ICAR-KRISHI VIGYAN KENDRA, GADAG

ANNUAL REPORT –2023-24

(FOR THE PERIOD FROM 01 APRIL, 2023 TO 31 MARCH 2024)

ICAR-K.H.Patil Krishi Vigyan Kendra, Hulkoti
Gadag district, Karnataka State
Pincode: 582205
Website: https://kvkgadag.icar.gov.in/
E-mail: kvk.Gadag@icar.gov.in
Host Organisation: Agricultural Science Foundation, Hulkoti

PART I - GENERALINFORMATION ABOUT THE KVK

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

KVK Address	Telephone		E mail	Web Address
	Office	Fax		
ICAR-K.H.Patil Krishi Vigyan Kendra, Hulkoti, Gadag dist.	(08372)289606 /289325	-	kvk.Gadag@icar.gov.in kvkhulkoti@gmail.com	www.kvkgadag.icar.gov.in

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

Address	Telephone		E mail	Web Address
	Office	Fax		
Agricultural Science Foundation, Hulkoti Gadag dist.	(08372) 289069	-	hulkotiasf@gmail.com	www.asf.ind.in

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Sudha V. Mankani	-	9480552339	sudhavmankani@gmail.com

1.4. Year of sanction: 1985

1.5. Staff positionason31 March 2024

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M / F	Discipline	Highest Qualification (for PC, SMS and Prog. Asstt.)	Pay Level	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
1	Head/Senior Scientist	VACANT	Senior Scientist and Head								
2	Scientist/ SMS	Dr. Sudha V. Mankani	Senior Scientist and Head(I/c) Subject Matter Specialist	F	Home Science	M.H.Sc, PhD	L-12	122900	26.06.1995	P	OBC
3	Scientist/ SMS	Mr. N.H. Bhandi	Subject Matter Specialist	M	Soil Science	M.Sc (Agri)	L-11	98200	01.06.2005	P	OBC
4	Scientist/ SMS	Mrs. Hemavati R.H.	Subject Matter Specialist	F	Horticulture	M.Sc (Horti)	L-10	63100	14.02.2020	P	OBC
5	Scientist/ SMS	Dr. Vinayak Niranjan	Subject Matter Specialist	M	Ag. Engineering	M.Tech(Ag .Eng), PhD	L-10	59500	11.10.2021	P	OBC
6	Scientist/ SMS	VACANT	Subject Matter Specialist		Agronomy						
7	Scientist/ SMS	VACANT	Subject Matter Specialist		Ag. Extension						

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M / F	Discipline	Highest Qualification (for PC, SMS and Prog. Asstt.)	Pay Level	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
8	Programme Assistant (Lab Tech.)	Dr. B.M. Murgod	Programme Assistant	M	Animal Science	B.V. Sc	L-7	62200	25.06.2007	P	OBC
9	Programme Assistant (Computer)	Mrs. Lalita S.Asuti	Computer Programmer	F	-	M.Sc (IT)	L-7	68000	01.06.2005	P	OBC
10	Programme Assistant/ Farm Manager	Mr. Suresh L. Halemani	Farm Manager	M	-	B.Sc (Agri.)	L-7	55200	01.02.2011	P	OBC
11	Assistant	Mr. M.B. Jakkanagoudra	Assistant	M	-	M.Com	L-7	62200	25.06.2007	P	OBC
12	Jr. Stenographer	Mr. T.K. Sai Swaroop Rao	Jr. Stenographer	M	-	SSC & Certificate in Stenography	L-4	31400	15.12.2016	P	OBC
13	Driver - 2	Mr. G.D. Madivalar	Driver-Cum-Mechanic	M	-	7th Std.	L-4	42200	26.06.1995	P	OBC
14	Driver - 1	VACANT	Driver-Cum-Mechanic								
15	SS-2	Mrs. Savita V. Karadani	Field Assistant	F	-	PUC	L-1	20300	14.02.2020	P	OBC
16	SS-1	VACANT	Field Assistant								

1.6. Total land with KVK (in ha):28.0 ha

S. No.	Item	Area (ha)
1	Under Buildings	1.9
2.	Under Demonstration Units	0.5
3.	Under Crops	12.0
4.	Orchard/Agro-forestry	13.6
5.	Others	-

1.7. Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs. in lakhs)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	1996	800	33.46	-	-	-
2.	Farmers Hostel	ICAR	1997	550	17.26	-	-	-
3.	Staff Quarters	ICAR	31-03-2006	400	25.82	-	-	-
	1							
	2							
	3							
	4							
	5							
	6							
4.	Demonstration Units							
	1. Dairy	ICAR	31-03-1997	50	4.00	-	-	-
	2. Sheep & goat	ICAR	31-03-1997	50	2.63	-	-	-
	3. Organic input production unit	ICAR	31-03-2011	67	3.00			
5	Fencing	ICAR	31-03-2011		8.00			
6	Rain Water harvesting system	ICAR	31-03-2007	-	10.00	-	-	-
7	Threshing floor	ICAR	31-03-2011	278	2.00	-	-	-
8	Farm godown	ICAR	31-03-2011	70	3.00	-	-	-
9	Vermi Compost	DDB	31-03-2002	100	3.50	-	-	-
10	Vehicle & implement shed	ICAR	31-03-2011	80	3.00	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs. in lakhs)	Total kms. Run	Present status
Jeep (Mahindra Bolero)	2023	9.00	5396	Good
Tractor	2003	5.00	13780Hrs	Needs replacement
Motor cycle - I	2004	0.40	79232	Needs replacement
Motor cycle - II	2009	0.50	60550	Needs replacement

C) Lab Equipment & AV aids

Name of the equipment	Year of purchase	Quantity (No.)	Cost (Rs. in lakhs)	Present status
Computer	2008	1	1.00	Good
Digital Amplifier with Public Address System	2013	1	0.36	Good
OHP	2004	1	0.25	Good

Name of the equipment	Year of purchase	Quantity (No.)	Cost (Rs. in lakhs)	Present status
Motorised projection screen	2013	1	0.21	Good
White board	2013	1	0.14	Good
LED display board	2013	1	0.10	Good
Lap top Computer	2007	1	0.53	Not Good
LCD	2007	1	0.45	Good
Ceramic black board	2007	1	0.12	Good
Lab equipments for dairy and goatery	2011	1	0.50	Good
Generator	2011	1	1.00	Good
EPBAX system	2011	1	0.50	Good
Equipments of Plant health diagnostic unit	2011	1	10.00	Good
Laptop computer	2016-17	1	0.589	Good
Desktop computer	2016-17	1	0.25	Good
Printer	2016-17	1	0.181	Good
Copier	2016-17	1	0.595	Good
Projector	2016-17	1	0.48	Good
Digital camera	2016-17	1	0.242	Good
Pico projector	2016-17	1	0.145	Good
Amplifier	2016-17	1	0.055	Good
Class room chairs	2016-17	1	0.21	Good
File cabin	2016-17	1	0.20	Good
Hostel furniture	2016-17	1	0.59	Good
Projector Screen	2020-21	1	0.24	Good
Laptop	2020-21	1	0.79	Good
Desktop	2020-21	1	0.44	Good
Office furniture	2020-21	1	1.02	Good
Desktop (All in one)	2022	1	1.26	Good
Laptop	2022	1	0.62	Good
Printer (All in one)	2022	1	0.30	Good

D)Farm equipment and implements

Name of the equipment/implement	Year of purchase	Quantity (No.)	Cost (Rs.)	Present status
Hipro lab model gin machine	2006	1	0.70	Good
Seed delinting machine	2006	1	0.18	Good
Cotton seed sorter	2007	1	0.50	Good
Seed treatment drum	2007	1	0.40	Good

Name of the equipment/implement	Year of purchase	Quantity (No.)	Cost (Rs.)	Present status
Rotary weeder	2009	1	0.84	Good
Laser guided land leveler	2011	1	3.89	Good
Power tiller	2011	1	2.72	Good
Rotavator	2022	1	1.23	Good
Tamarind de-seeder	2022	1	1.11	Good

1.8. Details of SAC meeting organized

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
06-12-2024	20	Introduce vegetable Soybean	These recommendations are included in the Action Plan of 2024-25	
		Document success stories and innovation of young farmers		
		Make impact study and collect feedback from farmers who have undergone training in KVK		
		Involve Rotary and Lion Clubs in educating young girls		
		Advised to write more number of articles, research papers and publications for the technologies assessed and demonstrated		
		Present income and expenditure statement of KVK Farm in next SAC Meeting		
		SMSs need to give more thrust to ODOP crop and takeup seed production of ByadagiChilli		
		Rain Water Harvesting structures for KVK buildings may be taken up based on availability of funds		
		Facilitate sharing of experience by successful FLD farmers in next SAC Meeting		
		Nominate farmers unrepresented so far for National level meetings/Awards		
		Study the “Keeping Quality” parameters of Arka Nikhita variety of Bhendi		
		Demonstration of drone sprayer maybe taken up		
		Take up Demonstration of DSb-21 variety of Soybean		
		Conduct trainings/Awareness programmes related to Seed treatment with Trichoderma & PSB		
		Organize more number of programmes related to silage preparation and animal components to farmers in collaboration with Veterinary College, Gadag		
		Collaborative programmes may be taken up with NABARD on promotion of Drone technology and value addition activities to FPOs		

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
		KVK needs to take help of NABARD for printing of Technical Bulletiins / Leaflets etc.		
		Include DSAF-1 variety of Safflower crop released by UAS, Dharwad under FLD		
		Demonstrate spraying of “Pulse Booster” (UAS, Dharwad product) in pulse crops		
		Promote minor fruit crops under dryland horticulture and also along the bunds as border crops		
		Conduct Awareness programmmes on treatment of intestinal nematode infections (Gastrointestinal parasites) in collaboration with Veterinary College, Gadag		
		Organize more number of awareness programmmes for farmers on Natural Farming, Organic Farming and Integrated Farming Systems for getting sustained income		

PART II - DETAILS OF DISTRICT

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

S. No	Farming system/enterprise
Rainfed situation	
1	Agricultural crops + Dairy enterprise
2	Agricultural crops + Horticultural crops
3	Agriculture + Horticulture + Dairy enterprise
Irrigated situation	
1	Agriculture + Dairy enterprise
2	Agriculture + Horticulture + Dairy enterprise

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

S. No	Agro-climatic Zone	Characteristics
1	Northern Dry Zone-3 and Region-2 of the state	This zone comprises of Gadag, Ron, Mundaragi, Gajendragad and Naragund blocks. Rainfall ranges from 450-600 mm with 30-35 rainy days mainly from June – September months. Maximum temperature ranges from 36-40^0 c. This zone is drought prone. **Kharif crops grown:** Greengram, Groundnut, Onion, Bt. Cotton Chilli, Sunflower, Maize etc **Rabi crops grown:** Bengalgram, Rabi Sorghum, wheat, sunflower etc
2	Northern Semi Transitional Zone-8 and Region-4 of the state	This zone comprises of Shirahattiand Laxmeshwar blocks. Average rainfall is 619 mm. Gets rainfall from both South-West and North-East mansoons. **Kharif crops grown:** Greengram, Sorghum, Bt-cotton, Groundnut, Sunflower, Millets, Maize, Onion, Chillietc **Rabi crops grown:**Rabi Sorghum, Sunflower, Bengal gram, Wheat etc

2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
1	Very shallow red gravelly loam soils	Less water holding capacity with less runoff and high infiltration rate,	26,625
2	Shallow red gravelly mixed with deep black soils	Less water holding capacity with moderate runoff and high infiltration rate. It contains high sand percent.	10,659
3	Medium deep red clayey soils	Moderate water holding capacity with less runoff and moderate infiltration rate. It contains high clay percent.	25,210
4	Medium deep red gravelly clay soils	Moderate water holding capacity with less runoff and high infiltration rate. It contains high clay percent.	63,163
5	Deep red gravelly clay soils	High water holding capacity with less runoff and less infiltration rate. It contains high clay percent.	8,290
6	Medium deep black clayey soils	Moderate water holding capacity with high runoff and less infiltration	1,50,117
7	Deep black clayey soils	More water holding capacity with low infiltration rate of water & clay content is more than 35 percent	67,444
8	Deep black calcareous clayey soils	More water holding capacity with low infiltration rate and high runoff. It contains more percent of Calcium	92,238
9	Deep alluvial black clayey soils	More water holding capacity with low infiltration rate and high run off.	17,088
10	Deep alluvial clayey soils (salt affected in patches)	More water holding capacity, less infiltration rate and high run off affects the seed germination	1,053
		Total	**4,61,887**

2.4. Area, Production and Productivity of major crops cultivated in the district (Reference year: 2022-23)

Sl. No	Crop	Area (ha)	Production (Tons)	Productivity(Kg /ha)
	Cereals			
1	Maize	113100	489625	4329
2	Rabi Sorghum	76846	54471	709
3	Wheat (Irrigated)	19250	37500	1948
4	Paddy (Irrigated)	4300	20500	4767
	Pulses			
4	Greengram	125000	96000	768
5	Bengalgram	150000	149000	993
6	Redgram	3373	2150	637
	Oilseeds			
7	Groundnut	44560	84400	1894
8	Sunflower	28300	45400	1604
9	Safflower	5600	3300	589
	Commercial crops			
9	Bt. Cotton	28300	146970	5193
10	Onion	29671	343420	11.5 tonns
12	Dry chillies	15102	72489	480

Source: Department of Agriculture, Gadag – 2022-23

2.5. Weather data

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
April, 2023	23.2	37.42	23.95	47.65
May, 2023	40.4	33.88	22.65	70.00
June, 2023	41.0	29.38	21.88	81.34
July, 2023	124	27.13	21.53	88.21
August, 2023	32	27.18	21.03	88.71
September, 2023	89	27.91	20.78	87.02
October,2023	6.0	26.80	19.07	85.85
November, 2023	43.0	26.64	17.26	85.67
December, 2023	1.0	29.00	19.00	82.86
January, 2024	0.0	30.56	15.49	61.60
February, 2024	0.0	34.50	17.27	42.60
March, 2024	0.0	39.00	21.41	37.13

2.6. Production and Productivity of Livestock, Poultry, Fisheries etc. in the district

Category	Population	Production	Productivity
Cattle			
Crossbred	24153	25968 Lit. of milk/day	5.22 Kg/day
Indigenous	118502	45944 Lit of milk/day	2.40 Kg/day
Buffalo	60989	64088 Lit. of milk/day	2.80 Kg/day
Sheep			
Crossbred	335		
Indigenous	258712	158 tons/year (meat)	15 Kg/animal
Goats	106353	134 tons/year (meat)	16 Kg/animal
Pigs			
Crossbred	557		
Indigenous	6012		
Rabbits	341		
Dogs	16711		
Others	311		
Poultry birds (egg production)	156275	72 lakh/year	100 per year

Source: Gadag District Statistical Report-FY 2018-19

Note: The data for the year 2022 is not available at District Statics Office / Office of Deputy Directory of AH & VS

2.7 District profile has been **Updated** for 2022 : Yes (Latest available data is uploaded)

2.8 Details of Operational area / Villages

Sl. No.	Taluk	Name of the village	How long the village is covered under operational area of the KVK	Major crops & enterprises	Major problems identified	Identified Thrust Areas
1	Gadag	Asundi	Two Years	Maize	• Incidence of Army worm • Drudgery during threshing and winnowing of Maize • Incidence of Turcicum leaf blight and Bacterial stalk rot • High labour requirement for harvesting of maize	• Trainings on ICM practices in maize • Trainings on use of machineries in maize cultivation • Supply of literature
				Greengram	• Low yield due to use of local variety • Low yield due to incidence of Powdery mildew and Pod borer • Seed shattering problem during harvesting in local variety China Moong • Moisture stress due to long dry spells in Kharif	• FLD on ICM practices in Greengram • FLD on Compartmental Bund Former • Training on ICM in Greengram • Supply of literature • Field day
				Bt. Cotton	• Incidence of Pink bollworm • Incidence of Leaf reddening • Incidence of sucking pests	• Training on ICM practices in cotton • Field day
				Bengalgram	• Low yield due to cultivation of local varieties • Low yield due to incidence of pod borer • Incidence of Wilt and Rust	• FLD on ICM practices in Bengalgram • Training on ICM practices in Bengalgram • Supply of literature • Field day
					• Low yields due to moisture stress	• FLD on solar nipping machine • FLD on compartmental bund former • Trainings on use of machineries in chickpea cultivation • Field day

Sl. No.	Taluk	Name of the village	How long the village is covered under operational area of the KVK	Major crops & enterprises	Major problems identified	Identified Thrust Areas
				Rabi Sorghum	• Low productivity due to use of local variety • Incidence of shoot fly and stem borer • Incidence of smut diseases • Problem of lodging in existing variety	• FLD on ICM practices in Rabi Sorghum • Training on ICM practices in Rabi Sorghum • Supply of literature • Field day
				Summer groundnut operation	• Low yield due to use of local varieties • Incidence of collar rot and root grub	• FLD on ICM in Summer Groundnut • Training on ICM practices in summer groundnut • Field Day • Supply of literature
					• Drudgery of in manual harvesting • Low income due to high labour cost	• FLD on mechanical harvesting of summer groundnut • Trainings on use of machineries in groundnut cultivation
				Vegetable crops	• Low income due to cultivation of local varieties • Application of imbalanced fertilizers	• FLD on Vegetable Cafeteria (Ridgegourd, Radish, Spinach and Dolichos Bean) • Assessment of high yielding okra hybrids for higher productivity • Trainings on ICM in vegetable crops • Supply of literature • Field day
				Red Chilli	• Non-availability of quality and pure seeds of Byadgi Dabbi • Lack of proper knowledge on ICM practices resulting in poor productivity and quality with high incidence of pest and diseases • Improper post-harvest	• FLD on ICM in Chilli crop • FLD on drying of Redchillies in Solar Drier • Assessment of Shelf Life of Chilli powder • Assessment of packaging methods for chilli powder storage • Training on ICM

Sl. No.	Taluk	Name of the village	How long the village is covered under operational area of the KVK	Major crops & enterprises	Major problems identified	Identified Thrust Areas
					management (Drying & storage of chilli and its powder)	• Supply of relevant literature • Farm advisory services • Rendering Kisan Mobile Advisory Services to farmers • Field day • Seed production
				Onion	• Imbalanced nutrition application without soil testing • Low productivity in existing variety Bellary Red onion • Low keeping quality of bulbs in existing variety • High incidence of thrips & purple blotch • High incidence of weeds • High labour requirement in detopping of harvested onion crop	• FLD on introduction of Bhima Super variety along with ICM practices • Trainings on ICM in onion crop • Seed production activities with identified seed farmers for supply of quality seeds of Bhima Super variety in village • Supply of relevant literature • Field day
				Milch cattle	Low productivity of milk due to non-availability of green fodder throughout the year.	• FLD on fodder cafeteria and nutrition in milch cattle • Training on scientific management of milch cattle • Supply of literature • Field visit • Mobile advisory services • Field day • Animal health camps in collaboration with Department of Animal Husbandry
				Nutrition and health	Less consumption of fruits and vegetables	• FLD on Nutri Garden • Training on balanced diet and nutrition • Training on importance of millets in diet

Sl. No.	Taluk	Name of the village	How long the village is covered under operational area of the KVK	Major crops & enterprises	Major problems identified	Identified Thrust Areas
						• Field day
				Grain storage	Incidence of stored grain pest	• FLD on demonstration of Super grain bags • Training on management of stored grain pests • Home visits and interactive meetings • Supply of literature • Supply of super grain bags
				Drudgery	• Drudgery in cleaning & grading of grains Less market price due to non-grading of grains	• Demonstration on spiral separator on Greengram, Bengalgram, Rabi Sorghum etc.
				Organic input production	Lack of awareness on importance of organic inputs among farm women	• Training • Supply of literature
				Borewell	Decreased ground water level and less water availability for irrigation	• Training on recharge of ground water through borewell • Field visits to demonstration units of artificial recharge of ground water through borewell • Supply of literature
2	Mundaragi	Halligudi	Two Years	Greengram	• Low yield due to use of local varieties • Incidence of Leaf spot and Powdery mildew • Incidence of Yellow Mosaic Virus and Leaf spot Moisture stress due to long dry spells in Kharif	• FLD on ICM practices in Greengram • Training on ICM practices in Greengram • FLD on Compartmental Bund Former • Supply of literature • Field day

Sl. No.	Taluk	Name of the village	How long the village is covered under operational area of the KVK	Major crops & enterprises	Major problems identified	Identified Thrust Areas
				Bengalgram	• Low yield due to cultivation of local varieties • Low yield due to incidence of pod borer • Incidence of Wilt and Rust	• FLD on ICM practices in Bengalgram • Training on ICM practices in Bengalgram • Field day • Supply of literature
					Reduced yield due to moisture stress	• FLD on compartmental bund former • FLD on solar nipping machine • Trainings on use of machineries in chickpea cultivation
				Safflower	• Low productivity due to cultivation of local variety • Incidence of sucking pests • Incidence of Capsule borer • Incidence of Alternaria leaf spot	• OFT on Assessment of Annigeri 2020 and ISF-764 varieties in Safflower crop • Training on ICM practices in Safflower • Supply of literature • Field Day
				Rabi Sorghum	• Low productivity due to use of local variety • Incidence of shoot fly and stem borer • Incidence of smut diseases • Problem of lodging in existing variety	• FLD on ICM practices in Rabi Sorghum • Training on ICM practices in Rabi Sorghum • Supply of literature • Field day
				Nutri cereal Foxtail millet	Low productivity in existing local variety	• FLD on ICM practices in Nutri cereal Foxtail millet variety DHFt-109-3 • Trainings • Supply of literature &Field day
				Bio-fortified Pearl millet	Long dry spells result in low yields in majority of the Kharif crops, hence introducing bio-fortified and drought resistant	• FLD on ICM practices in bio-fortified Pearl millet variety VPMV-9 • Organoleptic evaluation of Roti

