

ANNUAL REPORT 2008-09

(FOR THE PERIOD OCTOBER 2008 TO SEPTEMBER 2009)

KRISHI VIGYAN KENDRA - GADAG

PART I - GENERAL INFORMATION ABOUT THE KVK

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

Address	Telephone		E mail	Web Address
K.H.Patil Krishi Vigyan Kendra, Hulkoti, Gadag dist.	Office (08372)289069 289606 289325	FAX (08372) 289474	khpatil_kvkhulkoti@yahoo.com kvkhulkoti@gmail.com	www.khpkvk.org

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 289606 289325	(08372) 289474	asf_hulkoti@yahoo.co.in	--

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. L.G.Hiregoudar	(08372) 289772	9448358772	laxs1961@gmail.com

1.4. Year of sanction:

1.5. Staff Position (as on 31st August 2009)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M/F	Discipline	Highest Qualification (for PC, SMS and Prog. Asstt.)	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/OBC/ Others)
1	Programme Coordinator	Dr. L.G.Hiregoudar	Programme Coordinator	M	--	M.Sc (Agri), PhD	16400-22400	18200	05.09.92	P	OBC
2	SMS	Mr.S.K.Mudlapur	Subject Matter Specialist	M	Plant Protection	B.Sc (Agri)	8000-13500	11850	26.09.94	P	OBC
3	SMS	Mr.S.H.Adapur	Subject Matter Specialist	M	Ag. Extension	M.Sc (Agri)	8000-13500	11850	23.06.95	P	Others
4	SMS	Smt.S.S. Rayanagoudar	Subject Matter Specialist	F	Home Science	M.H.Sc	8000-13500	11850	26.06.95	P	OBC
5	SMS	Mr.V.D.Vaikunthe	Subject Matter Specialist	M	Agronomy	B.Sc (Agri)	8000-13500	11575	01.07.95	P	OBC
6	SMS	Mr.K.T.Patil	Subject Matter Specialist	M	Horticulture	B.Sc (Agri)	8000-13500	11575	01.07.95	P	OBC
7	SMS	Mr. N.H. Bhandi	Subject Matter Specialist	M	Soil Science	M.Sc (Agri)	8000-13500	9100	01.06.05	P	OBC
8	Programme Assistant (Lab Tech.) /T-4	Dr. B.M. Muragod	Programme Assistant	M	Animal Science	B.V. Sc	5500-9000	5850	25.06.07	P	Others
9	Programme Assistant (Computer) / T-4	Smt. Lalita S. Asuti	Computer Programmer	F	-	B.Com, PGDCA	5500-9000	6200	01.06.05	P	OBC
10	Programme Assistant/ Farm Manager	Suresh Halemani	Farm Manager	M	-	B.Sc (Agri.)	5500-9000	-	01-02-09	T	OBC
11	Assistant	Mr. M.B. Jakkanagoudar	Accountant / Superintendent	M		M.Com	5500-9000	5850	25.06.07	P	OBC

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M/F	Discipline	Highest Qualification (for PC, SMS and Prog. Asstt.)	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/OBC/ Others)
12	Jr. Stenographer	Mr. Manju D.	Stenographer	M		B.Com	4000-6000	4200	11.06.07	P	OBC
13	Driver	Mr. N.L. Hadapad	Auxiliary staff	M	Driver-Cum-Mechanic	7 th Std.	3050-4950	4350	03.09.92	P	Others
14	Driver	Mr. G.D. Madivalar	Auxiliary staff	M	Driver-Cum-Mechanic	7 th Std.	3050-4950	4110	20.07.95	P	Others
15	Supporting staff	Mr.S.B. Kotabagi	Supporting staff	M	Clerk-Cum-Field man	M.A	2550-3200	3200	18.07.85	P	Others
16	Supporting staff	Mr. V.R. Navalli	Supporting staff	M	Village work attendant	SSLC	2550-3200	3200	20.07.93	P	OBC

1.6.Total land with KVK (in ha) :

Sl. No.	Item	Area (ha)
1	Under Buildings	1.5
2.	Under Demonstration Units	0.5
3.	Under Crops	12.0
4.	Orchard/Agro-forestry	6.0
5.	Others	20.0

1.7.Infrastructural Development :

A) Buildings

Sl. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	1996	800	33.46	-	-	-
2.	Farmers Hostel	ICAR	1997	550	17.26	-	-	-
3.	Staff Quarters	ICAR	2006	400	45.00	-	-	-
	1							
	2							
	3							
	4							
	5							
	6							
4.	Demonstration Units							
	1 Dairy	ICAR	2000	50	6.0	-	-	-
	2 Sheep & Goat	ICAR	2002	50	5.0	-	-	-
	3							
	4							
5	Fencing	-	-	-	-	-	-	-
6	Rain Water harvesting system	ICAR	2007	-	10.00	-	-	-

Sl. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
7	Drying Yard	Spices Board	2000	200	0.75	-	-	-
8	Farm Godown	-	-	-	-	-	-	-
9	Poly House	KSDH	2006	50	3.00	-	-	-
10	Vermi Compost	DDB	2002	100	3.50	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Bolero	2009	6.0	10,000	Good
Tractor	2003	5.00	815 hours	Good
Motor cycle	2009	0.4	35,000	Good
	2009	0.5	15,000	Good

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Rotary Power weeder	2009	95000	Good
Rotavator	2008	95000	Good
Seed delinting machine	2006	17680	Good
Lab model Gin machine	2006	70000	Good
Cotton seed sorter	2007	49500	Good
Seed treating drum	2007	40000	Good
Projection screen	2006	12375	Good
Laptop	2005	55000	Good
LCD	2004	75000	Good
Xerox	2004	85000	Good
OHP	2004	24550	Good
Fax	2004	25450	Good
Computer	2003	125000	Good
Camera	1998	13688	Good
Amplifier	1999	14614	Good

1.8. A). Details SAC meeting conducted in 2008-09

Sl. No.	Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
1.	24-03-2009	26	4	<ul style="list-style-type: none"> To organize ex-trainees meet 	<ul style="list-style-type: none"> FLD farmers of previous year are being invited to get the feedback of demonstrated technologies
				<ul style="list-style-type: none"> To demonstrate newly released Chickpea variety JG-11 variety 	<ul style="list-style-type: none"> FLD on JG-11 variety of Chickpea is being implemented during 2009-10 in an area of 20 ha.
				<ul style="list-style-type: none"> To circulate KVK Training Schedule 	<ul style="list-style-type: none"> This is being done during this year
				<ul style="list-style-type: none"> To organize marketing Co-op. Society with help of NCDC 	<ul style="list-style-type: none"> Efforts are on for organizing a producer's company
				<ul style="list-style-type: none"> Increase the number of pheromone traps in the field for effective control of pest 	<ul style="list-style-type: none"> Being carried out
				<ul style="list-style-type: none"> Take more demonstrations under DDHC-11 	<ul style="list-style-type: none"> Taken 50 demonstrations under FLD-Cotton as per ICAR sanction and DDHC-11 seeds will be made available to interested farmers in the district
				<ul style="list-style-type: none"> Start Demonstration Unit of Sericulture 	<ul style="list-style-type: none"> ICAR Sanction is awaited to start Demonstration Unit
				<ul style="list-style-type: none"> Strengthen animal husbandry section in conducting FLD and Extension activities 	<ul style="list-style-type: none"> It is planned accordingly during this year
2	14-07-2009	23	3	<ul style="list-style-type: none"> Increase the number of SHGs to be trained during the year 2009-10 	<ul style="list-style-type: none"> Accordingly it has been planned
				<ul style="list-style-type: none"> Take up FLD on Bt Cotton 	<ul style="list-style-type: none"> FLD on Bt Cotton will be taken during next year i.e., 2010-11.
				<ul style="list-style-type: none"> Give thrust PHT & IPM in Sunflower 	<ul style="list-style-type: none"> It has been already included in the training curriculum of KVK
				<ul style="list-style-type: none"> Take up TAG-26 variety of groundnut under FLD 	<ul style="list-style-type: none"> It will be taken during rabi-summer FLD programme on groundnut (2009-10)
				<ul style="list-style-type: none"> Conduct demonstration of UAS-415 wheat variety 	<ul style="list-style-type: none"> This will be taken in rabi season (2009-10)

Sl. No.	Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
				<ul style="list-style-type: none"> • Introduce new breeds of Swarnadhara poultry birds, Bidari breed of goat and Kenguri breed of sheep 	<ul style="list-style-type: none"> • This will be taken up during next year under FLD programme (2010-11)
				<ul style="list-style-type: none"> • To take up onion seed production in large quantity 	<ul style="list-style-type: none"> • This will be taken up on selected farmers field under KVK guidance
				<ul style="list-style-type: none"> • Conduct OFT on influence of sowing date on incidence of SND in Sunflower 	<ul style="list-style-type: none"> • This will be proposed during next year (2010-11)

PART II - DETAILS OF DISTRICT

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

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

2.2 Description 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 and Naragund blocks. Rainfall ranges from 450-600 mm with 30-35 rainy days mainly from June – September months. Maximum temperature range from 36-40 ^o c. This zone is drought prone. <u>Kharif crops grown:</u> Greengram, Groundnut, Onion, Chilli, Sunflower, Maize <u>Rabi crops grown:</u> Bengalgram, Desi cotton, rabi jowar, wheat, sunflower
2	Zone -8	This zone comprises of Shirahatti block. Average rainfall is 619 mm. Gets rainfall from both South-West and North-East mansoons. <u>Kharif crops grown:</u> Green gram, Jowar, BT cotton, Groundnut, Sunflower, Millets, Maize, Onion, Chilli <u>Rabi crops grown:</u> Rabi jowar, Sunflower, Desi cotton, Bengal gram, Wheat

2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
1	Deep clay soil	More water holding capacity with low infiltration rate of water & clay content is more than 35 percent	274285
2	Medium deep black soils	Moderate water holding capacity with high runoff and less infiltration	12000
3	Red clay soil	Medium water holding capacity and moderately drained soils. Clay content is less than 25 percent	27000
4	Red gravelly clay soils	Less water holding capacity. High infiltration rate and less runoff	67500
5	Red gravelly loam soils	Moderately deep & well drained soils	12500
Total			393285

2.4. Area, Production and Productivity of major crops cultivated in the district (2008-09)

S. No	Crop	Area (ha)	Production (Metric tons)	Productivity (kg /ha)
1	Greengram	30228	6186	202
2	Bengal gram	44808	35846	804
3	Groundnut (Kharif)	36356	21814	610
4	Sunflower (Rainfed)	56424	22570	400
5	Sunflower (Irrigated)	5401	6481	1208
6	Desi cotton	40341	10678 bales	152
7	Onion	26353	19560	15000
8	Red chilli	15605	19560	900
9	Maize	12512	2318	2000
10	Rabi jowar	63050	98810	700

Source: Office of Joint Director of Agriculture, Gadag

2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)
		Maximum	Minimum	
October 2008	47.3	29.8	18.9	57
November 2008	142.0	30.0	16.6	60
December, 2008	-	28.0	15.0	54
January, 2009	-	30.8	14.8	48
February, 2009	-	31.0	18.9	49
March, 2009	-	36.4	20.0	57
April, 2009	47.0	38.2	22.1	44
May, 2009	56.4	37.5	21.0	43
June, 2009	139.7	33.4	22.3	61
July, 2009	59.8	33.2	19.9	71
August, 2009	68.7	29.8	20.1	69

Source: District Statistical Office

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

Category	Population	Production	Productivity
Cattle			
<i>Crossbred</i>	15418	25968	5.22 Kg/day
<i>Indigenous</i>	158588	45944	2.40 Kg/day
Buffalo	80234	64088	2.80 Kg/day
Sheep			
<i>Crossbred</i>			
<i>Indigenous</i>	313459	158	15 Kg/animal
Goats	172411	134	16 Kg/animal
Pigs			
<i>Crossbred</i>			
<i>Indigenous</i>			
Rabbits			
Poultry birds (egg production)	158656	72 lakh/year	100 per year
Hens			
<i>Desi</i>			
<i>Improved</i>			
Ducks			
Turkey and others			

