**746.6**	**32.39**	**20.02**	**74.81**

Source: Agromet advisory services CoA / ZAHRS, Shivamogga

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

Category	Population	Production	Productivity
Cattle			
Crossbred	112000	44000 MT	5.909
Indigenous	456000	80000 MT	2.388
Total	568000	124000 MT	
Buffalo	149515	43000	2.446
Sheep	36791	491527.76 kg(meat)	13.36
Goats	58034	638954.34Kg	11.01
Pigs	4007	161321.82Kg	40.26

Source : Department of Animal husbandry, Shivamogga (2014-15)

2.7 District profile has been Updated for 2017-18 Yes / No : YES

2.8 Details of Operational area / Villages

Sl. No.	Name of the Taluk / block	Name of the village	How long the village is covered under operational area of the KVK (specify the years)	Major crops & enterprises	Major problems identified	Identified thrust areas
1.	Shivamogga	Hunsodu, Mathodu, Basavanaganguru	2	Paddy, Areca, black pepper, nutmeg, cocoa, betel vine,	Stem borer, nutrient losses, quick wilt in black pepper, lack of knowledge on value addition in cocoa, nut dropping in arecanut, Blast, nutrient losses	Integrated Crop Management, Integrated Nutrient Management, Integrated Pest & Disease Management
		Aladalli, Belalakatte Sominakoppa, Godekoppa, Koodi	5	Maize, Paddy, vegetables, banana, arecanut, Ginger	Bacterial wilt problem in solaneceous vegetables, hidimundige in arecanut, murda complex in chilli, Lack of knowledge on high yielding varieties in vegetables, Stem borer, Rhizome rot	Integrated Crop Management , Integrated Pest Management and Integrated Disease Management
		Kyatinakoppa, Kommanalu	2	Paddy, sugarcane, arecanut, finger millet, vegetables	Stem borer, nutrient deficiency, inflorescence dieback and caterpillar, monocropping	Integrated Pest, Disease, Nutrient Management, Fodder crop management for dairy animals
		Holehatti	1	Arecanut, coconut, paddy, maize, ragi	Transportation problem when sugarcane is cultivated	Resource Management
		Hosahalli, Laxmipura	1	Arecanut, paddy	Improper resource management	Resource Management
		Chikkamarasa Koteganguru, Harnahalli, Ayanur	1	Paddy, maize, ginger, arecanut, banana, watermelon,	Stem borer, rhizome rot, bud necrosis in watermelon, lack of awareness on high yielding hybrids, Fusarium	Integrated Crop, Pest & Disease Management

Sl. No.	Name of the Taluk / block	Name of the village	How long the village is covered under operational area of the KVK (specify the years)	Major crops & enterprises	Major problems identified	Identified thrust areas
				vegetables	wilt in banana, low yielding varieties in ginger, non availability of multi cut fodder crops	
2.	Sagar	Shettikoppa, Balekoppa, Gullehalli,Shiruvala, Toragudo, Kalase, Anandapura, Konanakatte	2	Pineapple, arecanut, Paddy, Sugarcane, Coconut, fodder crops	Heart rot disease in pineapple, arecanut root grub, non availability of multi cut fodder crop, Root grub, wilt, thirps, stem borer	Integrated Pest and Disease Management
3.	Shikaripura	Eleneerukoppa, Halemugalagere,	3	Maize, sunflower, groundnut, pulses, maize, pulses, ragi, vegetables	Nutrient deficiency, wilt disease, sucking pests, Improper resource management, mono cropping	Integrated Pest, Disease, Nutrient Management, Integrated waste management, Integrated Crop Management, Fodder crop management
		Vittalanagara	1	Paddy, Maize	Water scarcity, excess rainfall	Fodder crop management for dairy, sheep, poultry
		Nimbegondi, Isoor, Anjanapura, Eleneerukoppa	2	Turmeric, groundnut, maize, sunflower, vegetables, ginger, arecanut	Rhizome rot, bud necrosis, low yielding in vegetables, yellow leaf disease in arecanut, low yielding varieties in ginger, Lack of knowledge on short duration pulses varieties	ICM, IPDM
4.	Bhadravathi	Kadadakatte, Majjgenalli, Bhandaralli	2	Paddy, sugarcane, arecanut, banana, vegetables	Inflorescence dieback and caterpillar in arecanut,	Integrated Pest and Disease Management

Sl. No.	Name of the Taluk / block	Name of the village	How long the village is covered under operational area of the KVK (specify the years)	Major crops & enterprises	Major problems identified	Identified thrust areas
		Holebyranahalli, Bhandarahalli, Karehalli	3	Turmeric, arecanut, paddy, banana, maize, flower crops	Lack of knowledge on micro nutrient management, low yielding varieties and Rhizome rot in turmeric, Stem borer, nutrient deficiency, inflorescence dieback and caterpillar	Integrated Crop Management and Integrated Nutrient Management , Integrated Pest, Disease, Nutrient Management
5.	Soraba	Samanavalli	1	Paddy, arecanut, pineapple, ginger, banana, vegetables	Pest and disease problem in paddy, ginger	Integrated Pest and disease Management
6.	Thirthahalli	Mandagadde	2	Paddy, arecanut, banana	Pest and disease problem in paddy, Koleroga in arecanut, psudostem weevil in banana	Integrated Pest and disease Management
7.	Hosanagara	Jayanagar, Humcha, Gartikere, Ripponpet, Kerehalli	2	Paddy, ginger, arecanut, Banana	Pest and disease problem in paddy, Koleroga in arecanut, psudostem weevil in banana	Integrated Pest and disease Management

2.9 Priority thrust areas

Sl. No.	Thrust Area
1.	Integrated Crop Management
2.	Integrated Nutrient Management
3.	Integrated Pest and Disease Management
4.	Variety / Hybrid introduction
5.	Farm mechanization
6.	Quality seed / seedlings production
7.	Fodder production
8.	Backyard poultry
9.	Value addition
10.	Post harvest technology
11.	Organic Farming
12.	Apiculture

PART III - TECHNICAL ACHIEVEMENTS

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

OFT				FLD			
1				2			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
3	3	11	11	13	13	77	77

Training				Extension Programmes			
3				4			
Number of Courses		Number of Participants		Number of Programmes		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
60	66	2500	2718	16	16	18000	20431

Seed Production (Q)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
	0.155		3009

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

3.B1. Abstract of interventions undertaken

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions									Supply of bio products	
				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.)	No.	Kg
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.	INM	Paddy	Leaching and volatilization losses of 'N' at critical growth stages	Assessment of Nitrogen use efficiency in paddy	-	2	1	-	Field day=1 Field Visits=10, Method demo=4 Advisories =10	-	-	-	-	-
2.	Varietal evaluation	Ginger	High seed rate, lack of awareness on newly released high yielding varieties	Assessment of ginger varieties for higher yield	-	2	1	-	Method demo=4 Field Visits=6	Rhizomes = 60 kgs.	-	-	2	20 kgs

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions									Supply of bio products	
				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.)	No.	Kg
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
3.	IDM	Pepper	Foot rot disease, low yield	Management of foot rot in pepper	-	2	1	-	Method demo=2 Field Visits=6, Advisories=3	-	-	-	1	8 ltr.
4.	IPDM	Paddy	Stem borer, leaf roller, blast, sheath blight and Udbatta		Integrated pest and disease management in Paddy	3	-	-	Method demo=1 Field Visits=6, Advisories=8, Field day=1	-	-	-	-	-
5	ICM	Maize	Zinc deficiency, stem borer, TLB and low yield		Integrated Crop Management in Maize	3	1	-	Field day=1 Field Visits=8, Advisories =12, Group discussion=3	-	-	-	3	72 kgs
6	ICM	Sunflower	Boron and zinc deficiency, powdery mildew, leaf spot, bud necrosis, low yield		Integrated Crop Management in Sunflower	3	1	-	Field Visits=4, Method demo=4 Advisories=6	-	-	-	2	48 kgs
7	ICM	Groundnut	Zinc & Boron Deficiency, Low shelling percentage, Incidence of leaf minor, Leaf spot disease		Integrated Crop Management in Groundnut	3	-	-	Field Visits=5, Method demo=4 Advisories=8	Pods =4.0	-	-	3	15 kg

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions									Supply of bio products	
				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.)	No.	Kg
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
8	Varietal evaluation	Black Gram	Non adoption of short duration pulse varieties for paddy fallows		Demonstration on Black Gram variety Rashmi (LBG – 625)	1	1	-	Field Visits=7, Method demo=2 Advisories =10	1.0	-	-	1	10 kgs
9	Hybrid evaluation	Chilli	Non adoption of disease resistant and high yielding hybrids		Introduction of Chilli hybrid 'Arka Meghana'	3	2	-	Field Visits=6, Advisories =12	-	39600	-	1	4 ltr
10	ICM	Tomato	Non adoption of disease resistant and high yielding hybrids		Integrated Crop Management in tomato	3	1	-	Field day=1 Field Visits=15, Advisories=25, Group discussion=3, Interaction=8	-	36000	-	1	3 ltr
11	Varietal evaluation	China aster	Non adoption of new flower crops		Introduction of China aster variety 'Kamini'	3	1	-	Field Visits=5, Advisories =10, Interaction=8	0.018	-	-	-	-

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions									Supply of bio products	
				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.)	No.	Kg
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
12	INPM	Arecanut	Nutrient deficiency, Nut splitting, inflorescence die-back, inflorescence caterpillar		Integrated nutrient and pest management in arecanut in Maidan area	2	1	-	Field Visits=14, Advisories=30, Interaction=1, Group discussion=2	-	-	-	-	-
13	IPDM	Banana	Pseudostem Weevil, Rhizome weevil, sigatoka leafspot and panama wilt		Management of Sigatoka leafspot and pseudostem Weevil in banana	3	1	-	Field Visits=12, Advisories=25, Interaction=2, Method demonstration =3, Group discussion=4	-	-	-	1	16 kgs
14	Fodder production	Fodder Sorghum	Fodder scarcity, unaware of fodder crops, dependency on hybrid Napier		Demonstration of fodder bank unit	2	-	-	Field Visits=8, Advisories=6, Interaction=2	0.21	3000	-	-	-
15	Food Science & Nutrition	Vegetables	Nutritional deficiency		Demonstration on Nutritional Gardens to ensure nutritional security	3	-	-	Field visit=3, Group discussion=1, interaction=1	0.001	-	-	-	-
16	Food Science & Nutrition	Health & Nutrition	Non utilization of roof of the house		Promotion of Vegetable Terrace Garden	-	-	-	-	0.001	-	-	1	5 kgs

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 Nitrogen use efficiency in paddy	UAS, Bengaluru + DRR, Hyderabad, IARI, New Delhi	Paddy	5		3	Field day =1, Field Visits = 10, Method demo=4 Advisories =10,
2	Assessment of ginger varieties for higher yield	IISR, Calicut	Ginger	4		4	Method demo=4 Field Visits = 6
3	Management of foot rot in pepper	UAS, Bengaluru, UAS, Dharwad	Black pepper	4		2	Method demo=2 Field Visits = 6, Advisories = 3
4	Integrated pest and disease management in Paddy	UAHS, Shivamogga	Paddy		10	4	Method demo Field visits Field day Advisory services
5	Integrated Crop Management in Maize	UAHS, Shivamogga	Maize		8	2	Field day =1 Field Visits = 8, Advisories =12, Group discussion =3
6	Integrated Crop Management in Sunflower	UAHS, Shivamogga	Sunflower		8	2	Field Visits = 4, Method demo=4 Advisories =6
7	Integrated Crop Management in Groundnut	UAS, Dharwad	Groundnut		5	2	Field Visits = 5, Method demo=4 Advisories =8
8	Demonstration on Black Gram variety Rashmi (LBG – 625)	UAHS, Shivamogga	Black Gram		10	2	Field Visits = 7, Method demo=2, Advisories =10
9	Introduction of Chilli hybrid 'Arka Meghana'	IIHR, Bengaluru	Chilli		4	2	Field Visits = 6, Advisories =12