Sl. No.	Taluk	Name of the village	How long the village is covered under operational area of the KVK	Major crops & enterprises	Major problems identified	Identified Thrust Areas
					pearl millet	• Analysis of Zinc and Iron in the flour • Trainings • Supply of literature &Field day
				Sunflower	• Incidence of Necrosis Incidence of Red headed caterpillar (RHHC)	• Training on ICM practices in Sunflower • Supply of literature
				Red Chilli	• Non-availability of quality and pure seeds of Byadgi Dabbi Lack of proper knowledge on ICM practices resulting in poor productivity and quality with high incidence of pest and diseases	• FLD on ICM in Chilli crop • Training on ICM • Supply of relevant literature • Farm advisory services • Rendering Kisan Mobile Advisory Services to farmers • Field day
				Onion	• Low income due to cultivation of local varieties • Imbalanced nutrition without soil testing • Low keeping quality bulbs in existing variety • High incidence of thrips & purple blotch • High incidence of weeds High labour requirement in detopping of harvested onion crop	• FLD on introduction of Bhima Super variety along with ICM practices • Trainings on ICM in onion crop • Demonstration of battery operated detopper • Trainings on use of battery operated detopper • Seed production activities with identified seed farmers • Supply of quality seeds of Bhima Super variety • Supply of relevant literature • Field day
				Rabi crops	Non profitability in existing Rabi crops due to moisture stress during Rabi Season	• FLD on introduction of Ashwagandha crop for higher income and drought mitigation • Supply of relevant literature • Field day

Sl. No.	Taluk	Name of the village	How long the village is covered under operational area of the KVK	Major crops & enterprises	Major problems identified	Identified Thrust Areas
				Rabi crops	Non profitability in existing Rabi crops due to moisture stress during Rabi Season	• FLD on introduction of Ajawaincrop for higher income and drought mitigation • Supply of relevant literature • Field day
				Milch cattle	Low productivity of milk due to non-availability of green fodder throughout the year.	• Training on scientific management of milch cattle • Supply of literature • Mobile advisory services
				Sheep	Low body weight in lambs	• Training on scientific management of sheep
				Goat	Low body weight in kids	• Training on scientific management of goats
				Nutrition and health	• Less consumption of fruits and vegetables	• FLD on Nutri Garden • Training on balanced diet and nutrition • Training on healthy foods for healthy life • Training on importance of millets in diet • Field day
				Grain storage	Incidence of stored grain pest	• FLD on demonstration of Super grain bags • Training on management of stored grain pests • Home visits and interactive meetings • Supply of literature • Supply of super grain bags
				Drudgery	• Drudgery in cleaning & grading of grains Less market price due to non-grading of grains	• Demonstration on spiral separator on Greengram, Bengalgram, Rabi Sorghum etc. • UV protected aprons for farm activities

Sl. No.	Taluk	Name of the village	How long the village is covered under operational area of the KVK	Major crops & enterprises	Major problems identified	Identified Thrust Areas
				Organic input production	• Lack of awareness on importance of organic inputs among farm women	• Training • Supply of literature
3	Laxmeshwar	Akkigund	Two Years	Maize	• Low yield due to cultivation of Maize as a sole crop • Imbalanced nutrition • Incidence of Army worm • Drudgery during threshing and winnowing of Maize • Incidence of Turcicum leaf blight and Bacterial stalk rot High labour requirement for harvesting of maize	• FLD on ICM practices in Maize • FLD on Maize + Redgram intercropping • Demonstrationofself propelled maize harvester • Trainings on ICM practices in maize • Trainings on use of machineries in maize cultivation • Supply of literature& field day
				Spreading groundnut	• Low productivity in existing local varieties • Imbalanced nutrition Incidence of leaf minor and leaf spot	• OFT on improved varieties of spreading groundnut • Trainings on ICM practices in Spreading groundnut • Supply of relevant literature
				Bt. Cotton	• Incidence of pink bollworm • Problem of leaf reddening • Incidence of sucking pests	• Training on use of Splat pheromone technique to control pink bollworm and method demonstration • Training on ICM practices in cotton
					Drudgery of operation in existing spraying methods	• OFT on assessment of different spraying equipment • Trainings on use of machineries in Bt. Cotton cultivation
				Greengram	• Low yield due to use of local varieties • Incidence of Powdery mildew	• FLD on ICM practices in Greengram • Training on ICM practices in

Sl. No.	Taluk	Name of the village	How long the village is covered under operational area of the KVK	Major crops & enterprises	Major problems identified	Identified Thrust Areas
					• Incidence of Yellow Mosaic Virus and Leaf spot	Greengram • Supply of literature • Field day
				Blackgram	• Low yield due to use of local varieties • Incidence of Powdery mildew • Incidence of pod borer	• OFT of high yielding varieties of Blackgram • Training on ICM practices in Blackgram • Supply of literature
				Bengalgram	• Low yield due to cultivation of local varieties • Low yield due to incidence of pod borer • Incidence of Wilt and Rust	• OFT on assessment of high yielding varieties • FLD on ICM practices in Bengalgram • Training on ICM practices in Bengalgram • Field day&Supply of literature
				Wheat	• Low productivity due to use of local varieties • Incidence of termites and stem borer • Incidence of rust and leaf spot	• Training on ICM practices in Wheat • Supply of literature
				Rabi Sorghum	• Incidence of Shoot fly and Stem borer • Incidence of Smut disease	• FLD on ICM practices in Rabi Sorghum • Training on ICM practices in Rabi Sorghum • Supply of literature • Field day
				Nutri cereal Foxtail millet	Low productivity in existing local variety	• FLD on ICM practices in Nutri cereal Foxtail millet variety DHFt-109-3 • Trainings • Supply of literature &Field day
				Rabi crops	Non profitability in existing farming system due to moisture stress during Rabi season	• FLD on introduction of Ashwagandha crop for higher income and drought mitigation

Sl. No.	Taluk	Name of the village	How long the village is covered under operational area of the KVK	Major crops & enterprises	Major problems identified	Identified Thrust Areas
						• Supply of relevant literature
				Borewell	Decreased ground water level and less water availability for irrigation	• Training on recharge of ground water through borewell • Field visits to demonstration units of artificial recharge of ground water through borewell • Supply of literature
				Milch cattle	Low productivity of milk due to non-availability of green fodder throughout the year.	• FLD on fodder cafeteria and nutrition in milch cattle • Training on scientific management of milch cattle • Supply of literature • Field visit • Mobile advisory services • Field day • Animal health camps in collaboration with Department of Animal Husbandry
				Goat	Low body weight in kids	• Training on scientific management of goats
				Nutrition and health	Less consumption of fruits and vegetables	• FLD on Nutri Garden • Training on balanced diet and nutrition • Training on healthy foods for healthy life • Training on importance of millets in diet • Field day
				Grain storage	Incidence of stored grain pest	• FLD on demonstration of Super grain bags • Training on management of stored grain pests • Home visits and interactive meetings

Sl. No.	Taluk	Name of the village	How long the village is covered under operational area of the KVK	Major crops & enterprises	Major problems identified	Identified Thrust Areas
						• Supply of literature • Supply of super grain bags
				Drudgery	• Drudgery in cleaning & grading of grains Less market price due to non-grading of grains	• Demonstration on spiral separator on Greengram, Bengalgram, Rabi Sorghum etc. • UV protected aprons for farm activities
				Organic input production	Lack of awareness on importance of organic inputs among farm women	• Training • Supply of literature • Field day
4	Naragund	Muganur	Two Years	Maize	• Low productivity due to imbalanced nutrition • Incidence of Armyworm • Problem of leaf reddening • Incidence of Downey mildew	• FLD on ICM practices in Maize • Training on ICM practices in maize • Supply of literature • Field day
				Greengram	• Low yield due to use of local varieties • Incidence of Powdery mildew Incidence of Yellow Mosaic Virus and Leaf spot	• FLD on ICM practices in Greengram • Training on ICM practices in Greengram • Supply of literature • Field day
				Blackgram	• Low yield due to use of local varieties • Incidence of Powdery mildew Incidence of pod borer	• OFT on high yielding varieties of Blackgram • Training on ICM practices in Blackgram • Supply of literature
				Wheat	• Low productivity due to use of local varieties • Incidence of stem borer Incidence of rust and leaf spot	• Training on ICM practices in wheat • Supply of literature
				Bengalgram	• Low yield due to cultivation of local varieties	• OFT on assessment of high yielding varieties in Bengalgram crop

Sl. No.	Taluk	Name of the village	How long the village is covered under operational area of the KVK	Major crops & enterprises	Major problems identified	Identified Thrust Areas
					• Low yield due to incidence of pod borer • Incidence of Wilt and Rust • Non profitability in existing farming system due to moisture stress • Deterioration of soil physical properties due to unscientific use of machineries Reduced Water Use Efficiency	• OFT on conservation agriculture practices • FLD on ICM practices in Bengalgram • FLD on Solar nipping machine • Training on ICM practices in Bengalgram • Field day • Supply of literature
				Rabi Sorghum	• Incidence of Shoot fly and Stem borer Incidence of Smut disease	• FLD on ICM practices in Rabi Sorghum • Training on ICM practices in Rabi Sorghum • Supply of literature • Field day
				Safflower	• Low productivity due to cultivation of local variety • Incidence of sucking pests • Incidence of Capsule borer Incidence of Alternaria leaf spot	• OFT on Assessment of Annigeri 2020 and ISF-764 varieties in Safflower crop • Training on ICM practices in Safflower • Supply of literature • Field Day
				Red Chilli	• Non-availability of quality and pure seeds of Byadgi Dabbi • Lack of proper knowledge on ICM practices resulting in poor productivity and quality with high incidence of pest and diseases Unhygienic way of drying of Red Chillies	• FLD on ICM in Chilli crop • FLD on solar drying of Red Chillies • Training on use of solar dryer for drying of chillies • Training on ICM • Supply of relevant literature • Farm advisory services • Field day • Seed production activities with identified seed farmers

Sl. No.	Taluk	Name of the village	How long the village is covered under operational area of the KVK	Major crops & enterprises	Major problems identified	Identified Thrust Areas
				Onion	• Low productivity due to imbalanced nutrition • Low productivity due to cultivation of low yielding variety Double Red Incidence of thrips reduces the yields	• FLD on introduction of Bhima Super variety along with ICM practices • Trainings on ICM in onion crop • Seed production activities with identified seed farmers • Supply of quality seeds of Bhima Super variety • Supply of relevant literature&Field day
				Milch cattle	• Low productivity of milk due to non-availability of green fodder throughout the year.	• Training on scientific management of milch cattle • Supply of literature • Mobile advisory services
				Drudgery	• Drudgery in cleaning & grading of grains Less market price due to non-grading of grains	• Demonstration on spiral separator on Greengram, Bengalgram, Rabi Sorghum etc. • UV protected aprons for farm activities
				Nutrition and health	Less consumption of millets, fruits and vegetables in daily diet	• FLD on Nutri Garden • Training on health and nutrition, importance of millets in diet • Field day
				Grain storage	Incidence of stored grain pest	• FLD on demonstration of Super grain bags • Training on management of stored grain pests • Home visits and interactive meetings • Supply of literature • Supply of super grain bags
				Dicoccum wheat	Nutritional importance and its value addition	• Training on nutritional importance and its value addition

2.9 Priority thrust areas

S. No	Thrust area
1	Soil fertility management through production and application of bio-manures
2	Conservation agriculture practice for higher productivity in Chickpea
3	Promotion of DBGV-204, NBeG-49 and Phule Vikram varieties of Bengalgram under protective irrigation
4	Promotion of SPV-2217 variety of Rabi Sorghum
5	Assessment of different Safflower varieties for higher productivity
6	Demonstration of different varieties in vegetables, medicinal and aromatic crops
7	Promotion of nutri-farms
8	Popularisation of drudgery reduction equipments
9	Post harvest technologies
10	Livestock nutrition for higher milk productivity

PART III - TECHNICAL ACHIEVEMENTS

3.A. Target and Achievements of mandatory activities

OFT				FLD			
1				2			
OFTs (No.)		Farmers (No.)		FLDs (No.)		Farmers (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
5	5	17	17	18	18	215	215

Training (Farmers/farm women)				Training (Rural youth)			
3				4			
Courses (No.)		Participants (No.)		Programmes (No.)		Participants (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
90	99	4000	4146	15	21	400	471

Training (Extension personnel)				Training (sponsored)			
5				6			
Courses (No.)		Participants (No.)		Programmes (No.)		Participants (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
20	28	900	981	60	71	2000	2333

Training (Vocational)				Extension Programmes			
7				8			
Courses (No.)		Participants (No.)		Programmes (No.)		Participants (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
10	14	300	378	420	425	30000	36527

Seed Production (Q)		Planting material (Nos.)	
9		10	
Target	Achievement	Target	Achievement
50	54.766	29000	29954

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
11		12	
Target	Achievement	Target	Achievement
4	4	15000	15488

Soil, water, plant and manure analysis (including mobile kits)				Mobile agro advisories provided			
13				14			
Samples (No.)		Farmers (No.)		Messages including text, voice (No.)		Farmers (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
900	959	900	914	60	68	100000	107859

3.B1. Abstract of interventions undertaken

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of live-stock (No.)	Supply of bio products	
													No.	Kg
1	Varietal demonstration	Rabi Sorghum	Low productivity in exiting M-35-1 variety	-	Demonstration of SPV-2217 variety in Rabi Sorghum crop	2	-	-	6	3	-	-	-	10
2	Varietal demonstration	Foxtail Millet	Low productivity in local variety		Demonstration of HN-46 variety in Foxtail Millet	2	-	-	5	0.18	-	-	-	-
3	Varietal demonstration	Blackgram	Low productivity due to use of local variety	Assessment of production potential of different Blackgram varieties under rainfed condition	-	5	-	-	10	0.63	-	-	-	2.25
4	Varietal Assessment	Bengalgram	Productivity of JAKI-9218 variety is low under irrigated condition	Assessment of potential productivity of DBGV-204, NBeG-49 and Phule Vikram	-	4	-	-	5	4.0	-	-	-	1.5

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of live-stock (No.)	Supply of bio products	
													No.	Kg
				varieties										
5	Conservation agriculture practice	Bengalgram	Non profitability due to moisture stress, deterioration of soil physical properties due to repeated use of machineries especially Rotavators& reduced water application efficiency	Assessment of conservation agriculture practice for higher productivity in Chickpea preceeded with Maize crop	-	3	-	1	8	0.9	-	-	-	-
6	ICM	Bengalgram	Low yield in existing local varieties	-	Demonstration of JAKI-9218 vareity of Bengalgram crop	4	-	-	7	0.5	-	-	-	65
7	Low Productivity	Bengalgram	Low productivity due to moisture stress	-	Demonstration of tractor operated bund former in Bengalgra	2	-	-	5	-	-	-	-	-

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of live-stock (No.)	Supply of bio products	
													No.	Kg
					m crop									
8	Drudgery reduction	Bengalgram	High labour and time consumption in hand nipping method	-	Demonstration of solar nipping machine in Bengalgram crop	3	-	-	8	-	-	-	-	-
9	Varietal assessment	Safflower	Low productivity due to cultivation of local variety	Assessment of different Safflower varieties for higher productivity	-	2	-	-	5	0.63	-	-	-	-
10	ICM	Safflower	Low productivity due to cultivation of local variety	-	Demonstration of ICM practices in high yielding ISF-764 variety of Safflower	3	-	-	4	0.86	-	-	-	-
11	Varietal introduction	Soybean	Lack of awareness on Soybean cultivation		Demonstration of KDS-753 variety of Soybean	2	-	-	5	0.75	-	-	-	-
12	INM	Summer Groundnut	Low yield due to imbalanced nutrition &lack of knowledge		Demonstration of INM in Summer Groundnut	4	-	-	10	-	-	-	-	1203

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of live-stock (No.)	Supply of bio products	
													No.	Kg
			on application of micro nutrients											
13	Farm Machinaries	Summer Groundnut	High labour and time requirement in manual harvesting method Pod damage in harrowing method	-	Demonstration of Tractor operated Groundnut Digger Cum Elevator	02	-	-	10	-	-	-	-	-
14	Integrated Crop Management	Onion	Low income due to cultivation of local varieties Double red & Bellary red	-	Demonstration of ICM in Red onion variety Bheema Super	8	-	-	10	0.12	-	-	-	-
15	Farm machinaries and drudgery reduction	Onion	Drudgery of operation in manual detopping of harvested onions		Demonstration of Battery operated Onion Detopper (Under Demonstration of ICM practices in Red	06	-	-	10	-	-	-	-	-

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of live-stock (No.)	Supply of bio products	
													No.	Kg
					onion variety Bhima Super)									
16	Integrated Cropmanagementin Chilli	Red Chilli (Byadagi Dabbi)	Non-availability of quality and pure seeds of Byadagi Dabbi, high incidence of sucking pests leading to murda complex disease & anthracnose disease Lack of proper knowledge on ICM practices resulting in poor productivity and quality Improper post-harvest manageme	-	Integrated Crop Management ByadagiChilli	9	-	-	9	0.10	-	-	2	20Kg: *Beauveria bassiana* and 20Kg: *Lecanicillium lecanii*

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of live-stock (No.)	Supply of bio products	
													No.	Kg
			nt											
17	Varietal Assessment	Okra	Existing hybrids are low yielding and resulting in low income	Assessment of Okra Hybrids for higher productivity	-	5	-	-	10	0.09	-	-	-	-
18	Varietal demonstration	Vegetable Crop Cafeteria	Low productivity and income due to non-availability of improved vegetable varieties and less profit as farmers grow any of the vegetable crop	-	ICM in Vegetable crop cafeteria	5	-	-	10	0.04 Qtls: Ridgegourd seeds (Arka Prasana variety), 0.4Qtls: Dolichos bean seeds(Arka Amogh variety), 0.25Qtls:Spinach seeds (Arka Anupam variety)& 0.01Qtls: Radishseeds(Arka Nishant variety) 0.004Qtls: Cucumber	200 Drumstic seedlings	-	-	-

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of live-stock (No.)	Supply of bio products	
													No.	Kg
										seeds (Arka Veera)				
19	Crop introduction	Ashwagandha	Non profitability in existing cropping pattern due to vagaries of Monsoon and lack of crop diversification in field crops resulting in income insecurity to the farmers	-	Introduction of Ashwagandha crop	3	-	-	5	0.20	-	-	-	-
20	Crop introduction	Ajwain	Non profitability in existing cropping pattern due to vagaries of Monsoon and lack of crop diversification in field	-	Introduction of Ajwain crop	2	-	-	3	0.06	-	-	-	-

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of live-stock (No.)	Supply of bio products	
													No.	Kg
			crops resulting in income insecurity to the farmers											
21	Health & Nutrition	Nutrition Garden	Lack of awareness on Nutri Garden & less consumption of fruits and vegetables	-	Nutri Garden	10	1	3	15	10 Kg	200	-	-	1025
22	Grain storage	Super grain bags	Incidence of stored pest	-	Demonstration of Super grain bags	1	-	-	1	-	-	-	-	-
23	Nutrition Management in dairy animals	Fodder production	Low productivity of milk in CB cow due to Non-cultivation of perennial fodder and grass species	-	Demonstration of Fodder Production	1	12	2	15	1.05	40931	-	-	-
24	Nutrition	Sheep	Low returns due to low body	-	Feeding of bypass protein	3	2	-	9	-	-	-	-	-

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of live-stock (No.)	Supply of bio products	
													No.	Kg
			weight gain		and bypass fat with deworming in lambs to improve weight gain									
25	Nutrtition	Milch cattle	Delayed maturity in CB calves	-	Feeding of calf starter with deworming in CB Calves to attain early maturity	2	3	-	9	-	-	-	-	-

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 (Extension activities)
1	2	3	4	5	6	7	8
1	Demonstration of SPV-2217 variety in Rabi Sorghum crop	UAS, Dharwad	Rabi Sorghum	-	20	2	6
2	Demonstration HN-46 variety in Foxtail Millet	UAS, Dharwad	Foxtail Millet	-	3	2	5
3	Assessment of production potential of different Blackgram varieties under rainfed condition	UAS, Dharwad	Blackgram	3	-	5	10
4	Assessment of potential productivity of JAKI-9218, DBGV-204, NBeG-49 and Phule Vikram varieties	UAS, Dharwad PJTSAU, Hyderabad MPK, Rahuri	Bengalgram	5	-	4	5
5	Assessment of conservation agriculture practice for higher productivity in Chickpea preceeded with Maize crop	PAU, Ludhiana	Bengalgram	3	-	3	8
6	Demonstration of JAKI-9218 vareity of Bengalgram crop	UAS, Dharwad	Bengalgram		25	4	7
7	Demonstration of tractor operated bund former in Bengalgram crop	UAS, Raichur	Bengalgram	-	20	2	5
8	Demonstration of solar nipping machine in Bengalgram crop	UAS, Raichur	Bengalgram	-	10	3	8
9	Assessment of ISF-764, A-2020 & DSAF-1 Safflower varieties for higher productivity	ICAR-IIOR, Hyderabad & UAS, Dharwad	Safflower	3	-	2	5
10	Demonstration of ICM practices in high yielding ISF-764 variety of Safflower	ICAR-IIOR, Hyderabad	Safflower	-	10	3	4
11	Demonstration of KDS-753 variety of Soybean	MPKV, Rahuri	Soybean	-	3	2	5
12	Demonstration of INM in Summer Groundnut	UAS, Dharwad	Summer Groundnut	-	6	4	10
13	Demonstration of tractor operated Groundnut digger cum elevator	TNAU, Coimbatore	Groundnut	-	10	2	8
14	ICM in Red onion variety Bheema Super	UAS Bagalkot and ICAR-DOGR, Pune	Red Onion	-	12	6	15

S. No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted			
				OFT	FLD	Training	Others (Extension activities)
15	Demonstration of battery operated Onion detopper (Under demonstration of ICM practices in Red Onion)	UAS, Raichur	Onion	-	1	6	10
16	ICM in ByadagiChilli	ICAR- IIHR, Bengaluru and UAS, Dharwad	Red chilli	-	10	9	12
17	Assessment of Okra Hybrids for higher productivity	ICAR-IIHR, Bengaluru	Okra	3	-	6	13
18	ICM in Vegetable Crop Cafeteria	ICAR-IIHR, Bengaluru	Vegetable crops	-	10	7	18
19	Introduction of Ashwagandha crop	CSIR-CIMAP, Lucknow, UP	Ashwagandha	-	5	6	16
20	Introduction of Ajwain crop	ICAR-NRC on seeds spices, Ajmer, Rajasthan	Ajwain	-	3	2	6
21	Nutrition Garden	UAS, Bengaluru	Health and nutritional security	-	25	10	15
22	Super grain bags	UAS, Raichur	Grain storage	-	40	4	6
23	Demonstration of Fodder production	ICAR-IGFRI, RRS, Dharwad & UAS, Dharwad	CB Cows	-	8	14	15
24	Nutrition	KVAFSU, Bidar	Sheep	-	10	2	9
25	Nutrition	KVAFSU, Bidar	Milch cattle	-	10	3	9

3.B2 contd..