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

Source: District Statistical Office

2.7 Details of Operational area / Villages

Sl.No.	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1	Gadag	Gadag	Hosur cluster [Comprising of Kanavi, Hosur, Shirunj, Yelishirunj]	Spreading Groundnut (Kharif & Summer), Greengram, Maize, Onion +Chilli, Chrysanthemum, Brinjal, Tomato, Green Chilli, Dairying and Goat rearing	Groundnut	
					Moisture stress in peg initiation stage in groundnut	<i>In-situ</i> moisture conservation
					Imbalanced usage of nutrients	Integrated Nutrient Management
					Incidence of leaf minor	Leaf minor management
					Incidence of rust and tikka during pod formation stage	Rust and tikka disease management
					Greengram	
					Incidence of Spingid moth and powdery mildew	Spingid moth & powdery mildew management
					Non availability of labour for weeding	Promotion of weeder
					Lack of grading and value addition	Value addition
					Maize (Rainfed)	
					Moisture stress during seed setting stage	Insitu moisture conservation
					Imbalanced usage of nutrients	Integrated Nutrient Management
					Onion + Chilli + Cotton	
					Low quality bulb production in onion	Integrated Nutrient Management
					Incidence of purple blotch in onion	Management of purple blotch
					Incidence of mites and thrips in chilli	Management of mites and thrips
					Low quality of dry chilli	Usage pf polythene sheets for chilli drying

Sl.No.	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
					<ul style="list-style-type: none"> ▪ Lack of value addition in chilli 	<ul style="list-style-type: none"> ▪ Value addition
					Chrysanthemum	
					<ul style="list-style-type: none"> ▪ Bud dropping & improper opening of flower buds 	<ul style="list-style-type: none"> ▪ INM
					Brinjal	
					<ul style="list-style-type: none"> ▪ Fruit and shoot borer 	<ul style="list-style-type: none"> ▪ Fruit and shoot borer management
					Tomato	
					<ul style="list-style-type: none"> ▪ Incidence of leaf curl 	<ul style="list-style-type: none"> ▪ Leaf curl management
					Live stock enterprises	
					<ul style="list-style-type: none"> ▪ Low milk productivity due to nutritional disorder 	<ul style="list-style-type: none"> ▪ Nutrition management
					<ul style="list-style-type: none"> ▪ Incidence of worms in calves & goats 	<ul style="list-style-type: none"> ▪ Deworming
					Entrepreneurship	
					<ul style="list-style-type: none"> ▪ Lack of entrepreneurship in agriculture 	<ul style="list-style-type: none"> ▪ EDP for rural youths
2	Mundaragi		Shingatarayankere cluster [Comprising of Kadampur and Shingatarayankeri Tanda]	Spreading Groundnut, Greengram, Hybrid jowar (K), Onion, Chrysanthemum	Groundnut	
					<ul style="list-style-type: none"> ▪ Unsustainable production 	<ul style="list-style-type: none"> ▪ Promotion of intercropping system (Groundnut + Foxtail millet)
					<ul style="list-style-type: none"> ▪ Poor shelling percentage 	<ul style="list-style-type: none"> ▪ INM in spreading groundnut
					Bunch Groundnut	
					<ul style="list-style-type: none"> ▪ Cultivation of local variety 	<ul style="list-style-type: none"> ▪ Introduction of TAG-24 variety
					<ul style="list-style-type: none"> ▪ Poor shelling percentage 	<ul style="list-style-type: none"> ▪ INM in groundnut
					<ul style="list-style-type: none"> ▪ Incidence of leaf minor 	<ul style="list-style-type: none"> ▪ Leaf minor management
					Greengram	
					<ul style="list-style-type: none"> ▪ Incidence of sphingid moth and powdery mildew 	<ul style="list-style-type: none"> ▪ Sphingid moth & powdery mildew management

Sl.No.	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
					Hybrid jowar (K)	
					<ul style="list-style-type: none"> Poor quality of fodder 	<ul style="list-style-type: none"> Introduction of CSV-15 variety
					<ul style="list-style-type: none"> Moisture stress 	<ul style="list-style-type: none"> <i>In-situ</i> soil moisture conservation
					Onion (irrigation)	
					<ul style="list-style-type: none"> Poor quality production of bulbs 	<ul style="list-style-type: none"> INM in onion
					<ul style="list-style-type: none"> High incidence of weeds 	<ul style="list-style-type: none"> Chemical weed management
					Chrysanthemum	
					<ul style="list-style-type: none"> Incidence of bud necrosis 	<ul style="list-style-type: none"> Bud necrosis management
					<ul style="list-style-type: none"> Improper opening of buds 	<ul style="list-style-type: none"> INM in Chrysanthemum
					Buffalo enterprise	
					<ul style="list-style-type: none"> Infertility in buffaloes 	<ul style="list-style-type: none"> Nutrient Management
					Entrepreneurship	
					<ul style="list-style-type: none"> Lack of entrepreneurship in agriculture 	<ul style="list-style-type: none"> EDP for rural youths
3	Shirahatti		Holalpur cluster [Comprising of Magadi, Parasapur and Holalapur villages]	Spreading groundnut, Hybrid jowar (K) + Tur	Spreading Groundnut	
					<ul style="list-style-type: none"> Use of impure seeds 	<ul style="list-style-type: none"> Supply of pure seeds
					<ul style="list-style-type: none"> Non usage of balanced nutrition 	<ul style="list-style-type: none"> Integrated Nutrient Management
					<ul style="list-style-type: none"> Unsustainable production 	<ul style="list-style-type: none"> Promotion of inter cropping system
					<ul style="list-style-type: none"> Moisture stress 	<ul style="list-style-type: none"> <i>In-situ</i> soil moisture conservation
					Hybrid jowar + Tur	
					<ul style="list-style-type: none"> Poor fodder quality of jowar 	<ul style="list-style-type: none"> CSV-15 variety

Sl.No.	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
					<ul style="list-style-type: none"> ▪ Cultivation of long duration local variety of Tur 	<ul style="list-style-type: none"> ▪ Introduction of ICPL-87
					Buffaloe enterprise	
					<ul style="list-style-type: none"> ▪ Low milk yield due to poor quality fodder and nutritional disorders 	<ul style="list-style-type: none"> ▪ Enrichment of dry fodder
					Grain storage	
					<ul style="list-style-type: none"> ▪ Incidence of storage pests 	<ul style="list-style-type: none"> ▪ Storage pest management
					Entrepreneurship	
					<ul style="list-style-type: none"> ▪ Lack of entrepreneurship in agriculture 	<ul style="list-style-type: none"> ▪ EDP for rural youths
4	Ron		Mallapur cluster [Comprising of Mallapur, Sandigwad and Chikkamannur villages]	Onion + Chilli + Cotton, Cotton, Greengram, Groundnut, Rabi jowar and sunflower	Onion + Chilli + Cotton	
					<ul style="list-style-type: none"> ▪ Moisture stress 	<ul style="list-style-type: none"> ▪ <i>In-situ</i> soil moisture conservation
					<ul style="list-style-type: none"> ▪ Cultivation of local variety in onion 	<ul style="list-style-type: none"> ▪ Assessment of improved variety in onion
					<ul style="list-style-type: none"> ▪ Non availability of labours for weeding in existing sowing method 	<ul style="list-style-type: none"> ▪ Refinement of sowing method in onion to facilitate intercultivation
					Greengram	
					<ul style="list-style-type: none"> ▪ Drudgery in hoeing & weeding operations 	<ul style="list-style-type: none"> ▪ Introduction of drudgery reducing equipments
					Cotton	
					<ul style="list-style-type: none"> ▪ Unsustainable production 	<ul style="list-style-type: none"> ▪ ICM in desi cotton
					Rabi jowar	
					<ul style="list-style-type: none"> ▪ Moisture stress 	<ul style="list-style-type: none"> ▪ <i>In-situ</i> soil moisture conservation ▪ Drought tolerance inducing technology

Sl.No.	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
					Sheep enterprises	
					<ul style="list-style-type: none"> ▪ Low productivity of local sheep 	<ul style="list-style-type: none"> ▪ Upgradation of local sheep with Ramboulette
					Nutrition	
					<ul style="list-style-type: none"> ▪ Nutrition deficiency in human beings 	<ul style="list-style-type: none"> ▪ Introduction of nutritional garden
						<ul style="list-style-type: none"> ▪ Value addition in locally available vegetables (Karchi Kai)
					Fuel saving enterprises	
					<ul style="list-style-type: none"> ▪ Drudgery in cooking 	<ul style="list-style-type: none"> ▪ Assessment of Oorja Chulha for fuel efficiency
5	Naragund		Gurlagatti cluster [Comprising of Kanakikoppa, Hadli, Siddapur and Gangapur villages]	Maize, Bengalgram, Wheat, Sunflower and Hybrid Cotton	Maize	
					<ul style="list-style-type: none"> ▪ Incidence of stem borer & downy mildew 	<ul style="list-style-type: none"> Management of stem borer and downy mildew
					<ul style="list-style-type: none"> ▪ Low fertility of soil 	<ul style="list-style-type: none"> Green manuring
					Bengalgram	
					<ul style="list-style-type: none"> ▪ Lack of integrated crop management practices 	<ul style="list-style-type: none"> ▪ ICM in bengalgram
					Wheat	
					<ul style="list-style-type: none"> ▪ Drudgery in harvesting 	<ul style="list-style-type: none"> ▪ Introduction of improved sickle
					Hybrid cotton	
					<ul style="list-style-type: none"> ▪ Incidence of pests and low yield 	<ul style="list-style-type: none"> ▪ Introduction of Bt cotton along with ICM
					Dairy enterprises	
					<ul style="list-style-type: none"> ▪ Infertility in CB cows 	<ul style="list-style-type: none"> ▪ Nutritional management
					<ul style="list-style-type: none"> ▪ Ticks and mites infection 	<ul style="list-style-type: none"> ▪ Management of ticks and mites

2.7 Priority thrust areas

Sl. No	Thrust area
i)	In-situ soil moisture conservation
ii)	ICM in oilseeds, pulses, cereals and onion
iii)	IPM in bengalgram and brinjal
iv)	Sustainable crop production technology
v)	Soil fertility management
vi)	Seed production in onion, cotton and groundnut
vii)	Feed management in milch animals
viii)	Ecto and endo parasite management
ix)	Self employment opportunities for youths
x)	Women drudgery reduction measures
xi)	Entrepreneurship development in agriculture

PART III - TECHNICAL ACHIEVEMENTS

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

OFT				FLD			
1				2			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
6	6	26	26	11	11	213	191

Training				Extension Activities			
3				4			
Number of Courses		Number of Participants		Number of activities		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
150	172	4000	5397	250	286	5000	7367

Seed Production (Qtl.)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
40	92.45	5000	8000

Livestock (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
-	-	100	115

3.B1. Abstract of interventions undertaken based on thrust areas identified for the district as given in SI.No.2.7

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No.	Kg
1	ICM & variety	Greengram	Low productivity	-	ICM in S4 variety	4	2	1	9	5.0	-	-	-	-
2	ICM	Bengalgram	Low productivity due to pod borer & wilt	Management of wilt through seed treatment with trichoderma @ 10 gms /Kg	ICM in Bengalgram	4	2	2	11	-	-	-	-	200
3	ICM & variety	Spreading groundnut	Low productivity due to local variety, leaf minor & poor shelling percentage	Assessment of JSP-39 variety	ICM in spreading groundnut	3	-	1	8	2.0	-	-	-	300
4	ICM & variety	Summer groundnut	Low productivity of local variety, leaf minor & poor irrigation management	-	ICM in TAG-24 & GPBD-4 variety	5	1	1	10	20.0	-	-	-	200
5	ICM	Sunflower	Low productivity due to imbalanced nutrition, powdery mildew and caterpillar infestation	-	ICM & Phosphorous nutrition	5	-	1	7	-	-	-	-	100