10	Integrated Crop Management in tomato	IIHR, Bengaluru	Tomato		3	2	Field day =1 Field Visits = 15, Advisories =25, Group discussion =3, Interaction =8
11	Introduction of China aster variety 'Kamini'	IIHR, Bengaluru	China Aster		6	2	Field Visits = 5, Advisories =10, Interaction =8
12	Integrated nutrient and pest management in arecanut in Maidan area	CPCRI, Kasaragod	Arecanut		10	3	Field Visits = 14, Advisories =30, Interaction =1, Group discussion = 2
13	Management of Sigatoka leafspot and pseudostem Weevil in banana	UAHS, Shivamogga	Banana		8	2	Field Visits = 12, Advisories =25, Interaction =2, Method demonstration=3, Group discussion = 4
14	Demonstration of fodder bank unit	TNAU-Coimbatore, IGFRI-Dharwad	Fodder Sorghum		6	2	Field Visits = 8, Advisories =6, Interaction =2
15	Demonstration on Nutritional Gardens to ensure nutritional security	UAS, Bengaluru	Vegetables		5	2	Field visit = 3, Group discussion = 1, Interaction = 1
16	Promotion of Vegetable Terrace Garden	UAS, Bangalore	Vegetables		5	0	-

3.B2 contd..

No. of farmers covered															
OFT				FLD				Training				Others (Specify)			
General		SC/ST		General		SC/ST		General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
4	-	1	-	-	-	-	-	72	9	8	3	37	9	6	5
3	-	-	-	-	-	-	-	92	12	3	3	25	8	3	1
2	-	2	-	-	-	-	-	48	6	5	0	18	3	2	0
				7	1	-	-	96	18	4	2	79	22	4	3
				4	-	1	-	43	21	10	5	37	3	15	2
				8	1	1	-	52	16	12	0	21	2	1	0
				9	1	-	-	38	15	9	1	25	11	1	0
				7	-	1	-	45	32	12	0	48	20	12	6
				3	-	1		39	29	8	2	22	8	5	1
				1	-	2	-	53	18	12	0	68	24	102	9
				5	1	-	-	61	11	10	1	28	12	6	0
				6	-	-	-	72	12	11	1	31	16	8	2
				9	1	-	-	32	9	18	2	91	21	10	3
				5	-	3	-	28	18	12	2	38	12	8	3

PART IV - On Farm Trial

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

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management	1			1						2
Varietal Evaluation										
Integrated Pest Management										
Integrated Crop Management										
Integrated Disease Management				1						1
Small Scale Income Generation Enterprises										
Weed Management										
Resource Conservation Technology										
Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique										
Mushroom cultivation										
Total	**1**			**2**						**3**

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

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

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

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

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

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

4.B. Achievements on technologies Assessed and Refined

4.B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trial covering all the Technological Options)
Integrated Nutrient Management	Paddy	Assessment of Nitrogen use efficiency in paddy	5	5	2.0
Varietal Evaluation	Ginger	Assessment of ginger varieties for higher yield	4	2	2.4
Integrated Pest Management	Black Pepper	Management of foot rot in pepper	4	4	20 Vines / trial
Integrated Crop Management					
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
Total					

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

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

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

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

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

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

4.C1.Results of Technologies Assessed

Results of On Farm Trial : 1) Assessment of Nitrogen use efficiency in paddy

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	Leaching and volatilization losses of 'N' at critical growth stages	Assessment of Nitrogen use efficiency in paddy	5	T.O.1 (Farmer practice) : Basal application of N & P only followed by N & K top dressing	Farmer practice	51.2	q/ha	(1) Productive tiller/m^2= 284 (2) Stem borer incidence (%) =1.8 (3) Agronomic use efficiency of Nitrogen (Yield/applied N) =34.13	62160	2.73	
					T.O.2 : RDF, basal application of 50% N & K + 100 % P, 50% N as top dressing in 2 split at 25 & 55 DAP + 50% K at 55 DAP	UAS, Bengaluru	54.8	q/ha	1) Productive tiller/m^2= 289, (2) Stem borer incidence (%) =0.8 (3) AUE of Nitrogen (Yield/applied N) = 54.80	70800	3.06	
					T.O.3 : RDF + foliar application of 1% 19:19:19 at maximum tillering stage + foliar application of 1% 13:0:46 at grain filling stage	UAS, Bengaluru + DRR, Hyderabad	57.4	q/ha	1) Productive tiller/m^2= 310, (2) Stem borer incidence (%) =0.8 3) AUE of Nitrogen (Yield/applied N) = 57.40	75060	3.14	
					T.O.4: RDF, RD nitrogen through slow release urea (Neem coated urea)	IARI, New Delhi	55.0	q/ha	1) Productive tiller/m^2= 298 (2) Stem borer incidence (%) =0.6 3) AUE of Nitrogen (Yield/applied N) = 55.00	71240	3.07	

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

1. Title of Technology Assessed : Assessment of Nitrogen use efficiency in paddy
2. Performance of the Technology on specific indicators : Technology. Opt. 3 : Performed better and received higher yield
3. Specific Feedback from farmers : Farmers actively participated in the trial and they noticed the quality improvement in grains through foliar spray of potash. :
4. Specific Feedback from Extension personnel and other stakeholders : Recommended NPK + foliar application of 1% 19:19:19 NPK at maximum tillering stage + foliar application of 1% 13:0:46 NPK at grain filling stage performed better and recorded higher yield.
5. Feedback to Research System based on results and feedback received :

Results of On Farm Trial : 2) Assessment of ginger varieties for higher yield

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
Ginger	Irrigated	High seed rate, lack of awareness on newly released high yielding varieties	Assessment of ginger varieties for higher yield	4	Tech. Option 1: Himachal	Farmers' Practice	In progress					
					Tech. Option 2: Varada	IISR, Calicut						
					Tech. Option 3 : Mahima	IISR, Calicut						

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

1. **Title of Technology Assessed** : Assessment **of ginger varieties for higher yield**
2. Performance of the Technology on specific indicators :
3. Specific Feedback from farmers :
4. Specific Feedback from Extension personnel and other stakeholders :
5. Feedback to Research System based on results and feedback received :

Results of On Farm Trial : 3) Management of foot rot in pepper

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 disease, low yield	Management of foot rot in pepper	20 Vines / trial	Tech. Option 1 : Application of Bordeaux mixture	Farmers' Practice	In progress					
					Tech. Option 2 : Drenching of Metalaxyl 8% + Mancozeb 64% WP @ 2 g/l (5-10l / vine) and soil application of *Trichoderma* 50 g / vine.	UAS, Bengaluru						
					Tech. Option 3 : Soil application of Compost 20 kg. + Neem cake 1 kg. + Microbial consortia 50 g / vine and covering with 200 gauge UV resistant polythene sheet @ 1.25 sqm. / vine	UAS, Dharwad						

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

1. Title of Technology Assessed : Management of foot rot in pepper
2. Performance of the Technology on specific indicators :
3. Specific Feedback from farmers :
4. Specific Feedback from Extension personnel and other stakeholders :
5. Feedback to Research System based on results and feedback received :

4.D1. Results of Technologies Refined : 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 (Farmer 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

5.A. Summary of FLDs implemented

Sl. No.	Category	Farming Situation	Season	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		Farmers (No.)		Farmers (No.)	
									Proposed	Actual	SC/ST	Others	Small/ Marginal	Others
1.	Oilseeds	Irrigated	Summer	Sunflower		Cauvery Champ	ICM	• Bio-fertilizer (*Azospirillum &* PSB) and *Trichoderma* enriched FYM application (1:20) @ 8 t/ha • RDF : 90:90:50 kg. NPK / ha • Zinc Sulphate @ 10 kg / ha • 0.2 % Borax Spray at button opening stage • Spraying of Imidachloprid 200 SL (1 ml/*l*) for bud necrosis • Hexaconazole 5 EC @ 1 ml / *l*	4.0	4.0	-	8	6	2
		Irrigated	Summer	Groundnut	G-2-52	-	ICM	• Variety G-2-52 • Lime application based on soil test • Seed treatment with *Rhizobium*, PSB & *Trichoderma*	2.0	2.0	1	4	3	2

Sl. No.	Category	Farming Situation	Season	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		Farmers (No.)		Farmers (No.)	
									Proposed	Actual	SC/ST	Others	Small/ Marginal	Others
								• Gypsum application @ 500 kg / ha • Foliar application of borax @ 0.2 % • Profenophos 20 EC @ 2.0 ml//						
	Pulses	Irrigated	Rabi / Summer	Black Gram	LBG – 625	-	Resource conservation and varietal spread	• Short duration black gram variety LBG – 625 in rice fallows • Seed treatment with bio-fertilizers	4.0	4.0	1	9	7	3
	Cereals	Irrigated	Kharif	Paddy	JGL-1798	-	IPDM	• IPM-Cultural and mechanical methods • Spraying of Neem oil 2000 PPM @ 2.5 ml// • Application of Fipronil 0.3 G @ 10 kg/ac • Seed treatment with Carbendazim 50 WP @ 4 g/kg of seeds • Release of Trichogramma @ 1.20 lakh / ac	4.0	4.0	0	10	8	2

Sl. No.	Category	Farming Situation	Season	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		Farmers (No.)		Farmers (No.)	
									Proposed	Actual	SC/ST	Others	Small/ Marginal	Others
								• Spraying of Propiconazole 25 EC @ 1 ml//						
		Rainfed	*Kharif*	Maize	-	Pioneer-555, Cauvery seeds, NK-666, DKC	ICM	• Bio-fertilizer (*Azospirillum and* PSB) and *Trichoderma* enriched FYM application (1:20) @ 8 t/ha • RDF : 100 : 50 : 25 kg. NPK / ha • Zinc Sulphate @ 10 kg/ha • Profenophos 20 EC @ 2 ml// • Propiconazole 25 EC @ 1.0 ml //	3.2	3.2	1	7	5	3
	Millets													
	Vegetables	Irrigated	Kharif	Chilli		Arka Meghana	ICM	• Introduction of chilli hybrid – Arka Meghana • Marigold as trap crop (20:1) • Vegetable special – micro nutrient mixture • Neem Oil 20000 PPM @ 2.5 ml// for fruit borer • Imadichloprid 17.8 SL @ 0.5	1.6	1.6	1	3	3	1