	No. of farmers covered															
	OFT				FLD				Training				Others (Extension activities)			
	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
Demonstration of SPV-2217 variety in Rabi Sorghum crop	0	0	0	0	16	9	0	0	30	12	12	8	110	28	10	2
Demonstration of HN-46 variety in Foxtail Millet	0	0	0	0	3	0	0	0	20	30	5	5	45	65	14	12

	No. of farmers covered															
	OFT				FLD				Training				Others (Extension activities)			
	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
Assessment of production potential of different Blackgram varieties under rainfed condition	3	0	0	0	0	0	0	0	85	25	6	8	60	20	7	10
Assessment of potential productivity of JAKI-9218, DBGV-204, NBeG-49 and Phule Vikram varieties	5	0	0	0	0	0	0	0	72	30	10	8	75	46	10	12
Assessment of conservation agriculture practice for higher productivity in Chickpea preceeded with Maize crop	2	0	1	0	0	0	0	0	55	25	8	2	44	12	5	1
Demonstration of JAKI-9218 vareity of Bengalgram crop	0	0	0	0	23	0	2	0	69	30	8	4	86	43	12	9
Demonstration of tractor operated bund former in Bengalgram crop	0	0	0	0	17	2	1	0	41	19	4	3	42	22	5	4
Demonstration of solar nipping machine in Bengalgram crop	0	0	0	0	8	0	2	0	37	13	5	2	64	28	10	7
Assessment of ISF-764, A-2020 & DSAF-1 Safflower varieties for higher productivity	3	0	0	0	0	0	0	0	45	10	4	1	20	10	6	2

	No. of farmers covered															
	OFT				FLD				Training				Others (Extension activities)			
	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
Demonstration of ICM practices in high yielding ISF-764 variety of Safflower	-	0	0	0	8	0	2	0	34	12	8	4	57	33	6	3
Demonstration of KDS-753 variety of Soybean	0	0	0	0	3	0	0	0	24	16	6	4	105	24	6	4
Demonstration of INM in Summer Groundnut	0	0	0	0	6	0	0	0	36	10	6	4	45	15	8	4
Demonstration of tractor operated Groundnut digger cum elevator	0	0	0	0	8	0	2	0	28	32	0	0	48	25	12	10
ICM in Red onion variety Bheema Super	0	0	0	0	10	0	2	0	63	25	51	11	35	15	28	10
Demonstration of Battery operated Onion detopper	0	0	0	0	1	0	0	0	75	21	7	8	165	10	5	6
Assessment of Okra Hybrids for higher productivity	3	0	0	0	0	0	0	0	102	15	22	8	22	10	18	5
ICM in Vegetable Crop Cafeteria	0	0	0	0	8	0	2	0	90	10	32	18	60	20	23	17
Introduction of Ashwagandha crop	0	0	0	0	5	0	0	0	68	16	12	4	36	18	9	5
Introduction of Ajwain crop	0	0	0	0	3	0	0	0	26	4	12	4	30	6	10	2
Nutrition Garden	0	0	0	0	0	23	0	2	42	383	10	49	45	204	5	20
Supe grain bags	0	0	0	0	2	10	4	4	12	34	2	4	0	35	0	6
Demonstration of Fodder production	0	0	0	0	10	0	0	0	227	45	20	15	92	54	25	17

	No. of farmers covered															
	OFT				FLD				Training				Others (Extension activities)			
	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
Feeding of bypass protein and bypass fat with deworming in lambs to improve weight gain	0	0	0	0	8	2	0	0	25	35	8	2	85	25	10	2
Feeding of calf starter with deworming in CB Calves to attain early maturity	0	0	0	0	7	2	1	0	40	20	0	0	56	43	6	10

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	Spices/ Medicinal crops	TOTAL
Integrated Nutrient Management											
Varietal Evaluation		1	2		1						4
Integrated Pest Management											
Integrated Crop Management											
Integrated Disease Management											
Small Scale Income Generation Enterprises											
Weed Management											
Resource Conservation Technology			1								1
Farm Machineries											
Integrated Farming System											
Seed / Plant production											
Value addition											
Drudgery Reduction											
Storage Technique											
Mushroom cultivation											
Total		**1**	**3**		**1**						**5**

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 : 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 : 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 technologies	No. of Technological options tested in each OFT	No. of trials	Number of farmers / locations	Area in ha (Per trial covering all the Technological Options in a farm)
Integrated Nutrient Management						
Varietal Evaluation	Blackgram	Assessment of production potential of different Blackgram varieties under rainfed condition	3		3	1.2 ha/trial (Total: 3.6 ha)
	Bengalgram	Assessment of potential productivity of JAKI-9218, DBGV-204, NBeG-49 and Phule Vikram varieties	5		5	0.8 ha / trial (Total :4 ha)
	Safflower	Assessment of ISF-764, A-2020 & DSAF-1 Safflower varieties for higher productivity	3		3	1.2 ha/trial (Total :3.6 ha)
	Okra	Assessment of Okra Hybrids for higher productivity	3		3	0.8 ha / trial (Total: 2.4 ha)
Integrated Pest Management						
Integrated Crop Management						
Integrated Disease Management						
Small Scale Income Generation Enterprises						
Weed Management						
Resource Conservation Technology	Bengalgram	Assessment of conservation agriculture practice for higher productivity	3		3	0.8 ha / trial (Total : 2.4 ha)
Farm Machineries						

Thematic areas	Crop	Name of the technologies	No. of Technological options tested in each OFT	No. of trials	Number of farmers / locations	Area in ha (Per trial covering all the Technological Options in a farm)
Integrated Farming System						
Seed / Plant production						
Value addition						
Drudgery Reduction						
Storage Technique						
Mushroom cultivation						
Total			**17**		**17**	

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

Thematic areas	Crop	Name of the technologies	No. of Technological options tested in each OFT	No. of trials	Number of farmers / locations	Area in ha (Per trial covering all the Technological Options in farm)
Integrated Nutrient Management						
Varietal Evaluation						
Integrated Pest Management						
Integrated Crop Management						
Integrated Disease Management						
Small Scale Income Generation Enterprises						

Thematic areas	Crop	Name of the technologies	No. of Technological options tested in each OFT	No. of trials	Number of farmers / locations	Area in ha (Per trial covering all the Technological Options in farm)
Weed Management						
Resource Conservation Technology						
Farm Machineries						
Integrated Farming System						
Seed / Plant production						
Value addition						
Drudgery Reduction						
Storage Technique						
Mushroom cultivation						
Cropping Systems						
Farm Mechanisation						
Others, Pl. Specify						
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				
Processing and Value addition				
Production and management				

Feed and fodder management				
Small scale income generating enterprises				
Others, pl. specify				
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				
Processing and Value addition				
Production and management				
Feed and fodder				
Small scale income generating enterprises				
Others, pl. specify				
Total				

4.B.5. Technologies assessed under various enterprises by KVKs

Sl.	Thematic areas	Name of the enterprise	Name of technology(s)	No. of Technological options tested in each OFT	No. of trials	No. of locations
1	Drudgery reduction					
2	Entrepreneurship Development					
3	Health and nutrition					
4	Processing and value addition					
5	Energy conservation					
6	Small-scale income generation					
7	Storage techniques					
8	Household food security					

Sl.	Thematic areas	Name of the enterprise	Name of technology(s)	No. of Technological options tested in each OFT	No. of trials	No. of locations
9	Organic farming					
10	Agroforestry management					
11	Mechanization					
12	Resource conservation technology	Assessment of conservation agriculture practice for higher productivity	• Direct sowing of chickpea in standing stubbles after combined harvester operation (Previous crop: Maize) • Direct sowing of chickpea in cut and spread Maize crop residue resulted through harvesting by single row self propelled Maize harvester (Previous crop: Maize)	2	3	
13	Value Addition					
14	Others					

4.B.6.Technologies assessed under various enterprises for women empowerment : NIL

	Thematic areas	Name of enterprise	Name of technology(s)	No. of Technological options tested in each OFT	No. of trials	No. of locations
1	Drudgery Reduction					
2	Entrepreneurship Development					
3	Health and Nutrition					
4	Value Addition					
5	Women Empowerment					
6	Others(Home science)					

4.C1.Results of Technologies Assessed

(I) Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Source of technology	Yield (Qt/Ha)	Unit of yield	Observations other than yield (Plant height(cm))	Gross Return Rs./ha	Net Return Rs. / ha	BC Ratio (Gross income/ Gross Cost)
1	2	3	4	5	6	7	8	9	10	11	12	13
Blackgram	Rainfed		Assessment of production potential of different Blackgram varieties under rainfed condition	3	**T.O.1 (Farmers' practice)** Local	-	4.58	Qtl/ha	28.26	33892	8452	1.33
					T.O.2 Cultivation of DBGV-5 variety	UAS, Dharwad	5.53	Qtl/ha	20.74	40922	14392	1.54
					T.O.3 Assessment of LBG-791 variety	UAS, Bengaluru	5.93	Qtl/ha	29.48	43882	17732	1.68

4. C2.Feedback on technologies assessed

Name of technology assessed	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Assessment of production potential of different Blackgram varieties under rainfed condition	LBG-791 and DBGV-5 varieties are high yielding. No constraints for adoption in rainfed area.	• LBG-791 variety seeds need to be made available in large quantity in the district

4.C3. Details of Successfully completed / concluded technology assessment (support with necessary summary of data and photographs)

1. **Title of Technology Assessed :**Assessment of potential productivity of DBGV-204, NBeG-49 and Phule Vikram varieties

2. **Performance of the Technology on specific indicators**

Technology Assessed	Grain Yield (Qtl/ha)	Net Returns (Rs./ha)	B.C. Ratio	Plant height (cm)	No. of pods/plant
Farmer's practice: Local	4.58	8452	1.33	28.26	18.34
Recommended practice: Cultivation of DBGV-5 variety	5.53	14392	1.54	20.74	22.19
Alternate practice-1: Assessment of LBG-791 variety	5.93	17732	1.68	29.48	24.76

3.**Specific Feedback from farmers**: LBG-791 yield more than local and DBGV-5 varieties

4.**Specific Feedback from Extension personnel and other stakeholders:**Check suitability of LBG-791 variety under Rainfed situation

5. **Feedback to Research System based on results and feedback received:**Nil

6. **Feedback on usefulness and constraints of technology :**Both LBG-791 and DBGV-5 varieties have performed very well. Farmers found both varieties very suitable in getting higher yield and net returns

(II) Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Source of technology	Yield (Qt/Ha)	Unit of yield	Observations other than yield (Plant height(cm))	Gross Return Rs./ha	Net Return Rs. / ha	BC Ratio (Gross income/ Gross Cost)
1	2	3	4	5	6	7	8	9	10	11	12	13
Bengalgram	Protective irrigation	Productivity of JG-11 variety is low under irrigated condition	Assessment of potential productivity of JAKI-9218, DBGV-204, NBeG-49 and Phule Vikram varieties	5	**T.O.1 (Farmers' practice)** Cultivation of JG-11 variety	-	10.83	Qtl/ha	29.90	64980	42880	2.94
					T.O.2 Cultivation of JAKI-9218 variety	UAS, Dharwad	11.55	Qtl/ha	30.32	69300	47740	3.21
					T.O.3 Assessment of DBGV-204 variety	UAS, Dharwad	11.78	Qtl/ha	31.45	70680	49280	3.30
					T.O.4 Assessment of NBeG-49 variety	PJTSAU, Hyderabad	12.08	Qtl/ha	33.88	72480	51100	3.39
					T.O.5 Assessment of Phule Vikram variety	MPKV, Rahuri	13.05	Qtl/ha	38.79	78300	56000	3.51

4. C2.Feedback on technologies assessed

Name of technology assessed	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Assessment of potential productivity of JAKI-9218, DBGV-204, NBeG-49 and Phule Vikram varieties	NBeG-49 and Phule Vikram varieties are high yielding and suitable for mechanical harvesting. No constraints in adoption of Technology.	• NBeG-49 variety seeds need to be made available in large quantity especially in command area villages.

4.C3. Details of Successfully completed / concluded technology assessment (support with necessary summary of data and photographs)

1. **Title of Technology Assessed :**Assessment of potential productivity of DBGV-204, NBeG-49 and Phule Vikram varieties

2. **Performance of the Technology on specific indicators**

Technology Assessed	Performance indicators						
	Grain Yield (Qtl/ha)	**Net Returns (Rs./ha)**	**B.C. Ratio**	**Plant height (cm)**	**No. of pods/plant**	**Test weight (g)**	**Duration (Days)**
Farmer's practice: Cultivation of JG-11 variety	10.83	42880	2.94	29.90	34.54	22.12	110
Recommended practice: Cultivation of JAKI-9218 variety	11.55	47740	3.21	30.32	36.23	22.87	110
Alternate practice-1: Assessment of DBGV-204 variety	11.78	49280	3.30	31.45	39.36	23.90	112
Alternate practice-2: Assessment of NBeG-49 variety	12.08	51100	3.39	33.88	42.24	24.54	114
Alternate practice-3: Assessment of Phule Vikram variety	13.05	56000	3.51	38.79	44.87	25.87	112

3.**Specific Feedback from farmers:**NBeG-49 and Phule Vikram varieties are high yielding and suitable for mechanical harvesting. No constraints in adoption of technology.

4.**Specific Feedback from Extension personnel and other stakeholders:**Check suitability of NBeG-49 under rainfed condition also.

5. **Feedback to Research System based on results and feedback received:** NIL

6. **Feedback on usefulness and constraints of technology :**Both NBeG-49 and Phule Vikram varieties have performed very well. Farmers found both these varieties very useful in getting higher productivity and net returns

(III) Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Source of technology	Yield (Qt/Ha)	Unit of yield	Observations other than yield (Soil moisture content*(%d.b.))	Gross Return Rs./ha	Net Return Rs. / ha	BC Ratio (Gross income/ Gross Cost)
1	2	3	4	5	6	7	8	9	10	11	12	13
Bengalgram	Protective irrigation	Non profitability due to moisture stress, deterioration of soil physical properties due to repeated use of machineries especially Rotavators& reduced water application efficiency	Assessment of conservation agriculture practice for higher productivity in Chickpea preceeded with Maize crop	3	**T.O.1 (Farmers' practice)** Sowing of Chickpea following conventional tillage (Rotavator operation twice and Harrowing) after the harvest of maize		13.63	q/ha	11.25	81780	58080	3.45
					T.O.2 : Sowing of chickpea after single pass blade harrow operation after harvest of maize with combine harvester	PAU, Ludhiana	14.25	q/ha	15.22	85500	63200	3.83
					T.O.3 Sowing of chickpea after single pass Rotavator operation after harvest of maize with combine harvester	PAU, Ludhiana	15.25	q/ha	16.34	91500	69700	4.19

4. C2. Feedback on technologies assessed

Name of technology assessed	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Assessment of conservation agriculture practice for higher productivity in Chickpea preceeded with Maize crop	Conservation Agriculture practices in Chickpea enhanced the yield and resulted in early germination of seeds. Soil water holding capacity was also improved.	Lack of knowledge to farmers regarding the technology

4.C3. Details of Successfully completed / concluded technology assessment (support with necessary summary of data and photographs)

1. **Title of Technology Assessed:**Assessment of conservation agriculture practice for higher productivity in Chickpea preceeded with Maize crop

2. **Performance of the Technology on specific indicators**

Technology Assessed	Performance indicators				
	Grain Yield (Qtl/ha)	**Net Returns (Rs./ha)**	**B.C. Ratio**	**Soil Moisture Content* (% d.b.)**	**Saving in cost of cultivation (%)**
Farmer's practice: Sowing of chickpea following conventional tillage (Harrowing and rotavator operation twice) after the harvest of maize	13.63	58080	3.45	11.25	-
Recommended practice: Sowing of chickpea after single pass blade harrow operation after harvest of maize with combine harvester	14.25	63200	3.83	15.22	5.90
Alternate practice-1: Direct sowing of chickpea in cut and spread maize crop residue	15.25	69700	4.19	16.34	8.00

3.**Specific Feedback from farmers:**Conservation Agriculture practices in Chickpea enhanced the yield and saved irrigation water significantly. Soil water holding capacity was also improved.

4.**Specific Feedback from Extension personnel and other stakeholders:**Conservation agriculture practices are well suited for irrigated condition and farmers may adopt the technology.

5. **Feedback to Research System based on results and feedback received:**Nil

6. **Feedback on usefulness and constraints of technology:**

- The technology has to be adopted over a long period to obtain good results as building up of organic carbon takes time.
- Incidence of weeds and mites are the major constraints.

(IV) Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Source of technology	Yield (Qt/Ha)	Unit of yield	Observations other than yield (No. of capsules/Plant)	Gross Return Rs./unit	Net Return Rs. / unit	BC Ratio (Gross income/ Gross Cost)
1	2	3	4	5	6	7	8	9	10	11	12	13
Safflower	Rainfed	Low productivity due to cultivation of local variety	Assessment of ISF-764, A-2020 and DSAF-1 varieties for higher productivity	6	**T.O.1 (Farmers' practice) / Recommended practice** Cultivation of local A-1 variety	UAS, Dharwad	8.45	Qtl. /ha.	32	38025	20365	2.15
					T.O.2 Assessment of ISF-764 variety	IIOR, Hyderabad	9.40	Qtl. /ha	48	42300	24750	2.41
					T.O.3 Assessment of A-2020 variety	UAS, Dharwad	10.35	Qtl. /ha	56	46575	28455	2.57
					T.O.4 Assessment of DSAF-1 variety	UAS, Dharwad	10.68	Qtl. /ha	63	48038	29708	2.62

4. C2. Feedback on technologies assessed

Name of technology assessed	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Assessment of ISF-764 and A-2020and DSAF-1 varieties for higher productivity	• DSAF-1 variety has following advantages • More number of capsules per plant • Higher grain weight	DSAF-1 variety seeds need to be made available in large quantity in the district.

4.C3. Details of Successfully completed / concluded technology assessment (support with necessary summary of data and photographs)

1. **Title of Technology Assessed :** Assessment of ISF-764and A-2020 and DSAF-1 varieties for higher productivity

2. **Performance of the Technology on specific indicators**

Technology Assessed	Performance indicators					
	Yield (Qtl/ha)	**Net Returns (Rs./ha)**	**B.C. Ratio**	**% increase in yield**	**No. of capsules / plant**	**Plant Height (cm)**
Farmer's practice: Cultivation of A-1 variety	8.45	20365	2.15	-	32	62
Alternate practice-1: Assessment of ISF-764 variety	9.40	24750	2.41	11.24	48	75
Alternate practice-2: Assessment of A-2020 variety	10.35	28455	2.57	22.49	56	107
Alternate practice-2: Assessment of DSAF-1 variety	10.68	29708	2.62	26.33	63	92

3.**Specific Feedback from farmers:** DSAF-1 and A-2020 varieties resulted in better yield compared to other varieties and No. of capsules were more in DSAF-1 variety

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

5. **Feedback to Research System based on results and feedback received:** Nil

6. Feedback on usefulness and constraints of technology: DSAF-1 & A-2020 varieties have resulted in more yield & net returns

(V) Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Source of technology	Yield (Qt/Ha)	Unit of yield	Observations other than yield (Fresh fruit weight in gms)	Gross Return Rs./unit	Net Return Rs. / unit	BC Ratio (Gross income/ Gross Cost)
1	2	3	4	5	6	7	8	9	10	11	12	13
Okra	Irrigated	Low yield, keeping quality and income due to cultivation of local variety	Assessment of Okra Hybrids for higher productivity	3	**T.O.1 (Farmer practice)** Cultivation of Private Hybrids	-	139.75	Qtl/ha	13.04	223600	119833	2.15
					T.O.2 Assessment of CoBH-4 Okra Hybrids	TNAU, Tamilnadu	159.90	Qtl/ha	14.28	255840	148743	2.39
					T.O.3 Assessment of Arka Nikita Okra Hybrids	ICAR-IIHR, Bengaluru	166.32	Qtl/ha	16.71	299370	188243	2.69
					T.O.4 Assessment of Phule Vimukta variety	MPKV,Rahuri	122.58	Qtl/ha	12.87	196133	94066	1.92

4. C2. Feedback on technologies assessed

Name of technology assessed	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Assessment of Arka Nikita	Fruits of Arka Nikita are very tender, attractive and preferred in Gadag city market	-

4.C3. Details of Successfully completed / concluded technology assessment (support with necessary summary of data and photographs)

1. **Title of Technology Assessed:**Assessment of Okra Hybrids for higher productivity
2. **Performance of the Technology on specific indicators :**

Technology Assessed	**Performance indicators**					
	Fresh fruit weight (gms)	**Average Plant height (cm)**	**Average fruit length (cm)**	**Net Returns (Rs./ha)**	**B.C. Ratio**	**Market price (Rs./Qtl)**
Farmers' practice: Cultivation of Private Hybrids	11.43	97.25	12.24	119833	2.15	1600
Recommended practice: Assessment of CoBH-4 Okra Hybrid	12.86	190.52	13.96	148743	2.39	1600
Alternate practice-1: Assessment of Arka Nikita Okra Hybrid	13.45	126.54	15.44	188243	2.69	1800
Alternate practice-2: Assessment of Phule Vimukta variety	11.18	93.82	12.10	94066	1.92	1600

3. **Specific Feedback from farmers**: Arka Nikita is suitable for Rabi cultivation, which fetches better price. The fruits are very tender, attractive and preferred in Gadag market. Therefore farmers accepted Arka Nikita Okra Hybrid.
4. **Specific Feedback from Extension personnel and other stakeholders : --**
5. **Feedback to Research System based on results and feedback received : --**
6. **Feedback on usefulness and constraints of technology:**Arka Nikita is suitable for Rabi cultivation, which fetches better price. The fruits are very tender, attractive and preferred in Gadag market. Therefore farmers accepted Arka Nikita Okra Hybrid.