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No.	Kg
6	ICM	Bt. Cotton	Incidence of sucking pest & pod borer	-	ICM in Bt. Cotton	4	-	-	8	-	-	-	-	-
7	ICM & variety	Rabi cotton	Low productivity	-	ICM in DDHC-11 variety	5	-	-	6	42.0	-	-	-	-
8	Plant nutrition	Maize	Imbalanced nutrition	Split application of nitrogen	-	5	-	1	3	-	-	-	-	-
9	ICM, variety, cropping system	Kharif Jowar + Redgram	Low productivity of local variety	-	ICM in DSV-6 + ICPL-87 Jowar + Redgram variety	2	-	-	4	3.0	-	-	-	-
10	Moisture management	Rabi Jowar	Moisture stress	-	Compartment bunding & seed priming with Calc ₂	5	-	1	10	10.0	-	-	-	-
11	ICM variety & spacing management	Onion	Low productivity of local variety, moisture stress	Sowing method & seed rate under dry land	ICM in Arka Kalyan variety	4	-	-	7	2.2	-	-	-	-
12	Nutrition	Chilli	Imbalanced nutrition	Foliar spray of ZnSO ₄	-	3	-	-	5	-	-	-	-	-
13	Disease management	Tomato	Leaf curl disease	-	Demonstration of Arka ananya hybrid	2	-	-	3	-	-	-	-	-
14	IPM	Brinjal	Fruit & shoot borer	Management of fruit shoot borer	-	2	-	-	4	-	-	-	-	-
15	INM	Chrysanthemum	Imbalanced nutrition	-	INM	1	-	-	4	-	-	-	-	-

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No.	Kg
16	Nutrition in animals	Buffalo	Poor nutrition	-	Enrichment of dry fodder	7	5	2	8	-	-	-	-	-
17	Parasite management	Buffalo calves	Worm infestation	-	Deworming in buffalo calves	5	2	-	7	-	-	-	-	-
18	Parasite management	Goat kids	Worm infestation	-	Deworming in goat kids	3	1	-	4	-	-	-	-	-
19	Fuel saving devices	Chulha	Drudgery in cooking	-	Oorza chulha for fuel efficiency	4	-	2	5	-	-	-	-	-
20	Nutrition	Kitchen garden	Nutrition deficiency	-	Introduction of Kitchen garden	3	-	1	6	-	-	-	-	-
21	Drudgery reduction	Improved Sickle	Drudgery	-	Demonstration of improved Sickle in Wheat	4	-	1	-	-	-	-	-	-

3.B2. Details of technology used during reporting period

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
1	GPBD-4 variety in Groundnut	UAS, Dharwad	Groundnut	-	1	4	20.0
2	TAG-24 variety	UAS, Dharwad	Groundnut	-	1	4	20.0
3	Selection-4 variety	UAS, Dharwad	Groundnut	-	1	3	
4	Powdery mildew management	UAS, Dharwad	Sunflower	-	1	3	
5	Phosphorous nutrition	UAS, Dharwad	Sunflower	-	1	2	
6	Caterpillar management	UAS, Dharwad	Sunflower	-	1	2	
7	Boron nutrition	UAS, Dharwad	Sunflower	-	1	2	
8	IPM	UAS, Dharwad	Bengalgram	-	1	4	
9	Wilt management	PDBC Bangalore	Bengalgram	1	-	2	
10	Arka Kalyan variety	IIHR, Bangalore	Onion	-	1	3	2.2
11	JSP-39 variety	UAS, Dharwad	Groundnut	1	-	2	2.0
12	DDHC-11 variety	UAS, Dharwad	Cotton	-	1	4	42.0
13	ICM in Bt Cotton	UAS, Dharwad	Cotton	-	1	3	-
14	CaCl ₂ Seed treatment	UAS, Dharwad	Rabi jowar	-	1	3	-
15	Improved Sickie	CIAE, Bhopal	Wheat	-	1	3	-
16	Split application of nitrogen in Maize	UAS, Dharwad	Maize	1	-	1	-
17	Spacing & seed rate management	Farmers	Onion	1	-	2	-
18	Shoot and fruit borer management	UAS, Dharwad and PDBC, Bangalore	Brinjal	1	-	2	-
19	Kitchen garden	UAS, Dharwad	Kitchen garden	-	1	3	-
20	Foliar spray of ZnSo ₄	UAS, Dharwad	Chilli	1	-	2	2.0
21	DSV-6 variety	UAS, Dharwad	Kharif Jowar	-	1	2	-
22	Arka Ananya hybrid	IIHR, Bangalore	Tomato	-	1	2	-
23	INM in Chrysanthemum	UAS, Dharwad	Chrysanthemum	-	1	2	-
24	Oorza Chulha	Indian Institute of Science, Bangalore	Chulha	-	1	3	-
25	Deworming in calves	UAS, Dharwad	Calves	-	1	2	-
26	Enrichment of dry fodder	UAS, Dharwad	Buffalo calves	-	1	7	-
27	Deworming in Goat kids	UAS, Dharwad	Goat kids	-	1	3	-

3.B2 contd..

No. of farmers covered															
OFT				FLD				Training				Others (Supply of seeds)			
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
-	-	-	-	19	4	3	1	81	14	7	2	21	-	-	-
-	-	-	-	10	1	1	1	61	4	5	1	11	-	-	-
-	-	-	-	36	7	5	2	65	12	10	4	40	-	-	-
-	-	-	-	20	4	3	2	59	7	6	2	-	-	-	-
3	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-
-	-	-	-	9	2	1	1	37	-	4	-	-	-	-	-
-	-	-	-	8	-	-	-	41	-	6	-	-	-	-	-
-	-	-	-	40	11	10	3	94	11	21	7	-	-	-	-
6	-	-	-	-	-	-	-	11	-	-	-	-	-	-	-
-	-	-	-	6	-	-	-	61	4	7	-	21	-	5	-
3	-	-	-	-	-	-	-	31	-	5	-	5	-	-	-
-	-	-	-	35	15	5	3	64	14	12	2	201	-	25	-
-	-	-	-	11	5	7	2	59	4	15	-	-	-	-	-
-	-	-	-	18	4	2	2	60	5	14	-	-	-	-	-
-	-	-	-	0	15	0	5	0	35	6	-	-	-	-	-
3	-	-	-	-	-	-	-	30	-	4	-	-	-	-	-
6	-	-	-	-	-	-	-	44	-	5	-	-	-	-	-
5	-	-	-	-	-	-	-	37	-	10	-	-	-	-	-
-	-	-	-	-	8	-	2	-	48	-	13	-	-	-	-
3	-	-	-	-	-	-	-	41	-	9	-	-	-	-	-
-	-	-	-	17	4	3	1	37	5	4	-	25	-	-	-
-	-	-	-	12	-	-	-	27	-	-	-	-	-	-	-
-	-	-	-	15	5	5	-	39	4	5	-	-	-	-	-
-	-	-	-	-	3	-	-	-	57	10	14	-	-	-	-
-	-	-	-	5	16	3	2	7	16	3	-	-	-	-	-
-	-	-	-	5	16	3	1	41	110	15	61	-	-	-	-
-	-	-	-	4	12	3	1	15	37	10	5	-	-	-	-

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

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

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

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

4.B. Achievements on technologies Assessed and Refined

4.B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Area (ha)
Integrated Nutrient Management	Chilli	Assessment of FeSo ₄ in Chilli	3	1.4
Varietal Evaluation	Groundnut	Assessment of JSP-39 variety	3	1.4
Integrated Pest Management	Brinjal	Management of fruit borer	5	1.4
Integrated Crop Management	Onion	Sowing methods and seed rate	6	2.8
Integrated Disease Management	Bengalgram	Trichoderma dosage for effective wilt management	6	2.8
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			23	9.8

4.B.2. Technologies Refined under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Area (ha)
Integrated Nutrient Management	Maize	Split application of nitrogen in Maize	3	1.4
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			3	1.4

4.B.3. Technologies assessed under Livestock

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

4.B.4. Technologies Refined under Livestock

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

4.C1. Results of Technologies Assessed

Results of On Farm Trial

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement done	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Groundnut (Spreading)	Rainfed	<ul style="list-style-type: none"> The yield performance of local Mardur variety is decreasing over the years. So to assess the yield performance, the new variety JSP-39 was proposed for assessment 	Assessment of yield performance of JSP-39 Groundnut (Spreading) variety	3	<p><u>Technology Option-1(Farmers Practice) :</u> Cultivation of Mardur variety</p> <p><u>Technology Option-2:</u> Assessment of DSG-1 variety</p> <p><u>Technology Option-3:</u> Assessment of JSP-39 variety</p>	<p>Pod yield Net return B:C Ratio</p> <p>Pod yield Net return B:C Ratio</p> <p>Pod yield Net return B:C Ratio</p>	<p>5.32 Qt/ha Rs. 2748/- 1:1.21</p> <p>6.10 Qt./ha Rs. 4229/- 1:1.33</p> <p>6.99 Qt./ha Rs. 5465/- 1:1.44</p>	<ul style="list-style-type: none"> Pod yield is high Resistant to fusarium wilt 	<ul style="list-style-type: none"> Pod yield (32%) is more compared to local, early maturity (12-15 days) compared to local, resistant to fusarium wilt 	Nil	Nil

Technology Assessed	Production	Unit (Qt/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17
Technology option 1 (Farmer's practice) Cultivation of Mardur variety	Pod yield	5.32	2748.00	1:1.21
Technology option 2 Assessment of DSG-1 variety	Pod yield	6.10	4229.00	1:33
Technology option 3 Assessment of JSP-39 variety	Pod yield	6.99	5465.00	1:44

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement done	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Onion	Rainfed	<ul style="list-style-type: none"> Farmers follow criss cross method of sowing which interferes in weeding operation. Due to labour problem, hand weeding is also not possible 	Assessment of sowing method and seed rate in dry land Onion crops	03	<p><u>Technology Option-1 (Farmers' Practice):</u> Criss-cross method of sowing by using 2.5 kg seeds/ha.</p> <p><u>Technology Option-2:</u> Single row sowing of with seed rate 8 kg/ha</p> <p><u>Technology Option-3:</u> Single row sowing using 2.5 seeds kg/ha</p>	<p>Cost of weeding</p> <p>Bulb yield</p> <p>Cost of weeding</p> <p>Bulb yield</p> <p>Cost of weeding</p> <p>Bulb yield</p>	<p>Rs. 2700 (3 weedings)</p> <p>90.26 Qt/ha</p> <p>Rs. 1650/- (2 weedings)</p> <p>88.23</p> <p>Rs. 1400/- (1 weeding)</p> <p>112.75 Qt/ha</p>	<ul style="list-style-type: none"> Due to inter cultivation less weeding is required and also helps for soil loosening leading to good bulb size and more bulb yield 	<ul style="list-style-type: none"> Attractive bulb shape, size and good market price were obtained. These factors have impressed the farmers 	Nil	Nil

Technology Assessed	Production	Unit (Qt/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17
Technology Option-1: (Farmer's practice) Criss-cross method of sowing by using 2.5 kg seeds/ha.	Bulb yield	90.26	39430.00	1:6.2
Technology Option-2: Single row sowing with seed rate 8 kg/ha	Bulb yield	88.23	36765.00	1:5.6
Technology Option-3: Single row sowing with 2.5 seeds kg/ha	Bulb yield	112.15	49975.00	1:8.19

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement done	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Bengalgram	Irrigated	<ul style="list-style-type: none"> Bengal gram is grown under irrigated situation in the identified village of Nargund block. Incidence of wilt is a major problem affecting the productivity 	Assessment of Trichoderma dosage for effective control of wilt disease in Bengalgram	8	<p><u>Technology Option-1 (Farmers' Practice):</u> Seed treatment with captan @ 2.5gm/kg</p> <p><u>Technology Option-1:</u> Seed treatment with Trichoderma 4gm/kg</p> <p><u>Technology Option-2:</u> Seed treatment with Trichoderma 10gm/kg</p>	<p>% of disease incidence Yield B:C Ratio</p> <p>% of disease incidence Yield B:C Ratio</p> <p>% of disease incidence Yield B:C Ratio</p>	<p>35.26 7.62 Qt/ha 1:1.91</p> <p>23.11 8.2 Qt/ha 1:2.00</p> <p>16.48 10.22 Qt/ha 1:2.35</p>		<ul style="list-style-type: none"> Optimum Plant population is maintained in irrigated condition with technology option-3 Trichoderma should be made available at village level 		Increased dosage of Trichoderma will have prolonged effect because of colonization of Trichoderma spore in the Rhizosphere which in turn check the multiplication of spores of wilt causing fungi.