Sl. No.	Category	Farming Situation	Season	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		Farmers (No.)		Farmers (No.)	
									Proposed	Actual	SC/ST	Others	Small/ Marginal	Others
								ml// for Thrips • Propargite 57 EC @ 1.6 ml// for mites						
		Irrigated	Kharif	Tomato		Arka Samrat	ICM	• Demonstration of high yielding, triple disease resistant tomato hybrid – 'Arka Samrat' • Vegetable special – micro-nutrient mixture • Neem Oil @ 2.5 ml// • Profenophos 20 EC @ 2.0 ml//	1.2	1.2	2	1	2	1
	Flowers	Irrigated	Kharif	China Aster	Kamini	-	ICM	Introduction of *China aster* variety 'Kamini'	2.4	2.4	-	6	5	1
	Ornamental													
	Fruit													
	Spices and condiments													
	Commercial													

Sl. No.	Category	Farming Situation	Season	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		Farmers (No.)		Farmers (No.)	
									Proposed	Actual	SC/ST	Others	Small/ Marginal	Others
	Medicinal and aromatic													
	Fodder	Irrigated	Kharif	Fodder crop	CoFS -29, Co-1, AV-5		Fodder crop	Demonstration of Fodder bank unit	1.5	1.5	-	6	4	2
	Plantation	Irrigated	Kharif	Arecanut	Tarik ere local		IPDM	• Application of FYM @ 20 kg/plant • 100g + 40g + 140 g NPK + 20g Borax / plant • Spraying with Carbendazim 12% + Mancozeb 63 % WP @ 2.0 g// + Chlorpyriphos 20 EC @ 2.0 ml //	2.0	2.0	-	10	5	5
		Irrigate	Kharif	Banana	Putta bale	-	IPDM	• Injection with Dimethoate 30 EC @ 5 ml in 5 ml of water. • Spraying with Propiconazole 25 EC @ 1.0 ml// (3 times at 15 days intervals)	3.2	3.2	3	5	4	4

Sl. No.	Category	Farming Situation	Season	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		Farmers (No.)		Farmers (No.)	
									Proposed	Actual	SC/ST	Others	Small/ Marginal	Others
								• Application of microbial consortia of *Trichoderma* and pseudomonas @ 50 gm/plant • Drenching with Carbendazim 50 WP @ 2 g/l						
	Fibre													
	Dairy													
	Poultry													
	Rabbitry													
	Piggery													
	Sheep and goat													
	Duckery													
	Common carps													
	Mussels													
	Ornamental fishes													

Sl. No.	Category	Farming Situation	Season	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		Farmers (No.)		Farmers (No.)	
									Proposed	Actual	SC/ST	Others	Small/ Marginal	Others
	Oyster mushroom													
	Button mushroom													
	Vermicompost													
	Sericulture													
	Apiculture													
	Implements													
	Others (specify)													
	Food Science & Nutrition	-	-	Vegetables	-	-		Demonstration of nutritional garden	5	5	-	5	-	-
	Health & Nutrition			Vegetables			Non utilization of roof of the house	• Promotion of vegetable Terrace garden • Growing of organic, quality vegetables • Compost making by using kitchen and garden wastes	5	5	-	5	-	-

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

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
	Oilseeds	Irrigated	Summer, 2017-18	Sunflower	-	-	ICM	• Bio-fertilizer (*Azospirillum &* PSB) and *Trichoderma* enriched FYM application (1:20) @ 8 t/ha • RDF: 90:90:50 kg. NPK / ha • Zinc Sulphate @ 10 kg / ha • 0.2 % Borax Spray at button opening stage • Spraying of Imidachloprid 200 SL (1 ml//) for bud necrosis • Hexaconazole 5 EC @ 1 ml / /	Summer, 2017-18	L	H	M	Maize
		Irrigated	Summer	Groundnut	G-2-52	-	ICM	• Variety G-2-52 • Lime application based on soil test • Seed treatment with *Rhizobium*, PSB & *Trichoderma* • Gypsum application @ 500 kg / ha • Foliar application of borax @ 0.2 % • Profenophos 20 EC @ 2.0 ml//		M	H	L	Paddy and maize
	Pulses	Irrigated	Rabi / Summer	Black Gram	LBG – 625	-	Resource conservation and varietal spread	• Short duration black gram variety LBG – 625 in rice fallows • Seed treatment with bio-fertilizers		L	H	M	Paddy

	Cereals	Irrigated	Kharif	Paddy	-	-	IPDM	• IPM-Cultural and mechanical methods • Spraying of Neem oil 2000 PPM @ 2.5 ml// • Application of Fipronil 0.3 G @ 10 kg/ac • Seed treatment with Carbendazim 50 WP @ 4 g/kg of seeds • Release of Trichogramma @ 1.20 lakh / ac • Spraying of Propiconazole 25 EC @ 1 ml//		M	M	L	Paddy
		Rainfed	*Kharif*	Maize	-	-	ICM	• Bio-fertilizer (*Azospirillum and* PSB) and *Trichoderma* enriched FYM application (1:20) @ 8 t/ha • RDF : 100 : 50 : 25 kg. NPK / ha • Zinc Sulphate @ 10 kg/ha • Profenophos 20 EC @ 2 ml// • Propiconazole 25 EC @ 1.0 ml //		M	H	M	Maize
	Millets												
	Vegetables	Irrigated	Kharif	Chilli		Arka Meghana	ICM	• Introduction of chilli hybrid – Arka Meghana • Marigold as trap crop (20:1) • Vegetable special – micro nutrient mixture • Neem Oil 20000 PPM @ 2.5 ml// for fruit borer • Imadichloprid 17.8 SL @		M	H	M	Vegetable

								0.5 ml// for Thrips • Propargite 57 EC @ 1.6 ml// for mites					
	Flowers												
	Ornamental												
	Fruit												
	Spices and condiments												
	Commercial												
	Medicinal and aromatic												
	Fodder	Irrigated	Kharif	Fodder crop			Fodder crop	• Demonstration of Fodder bank unit		L	H	M	Paddy, Maize, Jowar, Tomato
								•					
	Plantation	Irrigated	Kharif	Arecanut			IPDM	• Application of FYM @ 20 kg/plant • 100g + 40g + 140 g NPK + 20g Borax / plant • Spraying with Carbendazim 12% + Mancozeb 63 % WP @ 2.0 g// + Chlorpyriphos 20 EC @ 2.0 ml //		M	H	L	Arecanut
		Irrigate	Kharif	Banana	-	-	IPDM	• Injection with Dimethoate 30 EC @ 5 ml in 5 ml of water. • Spraying with Propiconazole		M	M	M	Maize

								25 EC @ 1.0 ml// (3 times at 15 days intervals) • Application of microbial consortia of *Trichoderma* and pseudomonas @ 50 gm/plant • Drenching with Carbendazim 50 WP @ 2 g/l						
	Fibre													

5.B. Results of FLDs

5.B.1. Crops

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
							H	L	A										
Oilseeds Sunflower	Integrated Crop Management in sunflower	-	Cauvery Camp	Irrigated	8	4.0	16.50	12.75	14.25	11.75	21.27	16724	51300	34576	3.06	15921	42300	26379	2.65
Ground nut	Integrated Crop Management in groundnut	G-2-52	-	Irrigated	5	2.0	In Progress												
Pulses Black gram	Demonstration on Black Gram variety Rashmi (LBG – 625)	LBG-625	-	Irrigated	10	4.0	6.1	5.4	5.78	5.28	9.4	17181.50	34720	17538	2.02	15743	27690	11947	1.76
Cereals Paddy	Integrated pest and disease management in Paddy	-	JGL-1798	Irrigated	10	4.0	60	52	58	45.5	27.47	25000	63800	38800	2.55	22000	45500	23500	2.06

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										
Maize	Integrated Crop Management in Maize	-	Pioneer-555, Cauvery seeds, NK-666, DKC	Irrigated	8	3.2	85	69.5	78.53	74.68	5.15	44062.50	121521.90	77459.30	2.76	48437.50	115500	67062.50	2.38
Millets																			
Vegetables	Introduction of Chilli hybrid 'Arka Meghana'		Arka Meghana	Irrigated	4	1.6	27.30	23.40	25.08	21.23	18.13	113175	356075	242900	3.14	116875	307562	190687	2.63
	Integrated Crop Management in tomato		Arka Samrat	Irrigated	3	1.2	77.50	68.25	73.50	47.73	53.99	280500	1263575	983075	4.50	312500	919750	607250	2.94
Flowers	Introduction of China aster variety 'Arka Kamini'	Arka Kamini'		Irrigated	6	2.4	17.50	12.32	14.60	9.41	55.15	7065	21334.17	14269.17	3.01	4813.33	12203.33	7390	2.53
Ornamental																			
Fruit																			
Spices and condiments																			
Commercial																			
Fibre crops like cotton																			

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										
Medicinal and aromatic																			
Fodder	Demonstration of fodder bank unit	CoFS-29, Co-1, AV-5	-	Irrigated	6	0.9	In Progress												
Plantation Arecanut	Integrated nutrient and pest management in arecanut in Maidan area	Tarikere local		Irrigated	10	2.0	In Progress												
Banana	Integrated pest and disease management in Banana	Puttabale		Irrigated	8	3.2	In Progress												
Fibre																			
Others (pl.specify)																			

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										
Food Science & Nutrition	Demonstration on nutritional gardens to ensure nutritional security	French bean – arka sharath, Onion, Arka kalyan, Bhendi-Arka Anamika, Palak-Arka suguna, Tomato-Arka samrat, Drumstick=Bhagya	-	-	5	-	In Progress												
Health & Nutrition	Promotion of Vegetable Terrace Garden	French bean – arka sharath, Onion, Arka kalyan, Bhendi-Arka Anamika, Palak-Arka suguna, Tomato-Arka samrat	-	-	5	-	In Progress												

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

Integrated Crop Management in sunflower		
Parameter with unit	**Demo**	**Check**
Bud necrosis incidence (%)	8.1	14.7
Ear head caterpillar incidence (%)	6.3	11.4
Downey mildew incidence (%)	7.2	15.3

Integrated Crop Management in groundnut		
Parameter with unit	**Demo**	**Check**
Rust incidence (%)	NIL	12
Collar Rot (%)	10	18
Leaf spot incidence (%)	10	16

Demonstration on Black Gram variety Rashmi (LBG – 625)		
Parameter with unit	**Demo**	**Check**
Crop duration (days)	71.80	78.5
Pods per plant (Nos.)	12.0	9.2

Integrated pest and disease management in Paddy		
Parameter with unit	**Demo**	**Check**
Stem borer (%)	5.76	11.15
Leaf roller (%)	6.39	12.25
Blast disease (%)	5.65	10.20
Sheath Blight (%)	5.65	16.33

Integrated Crop Management in Maize		
Parameter with unit	**Demo**	**Check**
Stem borer incidence (%)	1.0	1.5
Cob weight (g)	183.37	148.07
Grains row / cob (No.)	14	13
Grains / row (No.)	34	29

Introduction of Chilli hybrid 'Arka Meghana'		
Parameter with unit	**Demo**	**Check**
Plant height (cm)	53.86	60.40
Branches (No.)	6.12	4.25
Fruits / plant (Nos.)	45.32	38.00
Antracnose incidence (%)	3.05	5.26
Thrips incidence (%)	1.87	2.20

Integrated Crop Management in tomato		
Parameter with unit	**Demo**	**Check**
Tomato leaf curl incidence (%)	1.25	9.5
Fruit borer incidence (%)	7.19	23.89

Introduction of China aster variety 'Arka Kamini'		
Parameter with unit	**Demo**	**Check**
Flowers per plant (Nos.)	56.83	40.83