** Photographs are attached in JPEG format

4.D1. Results of Technologies Refined : NIL

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Refined	Source of technology	Yield	Unit of yield	Observations other than yield	Gross Return Rs./unit	Net Return Rs. / unit	BC Ratio
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. D2. Feedback on technologies refined

Name of technology refined	**Useful characters as well as constraints of technology**	**Socio-economic as well as administrative constraints for its adoption**

4.D.2. Details of Technologies refined:

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

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	Rainfed	Rabi	Safflower	ISF-764	-	ICM	Demonstration of ICM practices in high yielding ISF-764 variety of Safflower	4	4	2	8	8	2
		Rainfed	Rabi	Soybean	KDS-763	-	Varietal demonstration	Demonstraiton of KDS-753 variety of Soybean	1.2	1.2	0	3	2	1
		Rainfed	Summer	Summer Groundnut			INM	Demonstration of INM in Summer Groundnut	2.4	2.4	1	5	5	1
		Rainfed	Summer	Summer Groundnut			Drudgery reduction	Demonstration of tractor operated Groundnut digger cum elevator	-	-	2	8	7	3
	Pulses													
2		Rainfed	Rabi	Bengalgram	JAKI-9218	-	ICM practices	Demonstration of ICM practices in JAKI-9218 variety of Bengalgram crop	10	10	2	23	20	5
		Rainfd	Rabi	Bengalgram	-	-	Farm Machineries	Demonstration of tractor operated	8	8	2	18	18	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
								compartment bund former in Bengalgram crop						
		Rainfed	Rabi	Bengalgram	-	-	Farm Machinaries	Demonstration of solar nipping machine in Bengalgram crop	-	-	2	8	8	2
3	Cereals													
		Rainfed	Rabi	Rabi Sorghum	SPV- 2217	-	Varietal demonstration	Demonstration of SPV-2217	8	8	2	18	15	5
4	Millets													
		Rainfed		Foxtail Millet	HN-46		Varietal demonstration	Demonstraiton of HN-46 variety in Foxtail Millet	1.2	1.2	0	3	3	0
5	Vegetables	Irrigated	Rabi 2023	Vegetable crops	Ridgegourd - Arka Prasana Dolichos Bean – Arka Amogh Spinach – Arka Anupam Radish- Arka Nishant Cucumber- Arka Veera	-	Varietal demonstration	Introduction of improved varieties in vegetable crops	4.0	4.0	2	8	6	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
					Drumstick-Bhagya									
6		Rainfed	Kharif 2023	Onion	Bheema Super	-	Varietal demonstration and ICM	Demonstration of ICM in Red onion variety Bheema Super	4.8	4.8	2	10	5	7
							Farm machinaries	Demonstration of battery operated Onion detopper	-	-	2	8	8	2
	Flowers													
	Ornamental													
	Fruit													
7	Spices and condiments	Rainfed	Kharif 2023	Red chilli	Byadagi Dabbi	-	ICM	ICM in ByadgiChilli	4.0	4.0	0	10	1	9
		Rainfed	Rabi 2023	Ajwain	Ajmer Ajwain-1	-	Crop introduction	Introduction of Ajwain crop	1.2	1.2	0	3	1	2
	Commercial													
8	Medicinal and aromatic	Rainfed	Rabi 2023	Ashwagandha	Poshita	-	Crop introduction	Introduction of Ashwagandha crop	2	2	0	5	2	3
9	Fodder	Irrigated	Kharif	Perennial fodder crops	Hybrid Napier-DHN 6, MulticutJowar-VH-988, Guinea grass, Rhodes grass,	-	Nutrition Management in dairy animals	Demonstration on Fodder Production &feeding to milch animals for enhanced milk	0.8	0.8	0	8	8	0

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
					Signal grass: Lucerne, Stylosanthes Hamata 555 &StyloScabra seeds, Subabul K8/B-42 & Sesbania grandiflora &Fodder oats			productivity						
	Plantation													
	Fibre													
10	Dairy	-	-	Milch cattle	CB calves	-	Nutrition	Feeding of calf starter with deworming in lambs to improve weight gain	-	-	3	7	8	2
	Poultry													
	Rabbitry													
	Piggery													
11	Sheep and goat	-	-	Sheep	-	-	Nutrition	Feeing of bypass protein and bypass fat with deworming in lambs to	-	-	8	2	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
								improve weight gain						
	Duckery													
	Common carps													
	Mussels													
	Ornamental fishes													
	Oyster mushroom													
	Button mushroom													
	Vermicompost													
	Sericulture													
	Apiculture													
	Implements													
	Others (specify)													
12	Nutri Garden	Irrigated & Rainfed	Kharif & Rabi	Vegetables	-	-	Nutrition	Demonstration of Nutri Garden	-	-	8	17	22	3
	PHT													
13	Grain storage			Greengram&Bengalgram	-	-	Grain storage	Demonstration of Super	-	-	16	24	20	20

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
								grain bags						

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

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
1	Oilseeds	Rainfed	Rabi 2023	Safflower	ISF-764	-	ICM	Demonstration of ICM practices in high yielding ISF-764 variety of Safflower	Rabi 2023	L	M	M	Greengram
		Rainfed	Rabi 2023	Soybean	KDS-763	-	Varietal demonstration	Demonstraiton of KDS-753 variety of Soybean	Rabi 2023	L	M	M	Rabi Sorghum
		Rainfed	Summer 2023	Summer Groundnut			INM	Demonstration of INM in Summer Groundnut	Summer 2023	L	L	M	Maize
2		Rainfed	Summer 2023	Summer Groundnut			Drudgery reduction	Demonstration of tractor operated Groundnut digger cum elevator	Summer 2023	L	L	M	Maize
3	Pulses												
4		Rainfed	Rabi 2023	Bengalgram	JAKI-9218	-	ICM practices	Demonstration of ICM practices in JAKI-9218 variety of Bengalgram crop	Rabi 2023	L	M	M	Greengram
5		Rainfed	Rabi 2023	Bengalgram	-	-	Farm Machineries	Demonstration of tractor operated compartment bund former in Bengalgram crop	Rabi 2023	-	-	-	Greengram
		Rainfed	Rabi 2023	Bengalgram	-	-	Farm Machinaries	Demonstration of solar nipping machine in Bengalgram crop	Rabi 2023	-	-	-	Greengram

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	
	Cereals												
6		Rainfed	Rabi 2023	Rabi Sorghum	SPV-2217	-	ICM	Demonstration of SPV-2217 variety	Rabi 2023	L	L	H	Greengram & fallow land
	Millets	Rainfed		Foxtail Millet	HN-46		Varietal demonstration	Demonstraiton of HN-46 variety in Foxtail Millet	Kharif 2023	L	M	M	Spreading Groundnut & fallow land
10													
11													
12	Vegetables	Irrigated	Rabi 2023	Vegetable crops	Ridgegourd - Arka Prasana Dolichos Bean – Arka Amogh Spincah– Arka Anupam Radish – Arka Nishant	-	Varietal demonstration	Introduction of new varieties in vegetable crops of ICAR-IIHR, Bengaluru	Rabi 2023	L	L	M	Greengram
13		Rainfed	Kharif 2023	Red Onion	Bheema Super	-	ICM practices	Demonstration of Bheema Super variety in Red Onion	Kharif 2023	L	L	M	Bengalgram
	Flowers												
	Ornamental												
	Fruit												
14	Spices and condiments												
15		Rainfed	Kharif 2023	Red chilli	Byadagi Dabbi	-	ICM in Byadgi Chilli	ICM in ByadgiChilli	Kharif 2023	L	L	M	Rabi Sorghum
		Rainfed	Rabi 2023	Ajwain	Ajmer Ajwain-1	-	Varietal introduction	Introduction of Ajwain crop	Rabi 2023	L	L	M	Bengalgram
	Commercial												

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	
16	Medicinal and aromatic	Ashwagandha	Rabi 2023	Ashwagandha	Poshita	-	Varietal introduction	Introduction of Ashwagandha crop	Rabi 2023	L	L	M	Rabi Sorghum
17	Fodder	Irrigated	Kharif 2023	Perennial Fodder crops	Hybrid Napier-DHN 6, MulticutJowar-VH-988, Guinea grass, Rhodes grass, Signal grass: Lucerne, Stylosanthes Hamata 555 &StyloScabra seeds, Subabul K8/B-42 & Sesbania grandiflora & Fodder oats	-	Nutrition Management in dairy animals	Demonstration on Fodder Production	Kharif 2023	L	L	M	Maize
	Plantation												
	Fibre												
	Sericulture												

5.B. Results of FLDs

5.B.1. Crops

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)			*Economics of check (Rs./ha)		
							Demo			Check		Gross Return	Net Return	** BCR	Gross Return	Net Return	** BCR
							H	L	A								
Oilseeds																	
Safflower	Demonstration of ICM practices ISF-764 variety in Safflower	ISF-764	-	Rainfed	10	4	9.10	8.05	8.51	6.64	28.00	38306	20489	2.15	29869	12799	1.75
Soybean	Demonstration of KDS-753 vareity of Soybean	KDS-753	-	Irrigated	3	1.2	13.24	10.38	12.33	10.80	14.12	77648	54138	3.30	68040	44640	2.91
Summer Groundnut	Demonstration of INM in Summer Groundnut						Results are awaited										
Pulses																	
Bengalgram	Demonstration JAKI-9218 variety in Bengalgram crop	JAKI-9218	-	Rainfed	25	10	15.00	12.50	14.20	11.50	23.85	82331	58420	3.44	66845	45620	3.14
Cereals																	
Rabi Sorghum	Demonstration of SPV-2217 variety	SPV-2217	-	Rainfed	20	8	20.0	16.13	17.98	13.80	30.28	73723	56638	4.31	56580	41212	3.68
Millets	Demonstration of HN-46 variety of Foxtail Millet	HN-46	-	Rainfed	3	1.2	16.90	13.55	15.75	12	31.25	105525	90315	6.94	80400	65900	5.54

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)			*Economics of check (Rs./ha)		
							Demo			Check		Gross Return	Net Return	** BCR	Gross Return	Net Return	** BCR
							H	L	A								
Vegetables:	Introduction of new varieties of ICAR-IIHR Bengaluru under Vegetable Crop Cafeteria	Ridgegourd: Arka Prasanna	-	Irrigated	10	4	31.25	23.75	26.04	20.40	27.65	288572	216910	4.03	225303	158846	3.39
		Dolichos bean: Arka Amogh					29.38	22.50	24.81	19.94	24.45						
		Radish : Arka Nishant					65.34	48.75	56.75	46.87	21.10						
		Spinach: Arka Anupam					31.40	24.38	27.04	22.52	20.60						
		Cucumber: Arka Veera					18.75	10.63	15.19	10.99	38.23						
Red Onion	Demonstration of ICM in Red onion variety Bheema Super	Bheema Super	-	Rainfed	12	4.8	66.00	47.78	54.91	45.43	20.87	109828	86511	4.70	81778	59480	3.66
Flowers																	
Ornamental																	
Fruit																	

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)			*Economics of check (Rs./ha)		
							Demo			Check		Gross Return	Net Return	** BCR	Gross Return	Net Return	** BCR
							H	L	A								
Spices and condiments																	
Ajwain	Introduction of Ajwain crop	Ajmer Ajwain-1	-	Rainfed	5	2	Crop vitiated due to moisture stress										
Chilli	Integrated Crop Management in ByadagiChilli	Byadagi Dabbi	-	Rainfed	10	4	7.50	5.63	6.13	4.75	28.94	208250	152810	3.78	161500	109880	3.13
Commercial																	
Fibre crops like cotton																	
Medicinal and aromatic																	
Ashwagandha	Introduction of Ashwagandha crop	Poshita	-	Rainfed	5	2	5.00	3.13	4.38	*	-	87500	57518	2.92	-	-	-
Fodder																	
Plantation																	
Fibre																	
Others (pl.specify)																	

** BCR= GROSS RETURN/GROSS COST
H – Highest Yield, L – Lowest Yield A – Average Yield

*Ajwain and Ashwagandha crop demonstrations do not have local check as thesecropsare new introduction during rabi season. Hence, Ajwain is compared with Bengalgram and Ashwagandha is compared with Rabi Sorghum crop as local checks to show that Ajwain and Ashwagandha are more profitable compared to traditional rabi season cropsi.eBengalgram and Rabi Sorghum respectively.

1) Data on additional parameters other than yield : Demonstration of SPV-2217 variety in Rabi Sorghum

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demonstration plot**	**Local check plot**
Lodging of plants (Percentage) at harvest	2.22	8.15
Plant height (cm)	222	203

2) Data on additional parameters other than yield :FLD on ICM in Onion

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**
Bulb weight (gms)	124.20	105.56
Thrips incidence (No.s/ plant)	0.48	1.51

3) Data on additional parameters other than yield :FLDonIntroduction of new varieties of vegetable crops of ICAR -IIHR, Bengaluru

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**
Ridgegourd		
Average number of fruits / vine (Nos.)	12.24	10.13
Average fruit weight (gm/fruit)	110.35	98.42
Dolichos bean		
Number of days for 1st harvest	47.26	45.12
Number of pods / plant	29.61	22.86
Radish		
Number of days for harvest	45	43
Root length (Cms)	14.53	12.63
Fresh root weight (gms)	156.52	124.87

Spinach		
Leaf length (Cms)	23	17
Leaf width (Cms)	9.12	7.41
Cucumber		
Days for first female flowering	24.18	26.58
Days for first fruit set	29.35	32.12
Fresh fruit weight (gms)	130.26	110.25
Fruits per vine (Nos.)	10.72	8.21

4) Data on additional parameters other than yield :Demonstration on introduction of Ashwagandha crop

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**
Root length (cm)		-
Dry root weight (Gm)		

Feedback on technologies demonstrated

Name of technology demonstrated	**Useful characters as well as constraints of technology**	**Socio-economic as well as administrative constraints for its adoption**
Demonstration of SPV-2217 variety in Rabi Sorghum	Variety is comparatively lodging resistant besides having higher productivity	-
Demonstration of vegetable crop cafeteria	**Ridgegourd - Arka Prasan variety** • An early variety, • Gives more yield • Low incidence of powdery mildew compared to local variety • Fruits are tender with good taste and cooking quality **Dolichos bean – Arka Amogh** • More yield, good marketability and cosumer acceptability **Radish – Arka Nishant** • More yield • Mild in pungency • Attractive roots and foliage **Spinach- Arka Anupam**	**Cucumber- Arka Veera** Fruits are not accepted by the consumers as fruits are Cylindrical in shape-

Name of technology demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
	• More yield, thick and big leaves make large bunch & attractive green leaf colour and Good Shelf life **Cucumber- Arka Veera** • High yielding variety	
Demonstration of ICM in Red onion variety Bheema Super	**Bheema Super** • Bulb weight and quality is superior • Attractive pink bulbs fetches better market price (Rs. 200/-more per Qtl) compared to local variety • Low incidence of thrips and purple blotch compared to local variety • Application of Gypsum helped in less bulb rotting compared to local varieties • Application of Arka Vegetable Special helped to get large and dark pink coloured bulbs.	-
ICM in ByadgiChilli	• Pure seeds of Byadagi Dabbi supplied to farmers are very good, farmers saved the seeds for next season • Maize as border crop and Marigold as trap crop resulted in less incidence of sucking pest and fruit borer respectively • Application of Arka Vegetable Special (Micornutrient mixture) resulted in better flower and fruit set and dark red coloured fruits • Timely management of Fruit rot resulted in better fruit yield and quality	-
Demosntration of introduction of Ashwagandha crop	• These crops withstand vagaries of mansoon and grows well under residual soil moisture conditions compared to field crops. • Ashwagandha crop has assured buyback system and fetches better market price. Therefore, crop diversification through introduction of these climate resilient crops are more profitable and sustainable than traditional crops during less rainfall years	-
Demonstration of Battery Operated Onion Detopper (Under FLD on ICM in Onion)	• Battery operated Onion Detopper resulted in reduction of drudgery involved in manual detopping method. • There was significant saving in labour requirement and time of operation.	-

5. B2. Data on IFS demonstrations including KVK farm demo model

Name of the IFS technology demonstrated	Name of IFS Components				Total Area (ha)	IFS Yield (q/ha)				Check yield (Mono crop)	% Increase over check	Economics of IFS demonstration (Rs./ha)			Economics of check demonstration (Rs./ha)		
	1	2	3	4		Component wise (Mention name of component and yield parameter)						Gross Return	Net Return	BCR	Gross Return	Net Return	BCR
						1	2	3	4								

Feedback on IFS technologies demonstrated

Name of IFS technology demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption

5.B.3. Livestock and related enterprises

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Name of the parameter with unit	Yield (kg/animal)				% Increase	*Economics of demonstration Rs./unit)			*Economics of check (Rs./unit)		
						Demo			Check if any		Gross Return	Net Return	** BCR	Gross Return	Net Return	** BCR
						H	L	A								
Dairy	Demonstration on Fodder Production& feeding to cows for higher milk productivity	CB Cows	10	10		12	5.5	6.7	5.2	27.61	54270	28366	2.09	42525	17507	1.69
Poultry																
Rabbitry																
Pigerry																
Sheep and goat																
Duckery																
Others (pl.specify)																

** 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.)

FLD on Fodder production

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

Data on additional parameters: Demonstration on Fodder production

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demonstration**	**Check**
Feeding of Fodder	• Gradual improvement in the general condition of the animal health • Increase in intake of dry fodder • Cows are coming to heat within the period	-
Nutrition	30 Kg green fodder, 10 Kg dry fodder and 2 Kg concentrated feed / Cow / day	No systematic nutrition

5. B4. Feedback on livestock technologies demonstrated

Name of livestock technology demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
FLD on Fodder production	After production and feeding of perennial green fodder, and grasses to milking cow, there was •Enhanced intake of fodder •Increased Milk production •Improvement in health condition and reducedcost of cattle feed	-

5.B.5. Fisheries : NIL

Type of Breed	Name of the technology demonstrated	Breed	No. of Demo	Units/ Area (m^2)	Name of the pararmeter with unit	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 Return	Net Return	** BCR	Gross Return	Net Return	** BCR
						H	L	A								
Common carps																
Mussels																

Ornamental fishes																
Others (pl.specify)																

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

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

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

5. B6. Feedback on fisheries technologies demonstrated

Name of fisheries technology demonstrated	**Useful characters as well as constraints of technology**	**Socio-economic as well as administrative constraints for its adoption**

5.B.7. Other enterprises

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

Enterprise	Name of the technology demonstrated	Variety/ species	No. of Demo	Units/ Area {m^2}	Name of the parameter with unit	Yield (Qtl/ha)				% Increase	*Economics of demonstration (Rs./unit) or (Rs./m2)			*Economics of check (Rs./unit) or (Rs./m2)		
						Demo			Check if any		Gross Return	Net Return	** BCR	Gross Return	Net Return	** BCR
						H	L	A								
Sericulture																
Apiculture																
Others (pl. specify)																
Nutrition & Health	Demonstration of Nutri Garden	-	25	3439.78Sq.mts	• Amount spent towards purchase of vegetables/year • Percentage adequacy of vegetables • Availability of leafy vegetables, other vegetables and roots and tubers per day/ member	-	-	-	-	-	93036	70936	4.21	-	-	-
Grain Storage	Demonstration of Super Grain Bags	-	40		• No. of live insects per Kg (Nos./Kg) • Weight loss of grains (Kgs) • Percentage weight loss of grains (%)	-	-	-	-	-	-	-	-	-	-	-

Data on additional parameters other than yield :Nutri Garden

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Local**
Amount spent towards purchase of vegetables/year	Rs.3600 (Rs.300/month)	19200 (Rs.1600/month)
Percentage adequacy of vegetables	40 %	-
Availability of leafy vegetables, other vegetables and roots and tubers per day/ member (gms)	200	-

Data on additional parameters other than yield :Demonstration of Super Grain Bags

Data on other parameters in relation to technology demonstrated		
	Rabi Sorghum (20 Demo)	**Bengalgram (20 Demo)**
Parameter with unit	**Results are awaited**	**Results are awaited**
No. of live insects / Kg (Nos.)		
Initial weight of grains (Kg)		
Final weight of grains (Kg)		
Weight loss of grains / 50 Kg (Kg)		
Weight loss of grains (%)		

5. B8. Feedback on enterprises demonstrated

Name of enterprise demonstrated	**Useful characters as well as constraints of technology**	**Socio-economic as well as administrative constraints for its adoption**
Nutrition Garden	**Useful characters :** • Fresh vegetables were available to families • Cost incurred for purchase of vegetables has been reduced • All family members including children came to know about the cultivation of various vegetables • Exchange of vegetables with neighbors and friends **Constraints** : • Water problem • Management of pest and diseases	**Socio-economic constraints** • Due to small land holding, many families may show dis-interest in cultivation of vegetables in smaller quantity • Lack of resources • Fencing problem • Damage of Nutri-Garden occurs due to stray cattles and livestock **Administrative constraints** • Nil
Grain storage	**Useful characters :** • Storage is easy	**Socio-economic constraints** • Cost is more

Name of enterprise demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
	• No pest incidence	

5.B.9. Farm implements and machinery

Name of the implement	Cost of the implement in Rs.	Name of the technology demonstrated	No. of Demo	Area covered under demo in ha	Name of the operation with unit	Labour requirement in Mandays		% save	Savings in labour (Rs./ha)	*Economics of demonstration (Rs./ha)			*Economics of check (Rs./ha)		
						Demo	Check			Gross Return	Net Return	** BCR	Gross Return	Net Return	** BCR
Groundnut Digger Cum Elevator		Demonstration of Tractor operated Groundnut Digger Cum Elevator	10	4	Groundnut harvesting	Results are awaited									
Compartment bund former	55000	Tractor operated compartmental bund former	20	8	Compartmental Bunding	0.34	1.67	79.64	335	71238	49138	3.22	67416	44416	2.93
Solar nipping machine	10500	Solar nipping machine in Chickpea	10	4	Nipping	1.4	5	72	2100	92300	68800	3.92	83250	60750	3.70
Battery Operated Onion Detopper	3500	Battery Operated Onion Detopper	10	4	Onion Detopping	69	100	31	-	-	-	-	-	-	-

* 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.)