Technology Assessed	Production	Unit (Qt/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17
Technology option-1 (Farmer's practice): Seed treatment with captan @ 2.5gm/kg	Yield	7.62	7838/-	1:1.91
Technology option-2 : Seed treatment with Trichoderma @ 4gm/kg	Yield	8.2	8826/-	1:2.00
Technology option-3: Seed treatment with Trichoderma @ 10gm/kg	Yield	10.22	12661/-	1:2.35

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement done	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Brinjal	Irrigated	<ul style="list-style-type: none"> Brinjal shoot and fruit borer is severe pest affecting productivity. Incidence occurs immediately after transplanting and will be noticed throughout the growing season during Kharif. 	Assessment of Neem cake and installation of pheromone traps with lucina lures for management of fruit and shoot borer in Brinjal	6	<p><u>Technology Option-1 (Farmers Practice) :</u> Foliar application of monocrotophos @ 1.5 ml/ltr</p> <p><u>Technology Option-2:</u> Soil application of Neemcake @ 500kg/ha two split at time of planting and 60 DAT Installation of Pheromone traps with lucina lures @ 8 No/ha (changes of lures at 20 DAT, 40 DAT & 60DAT.)</p> <p><u>Technology Option-3:</u> Foliar application of prophenophos 50 EC at flowering stages of the crop along with technology option-2</p>	% of pest incidence Yield B:C Ratio	12.28 304 Qt/ha 1:4.27				<ul style="list-style-type: none"> Installation of Pheromone traps with lucina lures mass trapping of adult of Leucinodorus orbonalis which reduces the pest population and application of Neemcake helps in repelling and has ovicidal effect on pest. Spraying of prophenophos at flowering stage helps in adult moths to lay eggs on growing shoot and flower, thus controlling the pest.
						% of pest incidence Yield B:C Ratio	8.81 321 Qt/ha 1: 4.43		<ul style="list-style-type: none"> 2-3 Pesticides spray can be reduced It is low cost less labor intensive 		
						% of pest incidence Yield B:C Ratio	4.50 355 Qt/ha 1:4.85				

Technology Assessed	Production	Unit (Qtl/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17
Technology option-1 : (Farmer's practice) Foliar application of monocrotophos @ 1.5ml/lit	Yield	304	93175/-	1:4.27
Technology option-2: Soil application of Neemcake @ 500kg/ha two splits at a time of planting and 60 DAT. Installation of pheromone traps with lucina lures@ 8No/ha (changes of lures at 20DAT, 40DAT, 60DAT)	Yield	321	99417/-	1: 4.43
Technology option-3: Foliar application of prophenophos 50 EC at Flowering stages of the crop along with technology option-2	Yield	355	112755/-	1:4.85

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement done	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Chilli	Rainfed	<ul style="list-style-type: none"> Due to micronutrient deficiency, the yield and quality of the Chilli are reduced 	Assessment of foliar spray of ZnSo ₄ in Chilli	3	<p><u>Farmers Practice :</u> Application of 80:30:30 NPK Kg/ha</p>	Plant height (cms) No. of Branches No. of Flowers No. of fruits Yield (Qtl/ha)	23.32 10.20 81 66 6.87	<ul style="list-style-type: none"> Chilli yield is more due to increase in number of flowers & fruits due to micronutrient management and application of appropriate RDF 	<ul style="list-style-type: none"> Due to micronutrient application, the no. of flowers and no. of fruits are increased. Consequently, the yield is increased compared to farmers' practice 	Nil	
					<p><u>Technology Option-1:</u> Application of 100:50:50 NPK Kg/ha</p>	Plant height (cms) No. of Branches No. of Flowers No. of fruits Yield (Qtl/ha)	25.10 11.40 87 74 7.18				
					<p><u>Technology Option-2:</u> Application of 100:50:50 of NPK Kg/ha and 25 kg ZnSo₄ as foliar spray</p>	Plant height (cms) No. of Branches No. of Flowers No. of fruits Yield (Qtl/ha)	25.88 12.06 91 78 8.12				

Technology Assessed	Production	Unit (Qtl/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17
<u>Technology Option-1 (Farmers Practice):</u> Application of 80:30:30 NPK Kg/ha	Yield	5.87	22885/-	1: 2.85
<u>Technology Option-2:</u> Application of 100:50:50 NPK kg/ha	Yield	7.18	28995/-	1: 3.05
<u>Technology Option-3:</u> Application of 100:50:50 of NPK kg/ha and 25 kg ZnSo4 as foliar spray	Yield	8.12	33760/-	1: 3.25

* The yield levels are low because of moisture stress due to moisture stress caused by low rainfall

4.C2. Details of each On Farm Trial to be furnished in the following format separately along with raw data as per the separate proforma provided

Assessment -1 : Assessment of yield performance of JSP-39 variety in spreading Groundnut

- 1) Title of Technology Assessed : Assessment of yield performance of JSP-39 ground nut (spreading) variety
- 2) Problem Definition : The yield performance of local Mardur variety is reduced over the years. So to assess the yield Performance, new variety JSP-39 was assessed for its yield performance
- 3) Details of technologies selected for assessment :
 - Technology Option-1 (Farmers' practice) : Cultivation of local Mardur variety
 - Technology Option-2 : Assessment of DSG-1 variety
 - Technology Option-3 : Assessment of JSP-39 variety
- 4) Source of technology :
 - i) Technology Option-1 : Farmers
 - ii) Technology Option-2 : UAS, Dharwad
 - iii) Technology Option-3 : UAS, Dharwad
- 5) Production system and thematic area : Medium & Big Farmers,
Thematic area : Assessment of new variety
- 6) Performance of the Technology with Performance indicators : The pod yield of JSP-39 is higher (32%) compared to local Mardur variety
- 7) Final recommendation for micro level situation : Recommended for Front Line Demonstrations
- 8) Constraints identified and feedback for research : The variety has shriveled kernels
- 9) Process of farmers participation and their reaction : Farmers have actively participated in all activities and they are impressed about the yield performance

Assessment -2 : Assessment of sowing methods and seed rate in Onion under dry land situation

- | | | | |
|----|-----------------------------------------------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1) | Title of Technology Assessed | : | Assessment of sowing methods and seed rate in dry land Onion crop |
| 2) | Problem definition | : | In identified villages, farmers are practicing criss-cross method of sowing using 2.5 kg seed/ha wherein inter cultivation is not possible and due to non-availability of labours for hand weeding the productivity get affected. Hence, this assessment was proposed |
| 3) | Details of technologies selected for assessment | : | <ul style="list-style-type: none"> • <u>Technology Option-1(Farmers' practice)</u> : Criss-cross method by using 2.5 kg of seed/ha • <u>Technology Option-2</u> : Single row sowing of seeds @ 8 kg/ha • <u>Technology Option-3</u> : Single row sowing of seeds @ 2.5 kg/ha |
| 4) | Source of technology | : | <ul style="list-style-type: none"> i) Technology Option-1 : Farmers ii) Technology option-1 : UAS, Dharwad iii) Technology option-2 : Discussion with farmers |
| 5) | Production system and thematic area | : | Big and medium farmers production system, Thematic area : Spacing and seed rate management |
| 6) | Performance of the Technology with performance indicators | : | Single row method of sowing using 2.5 kg/ha of seeds has increased bulb yield and reduced cost on weeding |
| 7) | Final recommendation for micro level situation | : | Recommended for Front Line Demonstrations |
| 8) | Constraints identified and feedback for research | : | Nil |
| 9) | Process of farmers participation and their reaction | : | Farmers actively participated in all activities and were impressed with results |

Assessment -3 : Assessment of trichoderma dosage for effective control of wilt in Bengalgram

- 1) Title of Technology Assessed : Assessment of Trichoderma dosage for effective control of wilt disease in Bengal gram
- 2) Problem definition : Bengal gram is grown under irrigated situation in the identified village of the Nargund block. Incidence of wilt is major problem affecting the productivity.
- 3) Details of technologies selected for assessment :
 - *Technology Option-1 (Farmers' practice):* Seed treatment with caption @ 2.5 gm/kg
 - *Technology Option-2:* Seed treatment with Trichoderma 4 gm/kg
 - *Technology Option-3:* Seed treatment with Trichoderma 10 gm/kg
- 4) Source of technology : UAS, Dharwad and PDBC, Bangalore
- 5) Production system and thematic area : Small production system under irrigated condition (Biological disease management)
- 6) Performance of the Technology with performance indicators :
- | Technology Assessed | Parameters | Data on the parameters |
|---------------------------------------------------------------------|--------------------|------------------------|
| <i>Technology Option-1:</i> Seed treatment with caption @ 2.5 gm/kg | % of disease index | 35.26 |
| | Yield (Qtl/ha) | 7.62 |
| | B.C. Ratio | 1: 1.91 |
| Technology Option-2: Seed treatment with Trichoderma @ 4 gm/kg | % of disease index | 23.11 |
| | Yield (Qtl/ha) | 8.2 |
| | B.C. Ratio | 1: 2.0 |
| Technology Option-3: Seed treatment with Trichoderma @ 10 gm/Kg | % of disease index | 16.48 |
| | Yield (Qtl/ha) | 10.22 |
| | B.C. Ratio | 1: 2.35 |
- 7) Final recommendation for micro level situation : Seed treatment with Trichoderma @ 10gm/Kg seed has controlled the wilt disease in Bengal gram as compared to seed treatment with Trichoderma (4gm) and Capton (2.5gm). Hence this technology is recommended to farmers in the district.
- 8) Constraints identified and feedback for research : Nil
- 9) Process of farmers participation and their reaction : The farmers have participated in the management of wilt disease. Farmers opined as follows.
 i) Optimum plant population is maintained in irrigated condition with Technology Option-3
 ii) Trichoderma should be made available at Rayata Samparka Kendras or at village level by Department of Agriculture

Assessment -4 : Assessment of Neemcake and installation of pheromone traps for management of fruit and shoot borer in Brinjal

- 1) Title of Technology Assessed : Assessment of Neemcake and installation of pheromone traps with lucin lures for management of fruit and shoot borer in Brinjal
- 2) Problem definition : Brinjal shoot and fruit borer is severe pest, affecting the brinjal productivity. Incidence occurs immediately after transplantation and will be noticed throughout the growing season during Kharif. The yield loss is about 25-30%.
- 3) Details of technologies selected for assessment :
 - *Technology Option-1(Farmers' practice)*: Foliar application of monocrotophos @ 1.5 ml/lit
 - *Technology Option-2*: Soil application of Neem cake @ 500 kg/ha in two split at the time of planting and at 60 DAT, installation of Phermone traps with lucin lures @ 8 No/ha. Change of lures at 20 DAT, 40 DAT and 60 DAT.
 - *Technology Option-3*: Foliar application of profenophos 50EC at flowering stages of the crop + Technology Option-2
- 4) Source of technology : UAS, Dharwad and PCI, Bangalore
- 5) Production system and thematic area : Small production system under irrigated condition
- 6) Performance of the Technology with performance indicators :
- | Technology Assessed | Parameters | Data on the parameters |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------|
| <i>Technology Option-1(Farmers' practice)</i> : Foliar application of monocrotophos @ 1.5 ml/lit | % of pest incidence | 12.28 |
| | Yield (Qtl/ha) | 304 |
| | B.C. Ratio | 1: 4.27 |
| <i>Technology Option-2</i> : Soil application of Neem cake @ 500 kg/ha two split at the time of planting and 60 DAT, installation of pheromone traps with lucin lures @ 8 No/ha | % of pest incidence | 8.81 |
| | Yield (Qtl/ha) | 321 |
| | B.C. Ratio | 1: 4.41 |
| <i>Technology Option-3</i> : Foliar application of Prefenophos 50 EC at flowering stage along with technology option-2 | % of pest incidence | 7.5 |
| | Yield (Qtl/ha) | 355 |
| | B.C. Ratio | 1: 4.85 |
- 7) Final recommendation for micro level situation : Neem cake split application and installation of pheromone traps with lucin lures for mass trapping of *Leucinodus orbanalis* along with sprays of Prefenophos recommended for effective management of shoot and fruit borer incidence in brinjal crop.
- 8) Constraints identified and feedback for research : Pheromone traps and Neem cake need to be made available to the farmers at village level.
- 9) Process of farmers participation and their reaction : The farmers have participated in mass trapping and soil application of Neem cake. They reacted positively for Technology Option-3.