Demonstration of Fodder Bank Unit				
Sl. No.	**Parameters**	**Plant Height (cms)**	**No. of tillers**	**Yield (t/ha)**
1.	**CoFS-29 (Fodder Sorghum)**			
	1st cutting	220	10	13.1
	2nd cutting	230	15	22.3
	3rd cutting	235	21	25.6
	4th Cutting	239	29	28.8
	TOTAL			**89.8**
2.	**Napier (Co-1)**			
	1st cutting	90	25	31.3
	2nd cutting	96	29	43.6
	3rd cutting	98	35	46.4
	4th Cutting	103	39	51.0
	TOTAL			**172.3**
3.	**Cowpea (AV-5)**	**78**	**-**	**16.1**

Integrated pest and disease management in Banana		
Parameter with unit	**Demo**	**Check**
Psudostem Weevil (%)	10.13	21.65
Sigatoka Leaf spot (%)	4.53	16.12
Panama Wilt (%)	3.51	10.16

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

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

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

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

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

5.B.3. Fisheries : NIL

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

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

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

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

5.B.4. Other enterprises : NIL

Enterprise	Name of the technology demonstrated	Variety/ species	No. of Demo	Units/ Area {m^2}	Yield				% Increase	*Economics of demonstration (Rs./unit) or (Rs./m2)				*Economics of check (Rs./unit) or (Rs./m2)			
					Demo			Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Oyster mushroom																	
Button mushroom																	
Vermicompost																	
Sericulture																	
Apiculture																	
Others (pl.specify)																	

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

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

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

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

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

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

Sl. No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	4	335	
2	Farmers Training	18	840	
3	Media coverage	-		
4	Training for extension functionaries	-		
5	Others (Please specify)			
	a) Method Demo	20	85	
	b) Group Meeting	13	65	
	c) Field visits	47	298	
	d) Advisories over phone	32	32	

PART VI – DEMONSTRATIONS ON CROP HYBRIDS

Demonstration details on crop hybrids

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Cereals																	
Bajra																	
Maize	• Bio-fertilizer (*Azospirillum and* PSB) and *Trichoderma* enriched FYM application (1:20) @ 8 t/ha • RDF : 100 : 50 : 25 kg. NPK / ha • Zinc Sulphate @ 10 kg/ha • Profenophos 20 EC @ 2 ml// • Propiconazole 25 EC @ 1.0 ml //	Pioneer-555, Cauvery seeds, NK-666, DKC	8	3.2	85	69.5	78.53	74.68	5.15	44062.50	121521.90	77459.30	2.76	48437.50	115500	67062.50	2.38
Paddy																	
Sorghum																	
Wheat																	

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Others (pl.specify)																	
Total																	
Oilseeds																	
Castor																	
Mustard																	
Safflower																	
Sesame																	
Sunflower	• Bio-fertilizer (*Azospirillum &* PSB) and *Trichoderma* enriched FYM application (1:20) @ 8 t/ha • RDF : 90:90:50 kg. NPK / ha • Zinc Sulphate @ 10 kg / ha • 0.2 % Borax Spray at button opening stage • Spraying of Imidachloprid 200 SL (1 ml//) for bud necrosis • Hexaconazole 5 EC @ 1 ml / /	Cauvery Champ	8	4.0	16.50	12.75	14.25	11.75	21.27	16724	51300	34576	3.06	15921	42300	26379	2.65
Groundnut																	
Soybean																	

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Others (pl.specify)																	
Total																	
Pulses																	
Greengram																	
Blackgram																	
Bengalgram																	
Redgram																	
Others (pl.specify)																	
Total																	
Vegetable crops																	
Bottle gourd																	
Capsicum																	
Others (pl.specify)																	
Chilli	ICM in Chilli	Arka Meghana	4	1.6	27.30	23.40	25.08	21.23	18.13	113175	356075	242900	3.14	116875	307562	190687	2.63
Total																	
Cucumber																	
Tomato	ICM in Tomato	Arka Samrat	3	1.2	77.50	68.25	73.50	47.73	53.99	280500	1263575	983075	4.50	312500	919750	607250	2.94
Brinjal																	
Okra																	
Onion																	

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Potato																	
Field bean																	
Others (pl.specify)																	
Total																	
Commercial crops																	
Sugarcane																	
Coconut																	
Others (pl.specify)																	
Total																	
Fodder crops																	
Maize (Fodder)																	
Sorghum (Fodder)																	
Others (pl.specify)																	
Total																	

PART VII. TRAINING

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems	1	29	0	29	16	0	16	45	0	45
Crop Diversification										
Integrated Farming	6	64	8	72	30	3	33	57	48	105
Micro Irrigation/Irrigation	2	43	18	61	12	5	17	55	23	78
Seed production										
Nursery management										
Integrated Crop Management										
Soil and Water Conservation	4	61	20	81	23	6	29	86	24	110
Integrated Nutrient Management										
Production of organic inputs										
Others (Pl.specify)										
PPVFRA	1	38	12	50	15	7	22	53	19	72
Organic farming	1	9	3	12	16	2	18	25	5	30
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	2	32	25	57	10	9	19	33	34	67
Off-season vegetables										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery raising	1	19	1	20	8	0	8	27	1	28
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation	2	29	11	40	3	5	8	33	15	48
Others (Pl.Specify)										
Terrace Garden	1	2	21	23	2	27	29	4	48	52
Importance of Nutritional Garden	1	11	6	17	9	3	12	20	9	29
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Plants										
Others (pl.specify)										
d) Plantation crops										
Production and Management technology	2	54	2	56	4	0	4	28	2	60
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology										
Processing and value addition	4	41	0	41	50	11	61	64	11	102
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management	1	22	0	22	10	0	10	32	0	32
Integrated water management										
Integrated nutrient management	1	11	0	11	0	0	0	11	0	11

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 use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing	1	8	28	36	2	6	8	10	34	44
Others (pl.specify)										
Livestock Production and Management										
Dairy Management										
Poultry Management	2	67	6	73	30	0	30	70	6	76
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology	1	4	0	4	1	0	1	5	0	5
Production of quality animal products										
Others (pl.specify)										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	1	0	36	36	2	8	10	2	44	46
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management	1	8	1	9	0	0	0	8	1	9
Integrated Disease Management	1	5	0	5	3	0	3	5	3	8

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Bio-control of pests and diseases	1	13	8	21	3	2	6	16	10	26
Production of bio control agents & bio pesticides	2	32	2	34	43	5	48	75	7	82
Others (pl.specify)										
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Bio-fertilizer production										
Vermi-compost production	1	6	0	6	0	0	0	6	0	6
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	1	14	8	22	8	5	13	22	13	35
Apiculture	2	31	5	36	16	3	19	47	8	55
Others (pl.specify)										
Empowerment of panchayath raj elected women representatives	1	0	30	30	0	5	5	0	35	35
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	**45**	**653**	**251**	**904**	**316**	**112**	**429**	**839**	**400**	**1296**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management	2	70	0	70	17	0	17	22	65	87
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify)										
Importance of nutritional garden	3	59	67	126	17	22	39	82	84	166
Minor millets	1	30	15	45	0	0	0	30	15	45

Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop										
Off-season vegetables										
Nursery raising	1	127	20	147	31	7	38	158	27	185
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation	1	21	78	99	8	17	25	29	95	124
Others (pl.specify)										
Flower cultivation	2	40	92	132	8	8	16	48	100	148
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										

Propagation techniques of Ornamental Plants										
Others (pl.specify)										
d) Plantation crops										
Production and Management technology	1	30	69	99	4	15	19	34	84	118
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management	1	35	0	35	13	0	13	48	0	48
Integrated water management										
Integrated nutrient management										
Production and use of organic inputs										
Management of Problematic soils										

Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology										
Production of quality animal products										
Others (pl.specify)										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design & development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										

Women empowerment	3	3	58	61	8	9	17	10	68	78
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management	1	25	5	30	5	0	5	30	5	35
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (pl.specify)										
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										

Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production	2	6	84	92	0	43	43	6	127	133
Apiculture										

Others (pl.specify)										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	**18**	**446**	**488**	**936**	**111**	**121**	**232**	**497**	**670**	**1167**

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	1	9	3	12	16	2	18	25	5	30
Seed production										
Production of organic inputs										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Planting material production	1	30	69	99	4	15	19	34	84	118
Vermi-culture										
Mushroom Production										
Bee-keeping	1	20	2	22	8	0	8	28	2	30
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										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
Flower cultivation	2	40	92	132	8	8	16	48	100	148
TOTAL	**5**	**99**	**166**	**265**	**36**	**25**	**61**	**135**	**191**	**326**

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										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
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)										
a) Flower cultivation	2	40	92	132	8	8	16	48	100	148
b) Production technology of coconut	1	30	69	99	4	15	19	34	84	118
TOTAL	**3**	**70**	**161**	**231**	**12**	**23**	**35**	**82**	**184**	**266**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify) a) District level technical seminar on Avian influenza	1	60	6	66	0	0	0	60	6	66
TOTAL	**1**	**60**	**6**	**66**	**0**	**0**	**0**	**60**	**6**	**66**

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

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

7.G. Sponsored training programmes conducted

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Increasing production and productivity of crops	1	12	0	12	18	0	18	30	0	30
1.b.	Commercial production of vegetables										
2	**Production and value addition**										
2.a.	Fruit Plants										
2.b.	Ornamental plants										
2.c.	Spices crops										
3.	**Soil health and fertility management**	1	8	0	8	22	0	22	30	0	30
4	**Production of Inputs at site**										
5	**Methods of protective cultivation**										
6	**Others (Pl.Specify)**										
7	**Post harvest technology and value addition**										
7.a.	Processing and value addition										
7.b.	Others (Pl.Specify)										
	Integrated farming system	2	43	14	57	14	5	19	57	19	76
8	**Farm machinery**										
8.a.	Farm machinery, tools and implements										
8.b.	Others (Pl.Specify)										
9.	**Livestock and fisheries**										
10	**Livestock production and management**										
10.a.	Animal Nutrition Management										
10.b.	Animal Disease Management										
10.c	Fisheries Nutrition										
10.d	Fisheries Management										
10.e.	Others (Pl.Specify)										

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.	**Home Science**										
11.a.	Household nutritional security										
11.b.	Economic empowerment of women										
11.c.	Drudgery reduction of women										
11.d.	Others (Pl.Specify)										
12	**Agricultural Extension**										
12.a.	Capacity Building and Group Dynamics	1	0	30	30	0	5	5	0	35	35
12.b.	Others (Pl.Specify)										
	TOTAL	**5**	**63**	**44**	**107**	**54**	**10**	**64**	**117**	**54**	**171**

Details of sponsoring agencies involved

1. Karnataka State Government
2. Bio-Centre, Department of Horticulture

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

S. No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Commercial floriculture										
1.b.	Commercial fruit production										
1.c.	Commercial vegetable production										
1.d.	Integrated crop management										
1.e.	Organic farming										
1.f.	Others (pl.specify)										
2	**Post harvest technology and value addition**										