Demonstration of Tractor Operated Groundnut Digger Cum Elevator

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Check
Results awaited		

Demonstration of Tractor Operated Compartmental Bund Former for in-situ Moisture Conservation

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Check
Average Soil Moisture content (% d.b)	29.83	20.56
Area coverage (ha/h)	0.36	-

Demonstration Solar Nipping Machine in Chickpea

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Check
Number of pods per plant	53	62
Number of branches per plant	16	21

Demonstration of Battery Operated Onion Detopper

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Check
Rate of detopping (kg/h)	175	120
Labour requirement (man hours/tonne)	11.50	16.66
Saving in Time (%)	39	-

5. B10. Feedback on farm implements demonstrated

Name of farm implement demonstrated	**Useful characters as well as constraints of technology**	**Socio-economic as well as administrative constraints for its adoption**
Demonstration of Tractor Operated Groundnut Digger Cum Elevator	**Results Awaited**	
Tractor operated compartmental bund former	•Compartmental Bunding helps in conservation of soil moisture for getting better yield. •Can be used for rain water harvesting during kharif and rabi seasons.	•Lack of awareness in farmers towards benefits of in-situ moisture conservation technologies. •Tractor operated compartmental bund former is single operation equipment. Hence farmers are reluctant in investing on purchase of the equipment.
Solar nipping machine	•Solar nipping machine works effectively for nipping of chickpea. •There is no need of special skills to operate this machine	•Lack of interest in farmers towards nipping operation in chickpea
Battery Operated	•Battery operated Onion Detopper resulted in reduction of	•Since the detopping of onion is done mostly by the women labour, the

Onion Detopper	drudgery involved in manual detopping method. •There was significant saving in labour requirement and time of operation.	ergonomical design of machine maybe improved.

5.B.11.Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	10	469	-
2	Farmers Training	62	1793	-
3	Media coverage	12	-	-
4	Training for extension functionaries	9	364	-
5	Others (Please specify)			

PART VI – DEMONSTRATIONS ON CROP HYBRIDS

Demonstration details on crop hybrids :

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

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

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demo	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)			*Economics of check (Rs./ha)		
					Demo	Check		Gross Return	Net Return	** BCR	Gross Return	Net Return	** BCR
Total													

Feedback on crop hybrids demonstrated

Name of crop hybrid demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption

PART VII. TRAINING

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification	1	30	4	34	5	0	5	35	4	39
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management	8	127	27	154	135	0	135	262	27	289
Soil and Water Conservation	4	85	35	120	0	0	0	85	35	120
Integrated Nutrient Management	3	147	0	147	0	0	0	147	0	147
Production of organic inputs										
Others (pl.specify)										
Natural Farming	7	122	118	240	28	12	40	150	130	280
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	2	6	44	50	0	0	0	6	44	50
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl.specify)										
Weed management										
ICM in vegetable crops										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards	1	40	1	41	19	0	19	59	1	60
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
orchards										
Plant propagation techniques										
Others (pl.specify)										
Integrated Horticulture System										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
Integrated pest management	1	0	0	0	26	4	30	26	4	30
d) Plantation crops										
Production and Management technology	4	15	0	15	117	13	130	132	13	145
Processing and value addition	3	20	5	25	97	16	113	117	21	138
Others (pl.specify)										
Strategies for management of physiological disorders in coconut palms	1	0	0	0	35	0	35	35	0	35
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 in Ashwagandha crop										
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management	1	26	3	49	7	0	7	33	3	56
Integrated water	1	26	3	29	8	0	8	34	3	37

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
management										
Integrated nutrient management										
Production and use of organic inputs	1	54	0	147	0	0	0	54	0	147
Management of Problematic soils	1	62	0	62	0	0	0	62	0	62
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	1	15	1	16	0	0	0	15	1	16
Animal Disease Management	1	0	18	18	0	0	0	0	18	18
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	2	0	38	128	0	14	14	0	52	142
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet	2	10	29	39	7	10	17	17	39	56
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	4	0	141	143	0	35	35	0	176	178
Women empowerment	2	0	49	79	0	11	11	0	60	90
Location specific drudgery production										
Rural Crafts										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Women and child care										
Others (pl.specify)										
EDP for women	1	0	22	62	2	5	7	2	27	69
Personal hygeiene, nutrition & pipe composting	1	0	5	5	0	28	28	0	33	33
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems	3	27	44	45	8	11	19	35	55	64
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements	2	58	0	58	9	0	9	67	0	67
Small scale processing and value addition	1	43	13	56	5	8	13	48	21	69
Others (pl.specify)										
Mechanisation in straw management										
Energy efficient pumps and water conservation										
Plant Protection										
Integrated Pest Management	1	0	0	0	33	7	40	33	7	40
Integrated Disease Management	1	17	0	17	4	0	4	21	0	21
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (pl.specify)										
Fisheries										
Integrated fish farming	1	0	0	0	95	0	95	95	0	95
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										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production										
Apiculture										
Others (pl.specify)										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics	1	20	4	24	4	0	4	24	4	28
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl. specify)										
Farmers' Producer Organisation										
Agro-forestry										
Production technologies	1	40	34	74	14	12	26	54	46	100
Nursery management										
Integrated Farming Systems	1	0	0	0	25	15	40	25	15	40
Others (Pl. specify)										
TOTAL	**65**	**990**	**638**	**1877**	**683**	**201**	**884**	**1673**	**839**	**2761**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management										
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs										
Others (pl.specify)										
Natural farming	1	20	0	20	8	0	8	28	0	28
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop										
Off-season vegetables	2	23	3	26	29	0	29	52	3	55
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl.specify)										
Advances in horticulture crops	1	12	0	12	15	0	15	27	0	27
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										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Others (pl.specify)										
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	5	0	5	20	0	20	25	0	25
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	4	284	82	366	56	31	87	340	113	453
Integrated water management	1	21	0	21	1	0	1	22	0	22
Integrated nutrient management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
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	4	20	47	67	3	23	26	23	70	93
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing	4	32	55	87	8	37	45	40	92	132
Processing and cooking	4	14	41	55	6	28	34	20	69	89
Gender mainstreaming through SHGs										
Storage loss minimization techniques	2	24	20	44	7	4	11	31	24	55
Value addition	3	42	107	149	8	24	32	50	131	181
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
EDP for women	1	2	22	24	0	11	11	2	33	35
Agril. Engineering										
Farm machinery and its maintenance	3	50	0	50	16	0	16	66	0	66
Installation and maintenance of micro irrigation systems	2	34	8	42	7	3	10	41	11	52
Use of Plastics in farming practices										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Production of small tools and implements	2	38	5	43	4	2	6	42	7	49
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology	1	0	20	20	0	3	3	0	23	23
Others (pl.specify)										
Operation of solar nipping machine										
Conservation in agriculture practices										
Plant Protection										
Integrated Pest Management										
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (pl.specify)										
Integrated pest and disease management										
Organic farming										
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										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production										
Apiculture										
Others (pl.specify)										
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	**34**	**621**	**410**	**1031**	**188**	**166**	**354**	**809**	**576**	**1385**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching	2	12	30	42	2	1	3	14	31	45
Rural Crafts										
Production of quality animal products										
Dairying	6	66	14	80	24	11	35	90	25	115
Sheep and goat rearing	10	120	56	176	48	12	60	168	68	236
Quail farming										
Piggery										
Rabbit farming										
Poultry production	1	5	5	10	2	3	5	7	8	15
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)										
Entrepreneurship development in Horticulture	1	0	0	0	25	0	25	25	0	25
TOTAL	**20**	**203**	**105**	**308**	**101**	**27**	**128**	**304**	**132**	**436**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
ICT in agriculture	1	10	20	30	3	2	5	13	22	35
TOTAL	**1**	**10**	**20**	**30**	**3**	**2**	**5**	**13**	**22**	**35**

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	2	74	36	110	0	0	0	74	36	110
Integrated Pest Management										
Integrated Nutrient management	1	37	0	37	3	0	3	40	0	40
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements	3	12	54	66	2	6	8	14	60	74
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	3	0	11	11	44	24	68	44	35	79
Livestock feed and fodder production	5	35	33	68	20	37	57	55	70	125
Household food security										
Any other (pl.specify)										
Value addition										
Health, nutrition and millet nutrition	2	3	66	69	2	9	11	5	75	80
Soil testing	1	33	3	36	4	0	4	37	3	40
Agro ecology and its importance - Krishi Sakhi	5	0	170	170	0	25	25	0	195	195
Recent technologies in soil fertility management	1	37	0	37	0	6	6	37	6	43
Natural farming	4	0	111	111	0	17	17	0	128	128
Total	**27**	**231**	**484**	**715**	**75**	**124**	**199**	**306**	**608**	**914**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Good food & nutrition garden										
Any other (pl.specify)										
Production technology on Onion and Chilli	1	52	3	55	12	0	12	64	3	67
Total	**1**	**52**	**3**	**55**	**12**	**0**	**12**	**64**	**3**	**67**

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	2	6	44	50	0	0	0	6	44	50
1.b.	Commercial production of vegetables										
2	**Production and value addition**										
2.a.	Fruit Plants										
2.b.	Ornamental plants										
2.c.	Spices crops										
3.	**Soil health and fertility management**	2	116	0	116	0	0	0	116	0	116
4	**Production of Inputs at site**										
5	**Methods of protective cultivation**										
6	**Others (pl.specify)**										
	Soil and water conservation										
7	**Post harvest technology and value addition**										
7.a.	Processing and value addition	1	0	23	23	0	7	7	0	30	30
7.b.	Others (pl.specify)										
	Storage loss minimization techniques										
8	**Farm machinery**										
8.a.	Farm machinery, tools and implements	11	124	139	263	43	18	61	167	157	324
8.b.	Others (pl.specify)										
9.	**Livestock and fisheries**										
10	**Livestock production and management**										
10.a.	Animal Nutrition Management										
10.b.	Animal Disease Management	1	0	18	18	0	7	7	0	25	25
10.c	Fisheries Nutrition										
10.d	Fisheries Management										
10.e.	Others (pl.specify)										
	Scientific dairy management	4	48	10	58	16	11	27	64	21	85
	Poultry management	1	5	5	10	2	3	5	7	8	15
	Scientific management of sheep & goat	7	97	47	144	36	8	44	133	55	188
	Management in farm animals	4	30	12	42	64	23	87	94	35	129
	Sceintific management of domestic animals for Pashu Sakhis	5	35	44	79	0	46	46	35	90	125
11.	**Home Science**										
11.a.	Household nutritional security	1	0	32	32	0	8	8	0	40	40
11.b.	Economic empowerment of women	3	0	71	71	2	16	18	2	87	89

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.c.	Drudgery reduction of women										
11.d.	Others (pl.specify)										
	Personal hygiene, nutrition & pipe composting	1	0	5	5	0	28	28	0	33	33
	Health and Nutrition	4	0	141	141	0	34	34	0	175	175
	Tailoring & stitching	2	3	45	48	0	6	6	3	51	54
	Women and child care										
	Value addition	5	25	143	168	4	40	44	29	183	212
	Millet nutrition	1	24	35	59	8	9	17	32	44	76
12	**Agricultural Extension**										
12.a.	Capacity Building and Group Dynamics	2	0	58	58	0	30	30	0	88	88
12.b.	Others (pl.specify)										
	Installation & maintenance of MIS	3	33	43	76	4	11	15	37	54	91
	Organic farming practice										
	Natural farming	4	0	111	111	0	17	17	0	128	128
	Agro ecology and its importance - Krishi Sakhi	5	0	170	170	0	25	25	0	195	195
	Entrepreneurship developmen in Horticulture	1	0	0	0	25	0	25	25	0	25
	Certificate Course in Integrated Nutrient Management	1	37	0	37	3	0	3	40	0	40
	Total	**71**	**583**	**1196**	**1779**	**207**	**347**	**554**	**790**	**1543**	**2333**

Details of sponsoring agencies involved

i) Dept of Animal Husbandry and Veterinary Sciences
ii) MANAGE
iii) NAARM
iv) ATMA
v) KREDL
vi) SBI-ASF RSETI, Hulkoti
vii) SCSP
viii) SKDRDP
ix) Department of Health and Family Welfare
x) Zilla Panchayat, Gadag
xi) CADA
xii) KSRLPS

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

Sl. No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Commercial floriculture										
1.b.	Commercial fruit production	1	0	0	0	25	0	25	25	0	25
1.c.	Commercial vegetable production										
1.d.	Integrated crop management										
1.e.	Organic farming										

Sl. No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1.f.	Others (pl.specify)										
2	**Post harvest technology and value addition**										
2.a.	Value addition										
2.b.	Others (pl.specify)										
3.	**Livestock and fisheries**										
3.a.	Dairy farming	3	22	7	29	12	9	21	34	16	50
3.b.	Composite fish culture										
3.c.	Sheep and goat rearing	7	83	51	134	43	12	55	126	63	189
3.d.	Piggery										
3.e.	Poultry farming	1	50	5	55	2	3	5	52	8	60
3.f.	Others (pl.specify)										
4.	**Income generation activities**										
4.a.	Vermi-composting										
4.b.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.										
4.c.	Repair and maintenance of farm machinery and implements										
4.d.	Rural Crafts										
4.e.	Seed production										
4.f.	Sericulture										
4.g.	Mushroom cultivation										
4.h.	Nursery, grafting etc.										
4.i.	Tailoring, stitching, embroidery, dying etc.	2	3	45	48	0	6	6	3	51	54
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	**14**	**158**	**108**	**266**	**82**	**30**	**112**	**240**	**138**	**378**

7.I. Details of Skill Training Programmes carried out by KVKs under ASCI : NIL

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

PART VIII – EXTENSION ACTIVITIES

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

Nature of Extension Programme	No. of Programmes	No. of Participants (General)			No. of Participants SC / ST			No.of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Field Day	12	333	124	457	102	35	137	25	21	46
Kisan Mela	1	100	50	150	18	12	30	0	4	4
Kisan Ghosthi	2	83	472	555	12	48	60	24	6	30
Exhibition	9	11351	7803	19154	900	873	1773	32	16	48
Film Show	24	408	345	753	120	154	274	10	8	18
Method Demonstrations	9	141	24	165	33	27	60	2	31	33
Farmers Seminar	5	322	195	517	146	54	200	16	11	27
Workshop	8	688	1414	2102	157	152	309	45	12	57
Group meetings	6	139	16	155	127	16	143	5	3	8
Lectures delivered as resource persons	9	216	160	376	33	22	55	57	28	85
Advisory Services	50	85	15	100	5	0	5	8	6	14
Scientific visit to farmers field	53	366	36	402	8	5	13	12	15	27
Farmers visit to KVK	146	181	82	263	12	8	20	50	13	63
Diagnostic visits	8	30	8	38	3	0	3	2	1	3
Exposure visits	2	47	3	50	0	0	0	0	0	0
Soil health Camp	4	124	30	154	82	10	92	2	0	2
Animal Health Camp	1	45	5	50	4	1	5	2	0	2
Soil test campaigns										
Celebration of important days (specify)										
International Women's Day	1	5	51	56	0	5	5	2	3	5
World food day	1	40	25	65	50	0	50	2	2	4
World soil day	1	68	60	128	10	12	22	6	4	10
Kisan Diwas	1	65	45	110	8	6	14	5	3	8
Mahila Kisan Diwas	1	0	75	75	0	25	25	3	4	7
World environment day	1	50	30	80	10	5	15	2	0	2
World water day	1	59	52	111	16	8	24	2	2	4
World milk day	1	32	15	47	4	2	6	0	2	2
Parthenium awareness programme	2	54	0	54	4	0	4	0	0	0
Special day celebrations										
Poshan vatika Maha Abhiyan & tree	1	11	16	27	6	4	10	3	2	5

Nature of Extension Programme	No. of Programmes	No. of Participants (General)			No. of Participants SC / ST			No.of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
plantation										
Viksit Bharat Sankalp Yatra	65	4200	2200	6400	0	0	0	35	30	65
Total	**425**	**19243**	**13351**	**32594**	**1870**	**1484**	**3354**	**352**	**227**	**579**

8.2 Other extension activities like print and electronic media etc.

Sl. No.	Type of media/activity	Number of activities/Number
1	Popular articles	4
2	Newspaper coverage	14
3	Extension Literature	5
4	Radio Talks	35
5	TV Talks	0
6	CD/DVD/Video clips	5
7	Animal health camps (no. of animal treated)	1 (45)
8	Others, please specify	
	Total	**64**

9.A. Production of seeds by the KVKs

Crop category	Name of the crop	Variety	Quantity of seed (qtl)	Value (Rs)	Number of farmers to whom provided
Cereals (crop wise)	Rabi Jowar	SPV-2217	2.85	27300	95
	Foxtailmillet	H-46	0.18	2700	6
		DHFt-109-1	0.30	4500	10
	Pearlmillet	VPMV-9	0.50	7500	10
Oilseeds	Safflower	ISF-764	1.4	14050	30
		A-2020	2.28	22850	15
		DASF-1	0.25	2550	9
Pulses	Bengalgram	JAKI-9218	8.90	88000	43
	Bengalgram	Phule Vikram	1.0	10000	5
	Bengalgram	NBEG-49	1.0	10000	5
	Bengalgram	DBGV-204	1.0	10000	5
	Greengram	DGGV-2	26.71	207580	179
	Redgram	TS-3R	1.20	18000	40
	Blackgram	LBG-791	4.76	71400	68
	Blackgram	DBGV-5	0.21	3003	3
Commercial crops					
Vegetables	Onion	Bhima super	0.29	26100	17
		Arka kalyan	0.47	42000	20
	Chilli	Byadgidabbi	0.10	35000	10
Flower crops					
Spices					
Fodder crop seeds	Sorghum Multi-cut	COFS-31	12.8 Kg	12288	1
	Fodder Cowpea		4.00 Kg	576	2
	Stylohaemata		1.7 Kg	876	1
	Styloscabra		1.2 Kg	576	2
	Lucerne		3.8 Kg	3436	3
	Subabul		2.8 Kg	1480	1
	Sesbenia grandiflora		1.30 Kg	1230	3
	Fodder Oats		89.0 Kg	11153	5
Fiber crops					
Forest Species					
Others (specify)	Ashwagandha		0.20	6000	5
Total			**54.766**	**640148**	**593**

9.B. Production of hybrid seeds by the KVKs: Nil

Crop category	Name of the crop	Hybrid	Quantity of seed (qtl)	Value (Rs)	Number of farmers to whom provided

9.C. Production of planting materials by the KVKs

Crop category	Name of the crop	Variety	Number	Value (Rs.)	Number of farmers to whom provided
Commercial					
Vegetable seedlings	Drumstick	Bhagya	65	2500	3
Fruits	Mango	Alphanso	120	18000	5
	Tamarind	PKM-1	80	12000	4
	Jamun	AJG-85	65	7500	4
	Guava	Lucknow-49	113	14700	6
	Custard apple	Balnagar	40	5040	2
	Lime	Balaji	85	13060	2
	Papaya	Red lady	65	2750	2
Ornamental plants					
Medicinal and Aromatic					
Plantation	Cashewnut	Vengurla-4	1780	15000	19
Spices	Curryleaf	Suhashini	73	3150	3
Tuber					
Fodder crop saplings	Guiniea grass		8555	15190	5
	Congo signal		4135	3852	4
	Rhodes grass		9830	9368	5
	Super Napier		4548	9096	3
Forest Species	Teak		400	18600	4
Others(specify)					
Total			**29954**	**149806**	**71**

9.D Production of planting materials by the KVKs

Crop category	Name of the crop	Name of the Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Vegetable seedlings	Chilli	Byadgidabbi	5000	5000	1

9.E. Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	Number of farmers to whom provided
Bio Fertilizers	Vermiwash	250 lit	10000	30
	Vermicompost	150Qtl	60000	45
	Rhizobium	74. 0 kg	8010	93
	PSB	91.0 kg	10475	91
	Azospirillum	17.0 kg	1925	35
Bio-pesticide			0	
Bio-fungicide	Trichoderma	24.0 kg	4800	50
Bio Agents	Earthworms	27.5 kg	8250	18
Others (specify)	Azolla	4.0 Kg	400	6
Total		**15488**	**103860**	**362**

9.F. Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
Dairy animals				
Cows	Jersey & HF	02	40000	2
Buffaloes	Surti cross	01	25000	1
Calves				
Others (Pl. specify) Buck	Jamunapari	01	30000	1
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		**04**	**95000**	**4**

PART X – PUBLICATION, SUCCESS STORY, INNOVATIVE MTHODOLOGY, ITK, TECHNOLOGY WEEK

10. A. Literature Published

(i) Summary of published

Item	Number
Research papers- International	0
Research papers- National	1
Technical reports	0
Technical bulletins	4
Popular articles - English	0
Popular articles – Local language	4
Extension literature	5
Others (Pl. specify) – Abstracts	3
TOTAL	**9**

(ii) Details of Literature published (Provide details only on Research articles and Technical Reports)

Please provide the details of above publication in the following format:

1. Research articles in journals:

Sudha V Mankani, Vinayaka H Niranjan, N.H.Bhandi and Hemavati R Hiregoudar (2024) PerformanceEvaluation of Solar Dryers for Drying of Red Chilli (Capsicum annuum). *Environment and Ecology* (Accepted for publication)

2.Technical Reports/ bulletins: Authors name, Title of the technical report, name of publishing KVK, number of pages.

KVK Scientists, (April-June, 2023) Krishi Vigyan Patrike, Volume-12, Issue-1, ICAR-K.H.Patil Krishi Vigyan Kendra, Hulkoti, 10p.

KVK Scientists, (July-September, 2023) Krishi Vigyan Patrike, Volume-12, Issue-3, ICAR-K.H.Patil Krishi Vigyan Kendra, Hulkoti, 8p.

KVK Scientists, (October-December, 2023) Krishi Vigyan Patrike, Volume-12, Issue-4, ICAR-K.H.Patil Krishi Vigyan Kendra, Hulkoti, 13p.