Assessment - 5 : Assessment of foliar spray of Zinc Sulphate in Chilli

- 1) Title of Technology Assessed : Assessment of foliar spray of ZnSo₄ in Chilli
- 2) Problem definition : Due to micronutrient deficiency, the yield and quality of the Chilli gets affected resulting in 20-25% loss
- 3) Details of technologies selected for assessment :
 - Technology Option-1 (Farmers' practice) : Application of 80:30:30 NPK Kg/ha
 - Technology Option-2 : Application of 100:50:50 Kg/ha
 - Technology Option-3 : Application of 100:50:50 NPK Kg/ha and 25 Kg ZnSo₄ foliar spray
- 4) Source of technology :
 - i) Technology Option-1 : Farmers
 - ii) Technology Option-2 : UAS, Dharwad
 - iii) Technology Option-3 : UAS, Dharwad
- 5) Production system and thematic area : Medium and big farmers,
Thematic area: INM
- 6) Performance of the Technology with performance indicators :
- | Technology Assessed | Parameters | Data on the parameters |
|------------------------------------------------------------------------------------------------------------------|-------------------|------------------------|
| <u>Technology Option-1 (Farmers' practice):</u>
Application of 80:30:30 NPK Kg/ha | Plant height (cm) | 23.32 |
| | No. of branches | 10.20 |
| | No. of flowers | 81 |
| | No. of fruits | 66 |
| | Yield (Qtl/ha) | 6.87 |
| <u>Technology Option-2:</u>
Application of 100:50:50 of NPK Kg/ha | Plant height (cm) | 25.10 |
| | No. of branches | 11.40 |
| | No. of flowers | 87 |
| | No. of fruits | 74 |
| <u>Technology Option-3:</u>
Application of 100:50:50 of NPK Kg/ha and 25 Kg ZnSO ₄ as foliar spray | Plant height (cm) | 25.88 |
| | No. of branches | 12.06 |
| | No. of flowers | 91 |
| | No. of fruits | 78 |
| | Yield (Qtl/ha) | 8.12 |
- 7) Final recommendation for micro level situation : Application of ZnSo₄ along with RDF is recommended for better productivity.
- 8) Constraints identified and feedback for research : Nil
- 9) Process of farmers participation and their reaction : Farmers actively participated and they were impressed about the yield performance under Technology Option-3.

4.D1. Results of Technologies Refined

Results of On Farm Trial

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement done	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Maize	Irrigated	High rates of nitrogen applied at short interval leads to wastage of nitrogen in soil. Whereas split application ensures constant availability of nitrogen for plant growth	Refinement on split application of nitrogen in Maize	3	<p><u>Technology Option-1 (Farmers' Practice):</u> Application of nitrogen @ 100 Kg/ha in two splits</p> <p><u>Technology Option -2:</u> Application of nitrogen @ 150 Kg/ha in two splits i.e., 50 Kg basal and 100 Kg at 30 DAS</p> <p><u>Technology Option-3:</u> Application of nitrogen @ 150 Kg/ha in three splits i.e., 50 Kg basal, 50 Kg at 30 DAS and 50 Kg at 60 DAS</p>	<ul style="list-style-type: none"> Plant height(cm) No. of grains per cob 1000 grain weight (g) Yield (Qtl/ha) 	<p>182.66</p> <p>43.20</p> <p>274.26</p> <p>50.91</p>	Grain yield is more than the farmers practice	Cob length & grain yield is more than the farmers' practice	Yes	High rates of nitrogen applied at short interval leads to wastage of nitrogen in soil. So less quantity of nitrogen with more number of splits will enhance the constant availability of nitrogen for crop growth and consequently for higher production
						<ul style="list-style-type: none"> Plant height(cm) No. of grains per cob 1000 grain weight(g) Yield (Qtl/ha) 	<p>183.83</p> <p>44.80</p> <p>287.73</p> <p>58.30</p>				
						<ul style="list-style-type: none"> Plant height(cm) No. of grains per cob 1000 grain weight (g) Yield (Qtl/ha) 	<p>188.11</p> <p>44.86</p> <p>290.70</p> <p>61.45</p>				

Contd..

Technology Refined	Production	Yield (Qtl/ha)	Net Return (Profit) in Rs. / Ha.	BC Ratio
13	14	15	16	17
<u>Technology Option-1 (Farmers Practice):</u> Application of nitrogen @ 100 Kg/ha in two splits	Grain yield	50.91	24283	1: 2.88
<u>Technology Option -2:</u> Application of nitrogen @ 150kg/ha in two splits i.e., 50 kg basal and 100 Kg at 30 DAS	Grain yield	58.30	29285	1: 3.11
<u>Technology Option-3:</u> Application of nitrogen @ 150kg/ha in three splits i.e., 50 Kg basal, 50 Kg at 30 DAS and 50 Kg at 60 DAS	Grain yield	61.45	31080	1: 3.16

4.D.2. Details of each On Farm Trial to be furnished in the following format separately as per the proforma below

- | | | | |
|----|-----------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1) | Title of Technology Refined | : | Refinement on time application of nitrogen in Maize |
| 2) | Problem definition | : | High rates of nitrogen applied at short interval leads to accumulation of residual nitrogen in soil. This has affected the productivity of maize |
| 3) | Details of technologies selected for refinement | : | <ul style="list-style-type: none"> • <u>Technology Option-1 (Farmers' practice)</u> : Application of nitrogen @ 100 kg/ha in two splits • <u>Technology Option-1</u> : Application of nitrogen @ 150 kg/ha in two splits i.e., 50 kg basal and 100 kg at 30 DAS • <u>Technology Option-2</u> : Application of nitrogen @ 150 kg/ha in three splits i.e., 50 kg basal, 50 kg at 30 DAS and 50 kg at 60 DAS |
| 4) | Source of technology | : | <ul style="list-style-type: none"> i) Farmers practice : Farmers ii) Technology option-1 : UAS, Dharwad iii) Technology option-2 : UAS, Dharwad |
| 5) | Production system and thematic area | : | Medium and big farmers
[Nitrogen management] |
| 6) | Performance of the Technology with performance indicators | : | The grain yield is more in three split application than two split application of nitrogen |
| 7) | Final recommendation for micro level situation | : | Three split application of nitrogen at 50 Kg/ha at sowing, 50 Kg/ha at DAS and 50 Kg/ha at 60 DAS in maize is recommended |
| 8) | Constraints identified and feedback for research | : | - |
| 9) | Process of farmers participation and their reaction | : | Farmers actively participated and they were impressed about the yield performance due to three split applications of nitrogen. |

PART V - FRONTLINE DEMONSTRATIONS**5.A. Summary of FLDs implemented during 2008-09**

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
1.	Oilseeds	Rainfed	Kharif 2008	Groundnut (Spreading)	Mardur	--	ICM	ICM	30	30	10	40	50	
		Irrigated	Rabi/ Summer 2008-09	Sunflower	-	Swati-145 Singenta-275 Kaveri-618	ICM	ICM	25	25	7	25	32	
		Irrigated	Rabi/ Summer 2008-09	Groundnut	TAG-24 GPBD-4	- -	Demonstration of varieties & ICM	ICM ICM	25	25	12	20	32	
		Rainfed	Rabi 2008-09	Sunflower	-	Sandoz	Phosphorous management	Application of recommended dose of phosphorous	05	05	01	04	05	
2.	Pulses	Rainfed	Kharif 2008-09	Greengram	Selection-4 (S-4)	-	ICM & Introduction of S-4 variety	Integrated Crop Mangement	35	35	12	75	87	
		Rainfed	Rabi 2008-09	Bengalgram	A-1	-	ICM	Integrated Crop Management	40	40	16	34	50	
3.	Cereals	Rainfed	Kharif 2008-09	Kharif Jowar	DSV-6	-	Demonstration of varieties	Demonstration of DSV-6 Variety	10	10	5	20	25	
		Rainfed	Rabi 2008-09	Rabi Jowar	M35-1	-	Seed priming for drought tolerance	Seed priming with CaCl ₂ (2%)	25	25	6	36	42	
4.	Millets													
5.	Vegetables	Rainfed	Kharif 2008	Onion	Arka Kalyan	-	Introduction of new variety	Introduction of high yielding Arka Kalyan in Onion	5	5	2	10	12	

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
		Irrigated	Summer 2008	Tomato	Arka Ananya	-	Introduction of new hybrid	Demonstration of leaf curl tolerant Arka Ananya hybrid in Tomato	2.4	2.4	-	12	12	
6.	Flowers	Irrigated	Kharif 2008	Chrysanthemum	Karnool		INM	Integrated Nutrient Management in Chrysanthemum	8	8	4	16	20	
7.	Ornamental													
8.	Fruit													
9.	Fiber	Rainfed	Rabi 2008-09	Desi Cotton	DDHC-11	-	ICM	ICM	20	20	11	39	50	
		Irrigated	Kharif 2008-09	Bt Cotton	-	RCH-2Bt	ICM	ICM	10	10	9	16	25	
10.	Implements	-	Rabi 2009	Irrigated Wheat	-	-	Drudgery reduction	Improved Sickle	3	3	3	17	20	
11.	Others Enterprises	-	-	-	-	-	Drudgery reduction	Oorja Chulha	-	-	2	4	6	
12.	Enterprises	-	-	-	-	-	Nutrition	Nutrition Garden	-	-	2	8	10	
	Buffaloe	-	2008-09	Buffaloe	Local	-	Nutrition	Enrichment of dry fodder	-	-	7	13	20	
	Buffaloe calves	-	2008-09	Calves	Local	-	Deworming	Deworming	-	-	10	15	25	
	Goat kids	-	2008-09	Goat kids	Local	-	Deworming	Deworming	-	-	10	10	20	