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
2.a.	Value addition										
2.b.	Others (pl.specify)										
3.	**Livestock and fisheries**										
3.a.	Dairy farming										
3.b.	Composite fish culture										
3.c.	Sheep and goat rearing										
3.d.	Piggery										
3.e.	Poultry farming										
3.f.	Others (pl.specify)										
4.	**Income generation activities**										
4.a.	Vermi-composting										
4.b.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.										
4.c.	Repair and maintenance of farm machinery and implements										
4.d.	Rural Crafts										
4.e.	Seed production										
4.f.	Sericulture										
4.g.	Mushroom cultivation	1	14	8	22	8	5	13	22	13	35
4.h.	Nursery, grafting etc.										
4.i.	Tailoring, stitching, embroidery, dying etc.										
4.j.	Agril. para-workers, para-vet training										
4.k.	Others (pl.specify)										
5	**Agricultural Extension**										
5.a.	Capacity building and group dynamics										
5.b.	Others (pl.specify)										
	Grand Total	**1**	**14**	**8**	**22**	**8**	**5**	**13**	**22**	**13**	**35**

PART VIII – EXTENSION ACTIVITIES

Extension Programmes (including extension activities undertaken in FLD programmes)

Nature of Extension Programme	No. of Programmes	No. of Participants (General)			No. of Participants SC / ST			No.of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Field Day	7	1119	586	1705	870	482	1352	12	2	14
Kisan Mela										
Kisan Ghosthi										
Exhibition	7	1634	1321	2955	749	835	1584	32	22	54
Film Show										
Method Demonstrations	13	42	174	216	6	58	64	13	5	18
Farmers Seminar	1	124	18	142	12	8	20	6	2	7
Workshop	1	303	149	452	136	56	192	13	3	16
Group meetings	6	33	1	34	127	11	138	0	0	0
Lectures delivered as resource persons	27	951	686	1637	207	196	403	212	44	256
Newspaper coverage										
Radio talks	1									
TV talks	3									
Popular articles										
Extension Literature										
Advisory Services	78	44	14	58	15	5	20	5	3	8
Scientific visit to farmers field	93	234	29	263	132	25	157	17	4	21

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
Farmers visit to KVK	189	267	6	273	9	0	9	0	0	0
Diagnostic visits	6	77	0	77	21	0	21	17	4	21
Exposure visits	10	172	17	189	108	19	127	3	0	3
Ex-trainees Sammelan										
Soil health Camp										
Animal Health Camp										
Agri mobile clinic										
Soil test campaigns										
Farm Science Club Conveners meet										
Self Help Group Conveners meetings										
Mahila Mandals Conveners meetings										
Celebration of important days (specify)										
a) Vanamahotsava - 2017 b) World honey bee day-2017 c) Mahila Kissan Diwas-2017 d) World Food Day-2017 e) Women in agriculture day f) World soil day-2017	7	767	269	1036	121	129	250	47	31	78
Any Other (Specify)										

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
a) Sankalpdinda Siddi - Determination to attainment -- New India Movement (2017-2022)	1	255	135	390	70	72	142	9	-	9
b) Krishi Unnati Mela - 2018 - Doubling the farmers income	1	27	31		24	27		4	2	
c) District level Technical Seminar on 'Avian Influenza'	1							60	6	66
TOTAL	**452**	**5925**	**3418**	**9285**	**2595**	**1915**	**4459**	**444**	**126**	**564**

PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIALS

9.A. Production of seeds by the KVKs

Crop category	Name of the crop	Name of the Variety	Name of the Hybrid	Quantity of seed (q)	Value (Rs)	Number of farmers to whom provided
Cereals (crop wise)						
Oilseeds						
Pulses						
Commercial crops						
Vegetables						
Flower crops						
Spices						
Fodder crop seeds	Fodder Sorghum	CoFS-29	-	0.005	200.00	2
Fiber crops						
Forest Species						
Others (specify)						
Millets	Finger millet	GPU-28	-	0.15	420	3
Total						

9.B. Production of planting materials by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Commercial						
Vegetable seedlings	Drumstick	Bhagya		600	7200	10

Fruits	Papaya		Red lady	2325	34875	15
Ornamental plants						
Medicinal and Aromatic						
Plantation						
Spices	Curryleaf	Local	-	84	1008	6
Tuber						
Fodder crop saplings						
Forest Species						
Others(specify)						
Total				**3009**	**43083**	**31**

9.C. Production of Bio-Products : NIL

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

9.D. Production of livestock materials : NIL

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
Dairy animals				
Cows				
Buffaloes				

Calves				
Others (Pl. specify)				
Poultry				
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl.specify)				
Fisheries				
Fingerlings				
Others (Pl. specify)				
Total				

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

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

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

(B) Literature developed/published

Item	Title	Authors name	Number
Research papers			
Technical reports	1. OLRS-Monthly Progress Report 2. MPR of KVK 3. ZREP Report 4. Citizen's-Client's Charter Report 5. Significant Achievements 6. Action Plan 7. Annual Progress Report 8. Weekly Pest and disease incidence 9. Doubling the farmers income	B.C.Hanumanthaswamy, Jyoti M. Rathod, Ashok M., M. V. Rekha, G.B.Smitha, Arun Kumar P., H.S.Imran Khan, Nagaraja R., Geetha B.S., Sanjeeva Kyatappanavar, Usha K.,	9
News letters			
Technical bulletins	Intercrops in arecanut garden	B.C.Hanumanthaswamy, G.B.Smitha, T.H.Gowda, M.V.Rekha	1000
	Pest and disease management through bio-pesticides and bio-agents in crops	B.C.Hanumanthaswamy, H.S.Imran Khan, T.H.Gowda	1000
	Green gram	B.C.Hanumanthaswamy, T.H.Gowda, Jyoti M. Rathod, H.S.Imran Khan, P. Arun Kumar	1300
	Mushroom - Nutrients and products	Jyoti M. Rathod, Hanumanthaswamy, R. Nagaraja, The.H.Gowda, G.B.Smitha, M.V.Rekha	1300
Popular articles	Integrated farming system for sustainability	Miss Smitha, G.B., Dr. B.C. Hanumanthaswamy and Dr. Arun Kumar P.	1400
	Flower dropping in tomato	Smitha G. B., B.C.Hanumanthaswamy, Rekha M. V.	1400
	Amorphophallus and elephant foot yam	Arunkumar P, Nagaraja R., B.C.Hanumanthaswamy	1400
	Egg nutrition and value addition	Deeksha Naik, Jyoti M. Rathod, Rekha M. V.	1400
	Snail problem and management	Rekha, M.V., B.C.Hanumanthaswamy, Smitha G. B.	1400
	Profitable income from Integrated farming system	Dr. Arun Kumar P, Dr. Imran Khan H.S., and	1400

Item	Title	Authors name	Number
		Dr. B.C.Hanumanthaswamy	
	Egg Curry	Jyoti M. Rathod	1400
	Apiculture for sustainable life	Rekha M. V., Hanumanthaswamy B.C.	1400
Extension literature			
Handouts	Mushroom cultivation	Dr. R. Nagaraja, Dr. B.C. Hanumanthaswamy	1500
	Milky mushroom cultivation	Dr. R. Nagaraja, Dr. B.C. Hanumanthaswamy	1500
Manual	Improved production technology of Ginger	Dr. B.C.Hanumanthaswamy, Dr. T.H.Gowda, Miss Smitha G.B., Dr.H. S. Imran Khan, Mrs. Jyoti M. Rathod, Dr. Nagaraja R., P.R.Somashekharappa, P. Arun Kumar, M.V. Rekha	
	Intercrops in arecanut garden	B.C.Hanumanthaswamy, T.H.Gowda, G.B.Smitha, Arun Kuar, P., Rekha M.V., Imran Khan, H.S., Nagaraja R., Somashekharappa P. R. Jyoti M. Rathod	
	Improved production technology of Ginger	B.C.Hanumanthaswamy, T.H.Gowda, G.B.Smitha, M.V.Rekha, Imran Khan, H.S., Jyoti M. Rathod, Arun Kumar P., Ashok M., Nagaraj, R., Somashekarappa P.R.	
Full length paper	Mushroom production for self employment	R. Nagaraja, P. Arunkumar, B.C.Hanumanthaswamy and Jyoti M. Rathod	
Folders	Mechanized paddy cultivation	B.C.Hanumanthaswamy, T.H.Gowda, P.R.Somashekharappa, R. Nagraja	
	Snail management	B.C.Hanumanthaswamy, Rekha M.V., T.H.Gowda, G.B.Smitha, Jyoti M. Rathod	
	Nutrient management in areca crop	B.C.Hanumanthaswamy, M.V.Rekha, T.H.Gowda, P.R.Somashekharappa, H.S.Imran Khan	
	Soil test - Soil sampling method	B.C.Hanumanthaswamy, M.V.Rekha, R.Nagaraja, T.H.Gowda, P.Arun Kumar	
	Bio-pesticides	B.C.Hanumanthaswamy, H.S. Imran Khan, The.H.Gowda, M.V.Rekha, G.B.Smitha	
	Bio-agents	B.C.Hanumanthaswamy, H.S. Imran Khan, T.H.Gowda, R. Nagaraja, .R.Somashekharappa	
	Precautions while handling pesticides	B.C.Hanumanthaswamy, H.S. Imran Khan, T.H.Gowda, P. Arun Kumar, Jyoti M. Rathod	
Others (Pl. specify)			
Book	Vidhatri – Collection of quotes	Jayalakshmi Narayan Hegde, Soumya T. M., Usha T. N., Geetha B. S.	500
TOTAL			

10.B. Details of Electronic Media Produced : NIL

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

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

1. 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 2017-18 KVK conducted 19 training programmes on topics related to "Improved production technologies of papaya and drumstick". During the training programmes about 550 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, 39856 drumstick (PKM-1 & Bhagya) seedlings of worth Rs. 4,39,016/- were sold to more than 112 farmers by covering an area of about 110 ha. as sole crop or intercrop in younger arecanut gardens. Similarly, 72629 papaya seedlings (Arka Surya and Taiwan–786) of worth Rs.9,06,030/- were sold to 140 farmers by covering in area of about 655 ha as intercrop in younger areanut gardens. By growing papaya and drumstick as intercrops farmers have obtained Rs. 1,65,000/- 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 500 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 : NIL

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

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1.	Ivy Gourd (Coccinia grandis)	Use of Panchagavya and Jeevamrutha	Panchagavya for pest / disease and Jeevamrutha for management in Ivy Gourd.
2.	Ginger	Fish tonic (raw fish + Jaggery in the ratio of 5:1)	Fish tonic act as nutrient supplement and also helps in repelling the insects

10.F. Indicate the specific training need analysis tools/methodology followed for

- Identification of courses for farmers/farm women
- Rural Youth
- Inservice personnel

1. Training courses decided based on the feedback from the field extension workers of agriculture / Horticulture / animal husbandry / NGOs and allied departments during bimonthly workshop / meetings and also based on the feedback collected during the field visit by KVK scientists.
2. Based on the suggestions by Scientific Advisory Committee members
3. Based on Ex-trainees' suggestions
4. Based on the SWOT / thrust areas identified during action plan preparation

10.G. Field activities

i. Number of villages adopted
ii. No. of farm families selected
iii. No. of survey/PRA conducted