KVK Scientists, (January-March, 2024) Krishi Vigyan Patrike, Volume-13, Issue-1, ICAR-K.H.Patil Krishi Vigyan Kendra, Hulkoti, 9p.

10.B. Details of Electronic Media Produced

Sl. No.	Type of media	Title	Details
1	CD / DVD	Sahakar Radio Gadag (Community Radio Station of KVK)	About Sahakar Radio Gadag. Type of programmes broadcasted through Radio.
		Improved Agronomic Practices	Lecture on Improved Agronomic Practices for higher productivity in Greengram
		Exhibition on Natural Farming, Agri. Technologies & Agri. Equipments	About exhibition on Natural Farming, Agri. Technologies & Agri. Equipments at Shri Kailash Ashram, Hulkoti
		Successful women entrepreneur - Smt. Mangala Kiran Neelgund, Mulagund- ICAR KVK, Gadag	About the success story of a women entrepreneur of Mulgund village in Gadag block of Gadag district
		Integrated Farming under Organic System - Success story	About the success story of a farmer who adopted organic farming under

Sl. No.	Type of media	Title	Details
		of a farmer	integrated farming
2	Mobile Apps	-	-
3	Social media groups with KVK as Admin	WhatsApp – • KVK, HULKOTI, GADAG group • Cashew Growers group • Mango Growers group • GADAG FPOs • Nutri-Garden farmers • Dairy entrepreneurs : KVK • Chilli growers	2976 members
4	Facebook account name	KhpKvkHulkoti	538 followers
5	Instagram account name	KVKGadag	104 followers
6	Twitter Account	ICAR-KVK Gadag	71 followers
7	Youtube Account	K.H.Patil Krishi Vigyan Kendra Hulkoti	4770 subscribers

10.C. Success Stories / Case studies

i) Doubling the Income of BlackgramFarmer :

Shri Mruthunjaya S. Malimath of Akkigunda village in Shirahatti block is one of the young farmer who participated in CFLD-Blackgramprogramme under NFSM Project of KVK during 2022-23. He was very enthusiastic to adopt improved technologies to address productivity constraints in Blackgram. He used to cultivate Local Blackgram variety. Incidence of wilt, thrips and powdery mildew were the major problems that affected the yield to the extent of 40-45 percent. Apart from this, there was also knowledge gap in management of pod borer and nutrient application. Demonstration was laid out in his farm under the supervision of KVK Scientists. Details of technologies demonstrated were use of high yielding and wilt tolerant variety (DBGV-5), seed treatment with trichoderma and bio-fertilizers. Local check was also laid out adjacent to the demonstrated plot. Shri Mruthunjaya adopted all the suggested technologies related to sowing method, seed rate, nutrition, intercultivation and management of pod borer. KVK Scientists periodically visited his plot and gave him timely suggestions. As a result of this, a very good crop was raised and all the farmers in the village visited this plot and learnt about the technologies adopted. The performance of demonstrated plot against local check is given below.

Performance of technologies in demonstration						
Yield (Q/ha)			**Net returns (Rs./ha)**			**Yield gap (q/ha) over check**
Demo	**Check**	**% increase**	**Demo**	**Check**	**% increase**	2.91
9.24	6.33	45.97	33288	17996	84.97	

Thus farmer could get 45.97 per cent increased yield and 84.97 per cent increased net income. His net income was almost doubled. Potential yield of the variety was achieved. This yield was 3 times the yield of State and District average.

KVK Scientist interacting with Blackgram farmers

Field day organised on farmers' field

ii) <u>Intercropping System for Enhancing Farmers Income :</u>

Shri Heggappa N. Gudami of Singatarayankeri village in Mundaragi block is one of the farmers who participated under NICRA project of KVK during 2022-23. He adopted Maize+Redgram, a new technology to address the productivity constraints in Maize. He used to cultivate Maize as a sole crop, but due to moisture stress, incidence of fall army worm and turciccum leaf blight, the yield of Maize was very low and net returns was also less. Hence, through KVK guidance he adopted Maize+Redgram intercropping system in Kharif, 2022 and followed ICM practices as advised by KVK Scientists like medium duration TS-3R variety of Redgram crop, seed treatment with bio-fertilizers, trichoderma, nipping, foliar spray of pulse magic etc. The farmer managed fall army worm and turciccum leaf blight in Maize. As a result of this, bumper crop was raised in intercropping system as compared to sole crop of Maize.

The neighboring farmers visited the demonstration plot and learnt about the different technologies adopted in his field. The results of the demonstration plot against local check is given below.

Performance of technologies						
Yield (Q/ha)			**Net returns (Rs./ha)**			**Yield gap (q/ha) over check**
Demo	**Check (Maize as sole crop)**	**% increase**	**Demo**	**Check**	**% increase**	
CEY of Maize:67.50 Maize : 49.50 Redgram: 7.50	54.75	23.28	90375	69750	29.56	CEY of Maize: 12.75

The farmer could get 23.28 percent increase in yield and 29.56 percent increase in net returns as compared to local. Hence, this intercropping system helped the farmer to gain more income.

iii) High Density Planting in Cashew- A Novel Approach for Doubling Farmers Income:

Mr. Basavaraj Halli is native to Shagoti village of Gadag block in Gadag District. He used to cultivate spreading groundnut crop in his 3 acres of land. Due to frequent occurrence of drought coupled with high cost of cultivation, he could not get sustainable income from groundnut cultivation. The red soil with poor moisture holding capacity restricted him to take up only one crop in a year during *kharif* season. Mr.Halli has decided to plant Cashew crop in his 3 acres of land during 2017. Grafts were supplied by Directorate of Cashewnut and Cocoa Development, Cochin with 3 years of financial assistance under Cashew Promotion Scheme. With the guidance of KVK, Gadag, he has planted 480 grafts of cashew at 5m × 5m (HDP) spacing. Latest technologies in soil and water conservation, pruning and training of plants, Drip irrigation system and fertigation techniques for efficient utilization of water and nutrients, timely Integrated Pest and Disease Management (IPDM) were practiced by him under KVK guidance. As a result, Yield of raw cashew doubled every year and in 2022, he harvested 14.50 quintals of raw nut. He has undertaken Banana as intercrop in cashew for initial 3 years under protective irrigation and earned Rs.1.50 lakhs from Banana crop. Income of the farmer has increased by 410 % since he has taken up cashew planting. More than 600 farmers from various districts of Karnataka visited his cashew orchard. The farmer got Best Cashew Farmer Award in Cashew cultivation on 30-01-2023 by Directorate of Cashew and Cocoa Development Board, Cochin during National Conference of Cashew at Bhubaneshwar, Odisha.

iv) Successful Dairy Unit of a Youth

Every unemployed youth should learn from Mr. Sharanappa S. Nagavimath of Kurtakoti village in Gadag taluk. MrSharanappa, who studied upto Diploma is a successful dairy entrepreneur. He has an ancestral land of 5 acres. He used to cultivate field crops viz., Bengalgram, Jowar, Sunflower etc. Due to frequent occurrence of agricultural drought, income from the agriculture was not sufficient to meet his family needs. He thought of starting the dairy unit for getting additional income. But the main issue for him was guidance and support.

During 2020-21, he participated in the dairy training organised by SBI-ASF-RSETI, Hulkoti in collaboration with KVK Hulkoti. He discussed with the experts about his dream project of dairy. KVK provided him the necessary guidance and support. Mr. Sharanappa spent Rs.3.5 lakhs for construction of dairy shed. Initially he purchased 1 she Buffaloe from Gadag Animal Market. After 2

months, he again purchased 2 she Buffaloes, later after 6 months he bought 5 Buffaloes. Totally He has purchased 8 she buffaloes including heifer in a span of 1 year period and was getting sustainable income from milk production of 7 liters / day / buffaloe.

Among 8 she buffaloes only 6 were milking and daily milk collection was 40-42 litres. He sells the milk in the Kurtakoti village. He says that, he gets price of Rs.40 per litre for Buffalo milk. Monthly he spends Rs.15,000 towards purchase of animal feed and for transportation of milk from his dairy farm to village. He says that he gets gross income of Rs.42,000/- from sale of milk per month and his net monthly income is around Rs.27,000/-.

This is one of the good example of how a youth plunged into dairy enterprise in drought prone area succeeded by utilising existing resources. When asked about his future plan, he says that he would extend the unit to 20 animals in next two years.

v) SHAPING THE LIFE WITH LAADU – A success story of Women Entrepreneur

Smt. Shilpa Angadi, aged 40 years is a resident of Hulkoti village of Gadag district. She had 3 kids and husband is working in private sector on contract basis. The income they got was not sufficient to run the family. Many a times she faced difficulty in paying the school fees. Then she started the Ethnic Sweet called GulladakiLaadu preparation. The GullakadiLaadu is North Karnataka Ethnic Sweet prepared from Jawar Wheat. The preparation of GullakadiLaadu is tedious and requires more time and labour.

Registration Certificate
Government of Karnataka
Food Safety and Standards Authority of India
Registration Certificate under FSS Act, 2006

Smt. Shilpa used to sell the produce without food licensing and she came in contact with KVK in 2022 and got the information on FSSAI License. Then, KVK identified her as entrepreneur and enrolled for the EDP Programme. She attended training at KVK on packaging, labelling and licensing of food products. She owns dough pounding machine and a wet grinder to grind the Wheat. The mixing of gluten with fine sooji is very tedious, requires more time and there is lot of drudgery and pain to the hands and fingers. She expressed this with KVK Scientists. Then KVK facilitated her in purchase of dough mixing machine as well as in obtaining FSSAI Licensing, labelling which was lacking in her business.

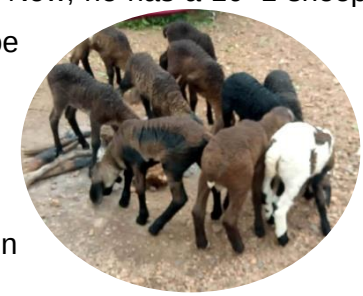
With the facilitation of KVK, she started selling GullakadiLaadu, in the brand name of Basaveshwara Food Products with FSSAI Registration No.: 30230803114063368. Her products were preferred by consumers because of taste, quality and texture. On an average, monthly she use 2 to 3 quintals of local wheat to make GullakadiLaadu. With the support of her husband and children monthly she prepares 2.5 quintals of GullakadiLaadu and sell the produce @ Rs.700/kg. The milk got after grinding Wheat is utilized in making Wheat Bari and sold @ Rs.300/kg. In addition to GullakadiLaadu, based on the demand of customers she prepares, Groundnut and Sesamum Holigae, Chutney powders etc. She markets her products through off-shooting marketing, local shops and send through courier to various cities like Bengaluru, Mysore etc. KVK also facilitated in marketing her products through KVK Sales Counter established at KVK's Millet Cafe on the NH-63. On an average, she earns a monthly income of Rs.30000 to Rs.40000. Her husband and children also cooperate in the preparation of the GullakadiLaadu. Thus the KVK support in FSSAI Licensing and procurement of dough mixing machine helped her to prepare Laadu without much difficulty. She always remembers the support of KVK in making her as Entrepreneur.

vi) A SUCCESS STORY OF FARMER WHO REARS NARISUVARNA BREED OF RAM

Shri Jinjappa Ningappa Guravin is resident of Shingatarayanakeri village of Mundaragi block is one of the successful sheep farmer and managing the small enterprise with sheep rearing in dryland area since 2015-16. He was rearing a flock of 10 non-descriptive local sheep. Due to lack of knowledge in management practices of sheep, he faced lot of mortality of sheep. During 2018, his sheep population reduced to only four. This has put him in distress as he did not have alternative livelihood option.

During this period, Shri Guravin came in contact with KVK, Gadag as the village was adopted under National Innovation and Climate Resilient Agriculture (NICRA) Project. KVK trained Shri Guravin on Scientific Management of sheep with major focus on balanced nutrition, deworming, vaccination and disease management.

During 2020-21, he was given Narisuvarna breed of sheep by KVK. Now, he has a 10+1 sheep unit. During subsequent year, the doe gave birth to 10 male and 20 female lambs. Interestingly, 3 doe gave birth to twins which totals to 6 lambs. Now, the sheep population has increased to 40.



He has sold 10 male lambs at the cost of Rs.6000/- per lamb to other sheep farmers in the region and earned an income of Rs.60,000/-. In the subsequent years, his sheep unit size increased to 23 sheep(22+1).

Because of KVK's continuous technical support, he is able to achieve good income. He says that, upgraded (Narisuvarna) one year old sheep has body weight of 40 to 50 kgs as against 30-35 kgs in local breed. Further, he says that he is providing upgradation services to other sheep units at free of cost. Due to this intervention, the upgraded sheep population is increasing in Shingatarayanakeri village as well as in the neighboring villages and taluks. Now Mr.Guravin has a unit size of 11 upgraded lambs. He aims to increase the unit size to 50 by 2025. He owes the credit to KVK's NICRA Project for improving his livelihood status.

vii) Droughtmitigation with New Variety (HN-46) of Foxtail Millet Crop:

Shri Mohammad Ali Nadaf of Kalakeri village in Naragund block is one of the progressive farmers participated in FLD-Foxtail Millet programme during 2023-24. He is very enthusiastic to adopt improved technologies to address productivity constraints in field crops. He used to cultivate Greengram and Maize during Kharif season. But due to scanty rainfall and increased moisture stress during 2023-24, he couldn't take up Greengram crop.

KVK, Scientists suggested him to take up foxtail millet which can give good yield and can be used as contingent crop in drought conditions. Demonstration of high yielding HN-46 variety of Foxtail Millet was laid out under the supervision of KVK Scientists in 0.4 ha area in Shri Nadaf's field. Apart from this, there was also knowledge gap in management of nutrient in foxtail millet. Local variety of Foxtail Millet was also raised in the adjacent plot. Shri Mohammad Ali Nadaf adopted all the suggested technologies related to sowing

method, seed rate, nutrition, intercultivation and management of pests. KVK Scientists periodically visited his plot and given him timely suggestions. As a result of this, good crop was raised and all the farmers in the village visited the plot and learnt about the demonstrated new Foxtail Millet variety (HN 46) and ICM practices adopted. The performance of demonstrated plot against local check is given below.

Performance of technologies in demonstration						
Yield (Q/ha)			Net returns (Rs./ha)			Yield gap (q/ha) over check
Demo	Check	% increase	Demo	Check	% increase	3.75
15.75	12	31.25	32950	22400	47.09 %	

The farmer could get 31.25 per cent increased yield and 47.09 per cent increased net income. The yield achieved by the farmer was near to potential yield of the variety. This yield was 2 times the yield of District average. In addition to this, he used local chakki service and performed primary processing *viz*., cleaning and dehulling of foxtail millet by which the price increased by Rs. 2000/qtl. The farmer has chosen open market for sale of processed produce and got better price.

KVK Scientist interacting with Foxtail millet farmers

Field day organisedin farmers' field

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

I) TECHNOLOGY TRANSFER THROUGH COMMUNITY RADIO STATION

In order to disseminate the technologies to the farming community in an effective manner, Community Radio Station (FM 89.6) has been started at KVK, Gadag. This radio station covers all the blocks of Gadag District covering a radius of 60 km around KVK. An android app has also been developed which can be installed in smart phones and the programmes can be listened from any part of the world. Number of radio talks related to crop production technologies, animal husbandry, soil and water conservation, entrepreneurship development in agriculture, dryland horticulture and

agricultural mechanization were given by the scientists. Apart from this, daily weather forecast is also being broadcasted every day which helps farmers to take decisions in various field operations.

List of radio talks broadcasted are given below

1. Nano Urea: Importance and Uses
2. Integrated Crop Management practices in different kharif crops for higher productivity
3. Improved practices in Chickpea cultivation
4. Integrated Crop Management in Bt. Cotton cultivation
5. Integrated Crop Management in Rabi Sorghum cultivation
6. Natural Farming Practices
7. Importance of Soil in Agriculture
8. Cultivation of Cashew in Dryland Horticulture
9. Cultivation of Mango in Dryland Horticulture
10. Entrepreneurship in Food Processing Sector
11. Use of Renewable Energy Sources in Agriculture
12. Drone Sprayer and its Utility
13. Malnutrition and Importance of Balanced Diet
14. Agri Nutri Garden
15. Disease Management in Dairy Animals
16. Scientific Dairy Farming
17. Resources for Poultry Farming
18. Rain Water Harvesting Practices
19. Kisan Sarathi
20. Use of ICT in agriculture
21. Calf a year
22. Animal reproduction and its importance
23. Importance of Artificial Insemination and causes of reproductive diseases
24. Animal Husbandry in Organic Farming
25. Lumpy Skin Disease
26. Animal based Integrated Farming System
27. Foot and Mouth Disease
28. Azolla Production

II) TRANSFER OF TECHNOLOGY THROUGH VIRTUAL MODE

Farmersface various problems in crop cultivation.It is very difficult to reach the farmers physically to address their problems with limited human resource in the KVK. Hence, interactive audio conference (Group calling), video conference and online trainings were conducted to disseminate the technologies and to provide timely suggestions with respect to production of different crops to farmers of various villages in the district. KVK has also formed WhatsApp groups of different crop growers and timely messages are being sent to these groups.

Video conferences, You Tube Live streaming and Audio conferences were also held for various crops. Thus, the TOT through virtual mode is enabling KVK scientists to reach more number of farmers.

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

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK	Scientific Rationale
1	Crops	To reduce the infestation of weed i.e Cyprus rotundus, the farmers practice weekly harrowing throughout the end of rainy season i.e from April to October. Then they will take up Rabi Sorghum crop.	Every week harrowing with blade goes on cutting the fresh sprouting meristems of the weed Cyprus rotundus. This weekly cutting results in exhausting of the nutrients present in the bulbs of weeds and no chance for photosynthesis by leaves. Hence, the roots get deprived of the fresh photosynthates on one hand and on other the stored energy gets lost due to growth of fresh meristems every week, but they get cut off with harrowing blade. Thus, the weed has no chance of re-growth when weekly harrowing is done regularly from April to October.	The weekly cutting results in exhausting of the nutrients present in the bulbs of weeds and no chance for photosynthesis by leaves. Hence, the roots get deprived of the fresh photosynthates on one hand and on other the stored energy gets lost due to growth of fresh meristems every week, but they get cut off with harrowing blade. Thus, the weed has no chance of re-growth when weekly harrowing is done regularly from April to October
2	Livestock	Turmeric powder mixed in ghee, heated and applied	For the healing of wound	Turmeric has got anti microbial properties.
3	Livestock	Washing of hoves of animals with lime water	For the treatment of foot and mouth disease	Lime has antiseptic property. It kills germs and healing is fast.
4	Livestock	Zeera & Garlic are boiled in water and is fed	For the treatment of fever	Act as anti cold& fever.
5	Livestock	• Tobacco shoot with Kerosine oil paste is made and applied • Leaves of neem or neem oil	For the treatment of ecto parasite infestation	Tobacco contain nicotine that kills ecto parasite. Neem has got ectoparasiticadal properties.
6	Livestock	Feeding of Brinjal 1 Kg/day for 10 days to dairy animal	Reduced high temperature stress leads the dairy animals	Potassium content is more in Brinjal. So

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK	Scientific Rationale
			come into heat	Potassium helps to reduce high temperature stress.
7	Livestock	Feeding of handful of curry leaves to dairy animals / day for 10 days after AI done.	Increased percentage of conception rate	They are rich in Proteins, Phosphorus, Calcium, Iron, Folic acid, Vitamins like A,B,C & E and these help in higher percentage of conception.