5.A. 1. Soil fertility status of FLDs plots during 2008-09

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	Kharif 2008	Groundnut (Spreading)	Mardur	-	ICM	ICM	Kharif 2008	Medium	Medium	Poor	Groundnut (Spreading)
		Irrigated	Rabi/ Summer 2008-09	Sunflower		Swati-145 Singenta-275 Kaveri-618	ICM	ICM		Medium	Medium	Medium	Maize
		Irrigated	Rabi/ Summer 2008-09	Groundnut	TAG-24 GPBD-4	-	Demonstration of verities	ICM		Medium	Medium	Medium	Onion, Hybrid Jowar
		Rainfed	Rabi 2008-09	Sunflower	-	Sandoz	Phosphorous management	Application of RDF phosphorous management	Rabi 2008-09	Low	Medium	High	Jowar
2.	Pulses	Rainfed	Kharif 2008-09	Greengram	Selection-4	-	ICM & Introduction of S-4	Integrated Crop Management	Kharif	Medium	Medium	High	Jowar
		Rainfed	Rabi 2008-09	Bengalgram	A-1	-	IPM	Integrated Crop Management	Rabi	Medium	Medium	High	Maize
3.	Cereals	Rainfed	Kharif 2008	Kharif Jowar	DSV-6	-	Demonstration of Variety	Demonstration of DSV-6 variety	Kharif	High	Medium	Medium	Groundnut (Spreading)
		Rainfed	Rabi 2008-09	Rabi Jowar	M35-1	-	Seed priming	Seed priming with CaCl ₂ (2%)	Rabi	Medium	Medium	Medium	Greengram and Groundnut
4.	Millets												
5.	Vegetables	Rainfed	Kharif 2008	Onion	Arka Kalyan	-	Introduction of new variety	Introduction of high yielding Arka Kalyan in Onion	Kharif 2008	Medium	Medium	Low	Groundnut
		Irrigated	Summer 2008	Tomato	-	Arka Ananya	Leaf curl management	Demonstration of leaf curl tolerant Arka Ananya hybrid in Tomato	Summer 2008-09	Medium	Medium	High	Chrysanthemum

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	
6.	Flowers	Irrigated	Kharif 2007	Chrysanthemum	Karnool	-	Nutrient management	Integrated Nutrient Management in Chrysanthemum	Kharif 2008-09	Medium	Medium	High	Brinjal
7.	Fibre	Rainfed	Rabi 2008-09	Desi Cotton	DDHC-11	-	ICM	ICM	Rabi 2008-09	High	High	Medium	Greengram
		Irrigated	Kharif 2008-09	Bt Cotton	-	RCH-2Bt	ICM	ICM	Kharif 2008-09	Medium	Medium	Medium	Groundnut

5.B. Results of Frontline Demonstrations

5.B.1. Oilseeds :

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
							H	L	A										
Oilseeds :																			
Groundnut (Spreading)	Integrated Crop Management	Mardur	-	Rainfed	50	30	15.75	8.40	11.57	9.00	28.55	15937	33553	17616	2.10	12867	26100	13233	2.02
Sunflower	ICM	-	Swati-145	Irrigated	8	6.44	14.60	9.75	12.48	9.75	28.00	12640	27456	14816	2.17	10682	21450	10768	2.00
		-	Singenta-275	Irrigated	20	15.4	16.25	10.55	13.31	10.55	26.16	12142	29282	17140	2.41	10557	23210	12653	2.17
		-	Kaveri-618	Irrigated	4	3.2	13.00	9.75	11.36	9.00	26.22	12203	24992	12789	2.04	10745	19800	9055	1.84
Groundnut	ICM	TAG-24	-	Irrigated	6	4.8	22.05	16.80	19.07	14.70	29.72	21099	55303	34204	2.62	17045	42630	25585	2.50
	ICM	GPBD-4	-	Irrigated	26	20.2	19.95	12.60	18.09	13.60	32.86	21099	50652	29553	2.40	17445	38080	25585	2.18

5.B.2. Pulses

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
							H	L	A										
Greengram	Integrated Crop Management	Selection-4	-	Rainfed	87	35	4.6	1.2	3.16	2.64	19.69	8840	10744	1904	1.21	7850	8976	1126	1.14
Bengalgram	Integrated Crop Management	A-1	-	Rainfed	50	40	14.20	7.00	9.88	7.6	30.00	9720	21242	11522	2.18	7803	1634	8537	2.09
Total																			

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

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Local
Groundnut (Spreading)		
1. Average pods /Plant	28.36	21.32
Groundnut		
1. TAG-24 Average pods/plant	42.87	23.38
2. GPBD-4 Average pods/plant	42.12	23.38
Greengram		
% incidence of pod borer	15.58	30.18
Bengalgram		
% incidence of pod borer	14.38	33.28

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

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Local
Body weight in buffalo calves (kg at one month old)	27 kg	26 kg
Body weight in goat kid at 1 month old	3.1	3.0

5.B.6. Other enterprises

Enterprise	Name of the technology demonstrated	Variety/ species	No. of Demo	Units/ Area (m ²)	Yield (q/ha)			% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)				
					Demo				Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Cooking	Oorja Chulha for fuel efficiency	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nutrition	Nutrition Garden	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oyster mushroom																	
Button mushroom																	
Vermicompost																	
Sericulture																	
Apiculture																	
Others																	

H-High L-Low, A-Average

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

Data on other parameters in relation to technology demonstrated				
Parameter with unit	Oorja Chulha (Demo)		Traditional Cooking (Local)	
	Rice	Dhal	Rice	Dhal
1) Quantity(Gms)	500	500	500	500
Time taken for cooking (minutes)	14	28	25	45
Time required to cook 1 kg. of food (minutes)	42		70	
Quantity of fuel required to cook 1 kg of food (gms)	400		1250	
Cost of fuel/kg of food cooked (Rs.)	2.40 (Pellets @ Rs. 6/Kg)		3.12 (firewood @ Rs. 2.5/kg)	
Parameter with unit	Demo (families with nutrition garden)			Check (families without nutrition garden)
2) Expenditure incurred for the purchase of vegetables (Rs.)	600/-			2400 (@ Rs. 200/month)

5.B.7. Farm implements and machinery

Name of the implement	Name of the technology demonstrated	No. of Demo	Units/ Area (m ²)	Yield (q/ha)			% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)				
				Demo				Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Improved Sickle	Harvesting of Irrigated Wheat by Improved Sickle	20	-	H	L	A	-	-	-	-	-	-	-	-	-	-

* 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 in drudgery, time and labour saving etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Local
Weight of the Sickle (gms)	174	283.9
Harvesting of Wheat stalks/hour (kg)	129.72	66.84
Time required to covers 1 Acre of land	12.30	31.11
Drudgery (as felt by farmwomen)	Less drudgery	More drudgery

Demonstrations on farm implements

Name of the implement	Area (Ha)	No. of Demo.	Name of the technology demonstrated	Details on parameters		
				Parameters	Demo	Local check
Ginning Machine	25	25	Ginning	Capacity output (kg/hour)	3.20	-
Seed delintor	25	25	Seed delinting	Capacity output (kg/hour)	0.10	0.08
				Cost (Rs./Qt.)	12.90	80.00
Rotavator	25	25	Stubble incorporation	Capacity output (ha/hr)	0.2	0.3
				Man hour/ha	30	60
Total	75	75				

Extension Programmes organized in Cotton Demonstration Plots

Extension activity	No. of Programmes	Participants			SC/ST		
		Male	Female	Total	Male	Female	Total
Consultancy							
Conventions							
Demonstrations	5	39	5	44	9	2	11
Diagnostic surveys							
Exhibition							
Farmer study tours	1	27	12	39	8	3	11
Farmers Field school							
Field Days	2	122	17	139	15	4	19
Field visits	13	117	14	131	21	5	26
Gram sabha							
Group discussions	5	41	2	43	7	0	7
Kisan Gosthi							
Kisan Mela	1	30	14	44	5	2	7
Training for Extension Functionaries							
Training for farmers	3	75	11	86	16	4	20
Viedo show	2	41	4	45	5	2	7
Newspaper coverage	2						
Popular articles							
Publication							
Radio talks	1						
T.V. Programme							
Others (Pl.specify)							
TOTAL	35	492	79	571	86	22	108

Technical Feedback on the demonstrated technologies on all crops / enterprise

Sl. No	Crop / Enterprise	Name of the technology demonstrated	Feed Back
1	Onion	Introduction of high yielding Onion variety Arka Kalyan	<ul style="list-style-type: none"> Bulb size, shape and colour of Arka Kalyan variety is very attractive and this is tolerant to purple blotch disease.
2	Tomato	Demonstration of leaf curl tolerant hybrid in Tomato	<ul style="list-style-type: none"> During summer season leaf curl infestation in all hybrids is common. This hybrid has shown resistance to leaf curl. Secondly, it has good price in local market due to high juice content in the fruit.
3	Chrysanthemum	Integrated Nutrient Management in Chrysanthemum	<ul style="list-style-type: none"> Micro nutrient deficiency leads to half flower opening leading to under size flowers. This technology of application of spray of micro nutrients like boron and copper has rectified the deficiency.
4	Groundnut (Spreading)	Integrated Crop Management	<ul style="list-style-type: none"> Fusarium wilt & collar rot are the major diseases. Resistant varieties need to be introduced.
5	Sunflower	Integrated Crop Management	<ul style="list-style-type: none"> Powdery mildew resistant variety needs to be introduced.
6	Groundnut	Demonstration of GPBD-4 and TAG-24 varieties	<ul style="list-style-type: none"> High yielding compared to local variety i.e. TMV-2
7	Kharif Jowar	Demonstration of DSV-6 Variety	<ul style="list-style-type: none"> Better grain yield performance Dough quality is better than local variety
8	Rabi Jowar	Seed priming with CaCl ₂ (2%)	<ul style="list-style-type: none"> Uniform germination Uniform bold seeds
9	Sickle	Improved sickle for harvesting of Wheat	<ul style="list-style-type: none"> Increases the efficiency of the farm women in harvesting because of the serrated blade Reduces drudgery of farm women
10	Drudgery in cooking	Oorja Chulha	<ul style="list-style-type: none"> Smokelessness reduces health problems and drudgery in cooking specially in winter and rainy season
11	Buffaloe	Enrichment of dry fodder	<ul style="list-style-type: none"> Feeding of dry fodder has increased the palatability of dry fodder
12	Buffaloe calf & Goat kid	Deworming in buffaloe calves & Goat kids	<ul style="list-style-type: none"> Deworming has enhanced the intake of fodder by calves and kids which in turn increased the body weight

Farmers' reactions on specific technologies

Sl. No	Crop / Enterprise	Name of the technology demonstrated	Feed Back
1	Onion	Introduction of high yielding Onion variety Arka Kalyan	Farmers are very much impressed on bulb size, colour, market rate and also yield of the crop.
2	Tomato	Demonstration of leaf curl tolerance hybrid in tomato	This hybrid is tolerant to leaf curl. Farmers were convinced about hybrid. Only concern is availability of this hybrid seeds.
3	Chrysanthemum	Integrated Nutrient Management in Chrysanthemum	Timely application of micro nutrient helped for better opening of buds, good yield and market price.
4	Groundnut (Spreading)	Integrated Crop Management	<ul style="list-style-type: none"> Farmers were convinced about the trichoderma seed treatment, importance of bio-fertilizers and micronutrients Convinced about the timely spray for the control of leaf minor.
5	Desi Cotton	ICM in Cotton	<ul style="list-style-type: none"> Farmers were impressed about the yield of DDHC-11 variety which is superior over Jayadhar. They have expressed that the application of vermicompost and bio-fertilizers had ensured the stable yield even in moisture stress situation.
6	Bt Cotton	ICM in Bt Cotton	<ul style="list-style-type: none"> Cultivation of Bt Cotton has significantly reduced the cost of cultivation Farmers are of the opinion that use of neem pesticides has reduced the incidence of sucking pests. Usage of growth regulator has reduced dropping of squares and flowers There was effective management of leaf reddening by foliar application of DAP and MgSO₄.
7	Sunflower	Integrated Crop Management	<ul style="list-style-type: none"> Convinced about the usage of ZnSO₄, Gypsum & Boron for the good seed setting
8	Groundnut	Demonstration of GPBD-4 & TAG-24 Varieties	<ul style="list-style-type: none"> Farmers expressed good opinion about yield performance of GPBD-4 & TAG-24 varieties Convinced about the resistance of GPBD-4 variety against rust and tikka diseases
9	Kharif Jowar	Demonstration of DSV-6 variety	<ul style="list-style-type: none"> Farmers expressed good opinion about grain yield performance Better grain colour even though it was harvested in the rainy season
10	Rabi Jowar	Seed priming with CaCl ₂ (2%)	<ul style="list-style-type: none"> Farmers were convinced about the germination percentage & good yield
11	Sickle	Improved Sickle	<ul style="list-style-type: none"> Farmwomen expressed that wooden handle with thick serrated blade increases efficiency and durability
13	Drudgery in cooking	Oorja Chulha	<ul style="list-style-type: none"> Suitable for small households Everyday charging of chulha for 1-2 hours is a major problem Buying of pellets @ 6/kg is costlier as more than 90% of the rural households use agricultural wastes for cooking

Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	5	381	
2	Farmers Training	37	815	
3	Media coverage	3	71	
4	Training for extension functionaries	5	119	

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demo	Units/ Area Ha	Yield (q/ha)			% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)				
					Demo				Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Others (pl.specify)																	
Total																	

H-High L-Low, A-Average

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology	1	30	0	30	0	0	0	30	0	30
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	3	114	5	119	12	0	12	126	5	131
Integrated water management	8	310	0	310	35	0	35	345	0	345
Integrated nutrient management	2	55	0	55	7	0	7	62	0	62

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production	2	60	5	65	10	0	10	70	5	75
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production	4	110	19	129	15	0	15	125	19	144
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	1	31	0	31	0	0	0	31	0	31
Group dynamics										
Formation and Management of SHGs	4	0	109	109	0	10	10	0	119	119
Mobilization of social capital										
Entrepreneurial development of farmers/youths	3	85	0	85	14	0	14	99	0	99
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	101	2402	549	2951	328	106	434	2731	658	3389

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Planting material production										
Vermi-culture	1	14	0	14	0	0	0	14	0	14
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition	1	28	0	28	2	0	2	30	0	30
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
TOTAL	6	141	0	141	19	0	19	160	0	160

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization	1	25	0	25	4	0	4	29	0	29
Information networking among farmers										
Capacity building for ICT application	2	45	0	45	6	0	6	51	0	51
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
Total	13	236	82	318	18	14	32	252	96	348

7.G. Sponsored training programmes

S. No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	Crop production and management										
1.a.	Increasing production and productivity of crops	5	114	15	129	17	4	21	131	19	150
1.b.	Commercial production of vegetables	1	30	5	35	4	0	4	34	5	39
2	Production and value addition										
2.a.	Fruit Plants										
2.b.	Ornamental plants										
2.c.	Spices crops										
3.	Soil health and fertility management	2	64	0	64	10	0	10	74	0	74
4	Production of Inputs at site										
5	Methods of protective cultivation										
6	Others (pl.specify) Water management	8	310	0	310	35	0	35	345	0	345
7	Post harvest technology and value addition										
7.a.	Processing and value addition	2	39	14	53	7	2	9	46	15	61
7.b.	Others (pl.specify)										
8	Farm machinery										
8.a.	Farm machinery, tools and implements										
8.b.	Others (pl.specify)										
9.	Livestock and fisheries										
10	Livestock production and management										
10.a.	Animal Nutrition Management	7	35	115	150	14	31	45	49	146	195
10.b.	Animal Disease Management										
10.c.	Fisheries Nutrition										
10.d.	Fisheries Management										
10.e.	Others (pl.specify)										
11.	Home Science										
11.a.	Household nutritional security										
11.b.	Economic empowerment of women										
11.c.	Drudgery reduction of women										
11.d.	Others (pl.specify)										
12	Agricultural Extension										
12.a.	Capacity Building and Group Dynamics	4	0	109	109	0	10	10	0	119	119
12.b.	Others (pl.specify)	1	10	0	10	0	0	0	10	0	10
	Total	30	602	258	860	87	47	134	689	304	993

Details of sponsoring agencies involved are as follows:

1. Karnataka State Department of Agriculture
2. Command Area Development Authority
3. Swarna Jayanti Grama Swarozgar Yojana
4. Department of Horticulture
5. Watershed Development Department

7.H. Details of vocational training programmes carried out by KVKs for rural youth

S. No.	Area of training	No. of Courses	No. of Participants									
			General			SC/ST			Grand Total			
			Male	Female	Total	Male	Female	Total	Male	Female	Total	
1	Crop production and management											
1.a.	Commercial floriculture											
1.b.	Commercial fruit production											
1.c.	Commercial vegetable production											
1.d.	Integrated crop management											
1.e.	Organic farming											
1.f.	Others (pl.specify)											
2	Post harvest technology and value addition											
2.a.	Value addition											
2.b.	Others (pl.specify)											
3.	Livestock and fisheries											
3.a.	Dairy farming	4	41	30	71	7	8	15	48	38	86	
3.b.	Composite fish culture											
3.c.	Sheep and goat rearing	2	45	0	45	8	0	8	53	0	53	
3.d.	Piggery											
3.e.	Poultry farming											
3.f.	Others (pl.specify)											
4.	Income generation activities											
4.a.	Vermi-composting	2	41	0	41	0	0	0	41	0	41	
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	1	9	0	9	0	0	0	9	0	9	
4.f.	Sericulture											
4.g.	Mushroom cultivation											
4.h.	Nursery, grafting etc.											
4.i.	Tailoring, stitching, embroidery, dying etc.											
4.j.	Agril. para-workers, para-vet training	1	11	0	11	0	0	0	11	0	11	
4.k.	Others (pl.specify)											
5	Agricultural Extension											
5.a.	Capacity building and group dynamics											
5.b.	Others (pl.specify)											
	Grand Total	10	147	30	177	15	8	23	162	38	200	

PART VIII – EXTENSION ACTIVITIES**Extension Programmes (including activities of 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	6	331	45	376	34	15	49	5	0	5
Kisan Mela										
Kisan Ghosthi	3	151	21	172	14	5	19	3	0	3
Exhibition	4	317	80	397	35	15	50	14	5	19
Film Show	24	95	208	303	10	65	75	0	8	8
Method Demonstrations										
Farmers Seminar	4	210	34	244	34	10	44	9	2	11
Workshop	2	161	20	181	10	4	14	5	2	7
Group meetings	14	120	14	134	5	7	12	0	0	0
Lectures delivered as resource persons	8	212	35	247	10	5	15	5	3	8
Newspaper coverage	8	0	0	0	0	0	0	0	0	0
Radio talks	9	8	1	9	0	0	0	0	0	0
TV talks	5	5	0	5	0	0	0	0	0	0
Popular articles	3	0	3	3						
Extension Literature	4	3000	500	3500	75	35	110	35	0	35
Advisory Services	48	117	10	127	19	4	23	7	0	7
Scientific visit to farmers field	68	281	17	298	21	4	25	9	0	9
Farmers visit to KVK	14	217	110	327	12	5	17	0	0	0
Diagnostic visits	7	37	5	42	2	2	4	0	0	0
Exposure visits	9	211	25	236	7	4	11	0	0	0
Ex-trainees Sammelan	2	62	27	89	7	4	11	0	0	0
Soil health Camp	3	81	0	81	5	0	5	0	0	0
Animal Health Camp	2	48	50	98	10	35	45	0	0	0
Agri mobile clinic										
Soil test campaigns	2	64	0	64	7	0	7	2	0	2
Farm Science Club Conveners meet										
Self Help Group Conveners meetings	12	71	112	183	14	5	19	0	0	0
Mahila Mandals Conveners meetings										
Celebration of important days Women in Agriculture day	1	0	82	82	0	5	5	0	3	3
Orchard layout	21	21	0	21	0	0	0	0	0	0
Orientation to B.Sc Agri students	3	117	31	148	0	0	0	0	0	0
Total	286	5937	1430	7367	331	229	560	94	23	117

PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIALS

9.A. Production of seeds by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Quantity of seed (qtl)	Value (Rs)	Number of farmers to whom provided
Cereals	Jowar	M-35-1	-	20.00	40,000	178
Oilseeds	Groundnut	GPBD-4	-	30.00	84,000	0
Pulses						
Commercial crops						
Vegetables	i) Onion	Arka Kalyan	-	0.25	10,000	15
	ii) Okra	Arka anamika	-	0.10	1000	
	iii) Ridge guard	Arka Sujata	-	0.10	1000	
Flower crops						
Spices						
Fodder crop seeds						
Fiber crops	Cotton	DDHC-11	-	42.00	1,26,000	310
Forest Species						
Others (specify)						
Total				92.45	262000	503

9.B. Production of planting materials by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Commercial						
Vegetable seedlings						
Fruits	Mango	Alphonso	-	3000	90,000	62
Ornamental plants						
Medicinal and Aromatic						
Plantation						
Spices						
Tuber						
Fodder crop saplings						
Forest Species	Simaroubha		-	5000	75,000	10
Others(specify)						
Total				8000	165000	72

9.C. Production of Bio-Products

Bio Products	Name of the bio-product	Quantity		Value (Rs.)	Number of farmers to whom provided
		No	Kg		
Bio Fertilizers					
Bio-pesticide					
Bio-fungicide					
Bio Agents	Earth worm	-	115	28250.00	41
Others (specify)					
Total		-	115	28250.00	41

9.D. Production of livestock materials

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

PART X – PUBLICATION, SUCCESS STORY, SWTL

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

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

- Date of start : 2003
- Periodicity : Quarterly
- Number of copies distributed: 500

ii) KVK News letter (Krishi Vigyan Patrike – a monthly Kannada News Letter)

- Date of start : September 2009
- Periodicity : Monthly
- Number of copies distributed : 10,000

(B) Literature developed/published

Item	Title	Authors name	Number
Research papers			
Technical reports			
News letters	Krishi Vigyan Patrike	All staff	10,000
Technical bulletins			
Popular articles			
Extension literature	Tips for cultivation of crops under moisture stress situation	V. D. Vaikunthe, Dr. B.M.Muragod & Dr. L.G.Hiregoudar	5000
Others (Pl. specify)			
TOTAL			15,000

10.B. Details of Electronic Media Produced

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

10.C. Success Stories / Case studies

Vermicompost: A cost effective input for sustainable production

Mr. Gurappa Basappa Chavadi of Surakod village in Naragund block owns 20 acre of dry land cultivating crops of maize, greengram, bengalgram and onion. He used to purchase chemical fertilizers worth Rs.40000-50000 every year. Prolonged use of chemical fertilizers has spoiled the soil fertility status and the production of the land started declining until he came in contact with KVK during 2003-04. During this period he attended training on management of soil fertility and vermicomposting at KVK. He interacted with the KVK scientists about his farm and shown interest for establishment of vermicompost unit. Initially he started with a single pit with size 20' x 4' x 3' and harvested 20 quintals of vermicompost. He applied the vermicompost to the Kharif crops such as maize, onion and greengram during 2004-05. As there was long dry spell of rains during that year, the fields of Mr. Chavadi didn't show withering symptoms compared to his neighbour's fields. He was convinced about the role of vermicompost in

retaining the soil moisture. The farmer harvested 5 Qtl of greengram, 30 Qtl of maize and 30 quintals of onion per ha. The yield levels were comparable to his fellow farmers and in addition he saved about Rs.5000 on cost of chemical fertilizer. During the same year Mr. Chavadi extended the vermicompost unit. i.e he established 5 additional pits of size 20' x 4' x 3' with Rs.30,000 financial assistance from Department of Horticulture, Government of Karnataka. With the strengthening of input production on his site, Mr. Chavadi at present is producing 250 to 300 bags of vermicompost and is applying the same to all the crops cultivating in 20 acre of land. He says that the continuous application of vermicompost to his fields for last 3-4 year has improved the soil fertility status which inturn has enhanced the productivity of land. Even during drought years he was able to get sustainable income from his lands. He is of the opinion that at present he is able to save Rs.50,000/- on the cost of chemical fertilizers. Production and application of vermicompost has not only added value to his land but reduced the cost of cultivation and improved his socio-economic condition.

The fellow farmers of Mr. Chavadi in the village are approaching him for technical guidance on sustainable crop production. Eight farmers of the village have already started vermicompost production under the guidance of Mr. Chavadi.