10.H. Activities of Soil and Water Testing Laboratory

1. Status of establishment of Lab : Good
2. Year of establishment : 2006
3. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost
1.	pH Meter	1 No.	8,550
2.	Conductivity meter	1 No.	7,400
3.	Physical balance (KROY)	1 No.	12,000
4.	Chemical balance (Shimadzu)	1 No.	48,900
5.	Water distillation still	1 No.	48,850
6.	Shaker	1 No.	27,600
7.	Hot air oven	1 No.	20,000
8.	Magnetic stirrer with hot plate	1 No.	5,500
9.	Spectrophotometer	1 No.	42,000
10.	Flame photometer	1 No.	35,200
11.	Macro digestion system	1 No.	52,118
12.	Automatic distillation system	1 No.	85,232
13.	Electronic Acid neutralizer scrubber	1 No.	23,909
14.	Hot plate Rectangular	1 No.	9,600
15.	Ind. & Comml.	1 No.	26,400
16.	F & P Fume cupboard	1 No.	41,625
17.	FRP ducting with FRP blower	1 No.	18,000
18.	Refrigerator	1 No.	18,133
19.	Khaitan Heavy duty fan	1 No.	3,777
20.	Flame Burner	1 No.	1,146
21.	Digital Micro pipette set	1 No.	21,180
22.	pH Meter	1 No.	6,600
23.	Soil testing kit	1 No.	72,000
24.	Electrical conductivity meter	1 No.	12,022
25.	AAS with accessories	1 No.	14,20,000
26.	UPS with battery	1 No.	54,548
27.	LG Ikon split 3 star AC	1 No.	27,000
28.	V-Guard stabilizer	1 No.	2,400
29.	pH meter (MKV-1)	1 No.	10,305

Details of samples analyzed so far since establishment of SWTL:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	9482	6304	6290	574255
Water Samples	3268			296550
Plant samples	100			16790
Manure samples				
Others (specify)				
Total	**12850**	**6304**	**6290**	**887595**

Details of samples analyzed during the 2017-18:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	1571	1093	1093	138803
Water Samples	947	878	878	84530
Plant samples	1	1	1	400
Manure samples				
Others (specify)				
Total	**2519**	**1972**	**1972**	**223733**

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

Date (s)	Farmers participated	No. of Samples analyzed	Soil health cards issued	No. of Villages	Public representatives participated	
					MLA/ Minister	Other Dignitaries/ Chief guests
2017-18	1093	1571	1571	1093	--	5

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

Period of observing Technology Week : From 20-11-2017 to 24-11-2017
Total number of farmers visited : 660
Total number of agencies involved : 5
Number of demonstrations visited by the farmers within KVK campus : 10

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop / livestock technology
Gosthies			
Lectures organized	10	660	Crops, livestock, value addition
Exhibition	1	660	Live specimen of seeds, seedlings, fruits, vegetables, honey bee rearing equipments,
Film show	15	660	Crops, water management, livestock
Fair			
Farm Visit	20	660	KVK Demo plots and Demo plots of Navile Campus
Diagnostic Practical			
Supply of Literature (No.)	6	660	Soil testing, INM in arecanut, Snail management, Bio-pesticides, safer use of pesticides, Bio-fungicides
Supply of Seed (q)			
Supply of Planting materials (No.)			
Bio Product supply (Kg)			
Bio Fertilizers (q)			
Supply of fingerlings			
Supply of Livestock specimen (No.)			
Total number of farmers visited the technology week	1	660	

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

A. Introduction of alternate crops/varieties

State	Crops/cultivars	Area (ha)	Number of beneficiaries
Karnataka	Chilli (Arka Meghana)	1.6	4
	Tomato (Arka Samrat)	1.2	3
	Black gram (LBG-625)	4.0	10
	Green Gram (KKM-3)	40.0	100
	China Aster (Arka Kamini)	2.4	5
	Groundnut (G-2-52)	2.0	5
	Fodder Sorghum (**CoFS-29**)	0.9	6

B. Major area coverage under alternate crops/varieties : NIL

Crops	Area (ha)	Number of beneficiaries
Oilseeds	2.0	5
Pulses	40.4	110
Cereals		
Vegetable crops	2.8	7
Tuber crops		
Flower crops	2.4	5
Fodder Crops	0.9	6
Total		

C. Farmers-scientists interaction on livestock management :

State	Livestock components	Number of interactions	No.of participants
Karnataka	Poultry	1	10
Total		1	10

D. Animal health camps organized : Nil

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

E. Seed distribution in drought hit states : NIL

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

F. Large scale adoption of resource conservation technologies

State	Crops/cultivars and gist of resource conservation technologies introduced	Area (ha)	Number of farmers
Karnataka	Introduction of Green gram variety KKM-3 for rice / paddy fallows	40.00	100
Total		**40.00**	**100**

G. Awareness campaign

State	Meetings		Gosthies		Field days		Farmers fair		Exhibition		Film show	
	No.	No. of farmers	No.	No. of farmers	No.	No. of farmers	No.	No. of farmers	No.	No. of farmers	No.	No.of farmers
Karnataka					1	2488	2	617	7	4593	10	1571
TOTAL						**2488**	**2**	**617**	**7**	**4593**	**10**	**1571**

PART XI. IMPACT

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

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Demonstration of photoperiod insensitive, less string, high yield French bean variety Arka Sharath	5	45%	88,190/- per ha	2,01,212/- 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

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
Total			**92.00**	**38.00**	**28.29**	**24.79**	**21.37**	**16.02**

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
TOTAL	**18907**	**67220**	**47955**	**35220**	**57868**	**38680**	**3.55**	**3.03**

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 2016-17 totally 75 demos covering an area of 75.00 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. Inspite 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 g/6 kg seeds 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.

11.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^{-1} 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 demon strations	Yield (q/ha^{-1})		Per cent increase over farmers plot	Potential yield (q/ha^{-1})	Extension gap (q/ha^{-1})	Technology gap (q/ha^{-1})	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
Average	**8.2**	**198.03**	**181.956**	**9.98**	**200**	**16.064**	**1.97**	**0.986**	**3.592**	**3.076**

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 Bordeux 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 XII - LINKAGES

12.A. 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
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

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

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Innovative programme	August-2017	State Government	14,00,000/-
Integrated Farming System	August-2017	State Government	14,00,000/-
Progressive Farmers to Farmers training programme	November, 2017	State Government	8,75,000/-

12.C. Details of linkage with ATMA

a) Is ATMA implemented in your district Yes/No
If yes, role of KVK in preparation of SREP of the district?

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**	**Implementation of ATMA programme**	**3**	**-**	**-**
02	**Research projects**				
03	**Training programmes**	**Value addition in maize, millets, Importance of nutritional garden**	**3**	**-**	**-**
04	**Demonstrations**				

05	**Extension Programmes**				
	Kisan Mela				
	Technology Week				
	Exposure visit				
	Exhibition				
	Soil health camps				
	Animal Health Campaigns				
	Others (Pl. specify)				
06	**Publications**				
	Video Films				
	Books				
	Extension Literature				
	Pamphlets				
	Others (Pl. specify)				
07	**Other Activities** (Pl.specify)				
	Watershed approach				
	Integrated Farm Development				
	Agri-preneurs development				

12.D. Give details of programmes implemented under National Horticultural Mission : NIL

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

12.E. Nature of linkage with National Fisheries Development Board ; NIL

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

12.F. Details of linkage with RKVY :

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

12. GKisan Mobile Advisory Services

Month	Message type (Text/Voice)	SMS/voice calls sent (No.)						Total SMS/Voice calls sent (No.)	Farmers (No.)
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprises		
April									
May									
June		2							1770
July						1	1		1770
August									
September									
October						1			1770
November									
December									
January 2018		1				1	1		1795
February									
March						1			1852
Total		**3**				**4**	**2**		**1852**

PART XIII- PERFORMANCE OF INFRASTRUCTURE IN KVK

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

Sl. No.	Demo Unit	Year of establishment	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1.									

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

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty. (kg)	Cost of inputs	Gross income	
Cereals									
a) Ragi	20.08.2017	28.11.2017	0.2	GPU-28, ML-365 and KMR-301	TL	550			
Pulses									
Green Gram	30.08.2017	08.12.2017	0.1	KKM-3	TL	260			
Blackgram	30.08.2017	08.12.2017	0.1	LBG-625	TL	62			
Cowpea	08.08.2017	15.12.2017	0.1	KBC-2	TL	66			
Redgram	30.07.2017	20.12.2017	0.50	BRG-1 & 2	TL	104			
Field bean	30.07.2017	20.10.2017	0.1	HA-3	TL	25			
Oilseeds									
a) Groundnut	25.06.2017	30.09.2017	1.0	GPBD-4	TL	1676			
Fibers									
Spices & Plantation crops									
Turmeric	05.06.2017		0.1						
Floriculture									
Fruits									
Vegetables									
Others (specify)									
Fodder sorghum	08.07.2017		0.1	COFS-29	TL	6.5			

13.C. 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	

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

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

13.E. Utilization of hostel facilities

Accommodation available (No. of beds) : 40

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
April 2017			
May			
June			
July			
August	30	18	
September	60	6	
October			
November			
December	30	3	
January 2018	60	13	
February	30	23	
March	79	4	

13.F. Database management

S.	Database target	Database created
1.		Database created in MS Word and MS Excel for compilation of 1) OLRS 2) KVK Portal 3) Periodical reports

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

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

PART XIV - FINANCIAL PERFORMANCE

14.A. Details of KVK Bank accounts

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
With Host Institute	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

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

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	72.13	72.13	72.42
2	**Traveling allowances**	1.00	1.00	0.91
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	3.00	3.00	3.54
B	POL, repair of vehicles, tractor and equipments	2.50	2.50	2.50
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	1.00	1.00	1.00
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	0.50	0.50	*0.50*
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	2.95	2.95	*2.95*
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	0.50	0.50	0.43
G	Integrated Farming System	0.50	0.50	0.49
H	Training of extension functionaries	0.25	0.25	0.25
I	Extension Activities	1.10	1.10	1.10
J	Farmers field school	0.30	0.30	0.30
K	EDP / Innovative activities	0.30	0.30	0.30
L	Soil & water testing and issue of soil health card	0.75	0.75	0.74
M	Maintenance of building	0.50	0.50	0.50
N	Library	0.05	0.05	0.01
O	Farmers conclave, KVK conference	0.25	0.25	0.25
	TOTAL (A)	**87.58**	**87.58**	**88.19**
B. Non-Recurring Contingencies				
1.	**Works**			
2.	**Equipments including SWTL & Furniture**			
3.	**Vehicle** (Four wheeler/Two wheeler, please specify)	0.10	0.10	-
4.	**Library** (Purchase of assets like books & journals)	0.10	0.10	-
TOTAL (B)				
C. REVOLVING FUND		**-**	**-**	**-**

GRAND TOTAL (A+B+C)	**87.68**	**87.68**	**88.19**

14.C. Status of revolving fund (Rs. in lakh) for the three years

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year
April 2015 to March 2016	6.64	10.33	11.00	5.97
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