10 F. Technology Week celebration:

Period of observing Technology Week: **From 23-01-2024 to 28-01-2024**

Total number of farmers visited :**9500**

Total number of agencies involved :**1**

Number of demonstrations visited by the farmers within KVK campus :**6**

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Lectures organized	4	183	Lectures organized on crop & dairy technologies
Exhibition	1	9500	Both crop and livestock technologies
Film show	1	40	Nutri Garden
Fair			
Farm Visit	3	152	Rabi crops, Livestock, Agricultural Machineries
Diagnostic Practicals	3	87	Method demonstration on use of Phermone traps, spray of Pulse Magic & solar operated sprayer
Supply of Literature (No.)	8	6400	Crop technology& others
Supply of Seed (q)	0	-	-
Supply of Planting materials (No.)	-	-	-
Bio Product supply (Kg)	200	100	Pulse magic
Bio Fertilizers (q)	-	-	-
Supply of fingerlings	-	-	-
Supply of Livestock specimen (No.)	-	-	-
Total number of farmers visited the technology week		**9500**	

10 E. Recognition and Awards:

1) Best Exhibition Stall Award at International Conferenceon evolving extension science towards secondary agriculture for sustainable development

2) Best Poster Presentation Award at National Conference on Millets held at NIASM, Baramti

3) National Level Best Cashew Farmer Award to Mr. Basavaraj Halli by DCCD, Cochin

4) Millionnaire Farmer Award to Mrs. Managala Kiran Neelagund by ICAR and Krishi Jagaran

5) District Level Best Farmer Award to Mr. Ashok Halakeri by UAS, Dharwad

PART XI – SOIL AND WATER TEST

11.1 Activities of Soil and Water Testing Laboratory

A. Status of establishment of Lab : 2005-06

1. Year of establishment : 01.07.2005
2. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost	Status
	A) Non-recurring contingency			
1	Spectrophotmeter	1	0.60	
2	Flame photometer	1	0.50	
3	pH meter	1	0.10	
4	Conductivity bridge	1	0.10	
5	Physical balance	1	0.10	
6	Chemical balance	1	1.00	
7	Water distillation still	1	1.00	
8	Orbital shaker	2	0.60	
9	Shaker	2	0.50	
10	Refrigerator	1	0.20	
11	Oven with optional attachments	1	0.15	
12	Hot plate with all models	1	0.25	
13	Grinder with motor	1	0.30	
14	Laboratory set up (all basic facilities)		3.20	
15	PUSHA STFR meter Kit	1	0.75	
16	MRIDAPARIKSHA	1	0.903	
	Total (A)		**10.253**	
	B) Recurring contingency			
1	Chemical &glasswares		3.50	
2	Miscellaneous items		0.20	
3	Soil and plant sample processing and storage facility		0.50	
	Total (B)		**4.20**	
	Grand Total (A+B)		**14.453**	

B. 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	11606	25998	409	
Water Samples	5831	5670	"	
Plant samples	126	126	"	
Manure samples	-	-	-	
Others (specify)	-	-	-	
Total	**17563**	**31794**	**409**	

C. Details of samples analyzed : 2023-24

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	694	664	154	
Water Samples	265	250	Same village	
Plant samples				
Manure samples				
Others (specify)				
Total	**959**	**914**	**154**	

11.2 Mobile Soil Testing Kit:

A. Date of purchase and current status

Mobile Kits	Date of purchase	Current status
1. PUSA SFTR meter kit	22-02-2016	Working
1. MRIDA PARIKSHAK	31-03-2017	Not Working (Under repair)

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

	During 2022	During 2023	Cumulative progress (Total)
Samples analyzed (No.)	253	215	2028
Farmers benefited (No.)	654	578	5866
Villages covered (No.)	5	34	39

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

Particulars	Date (s)	Villages (No.)	Farmers (No.)	Samples analyzed (No.)	Soil health cards issued (No.)
SWTL	1sApril, 2023 to 31stMarch, 2024	154	458	479	1193
Mobile Soil Testing Kit	1sApril, 2023 to 31stMarch, 2024	11	206	215	578

11.4 World Soil Health Day celebration

Sl. No.	Farmers participated (No.)	Soil health cards issued (No.)	VIPs (MP/ Minister/MLA attended (No.)	Other Public Representatives participated	Officials participated (No.)	Media coverage (No.)
1	127	86	-	2	11	2

PART XII. IMPACT

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

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Nipping in Bengalgram	160	50	Rs.22,500/ha	Rs.29,800/ha
Feeding of Silage Fodder to CB Cows	130	24	Rs.15,066/ lactation/cow	Rs.19,576/ lactation/cow
Mango special (micronutrient mixture) application	86	80	Rs.80,000/ha	Rs.1,20,000/ha
Introduction of Arka Prasanna improved variety in Ridegourd crop	37	55	Rs.83,000/ha	Rs.1,25,000/ha
Azolla as animal feed	150	35	Rs.9300/cow /lactation	Rs.13287/cow / lactation
Use of ISF-764 variety of Safflower along with ICM Practices	154	80	Rs.25,000/ha	Rs.35,000/ha
Use of Arka Vegetable special for micronutrient management in vegetables	60	55	Rs.67,000/ ha	Rs.79,000/- ha
Use of Chickpea Magic for foliar spray in Bengalgram	1000	90	Rs.75,000/ha	Rs.93750/ha
Use of DGGV-2 variety of Greengram along with ICM Practices	533	40	Rs.58900/ha	Rs.77500/ha
Fruit fly traps for management of Mango and Guava fruit fly	25	50	Ra.80,000/ha	Rs.100000/ha

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

i) Large scale adoption of JAKI-9218 variety of Bengalgram crop:

Bengalgram is the important Pulse crop of Gadag district, mainly cultivated under rainfed situation. It is being grown in an area of 75,000 ha. The productivity of the crop was very less due to decreasing yield potential of Annigeri-1 and JG-11 varieties cultivated by the farmers. From 2014-15 onwards, KVK started promoting JAKI-9218, a high yielding variety. Integrated Crop Management practices were also demonstrated along with JAKI-9218

variety. From 2014-15 to 2022-23, KVK organised Front Line Demonstrations in 402 hectares of area covering 665 farmers and farm women. The demonstrations were organised under KVK's FLD programme as well as Cluster Front Line Demonstration under NFSM programme. The demonstrations have been very successful as there was 20-25 percent increase in yield.

Nine years of demonstration programme has produced 4700 quintals of seed material which FLD farmers supplied to other farmers. Apart from this, KVK produced 116 quintals of JAKI-9218 variety and supplied to farmers.

There was heavy demand for the seed and KSSC took up seed production and supplied more than 10800 quintals of seeds during last four year period. Thus, JAKI-9218 variety is spread in nearly 70 percent of total area cultivated in Gadag district.

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

I. IMPACT ANALYSIS OF SPV-2217 VARIETY OF RABI SORGHUM ALONG WITH ICM PRACTICES

INTRODUCTION

Rabi Sorghum is an important cereal crop cultivated predominantly under rainfed situation during Rabi season in Gadag District. It occupies 10-15 per cent of the total cultivable area. The average productivity of crop decreased from 12 Qtls./ha during last decade to 8 Qtls/ha during current decade.

The major reasons for decreased productivity are use of local low yielding variety M-35-1, incidence of stem rot disease and lodging problem. Farmers expressed helplessness in finding solution to the problems faced in the cultivation of Rabi Sorghum.

KVK INTERVENTIONS

ICAR-KVK, Gadag has then introduced high yielding and charcoal stem rot resistant SPV-2217 variety of Rabi Sorghum crop with ICM practices since 2017-18 in KVK and NICRA project adopted clusters of villages. Demonstration of ICM practices such as seed treatment with Azatobacter, Azospirillum& PSB and Seed priming with $CaCl_2$ were demonstrated. Moisture stress, zinc and sulphur nutrition problems were addressed by demonstrating compartmental bunding and application of zinc sulphate.

SPV-2217 variety of Rabi Sorghum was demonstrated in an area of 228 ha covering 570 farmers in a span of six years. In addition to this, KVK has also taken up production of SPV-

2217 seeds and made available 28.50 qtl of seeds benefiting 575 farmers. Programmes implemented by KVK year-wise in popularizing SPV 2217 variety of Rabi Jowar with ICM practices is presented in Table 1.

Table 1.: Details of Demonstration of SPV-2217 Variety of Rabi Sorghum with ICM Practices

Sl. No	Year	Area (ha.)	No. of farmers	Culster villages
1.	2017-18	40	100	Kochalapur, Mahalingpur, Madolli&Binkadakatti
2.	2018-19	40	100	Mahalingpur, Bevinakatti, Hiremannur, Gangapur &Ranatur
3.	2019-20	40	100	Mahalingpur, Kalakeri, Chikkasavanur and Shirol
4.	2020-21	42	105	KalakeriChikkasavanur, Mahalingpur and Shirol
5.	2021-22	30	75	Mahalingpur, Chikkasavanur and Shirol
6.	2022-23	36	90	Mahalingpur, Halligudi, Akkigund, Muganur and Asundi
TOTAL		**228**	**570**	

DETAILS OF TECHNOLOGIES DEMONSTRATED

SPV-2217 variety of Rabi Sorghum was demonstrated with following technologies:

- Seed treatment with Bio-fertilizers (PSB, Azospirillum&Azatobacter) which facilitates drought tolerance in crops through the supply of nutrients.
- Seed priming with Calcium Chloride @ 2% to enhance germination percentage, to improve the crop vigour and to induce drought tolerance to the crop.
- Demonstration of compartmental bunding for *in-situ* soil moisture conservation.
- Application of zinc sulphate to combat zinc and sulphur deficiency.

ECONOMIC PERFORMANCE OF DEMONSTRATION

KVK demonstrated SPV-2217 variety of Rabi Sorghum along with ICM practices in adopted clusters of villages by KVK as well as under NICRA project during 6 years period. From Table:-2, it can be observed that farmers obtained yield of 12.99 qtl./hafrom cultivation of SPV-2217 variety as against 10.62 qtl./ha in local check. An increase of 22.73 per centin yield was realized. Adoping ICM practices along with SPV-2217 variety of Rabi Sorghum has resulted in net additional returns of Rs. 10,415per hectare with an average increase in net income of 44.60%.

Table 2. Economic performance of SPV 2217 variety of Rabi Jowar with ICM Practices

Sl. No	Year	Area (ha.)	No. of farmers	Yield (qtl/ha)		Increase in yield (%)	Net Income (Rs./ha)		Increase in Income (%)
				Local	Demo		Local	Demo	
1.	2017-18	40	100	9.95	12.03	20.90	16200	23020	42.10
2.	2018-19	40	100	5.11	6.55	28.20	16110	23060	43.15
3.	2019-20	40	100	8.42	9.65	14.60	16470	24410	48.20
4.	2020-21	42	105	9.91	12.52	26.33	16950	24190	42.60
5.	2021-22	30	75	12.8	16.16	26.25	18280	26470	42.70
6.	2022-23	36	90	17.5	21.02	20.11	18000	27150	48.80
TOTAL/AVG.		**228**	**570**	**10.62**	**12.99**	**22.73**	**14301**	**24716**	**44.60**

SPREAD OF TECHNOLOGY TO OTHER FARMERS :

As a result of KVK interventions through Front Line Demonstrations, Capacity Building Programmes and extension programmes, there has been a spread of the technology in more than 2500 ha. of area including area under demonstrations during last four years. The spread has been noticed mainly in KVK adopted clusters of villages. Farmers also expressed happiness over the yield levels of

SPV 2217 variety. Quality of Rotis made from the flour of demonstrated variety was also superior when compared to other varieties. This indicates that farmers have been convinced about the profitability of the demonstrated variety and ICM practices. During 2022-23, SPV-2217 variety was spread in 2500 hectares. Thus, it has contributed considerate net income to the district farmers.

ORGANOLEPTIC EVALUATION OF RABI SORGHUM VARIETIES :

Sl. No	Parameters	M 35-1	SPV-2217
1	Color of roti	II	I
2	Taste of roti	II	I
3	Stickiness of dough	II	I
4	Non-watery texture of dough	II	I
5	Overall acceptability	II	I

M 35-1

SPV-2217

CONCLUSION

Demonstration of SPV-2217 variety of Rabi Sorghum along with ICM practices has created a tremendous impact in Gadag District in terms of increased yield and net returns. Front Line Demonstration, Trainings and Extension activities conducted by KVK in the adopted cluster of villages covering an area of 228 ha and 570 farmers has given fruitful results in spreading of SPV-2217 variety. Farmers have been convinced about the profitability of new variety as good net returns were achieved in a span of six years from 2017-18 to 2022-23. There has been a spread of technologies in about 2500 ha. in last six years and these farmers got increased net returns by about 44.60%. Thus the demonstrations had a huge impact in improving the income of farmers in rain shadow district of Gadag.

II. IMPACT ANALYSIS OF INTERVENSIONS IN PROMOTION OF CASHEWCROP IN GADAG DISTRICT

INTRODUCTION :

Gadag is one of the drought prone districts in Karnataka state, it receives annual rain fall of 443 mm. Farmers faced challenging situation in red soil based cropping system. They mainly cultivate Spreading Groundnut in red soil during Kharif season in an area of 30,000 hectares. The average productivity is 6.7 quintal per hectare. The reason for low productivity is moisture stress situation caused due long dry spells and frequent occurrence of agricultural droughts during last two decades. Hence, the cultivation of Spreading Groundnut has become non-remunerative to the farmers. Unlike in case of black soil where farmers can take up two crops in a year (Kharif and Rabi seasons), red soils cannot support even one good crop if rainfall is inadequate.

KVK developed strategies and interventions to promote Cashew based farming system in rainfed red soil areas. The objective was to bring income security to farmers and increase the income of farmers

KVK INTERVENTIONS :

To address this problem, KVK initially took planting of five different varieties of cashew in KVK Instructional farm under the technical guidance of ICAR-Centre for Agricultural Research Institute, Goa. The crop adopted very well to climatic and edaphic factors of Gadag district. The research feedback on performance of the crop was given back to Cashew Research Institutes. The growth and the yield of the crop was appreciated by scientific and farming community.In this back drop KVK Gadagapproached ICAR-Directorate of Cashew and Cocoa Development(DCCD), Cochin for the supply of planting material and financial assistance for area expansion of Cashew crop in the Gadag district. DCCD supplied planting materials of Vengurla -4 variety to farmers of Gadag district and planting was done by farmers under the technical guidance of KVK scientists. Now the Cashew crop become an alternate crop in red soil in rain shadow areas where cultivation of field crop are not viable due to vagaries of monsoon. ICAR-Centre for Agricultural Research Institute (CCARI), Goa and ICAR-Directorate of Cashew Research (DCR), Puttur have developed Cashew cultivation technologies for rain shadow areas. Keeping in mind the problems of farmers in red soil area, KVK Gadag promoted Cashew crops as an alternative crops through Front Line Demonstrations, farm advisories, training programmes and facilitation for forward and backward linkages and convergence with line departments.

DETAILS OF TECHNOLOGIES AND ACTIVITIES CARRIED OUT FOR PROMOTION OF CASHEW CROP:

1. **Front Line Demonstration:** From 2013-14 KVK organised Front Line Demonstrations on crop diversification through introduction of Cashew crop as an alternative crop for field crops under dryland conditions in 22.8 ha area belonging to 57 farmers in the district. The FLDs organised by KVK is depicted in Table-1

Table:1 FLD programme on Crop diversification through introduction of Cashew crop

Sl. No	Year	Area (Ha.)	No. of farmers
1	2013-14	4	10
2	2014-15	2.4	6
3	2016-17	2	5
4	2018-19	6	15
5	2020-21	2	5
6	2023-24	6.4	16
	TOTAL	22.8	57

Details of technologies demonstrated:

- Adoption of rain water harvesting structures in field
- Planting of improved cashew varieties Ullal-1, Vengurla-4,(FRS,Vengurla , Maharastra), Bhaskar (DCR,Pttur) and Hybrids like Nethra Jumbo-1, Nethra Ubhay, Nethra Ganga (H-130)
- Planting made during the months of June-July.
- In-situ soil moisture conservation practices viz., semi circular crescent bunds across the slopes are made.
- Adoption of Integrated nutrient management practices
- Irrigation of plants during summer months for initial 3 years.
- Take intercrops in Cashew orchard to ensures income for maintenance of orchards.
- Adoption of Integrated pest and disease management practices.
- Farmers got expect steady income from Cashew after 5th year of planting.

2. Details of the extension activities carried out: KVK formulated various technology interventions and strategies to overcome the issue. Technological interventions were finalised with the experts' advice from ICAR Institutes.

Details of activities carried out by KVK for promotion of Cashew

i) SENSITIZATION PROGRAMMES: (86 Nos., 760 farmers)

ii) TRAINING PROGRAMMES:

(36 courses, 696 farmers)

iii)EXTENSION PROGRAMMES:

Crop Seminars: 11 Nos., 1672 farmers
Field visits : 469 Nos., 2480 farmers
Farm advisory : 748 Nos., 1122 farmers
Exposure visit of farmers: 86 Nos., 864 farmers
Study tour to Cashew Growers:

iv)CONVERGENCE STRATEGIES ADOPTED :

KVK identified partners who have similar objective of promotion of Cashew crop for upscaling efforts. KVK convened a meeting of identified partners in order to understand the role to be played by each partner in promotion of Cashewnut crop in Gadag district.

Convergence partners in Cashew promotion are:

a) State Department of Horticulture
b) Reliance Foundation (NGO)
c) Directorate of Cashew and Cocoa Development (DCCD), Cochin
d) Sujala – Watershed Development Programme
e) ATMA (State Department of Agriculture)

v) Organised Cashew growers in to Cashew Growers Association and through which KVK worked on cashew promotion with respect to technological and marketing support along with facilitation of linkage with Directorate of Cashew and Cocoa Development (DCCD), Cochin and State Department of Horticulture for availing incentive. KVK played a role of nodal agency having convergence with DCCD, Cochin.

OUTCOME AND IMPACT OF INTERVENTIONS

Economic performance of the KVK interventions:

KVK's sustained efforts during last decade has resulted in spread of Cashew in an area of 636.77 hectares in Gadag district. Five yearoldCashewnut plant yields about 4 Kg raw Cashewnut under rainfed situation. Each kg fetches an average price of Rs.110/- to Rs.130/- in the market. From 5 to 7 years old Cashew orchards, farmers have been getting net income of Rs.65,000/- to Rs.1,00,000/- per hectare depending on the maintenance of the orchards compared to Rs.15,000/- to Rs.25,000/- per hectare from cultivation field crops under rainfed situation. Notably these income levels are achieved during agricultural drought years. Cashew area is spread in 636.77 hectares, out of which 30 per cent of the orchards are of 5-6 years old. The details are presented in table-2

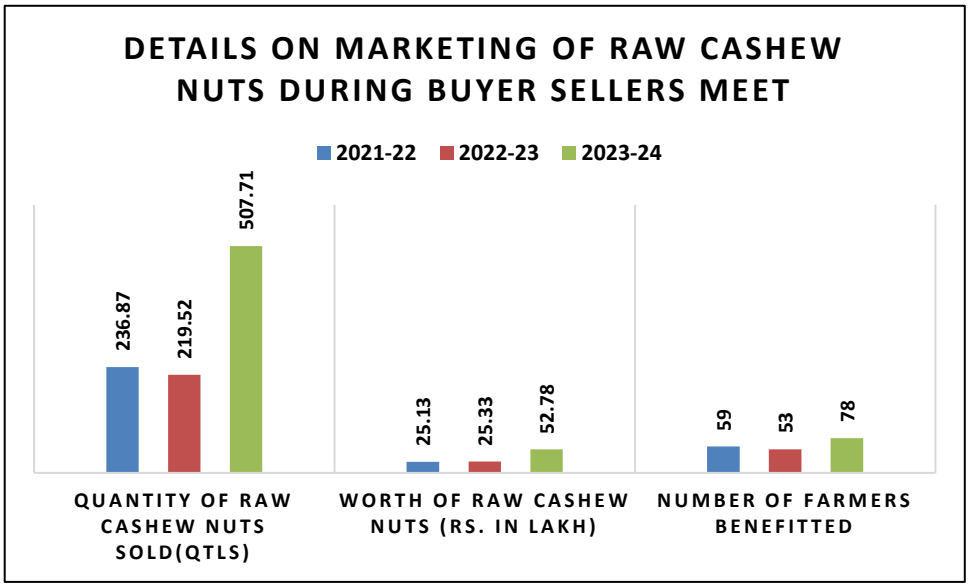
Table-2 : Economics of Cashew Cultivation in Comparison with Spreading Groundnut

Crop	Average yield (Q/ha)	Cost of cultivation (Rs/ha)	Gross returns (Rs/ha)	Net income (Rs/ha)
Spreading Groundnut	14	25,000	45,000	20,000
Cashew crop				
5 year old orchard	8	22000	88000	66000
7 year old orchard	11	25000	129800	104800

Buyers sellers meet: Since 2021-22 KVK gadag is organizing cashew raw nuts Buyer-Sellers Meet where farmers are informed through WhatsApp group about marketing of Cashew raw nuts. Data depicted in Fig.-1 indicates that from last three years there is significant increase in farmers participation in the buyer sellers meet with exponential increase in yield and worth of the cashew raw nuts. 190 farmers participated in the meet and sold 964.10 Qtls of raw cashew nuts worth of

Rs.103.24 Lakhs. Already Cashew is contributing approximately Rs.103 lakh per annum to the district economy. In near future of 4-5 years, it may go up to Rs.180 lakh per annum.

Fig.-1 Details on marketing of raw cashew nuts during buyer sellers meet



SPREAD OF THE TECHNOLOGY TO OTHER FARMERS FROM 2015 TO 2023-24

The successful interventions of the KVK Gadag entered into policies of Karnataka State department of Horticulture and thus in convergence with DDCD, Cochin, State Department of Horticulture and DCR, Puttur, KVK could able extend the area under cashew crop in 636.77 ha benefitting 515 farmers in the district. The details of are given in Table-3.

Table-3: Year wise area expansion under cashew crop in Gadag district

Sl.No.	Year of planting	Number of Grafts supplied	Area under Cashew crop (ha)	Number of farmers benefitted	Average Survival of saplings (%)
1	2015	6880	34.4	28	93.02
2	2016	1600	08.00	20	96.38
3	2017	46855	305.97	125	83.84
4	2018	5200	26.00	52	84.77
5	2019	11920	59.60	79	86.85
6	2020	19444	100.00	66	77.77
7	2021	8000	40.00	60	86.73
8	2022	6560	32.80	52	85.02
9	2023	6000	30.00	33	80.53
	Total	**112459**	**636.77**	**515**	**85.87**

CONCLUSION :

Comprehensive interventions of KVK with convergence mechanism has paved the way for spread of Cashew area in Gadag district. There is significant impact of KVK activities on area expansion and farmers' income.Crop diversification through introduction of Cashew based farming

system in red soil under rainfed situation has emerged as a profitable technology for addressing the productivity constraints in cultivation of field crops in red soils in drought prone areas like Gadag district. There has been significant improvement in the livelihood of farmers owing to adoption of rainfed Cashew cultivation. This is evident from the income realized by the farmers from Cashew cultivation in comparison with field crops.