15. Details of HRD activities attended by KVK staff

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Mrs. B.S.Geetha	Programme Assistant (Computer)	Orientation programme about OLRS	KVK, Sutturu, Mysore Organized by ATARI, Bengaluru	10/10/2017 To 12/10/2017
Dr. B.C. Hanumanthaswamy, SS & H	Senior Scientist and Head	Innovative extension approaches for agricultural management	KVK, Shivamogga Organized by EEI, Hyderabad Collaboration with Director of Extension, UAHS, Shivamogga	07/11/2017 To 10/11/2017
Dr. H. S.Imran Khan	Scientist (Plant Pathology)	Innovative extension approaches for agricultural management	KVK, Shivamogga Organized by EEI, Hyderabad Collaboration with Director of Extension, UAHS, Shivamogga	07/11/2017 To 10/11/2017
Mrs. Jyoti M. Rathod	Scientist (Home Science)	Innovative extension approaches for agricultural management	KVK, Shivamogga Organized by EEI, Hyderabad Collaboration with Director of Extension, UAHS, Shivamogga	07/11/2017 To 10/11/2017
Miss G. B. Smitha	Scientist (Horticulture)	Innovative extension approaches for agricultural management	KVK, Shivamogga Organized by EEI, Hyderabad Collaboration with Director of Extension, UAHS, Shivamogga	07/11/2017 To 10/11/2017

Dr. P. Arun Kumar	Scientist (Agril. Extension)	Innovative extension approaches for agricultural management	KVK, Shivamogga Organized by EEI, Hyderabad Collaboration with Director of Extension, UAHS, Shivamogga	07/11/2017 To 10/11/2017
Dr. Nagaraja R.	Prog.Asst.(Lab)	Innovative extension approaches for agricultural management	KVK, Shivamogga Organized by EEI, Hyderabad Collaboration with Director of Extension, UAHS, Shivamogga	07/11/2017 To 10/11/2017
Dr. P.R.Somashekharappa	Farm Manager	Innovative extension approaches for agricultural management	KVK, Shivamogga Organized by EEI, Hyderabad Collaboration with Director of Extension, UAHS, Shivamogga	07/11/2017 To 10/11/2017
Miss Rekha M. V.	Scientist (Soil Science)	Orientation to KVK soil science / agronomy SMSs at NBSSLUP, Bengaluru	NBSSLUP, Bengaluru Organized by ATARI, Bengaluru	06/02/2018
Miss G. B. Smitha	Scientist (Horticulture)	Orientation to Horticulture SMSs at IIHR, Bengaluru	IIHR, Bengaluru Organized by ATARI, Bengaluru	09/02/2018

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

16 (a) Farmers Field School :

Name of the village : Narayanapura
Taluk : Shivamogga
No. of farmers : 30 Nos.
Budget : Rs. 30,000/-

The following topics were covered under FFS

Sl. No.	Date	Topics
1.	11-07-2017	Selection and identification of FFS farmers
2.	18-07-2017	Introduction, concept, scope and importance of FFS
3.	24-07-2017	Soil sample and its importance
4.	31-07-2017	IPM in tomato
5.	14-08-2017	Visit to FFS plot
6.	21-08-2017	Use of bio-fertilizers and its importance

7.	28-08-2017	Integrated disease management in Tomato
8.	11-09-2017	Integrated Nutrient management in tomato
9.	18-09-2017	Role of bio-agents in IPM
10.	25-09-2017	Visit to FFS plot
11.	13-10-2017	Post harvest technology
12.	18-10-2017	Marketing strategies

Result

Parameters	Demo	Check
Hybrid	Arka Rakshak	J. K. Seeds
No. of branches / plant	10.40	7.21
No. of fruits per plant	57.60	44.80
Fruit weight (g)	107	92
Crop duration (days)	137	128
Yield (t/ha)	79.25	66.12
% increase in yield	19.85	-
Gross Cost (Rs.)	180634	196235
Gross Return (Rs.)	951048	793500
Net Return (Rs.)	770141	597265
B:C	5.26	4.04

ICAR-KVK, Shivamogga

SUMMARY FOR 2017-18

I. TECHNOLOGY ASSESSMENT

Summary of technologies assessed under various crops

Thematic areas	Crop	Name of the technology assessed	No. of trials
Integrated Nutrient Management	Paddy	Assessment of Nitrogen use efficiency in paddy	5
Varietal Evaluation	Ginger	Assessment of ginger varieties for higher yield	4
Integrated Pest Management	Black Pepper	Management of foot rot in pepper	4
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			
Others (Pl. specify)			
Total			

Summary of technologies assessed under livestock : NIL

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials
Disease Management			
Evaluation of Breeds			
Feed and Fodder management			
Nutrition Management			
Production and Management			
Others (Pl. specify)			
Total			

Summary of technologies assessed under various enterprises : NIL

Thematic areas	Enterprise	Name of the technology assessed	No. of trials

Summary of technologies assessed under home science : NIL

Thematic areas	Enterprise	Name of the technology assessed	No. of trials

II. TECHNOLOGY REFINEMENT

Summary of technologies refined under various crops : NIL

Thematic areas	Crop	Name of the technology refined	No. of trials
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			
Others (Pl. specify)			
Total			

Summary of technologies assessed under refinement of various livestock : NIL

Thematic areas	Name of the livestock enterprise	Name of the technology refined	No. of trials
Disease Management			
Evaluation of Breeds			
Feed and Fodder management			
Nutrition Management			
Production and Management			
Others (Pl. specify)			
Total			

Summary of technologies refined under various enterprises : NIL

Thematic areas	Enterprise	Name of the technology assessed	No. of trials

Summary of technologies refined under home science : NIL

Thematic areas	Enterprise	Name of the technology assessed	No. of trials

III. FRONTLINE DEMONSTRATION

Crops

Crop	Thematic area	Name of the technology demonstrated	No. of Farmers	Area (ha)
Cereals				
Paddy	IPDM	• IPM-Cultural and mechanical methods • Spraying of Neem oil 2000 PPM @ 2.5 ml// • Application of Fipronil 0.3 G @ 10 kg/ac • Seed treatment with Carbendazim 50 WP @ 4 g/kg of seeds • Release of Trichogramma @ 1.20 lakh / arecanut • Spraying of Propiconazole 25 EC @ 1 ml//	10	4.0
Paddy	ICM	• Bio-fertilizer (*Azospirillum and* PSB) and *Trichoderma* enriched FYM application (1:20) @ 8 t/ha • RDF : 100 : 50 : 25 kg. NPK / ha • Zinc Sulphate @ 10 kg/ha • Profenophos 20 EC @ 2 ml// • Propiconazole 25 EC @ 1.0 ml //	8	3.2
Millets				
Oilseeds				

Crop	Thematic	Name of the	No. of	Area
Sunflower	ICM	• Bio-fertilizer (*Azospirillum* & PSB) and *Trichoderma* enriched FYM application (1:20) @ 8 t/ha • RDF : 90:90:50 kg. NPK / ha • Zinc Sulphate @ 10 kg / ha • 0.2 % Borax Spray at button opening stage • Spraying of Imidachloprid 200 SL (1 ml//) for bud necrosis Hexaconazole 5 EC @ 1 ml / /	8	4.0
Groundnut	ICM	• Variety G-2-52 • Lime application based on soil test • Seed treatment with *Rhizobium*, PSB & *Trichoderma* • Gypsum application @ 500 kg / ha • Foliar application of borax @ 0.2 % • Profenophos 20 EC @ 2.0 ml//	5	2.0
Pulses				
Blackgram	Resource conservation and varietal spread	• Short duration black gram variety LBG – 625 in rice fallows Seed treatment with bio-fertilizers	10	4.0
Vegetables				
Chilli	**ICM**	• Introduction of chilli hybrid – Arka Meghana • Marigold as trap crop (20:1) • Vegetable special – micro nutrient mixture • Neem Oil 20000 PPM @ 2.5 ml// for fruit borer • Imadichloprid 17.8 SL @ 0.5 ml// for Thrips • Propargite 57 EC @ 1.6 ml// for mites	**4**	**1.6**

Crop	Thematic	Name of the	No. of	Area
Tomato	**ICM**	• Demonstration of high yielding, triple disease resistant tomato hybrid – 'Arka Samrat' • Vegetable special – micro-nutrient mixture • Neem Oil @ 2.5 ml// • Profenophos 20 EC @ 2.0 ml//	**3**	**1.2**
Flowers				
China aster-Kamini	ICM	Introduction of *China aster* variety 'Kamini'	**6**	**2.4**
Ornamental				
Fruit				
Fibres like Cotton				
Spices and condiments				
Commercial				
Medicinal and aromatic				
Fodder				
Fodder crop	Fodder crop	Demonstration of Fodder bank unit	**6**	**1.5**
Plantation				
Arecanut	IPDM	• Application of FYM @ 20 kg/plant • 100g + 40g + 140 g NPK + 20g Borax / plant • Spraying with Carbendazim 12% + Mancozeb 63 % WP @ 2.0 g// + Chlorpyriphos 20 EC @ 2.0 ml //	**10**	**2.0**

Crop	Thematic	Name of the	No. of	Area
Banana	IPDM	• Injection with Dimethoate 30 EC @ 5 ml in 5 ml of water. • Spraying with Propiconazole 25 EC @ 1.0 ml// (3 times at 15 days intervals) • Application of microbial consortia of *Trichoderma* and pseudomonas @ 50 gm/plant • Drenching with Carbendazim 50 WP @ 2 g//	**8**	**3.2**
Fibre				
Others (pl.specify)				
Food Science & Nutrition	Nutrition Security	Demonstration of nutritional garden	**5**	**-**
Health & Nutrition	Non utilization of roof of the house	• Promotion of vegetable Terrace garden • Growing of organic, quality vegetables • Compost making by using kitchen and garden wastes	**5**	
	Total		**88**	**29.1**

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

Livestock : NIL

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No.of units
Dairy				
Poultry				
Rabbit				

Piggery				
Sheep and goat				
Duck				
Others (pl.specify)				
		Total		

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

Fisheries : NIL

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No.of units
Common carps				
Mussels				
Ornamental fishes				
Others (pl.specify)				
		Total		

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

Other enterprises : NIL

Category	Name of the technology demonstrated	No. of Farmers	No.of units
Oyster mushroom			
Button mushroom			
Vermicompost			

Sericulture			
Apiculture			
Others (pl.specify)			
Total			

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

Women empowerment : NIL

Category	Name of technology	No. of demonstrations	No. of women involved	No. of groups involved
Women				
Pregnant women				
Adolescent Girl				
Other women				
Children				
Neonats				
Infants				
Children				

Farm implements and machinery : NIL

Name of the implement	Crop	Name of the technology demonstrated	No. of Farmers	Area (ha)

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

Other enterprises

Demonstration details on crop hybrids

Crop	Name of the Hybrid	No. of farmers	Area (ha)
Cereals			
Bajra			
Maize	Pioneer-555, Cauvery seeds, NK-666, DKC	8	3.2
Rice			
Sorghum			
Wheat			
Others (pl.specify)			
Total		**8**	**3.2**
Oil seeds			
Castor			
Mustard			
Safflower			
Sesame			
Sunflower	Cauvery Champ	8	4.0
Groundnut			
Soybean			
Others (pl.specify)			
Total			
Pulses			
Greengram			
Blackgram			
Bengalgram			
Redgram			
Others (pl.specify)			
Total			
Vegetable crops			
Bottle gourd			
Capsicum			
Others (pl.specify)			
Chilli	Arka Meghana	4	1.6
Total			

Cucumber			
Tomato	Arka Samrat	3	1.2
Brinjal			
Okra			
Onion			
Potato			
Field bean			
Others (pl.specify)			
Total			
Commercial crops			
Sugarcane			
Coconut			
Others (pl.specify)			
Total			
Fodder crops			
Maize (Fodder)			
Sorghum (Fodder)			
Others (pl.specify)			
Total			

IV. Training Programme

Training for Farmers and Farm Women including sponsored training programmes (On campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems	1	29	0	29	16	0	16	45	0	45
Crop Diversification										
Integrated Farming	6	64	8	72	30	3	33	57	48	105
Micro Irrigation/Irrigation	2	43	18	61	12	5	17	55	23	78
Seed production										
Nursery management										
Integrated Crop Management										
Soil and Water Conservation	4	61	20	81	23	6	29	86	24	110
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify)										
PPVFRA	1	38	12	50	15	7	22	53	19	72
Organic farming	1	9	3	12	16	2	18	25	5	30
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	2	32	25	57	10	9	19	33	34	67
Off-season vegetables										
Nursery raising	1	19	1	20	8	0	8	27	1	28
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation	2	29	11	40	3	5	8	33	15	48
Others (Pl.Specify)										
Terrace Garden	1	2	21	23	2	27	29	4	48	52
Importance of Nutritional Garden	1	11	6	17	9	3	12	20	9	29
b) Fruits										

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)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
d) Plantation crops										
Production and Management technology	2	54	2	56	4	0	4	28	2	60
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology										
Processing and value addition	4	41	0	41	50	11	61	64	11	102
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										

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										
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management	1	22	0	22	10	0	10	32	0	32
Integrated water management										
Integrated nutrient management	1	11	0	11	0	0	0	11	0	11
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	1	8	28	36	2	6	8	10	34	44
Others (pl.specify)										
Livestock Production and Management										
Dairy Management										
Poultry Management	2	67	6	73	30	0	30	70	6	76
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology	1	4	0	4	1	0	1	5	0	5
Production of quality animal products										
Others (pl.specify)										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	1	0	36	36	2	8	10	2	44	46
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management	1	8	1	9	0	0	0	8	1	9
Integrated Disease Management	1	5	0	5	3	0	3	5	3	8
Bio-control of pests and diseases	1	13	8	21	3	2	6	16	10	26
Production of bio control agents and bio pesticides	2	32	2	34	43	5	48	75	7	82
Others (pl.specify)										
Fisheries										
Integrated fish farming										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production	1	6	0	6	0	0	0	6	0	6
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	1	14	8	22	8	5	13	22	13	35
Apiculture	2	31	5	36	16	3	19	47	8	55
Others (pl.specify)										
Empowerment of panchayath raj elected women representatives	1	0	30	30	0	5	5	0	35	35

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	**45**	**653**	**251**	**904**	**316**	**112**	**429**	**839**	**400**	**1296**

Training for Farmers and Farm Women including sponsored training programmes (Off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management	2	70	0	70	17	0	17	22	65	87
Soil and Water Conservation										
Integrated Nutrient Management										

Production of organic inputs										
Others (pl.specify)										
Importance of nutritional garden	3	59	67	126	17	22	39	82	84	166
Minor millets	1	30	15	45	0	0	0	30	15	45
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop										
Off-season vegetables										
Nursery raising	1	127	20	147	31	7	38	158	27	185
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation	1	21	78	99	8	17	25	29	95	124
Others (pl.specify)										
Flower cultivation	2	40	92	132	8	8	16	48	100	148
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
d) Plantation crops										
Production and Management technology	1	30	69	99	4	15	19	34	84	118

Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management	1	35	0	35	13	0	13	48	0	48
Integrated water management										
Integrated nutrient management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										

Animal Disease Management										
Feed and Fodder technology										
Production of quality animal products										
Others (pl.specify)										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Women empowerment	3	3	58	61	8	9	17	10	68	78
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest	1	25	5	30	5	0	5	30	5	35

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

Mushroom production	2	6	84	92	0	43	43	6	127	133
Apiculture										
Others (pl.specify)										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	**18**	**446**	**488**	**936**	**111**	**121**	**232**	**497**	**670**	**1167**

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 farming1	1	9	3	12	16	2	18	25	5	30
Seed production										
Production of organic inputs										
Planting material production	1	30	69	99	4	15	19	34	84	118
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	1	20	2	22	8	0	8	28	2	30
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)										
Flower cultivation	2	40	92	132	8	8	16	48	100	148
TOTAL	**5**	**99**	**166**	**265**	**36**	**25**	**61**	**135**	**191**	**326**

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

Area of training	No. of	No. of Participants		
		General	SC/ST	Grand Total

	Courses	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)										
a) Flower cultivation	2	40	92	132	8	8	16	48	100	148

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
b) Production technology of coconut	1	30	69	99	4	15	19	34	84	118
TOTAL	**3**	**70**	**161**	**231**	**12**	**23**	**35**	**82**	**184**	**266**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify) a) District level technical seminar on Avian influenza	1	60	6	66	0	0	0	60	6	66
TOTAL	**1**	**60**	**6**	**6**	**0**	**0**	**0**	**60**	**6**	**66**

				6						

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

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

Sponsored training programmes

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Increasing production and productivity of crops	1	12	0	12	18	0	18	30	0	30
1.b.	Commercial production of vegetables										
2	**Production and value addition**										
2.a.	Fruit Plants										
2.b.	Ornamental plants										
2.c.	Spices crops										
3.	**Soil health and fertility management**	1	8	0	8	22	0	22	30	0	30
4	**Production of Inputs at site**										
5	**Methods of protective cultivation**										
6	**Others (Pl.Specify)**										
7	**Post harvest technology and value addition**										
7.a.	Processing and value addition										
7.b.	Others (Pl.Specify)										
	Integrated farming system	2	43	14	57	14	5	19	57	19	76
8	**Farm machinery**										
8.a.	Farm machinery, tools and implements										
8.b.	Others (Pl.Specify)										
9.	**Livestock and fisheries**										
10	**Livestock production and management**										
10.a.	Animal Nutrition Management										
10.b.	Animal Disease Management										
10.c	Fisheries Nutrition										
10.d	Fisheries Management										
10.e.	Others (Pl.Specify)										
11.	**Home Science**										
11.	Household nutritional										

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
a.	security										
11. b.	Economic empowerment of women										
11. c.	Drudgery reduction of women										
11. d.	Others (Pl.Specify)										
12	**Agricultural Extension**										
12. a.	Capacity Building and Group Dynamics	1	0	30	30	0	5	5	0	35	35
12. b.	Others (Pl.Specify)										
	TOTAL	**5**	**63**	**44**	**107**	**54**	**10**	**64**	**117**	**54**	**171**

Details of sponsoring agencies involved

3. Karnataka State Government
4. Bio-Centre, Department of Horticulture

Details of Vocational Training Programmes carried out for rural youth

S. No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1. a.	Commercial floriculture										
1. b.	Commercial fruit production										
1. c.	Commercial vegetable production										
1. d.	Integrated crop management										
1. e.	Organic farming										
1. f.	Others (pl.specify)										
2	**Post harvest technology and value addition**										
2. a.	Value addition										
2. b.	Others (pl.specify)										
3.	**Livestock and fisheries**										
3. a.	Dairy farming										

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. b.	Composite fish culture										
3. c.	Sheep and goat rearing										
3. d.	Piggery										
3. e.	Poultry farming										
3. f.	Others (pl.specify)										
4.	**Income generation activities**										
4. a.	Vermi-composting										
4. b.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.										
4. c.	Repair and maintenance of farm machinery and implements										
4. d.	Rural Crafts										
4. e.	Seed production										
4. f.	Sericulture										
4. g.	Mushroom cultivation	1	14	8	22	8	5	13	22	13	35
4. h.	Nursery, grafting etc.										
4. i.	Tailoring, stitching, embroidery, dying etc.										
4. j.	Agril. para-workers, para-vet training										
4. k.	Others (pl.specify)										
5	**Agricultural Extension**										
5. a.	Capacity building and group dynamics										
5. b.	Others (pl.specify)										
	Grand Total	**1**	**14**	**8**	**22**	**8**	**5**	**13**	**22**	**13**	**35**

V. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personn	TOTAL

			el	
Advisory Services	78	78	8	86
Diagnostic visits	6	98	21	119
Field Day	7	3057	14	3071
Group discussions	6	172	0	172
Kisan Ghosthi	0	0	0	0
Film Show	0	0	0	0
Self -help groups	0	0	0	0
Kisan Mela	0	0	0	0
Exhibition	7	4539	54	4593
Scientists' visit to farmers field	93	420	21	441
Plant/animal health camps				
Farm Science Club				
Ex-trainees Sammelan				
Farmers' seminar/workshop	1	-	66	66
Method Demonstrations	13	280	18	298
Celebration of important days	7	1286	78	1364
Special day celebration	2	611	14	625
Exposure visits	10	316	3	319
Others (pl.specify)				
Farmers visit to KVK	189	282	-	282
Radio Talk	5			
TV Talk	4			
Lectures delivered as resource persons	27	2040	190	2230
Total	455	13179	487	13666

Details of other extension programmes

Particulars	Number
Electronic Media	
Extension Literature	
News Letter	
News paper coverage	22
Technical Articles	8
Technical Bulletins	4
Technical Reports	9
Radio Talks	5
TV Talks	4
Animal health camps (Number of animals treated)	-
Others (pl.specify)	
Abstracts	1
Handouts	2
Manual	3

Full length paper	1
Folders	7
Book	1
Total	

VI. PRODUCTION OF SEED/PLANTING MATERIAL

Production of seeds by the KVKs

Crop category	Name of the crop	Name of the variety (if hybrid pl. specify)	Quantity of seed (q)	Value (Rs)	Number of farmers
Cereals	Finger millet	Variety-GPU-28	0.15	420	3
Oilseeds					
Pulses					
Commercial crops					
Vegetables					
Flower crops					
Spices					
Fodder crop seeds	Fodder Sorghum	Variety-CoFS-29	0.005	200	2
Fiber crops					
Forest Species					
Others					
Total			**0.155**	**620**	**5**

Production of planting materials by the KVKs

Crop category	Name of the crop	Name of the variety (if hybrid pl. specify)	Number	Value (Rs.)	Number of farmers
Commercial					
Vegetable seedlings	Drumstick	Variety-Bhagya	600	7200	10
Fruits	Papaya	Hybrid-Red lady	2325	**34875**	15
Ornamental plants					
Medicinal and Aromatic					
Plantation					
Spices	Curry leaf	Local	84	**1008**	6
Tuber					
Fodder crop saplings					
Forest Species					
Others					
Total			**3009**	**43083**	**31**

Production of Bio-Products : NIL

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	No. of Farmers
Bio Fertilizers				
Bio-pesticide				
Bio-fungicide				
Bio Agents				
Others				

Total				

Production of livestock and related enterprise materials : NIL

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
Poultry				
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl.specify)				
Fisheries				
Fingerlings				
Others (Pl. specify)				
Total				

VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS 2017-18

Samples	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
Soil	1571	1093	1093	138803
Water	947	878	878	84530
Plant	1	1	1	400
Manure				
Others (pl.specify)				
Total	**2519**	**1972**	**1972**	**223733**

VIII. SCIENTIFIC ADVISORY COMMITTEE

Number of SACs conducted : 12th SAC on 12-12-2017

IX. NEWSLETTER

Number of issues of newsletter published

X. RESEARCH PAPER PUBLISHED

Number of research paper published : 1 No.

XI. DETAILS ON RAIN WATER HARVESTING STRUCTURE AND MICRO-IRRIGATION SYSTEM : NIL

Activities conducted				
No. of Training programmes	No. of Demonstrations	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)

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