PART XIII - LINKAGES

13.A. Details of linkage with ATMA

Coordination activities between KVK and ATMA

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	**Meetings**	KVK-ATMA Intefernce Meetings and ATMA Steering Committee meetings	2	4	-
02	**Research projects**	Assessment of Improved Bunch Groundnut varieties for higher productivity under Irrigated situation in Rabi-Summer season	-	-	Jointly organised with ATMA
		Assessment of ISF-764 and A-2020 varieites of Safflower for higher productivity			
		Assessment of NBeG-49 and Phule Vikram varieties of Bengalgram for higher productivity under irrigated situation			
		Upgradation of local sheep with Nari Suvarna Ram for high productivity of meat			
03	**Training programmes**	• ICM in Kharif & Rabi crops • Post Harvest Technology • Farmers' Producers Organisation • Integrated Farming System • Health, nutrition and terrace garden	-	10	Jointly organised with ATMA
04	**Demonstrations**	ICM practices in Bengalgram	-	4	Jointly organised with ATMA

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
05	**Extension Programmes**		12	7	Jointly organised with ATMA
	Kisan Mela		-	1	Jointly organised with ATMA
	Technology Week		1	1	Jointly organised with ATMA
	Exposure visit		5	-	Jointly organised with ATMA
	Exhibition		2	-	Jointly organised with ATMA
	Soil health camps		2	-	Jointly organised with ATMA
	Animal Health Campaigns		2	-	Jointly organised with ATMA
	Others (Pl. specify)		-	-	-
	Field Day		4	2	Jointly organised with ATMA
	Jal Shakti Abhiyaan		4	2	Jointly organised with ATMA
	World Food Day		1	1	Jointly organised with ATMA
	International Womens' Day		1	1	Jointly organised with ATMA
	World Soil Health Day		1	1	Jointly organised with ATMA
	Farmers' field school	-	2	-	Jointly organised with ATMA
	Farmer-Scientist Interaction Meet	-	-	2	Jointly organised with ATMA
06	**Publications**				
	Video Films	-	-	-	-
	Books	-	-	-	-
	Extension Literature	-	-	-	-
	Pamphlets	-	-	-	-
	Others (Pl. specify)	-	-	-	-
07	**Other Activities (Pl. specify)**				

13B. List of special programmes undertaken by the KVK which have been financed by State Government/University/National Horticultural Mission/ RKVY/ National Fisheries Development Board/Other Agencies

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

13C. Kisan Mobile Advisory Services

Month	No. of Advisories	No. of Text messages sent	No. of voice messages sent	SMS/voice calls sent (No.)						Total SMS/ Voice calls sent (No.)	Farmers benefitted (No.)
				Crop	Livestock	Weather	Marketing	Awareness	Other enterprises		
April 23		Text	-	1	0	0	0	0	0	1	11429
May 23		Text	-	2	0	2	0	0	0	4	2456
June 23		Text	-	1	1	2	1	0	0	5	10230
July 23		Text	-	2	0	0	1	1	1	5	9820
August 23		Text	-	2	1	6	1	0	0	10	10250
September 23		Text	-	1	1	2	0	0	0	4	10002
October 23		Text	-	2	1	3	1	1	0	8	6200
November 23		Text	-	3	1	1	1	2	1	9	11212
December 23		Text	-	1	1	3	1	0	0	6	10500
January 24		Text	-	1	0	3	1	0	0	5	4560
February 24		Text	-	1	0	2	1	0	0	5	11000
March 24		Text	-	1	1	4	1	0	0	6	10200
Total				**18**	**7**	**28**	**9**	**4**	**2**	**68**	**107859**

PART XIV- PERFORMANCE OF INFRASTRUCTURE IN KVK

14.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	Green House	2007	250 Sq. ft.	Chilli-Byadgidabbi	Seedlings	5000	1500	5000	

14.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.	Cost of inputs	Gross income	
Cereals									
Rabi Jowar	11.11.23	16.03.2024	4.0	SPV-2217	Seeds	20.0	15000	60000	

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.	Cost of inputs	Gross income	
Pulses									
Bengalgram	13.11.23	10.03.2024	3.2	JAKI-9218, DBGV-204	Seeds	18.0	37200	99000	
Oilseeds									
Safflower	14.11.23	25.03.2024	3.6	A-2020, DASF-1, ISF-764	Seeds	25.0	36500	125000	
Fibers									
Spices & Plantation crops									
Cashew			0.80	Vengurla-4	Nuts	8.0	21000	86400	
Coconut	2018		4.00	Deejay sampoorna	Tender Nuts		85000	22500	
Coconut + Custardapple	2021		3.00	Kalpa surya, Kalpa jyothi, COD			25000	-	Planted 2 years back
Floriculture									
Fruits									
Tamarind			0.60	PKM-1 & DTS-1	Fruit	25.0	7500	120000	
Amla			0.60	NA-7, Krishna	Fruit	11.7	-	29200	
Mango			0.80	Alphonso	Fruit	-	24500	-	
Tamarind + Mango + Amla	2021		8.0	DTS-1, Kesar, NA-7		-	15000	-	Planted 2 years back
Agroforestry	2020		0.8			-	3000	-	Planted 2 years back
Vegetables									
Others (specify)									

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

Sl.No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1	Vermicompost	150.0 Qtl	27500	60000	
2	Earthworms	0.28Qtl	4800	8250	
3	Azolla	0.04Qtl	200	400	

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

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1	Buffaloes	Local	Milk	782 lit	24000	31280	
2	Cow	Jersey	Milk	2045 lit	60500	61350	
3	Sheep	Nari Suvarna	Lamb	2 lamb	2000	5000	
3	Goat	Jamunapuri local cross	Kid	1 kid	3500	6000	

14E. Utilization of hostel facilities

Accommodation available (No. of beds) : 30

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
April, 2023	257	18	-
May, 2023	253	31	-
June, 2023	200	10	-
July, 2023	53	11	-
August, 2023	28	7	-
September, 2023	28	9	-
October, 2023	28	9	-
November, 2023	14	2	-
December, 2023	298	31	-
January, 2024	187	31	-
February, 2024	252	17	-
March, 2024	517	31	-

14F. Database management

S. No	Database target	Database created
1	OFT	Already maintained
2	FLD	Already maintained
3	Training database	Already maintained
4	Seeds & planting material	Already maintained
5	All Extension activities	Already maintained
6	Farmers visiting to KVK	Already maintained
7	Field visits	Already maintained
8	District database	Already maintained
9	Soil & water test details	Already maintained
10	Database on KVK (i.e regarding KVK details, host institute details, staff information, KVK land information, KVK infrastructure, demo units, vehicle, office, lab, farm equipment & library)	Already maintained
11	HRD of KVK staff (i.e training/seminar/workshop attended by KVK staff)	Already maintained
12	Publications of KVK activities in news papers	Already maintained
13	Villages covered by KVK since inception	Already maintained
14	Kisan mobile advisory services – Subscribers and messages sent	Already maintained
15	Farm implements	Already maintained
16	Citizen's Client Charter	Already maintained

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

(a) Rain Water Harvesting Structure

Amount sanction (Rs.)	Expenditure (Rs.)	Details of infrastructure created / micro irrigation system etc.		Activities conducted					Quantity of water harvested in '000 litres	Area irrigated / utilization pattern
				No. of Training programmes	No. of Demonstrations	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)		
850000	850000	Graded bund construction	5054.68 cm	6	2	0	185	17	340	4.0 ha
		Construction of waste weirs 1)1.52 feet crust length 2)1.83 feet	5 Nos. 7 Nos.							

Amount sanction (Rs.)	Expenditure (Rs.)	Details of infrastructure created / micro irrigation system etc.		Activities conducted					Quantity of water harvested in '000 litres	Area irrigated / utilization pattern
				No. of Training programmes	No. of Demonstrations	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)		
		crust length 3) 2.44 feet crust length 4) 2.74 feet crust length 5) 3.00 feet crust length	4 Nos. 3 Nos. 3 Nos.							
		Farm pond	2 Nos.							
		Infiltration wells a) Infiltration Well b) Common tank	9 Nos. 1 No.							
		Bore well recharge pit	1 No.							
		Sub surface dam	2 Nos.							
		Soak pits	147							
		Check dam	1							

(b) Micro-irrigation systems :

Amount sanction (Rs.)	Expenditure (Rs.)	Details of infrastructure created / micro irrigation system etc.		Activities conducted					Quantity of water harvested in '000 litres	Area irrigated / utilization pattern
				No. of Training programmes	No. of Demonstrations	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)		
150000	150000	Drip irrigation system for Dry land Horticulture	5 Ha.	4	0	0	130	9	0	5 Ha.

PART XV – SPECIAL PROGRAMMES

15.1 Paramparagath Krishi Vikas Yojana (PKVY) :NIL

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

15.2 District Agriculture Meteorological Unit (DAMU) : NIL

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

15.3 Fertilizer awareness programmeorganised

State	Name of KVK	Details of Activities/programmeOrganised	Number of Chief Guests	No. of Farmers attended program	Total participants

15.4 Seed Hub : NIL

Crops	*Variety*	*Year of release*	*Production*				*No. of farmers benefited / Sold to no. of farmers*	*Quantity seed sold (q)*
			Target (q)	*Area (ha.)*	*Actual Production (q)*	*Category (FS/CS)*		

15.5 CFLD on Oilseeds:

Sl. No.	Crop	Varieties demonstrated & Check		Allocated		Implemented	
		Demo	Check	Area (ha)	Demos (No.)	Area (ha)	Demos (No.)
1	Sunflower	KBSH-78	Hybrid	50	125	50	125
	Total			**50**	**125**	**50**	**125**

15.6 CFLDs on Pulses:

Sl. No.	Crop	Varieties demonstrated & Check		Allocated		Implemented	
		Demo	Check	Area (ha)	Demos (No.)	Area (ha)	Demos (No.)
1	Blackgram	LBG-791	Jawari Uddu	26	65	26	65
	Total						

15.7 Krishi Kalyan Abhiyan : NIL

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

15.8 Micro-Irrigation

Type of Activity	Date(s) conducted	No. of farmers (General)			No. of farmers SC / ST			No. of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Training on Irrigation methods and water management	15-04-2023	33	3	36	4	0	4	2	0	2
Training on operation and maintenance of drip irrigation system	04-08-2023	22	8	30	3	3	6	3	1	4
Training programme on Importance of micro irrigation system	15-09-2023	27	0	27	8	0	8	1	2	3
Training on Installation and maintenance of micro irrigation systems	27-12-2023	0	18	18	0	7	7	2	0	2

15.9 Tribal Sub-Plan (TSP) :

Farmer Training		Women Farmer Training		Rural Youths		Extension Personnel		OFT (No of Technologies)	Number of farmers involved			Participants in extension activities (No.)	Production of seed (q)	Production of Planting material (Number in lakh)	Production of Livestock strains (Number in lakh)	Production of fingerlings (Number in lakh)	Testing of Soil, water, plant, manure samples (Number)
No. of Trainings/ Demos	No. of Farmers	No. of Trainings/ Demos	No. of Women Farmers	No. of Trainings/ Demos	No. of Youths	No. of Trainings/ Demos	No. of Ext. Person		On-farm trials	Frontline demos	Mobile agro-advisory to farmers						
Trainings: 1	30	0	0	0	0	0	0	0	0	35	25		0	0	0	0	0
Demos: 6	35																

15.10 SCSP :

Farmer Training		Women Farmer Training		Rural Youths		Extension Personnel		OFT (No of Technologies)	Number of farmers involved			Participants in extension activities (No.)	Production of seed (q)	Production of Planting material (Number in lakh)	Production of Livestock strains (Number in lakh)	Production of fingerlings (Number in lakh)	Testing of Soil, water, plant, manure samples (Number)
No. of Trainings/ Demos	No. of Farmers	No. of Traninings/ Demos	No. of Women Farmers	No. of Trainings/ Demos	No. of Youths	No. of Trainings/ Demos	No. of Ext. Person		On-farm trials	Frontline demos	Mobile agro-advisory to farmers						
5	290	1	18	0	0	0	0										

15.11 NARI : NIL

Activity	Achievement	
	Number of activity	No. of farmers/ beneficiaries
OFTs – Nutritional Garden (activity in no. of Unit)		
OFTs – Bio-fortified Crops (activity in no. of Unit)		
OFTs – Value addition(activity in no. of Unit/Enterprise)		
OFTs - Other Enterprises (activity in no. of Unit/Enterprise) (activity in no. of Unit/Enterprise)		
FLDs – Nutritional Garden (activity in no. of Unit)		
FLDs – Bio-fortified Crops (activity in no. of Unit)		
FLDs – Value addition(activity in no. of Unit/Enterprise)		
FLD- Other Enterprises (activity in no. of Unit/Enterprise) (activity in no. of Unit/Enterprise)		
Trainings		
Extension Activities		

15.12 KVK Portal

No. of Events added by KVKs	No. of Facilities added by KVKs	Filled Report on Package of Practices (Y/N)				Filled Profile Report (Y/N)							
		Crop	Livestock	Fisheries	Horticulture	Employees	Posts	Finance	Soil Health Cards	Appliances	Crops	Resources	Fish
2906	13	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y

15.13 KSHAMTA : NIL

Number of Adopted Villages	No. of Activities		No. of farmers benefited	
	Demo	Training	Demo	Training

15.14 DFI : KVK has intervened with 110 families during the year 2020 among 133 families surveyed under DFI

Sl	District	Taluks	Villages	Farmers (No.)	Average Benchmark Income (Rs./year)	Crops/ enterprises	KVK Interventions	Additional Net Income generated due to KVK interventions (Rs/year)	Total income of farmer (Rs/ year)
1	Gadag	Gadag, Shirahatti, Naragund, Mundaragi and Shirol	Chikkasavanur, Shingatarayanakeri and Gadag	110	71095	***Crops:*** Maize, Rabi Sorghum, Bt.Cotton, Groundnut, Greengram, White Onion, Chrysanthemum, Vegetables (Okra, Ridgegourd, Dolichos bean, Beans and Coriender) ***Enterprises:*** Dairy Nutri Garden	• Maize+ Redgram intercropping system with ICM practices • Introduction of SPV-2217 variety in Rabi Sorghum • Bt.Cotton+ Greengram intercropping system with ICM practices • Introduction of DH-256 variety of Grounndut along with ICM practices • Introduction of DGGV-2 variety with ICM practices • Introduction of Arka Shweta and Arka Shubra white Onion varieties • ICM in Chrysanthemum • Demonstration of vegetable cafeteria (Introduction of improved varieties of Okra, Ridgegourd, Dolichos bean, Beans and Coriender • Nutrient	149386	220481

Sl	District	Taluks	Villages	Farmers (No.)	Average Benchmark Income (Rs./year)	Crops/ enterprises	KVK Interventions	Additional Net Income generated due to KVK interventions (Rs/year)	Total income of farmer (Rs/ year)
							management in milch animals • Demonstration of nutri garden		

PART XVI - FARMERS FEEDBACK ON ASSESSED/DEMONSTRATED TECHNOLOGIES OF CROPS / LIVESTOCK

16.1 Farmers feedback on performance of crop varieties/hybrids

Sl. No.	Crop varieties/hybrids assessed/ demonstrated	Farmer's feedback
1	**Okra hybrids**	• **CoBH-4:** Good yielder, moderately tolerant to YVMV disease • **Arka Nikita:** High yielder, moderatelt tolerant to YVMV disease, fruits have demand in the market with good coocking quality • **Phule Vimukta:** good yielder
2	**Vegetable crop cafeteria** • Ridgegourd - Arka Prasan variety	• An early variety • Gives more yield • Low incidence of powdery mildew compared to local variety • Fruits are tender with good taste and cooking quality
	• Dolichos bean – Arka Amogh	• More yield, good marketability and cosumer acceptability
	• Radish – Arka Nishant	• More yield, mild in pungency and attractive roots and foliage • Preferred by local market
	• Spinach – Arka Anupama	• More yield, thick and big leaves make large bunch & attractive green leaf colour and Good Shelf life
3	**Onion** • Bheema Super	• Bheema Super have good bulb weight with 20.87 % increase in the yield. Bulbs are attractive with light pink colour fetches Rs.200/- more per quintal compared to local variety Bellary Red.

16.2 Farmers feedback on performance of agronomic practices

Sl. No.	Agronomic practices	Farmer's feedback
1	Seed treatment of Trichoderma in Bengalgram	Helps to reduce wilt disease
	Adoption of border crop and trap crops in ByadagiChilli	• Maize as border crop and Marigold as trap crop resulted in less incidence of sucking pest and fruit borer respectively

Sl. No.	Agronomic practices	Farmer's feedback
2	Seed treatment with Biofertilizers like Rhizobium and PSB	Helps to reduce use of nitrogenous and phosphatic fertilizers
3	Use of pulse magic in Greengram	Foliar spray of Pulse magic in Greengram at flowering stage helped in healthy growth of plant without any deficiency symptoms besides increasing number of pods per plant. This practice resulted in higher grain yield.
4	Seed treatment with Rhizobium and PSB	Higher seedling vigor
5	Foliar spray of Chickpea magic	Increased pod setting and higher yield
7	Use of Arka Vegetable Special at 40, 60 and 80 days after sowing in vegetables, Red Onion and Red Chilli	**Vegetables** • Application of Arka Vegetable Special resulted in better crop growth without much micronutrient deficiency. • Ridgegourd- Elongated fruits with malformation • Dolichos bean- Complete filling of grains • Spinach - lessoccurence of Iron deficiency resulted in healthy and dark green leaves • Radish – Less forking, bright white colour roots **Onion** • Application of Arka Vegetable Special helped to get large and dark pink coloured bulbs **Chilli** • Application of Arka Vegetable Special (Micornutrient mixture) resulted in better flower and fruit set and dark red coloured fruits **Okra** Application of Arka Vegetable Special (Micornutrient mixture) resulted in better crop stand, good flower and fruit set with no misshaped fruits.
8	**Crop diversification** Introduction of Ajwain and Ashwagandha crops	• These crops withstand vagaries of mansoon and grows well under residual soil moisture conditions compared to field crops. • Ashwagandha crop has assured buyback system and green seeds of improved Ajwain variety fetches better market price. Therefore, crop diversification through introduction of these climate resilient crops are more profitable and sustainable than traditional crops during less rainfall years

16.3 Farmers feedback onperformance of pest and disease management in crops

Sl. No.	Pest and disease management in crops	Farmer's feedback
1	Groundnut	Collar rot and Leaf sport diseases were identified in groundnut crop. Integrated management practices like seed treatment with fungicides, crop rotation practices, summer ploughing and green manuring along with chemical management practices helped to reduce collar rot and leaf spot incidence in groundnut crop.
2	Greengram	Major pests like thrips, Aphids and Pod borer and incidence of disease like powdery mildew were noticed during cultivation. Adoption of Integrated crop management practices in demonstrated plots helped in reduction of pest and disease occurrence.
3	Seed treatment with Trichoderma	Low incidence of soil borne fungal diseases
4	Seed treatment with*Trichodermaviride* and Imidachloprid in ByadagiChilli	Helped to reduce seedling rot and incidence of sucking pests at early vegetative growth stage
5	Seed treatment with*Trichodermaviride* in onion	Helped to reduce seedling rot disease in main field
6	Pest and disease management in Byadagichilli crop	Foliar spray of beauveriaTimely management of anthracnose, Murda complex disease lead to get 20% additional yield compared to local practices

16.4 Farmers feedback on performance of farm machinery technologies

Sl. No.	Farm machinery technologies	Farmer's feedback
1	i) Tractor operated Boom sprayer	Area coverage and efficacy of spray is good
	ii) Drone sprayer	Field capacity is better compared to other technologies and it results in saving of time and labour
	iii) Battery operated Onion detopper	Reduces drudgery of operation involved in manual detopping of Onions and also saves time of operation.

16.5 Farmers feedback on performance of livestock and fisheries technologies

Sl. No.	Livestock/fisheries technologies	Farmer's feedback
1	CB Cows	Feeding of green fodder enhances the milk yield and improves the health of the CB cows

PART XVII - FINANCIAL PERFORMANCE

17A. 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	-	-	-	-	-	-	-
With KVK	SBI	Gadag	0838	KHP KVK Hulkoti	10824829153	582002002	SBIN0000838

17B. Utilization of KVK funds during the year 2023-24

S.No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	17674400	17674400	17674383
2	**Traveling allowances**	209400	209400	209400
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	571684	571684	571684
B	POL, repair of vehicles, tractor and equipments	500000	500000	500000
C	Meals/refreshment for trainees (Ceiling upto Rs.40/day/trainee be maintained)	180000	180000	180000
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	25000	25000	25000
E	Frontline demonstration except oilseeds and pulses (Minimum of 30 demonstration in a year)	400000	400000	400000
F	On Farm Testing (On need based, location specific and newly generated information in the major production systems of the area)	100000	100000	100000
G	Training of Extension Functionaries	25000	25000	25000
H	Extension activities	140000	140000	140000
I	Maintenance of farms	200000	200000	200000
J	EDP / Innovative activities	0	0	0
K	Maintenance of buildings	165000	165000	165000
L	Establishment of Soil, Plant & Water Testing Laboratory and issue of Soil Health Cards	150000	150000	150000
M	Nutri Garden	25000	25000	25000
N	Library Maintenance	25000	25000	25000
4	SCSP Programme (General)	346800	346800	346800
	TOTAL (A)	**20737284**	**20737284**	**20737267**
B. Non-Recurring Contingencies				
1	**Works**	995151	995151	995151
2	**SCSP Prgoramme (Capital)**	311000	311000	311000
	TOTAL (B)	**1306151**	**1306151**	**1306151**
C. REVOLVING FUND		0	0	0
	GRAND TOTAL (A+B+C)	**22043435**	**22043435**	**22043418**

17C. Status of revolving fund (Rs. in lakh) for the last three years

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 31st March of each year
April toMarch 2021	4.51	16.57	15.89	5.19
April to March 2022	5.19	15.16	15.49	4.86
April to March 2023	4.86	28.68	24.36	9.28

18. Details of HRD activities attended by KVK staff

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Dr. Sudha V. Mankani	Senior Scientist and Head (I/c) & SMS (Home Science)	Intra KVK visit for cross learning	Kerala KVKs	16-18, August 2023
		Buyers-Seller Meet - Millet Cookery show	CMFRI, Ernakulum	28-30, December 2023
Mr. N.H.Bhandi	SMS (Soil Science)	South Asia Drought Monitoring System (SADMS)	CRIDA, Hyderabad	9-10 March 2023
		National seminar on millet	NIASM, Baramati	22-23,August2023
		Importance of soil testing & nutrients recommendation	IIHR, Bengaluru	21, September 2023
		Training cum exposure visit on natural farming for master trainers	UAS, Dharwad	12-16, March 2024
Mrs. Hemavati R.H.	SMS (Horticulture)	Webinar on adaptation & management strategies of fruit orchards under climate change scenario	Online by MANAGE, Hyderabad	30 June 2023
		Mango Export Awareness Programme	Mango Export Awareness Programme	8 November 2023
		Master trainers - Krishi Sakhi - Natural farming	MANAGE, Hyderabad	20-22, February 2024
Dr. B.M.Murgod	Programme Assistant (Animal Science)	Leveraging together : Animal feed industry and researchers towards doubling of farmers income	National Institute of Animal Nutrition and Physiology, Adugodi, Bengaluru	22 March 2024
Dr. Vinayak Niranjan	SMS (Ag. Engineering)	Data Driven Agriculture : A Statistical Analysis Training using R	College of Agriculture, Sumerpur	23-27, May 2023
		National seminar on evolving extension science towards secondary agriculture for sustainable development	GKVK, UAS, Bengaluru	22-24, June 2023
		57th Annual convention of Indian society of Agricultural Engineers	UAS, Raichur	6-11, November 2023
		Women entrepreneurship conclave	KAU, Thrissur	20-21, January 2024

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