2) Seed is his bread earner: A Success story of a cotton seed production farmer:

Mr. Shambulinga Veerappa Halakeri is a big farmer hailing from Huilgol village of Gadag district. He has a land holding of 25 Acres and the income from their crop was not sufficient enough to maintain his livelihood because of erratic rainfall. At one point of time Mr. Halakeri thought of quitting the agricultural profession. During 2004-05, KVK conducted front line demonstration on Integrated Crop Management in herbaceous cotton. Mr. Halakeri became one of the participant farmer. KVK introduced DDHC-11 variety of herbaceous cotton along with application of vermicompost and bio-fertiliser. He harvested 7 quintals of seed cotton during that year. KVK advised him to gin the cotton to get the seeds of DDHC-11 variety as it is high yielding. Accordingly, he produced 2 quintals of seeds and sold to his fellow farmers during the next year at the rate of Rs.30 per Kg. During 2005-06, he approached KVK for taking up large scale seed production of DDHC-II variety. KVK facilitated him to purchase foundation seeds and he took seed production of Cotton on 12 acres of his land and produced 20 quintals of seeds and earned Rs. 60000/- from the sales of seed. Since then, the farmer is producing 20-25 quantity of seeds every year and earning Rs. 60000-70,000. He is of the opinion that proper *in-situ* soil moisture conservation along with application of vermicompost and biofertilisers has helped him to produce good quality seeds. He has learnt the art of business in seed production as there are no organised marketing outlets for the Cotton seed.

Looking in to the success of Mr. Halakeri, farmers from neighbouring villages of Hadagali and Gujamagadi have approached KVK for foundation seeds for taking up Cotton seed production.

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

- i) Under Rastriya Krishi Vikas Yojana (RKVY) Project, an information KIOSK has been established at KVK by University of Agricultural Science, Dharwad. The information KIOSK contains relevant information for the farmers in the area of agriculture, horticulture and animal husbandry. Farmers who visit KVK have been using the KIOSK for their technological needs. So far the user friendly KIOSK is hit by 3000 farmers.

10.E. Details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1	Groundnut	Mixing of cowpea seeds	Management of sucking pest
2	Groundnut	Pulling of accasia tree branches over groundnut crop	Management of leaf minor pest
3	Jasmine	Letting sheep and goat in Jasmine orchard	Management of mites

10.F. Specific training need analysis

Implementation of Farmers Field School has helped to identify the specific needs of groundnut and bengalgram growers as there was season long interaction between KVK scientists and farmers.

Training need assessment workshop was held at UAS Dharwad wherein, KVK scientists and officers of developmental departments interacted over the training need requirement of Gadag district farmers. A comprehensive document was prepared on the training needs of farmers and extension functionaries.

10.G. Field activities

- i. Number of villages adopted : 8
- ii. No. of farm families selected : 475
- iii. No. of survey/PRA conducted : 5

10.H.Activities of Soil and Water Testing Laboratory

Status of establishment of Lab :

1.Year of establishment : 01-07-2005

2.List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost (Rs. in lakhs)
	A) Non-recurring contingency		
1	Spectrophotometer	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	Shaker without D.C. motor	2	0.60
9	Shaker without D.C. motor	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 H.P. motor	1	0.30
14	Laboratory set up (all basic facilities)		3.20
Total A			8.60
	A) Recurring contingency		
1	Chemical & glasswares		2.50
2	Petty items		0.20
3	Soil and plant sample processing and storage facility		0.50
Total B			3.20
Grand Total (A+B)			11.80

Details of samples analyzed so far since establishment of SWTL including during 2008-09:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	849	849	42	29575
Water Samples	139	139	26	6175
Plant samples	27	27	4	2025
Manure samples	0	0	0	0
Others (specify)	0	0	0	0
Total	1015	1015	72	37775

Details of samples analyzed during 2008-09 :

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized
Soil Samples	334	334	18	16700
Water Samples	54	54	7	4050
Plant samples	27	27	4	2025
Total	415	415	29	22775

PART XI IMPACT

11.A. Impact of KVK activities

Sl. No.	Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
				Before (Rs./Unit)	After (Rs./Unit)
1	Management of leaf eating Caterpillar in Sunflower	225	50	12000/ha	17000/ha
2	Compartment bunding in greengram	170	65	8000/ha	13500/ha
3	Enrichment of dry fodder	458	30	3 lit/day/ buffaloe	4 lit/day/ buffaloe
4	Seed treatment with imidacloprid in chilli for management of thrips & mites	150	30	15000/ha	25000- 30000/ha
5	Preparation of vermicelli	45	60	15000-20000/ annum	35000- 50000/unit/ annum
6	Powdery mildew management in sunflower	84	50	12000/ha	18000- 20000/ha
7	Boron application in sunflower	120	40	13000/ha	17000- 20000/ha
8	Nipping in desi cotton	200	50	7000/ha	10000- 12000/ha

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

11.B. Cases of large scale adoption

1) **Compartment bunding for *In-situ* soil moisture conservation:**

KVK has been promoting soil and water conservation technologies through implementation of Watershed development programme, training and demonstration of In-situ soil moisture conservation practices. Every year during April-May, KVK organizes sensitization programme in the villages on the importance of soil moisture conservation especially compartment bunding. Apart from this, front line demonstrations are being organized. Farmers have been very much impressed by the positive effect of compartment bunding as it helps for in-situ soil moisture conservation. This technology has been practiced in an area of about 25,000 ha by the farmers.

Farmers who have adopted compartment bunding have obtained the sustainable yields in Kharif crops like greengram, groundnut, onion and chilli during drought years.

2) **Enrichment of dry fodder for enhanced milk production:**

Dairy farming is the important subsidiary occupation of farmers in Gadag district. Availability of green fodder is the major problem as there is little irrigation facility and feeding of dry fodder is the only option for the farmers. Due to this reason, productivity of milk gets decreased. Considering the importance of dairy enterprise to the district economy KVK has been imparting training programmes to farmers and farm women under

Swarn Jayanti Grama Swarozgar Yojana (SGSY) on management of milch animals with main emphasis on animal nutrition. Every year about 500-600 farmers and farm women are being trained on animal nutrition. Demonstrations are conducted on enrichment of dry fodder. Farmers have adopted this technology as it is cost effective. So far KVK has trained about 5000 farmers and farm women and majority of them are feeding their animal with enriched dry fodder.

3) Adoption of DSV-6 variety of Kharif Jowar:

Jowar is one of the important cereal crop grown in Kharif season in Gadag district. It is being cultivated in an area of about 18,000 ha, mainly in Shirahatti and Mundaragi blocks under rainfed situation.

Under front line demonstrations, KVK introduced DSV-6 variety of Jowar during the year 206-07 to 2008-09 in an area of 15 ha wherein 24 farmers participated in the programme from 7 villages. The variety has been accepted by the farmers as it is high yielding and has good grain and fodder quality. Every year, KVK facilitated the FLD farmers to keep the seeds for providing to other farmers. During 2008-09 the area under DSV-6 was covered in an area of about 500 ha in the district mainly through network of FLD farmers Self Help Groups.

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

Impact of FLD in Aster introduction:

Papanashi is a small village located 18 km from KVK head quarters. The village has cultivated land of 800 ha. wherein crops like greengram, groundnut, onion, chilli, jowar, bengalgram are grown under rainfed situation and flower crops of chrysanthemum, jasmine and crossandra are being cultivated under irrigated situation. There are 32 irrigation pumpsets belonging to small and marginal farmers irrigating about 45 ha. Major source of income for this category of farmers is chrysanthemum crop which is being cultivated by about 32 farmers each in an area ranging from 0.1 to 1 ha.

Chrysanthemum crop is planted in the month of April-May and flowers are harvested during Ganesh, Dasara and Deepavali festival which fall in the month of August – October. Due to glut in the market, the prices of flower is very fluctuating and as the flower is perishable commodity, the farmers are forced to sell the flowers at throw away prices. Some times price of flower falls at the rate of Rs. 2 per Kg of flowers thereby by incurring heavy losses to farmers.

Considering the importance of flower crops to the village economy, KVK introduced Aster as an alternate flower crop in the village by organizing Front Line Demonstration during 2005-06. Production technology of Aster crops using Phule Ganesh variety was demonstrated in an area of 1 ha. involving 4 farmers.

The crop was raised during May-June and the farmers could able to get the good market for the flower during festival months of July, August and September.

Details of FLD results are presented below.

Name of farmer	Area (ha)	Flower yield (Kg)	Yield (Qtl./ha)	Gross income (Market rate @ Rs.4000/Qtl.)	Net income Rs./ha
K.S.Patil	0.1	450	45.0	180000	144500
G.G.Kulkarni	0.1	610	61.0	244000	208500
K.K.Hiremath	0.1	575	57.50	230000	194500
S.M.Adnur	0.1	520	52.0	208000	172500

Farmers were very much impressed by the net income from the Aster cultivation compared to Chrysanthemum cultivation.

Impact of FLD on Aster introduction: There has been a steady increase in the area under Aster in Papanashi village. It is the only village which is growing Aster in Gadag district. At present area under Aster crop in the village is 8 ha. It is being grown by 23 farmers in an area ranging from 0.1 ha to 0.4 ha. The planting is done in such a way that harvesting should coincide with festival months of July – October. During the last 3 years the price of Aster flower has never come down below Rs.25 per Kg of flower. Farmers have received highest price of Rs.120 per kg of flower. This is in contrast to Chrysanthemum flower whose price ranged from Rs.1 per kg to Rs.100 per kg during last 3 years.

The matrix ranking of both the flower crops with respect to different parameter as expressed by the flower is a presented below.

Parameters	Chrysanthemum	Aster
Market price	Highly fluctuating	Stable
Cost of cultivation	High	Low
Labour requirement	More	Less
Intercultivation	Not possible	Possible
No. of irrigation	More	Less
Consumer preference	Medium	High
Yield	High	Less

Even though the Chrysanthemum is high yielder, the fluctuation of market price coupled with high cost of cultivation has made the farmers to slowly adopt Aster cultivation as its market is stable and cost of cultivation is less.

PART XII - LINKAGES

12.A. Functional linkage with different organizations

Sl. No	Name of organization	Nature of linkage
1	Karnataka State Department of Agriculture	<ul style="list-style-type: none"> • Implementation of training programme under various schemes • Implementation of Field School under ATMA
2	University of Agricultural Sciences, Dharwad	<ul style="list-style-type: none"> • Implementation of farm trials
3	Department of Horticulture	<ul style="list-style-type: none"> • Organisation of training programme
4	Command Area Development Authority, Belgaum	<ul style="list-style-type: none"> • Training programme on soil, water and crop management in command area
5	Deshpande Foundation, United States of America	<ul style="list-style-type: none"> • Promotion of dry land horticulture
6	Gram Panchayats	<ul style="list-style-type: none"> • Under NREGA, technical guidance and supply of mango seedlings for promotion of dry land horticulture
7	Zilla Panchayat	<ul style="list-style-type: none"> • Training of farmers and farm women under SGSY project
8	Watershed Development Department	<ul style="list-style-type: none"> • Training programme on soil and water conservation

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

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs in lakh)
Livelihood improvement through promotion of dry land horticulture	June, 2009	Deshpande Foundation, USA through Host Institution	10.00

12.C. Details of linkage with ATMA

a) ATMA is being implemented in Gadag district

S. No.	Programme	Nature of linkage	Remarks
1	Field school	Implementation of field school on summer groundnut	Summer season of last year 2008-09

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

S. No.	Programme	Nature of linkage	Constraints if any
1	Training	Training on integrated horticulture	

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

S. No.	Programme	Nature of linkage	Remarks
	-	-	-

13.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	
i)	Vermicompost	75 tonns	78,000	1,87,500	
ii)	Earthworm	122 Kg	5800	30,500	

13.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	Cow	Deoni HF Cross	Milk	2800	28000	14000	
2	Sheep	Rambullet	Meat	1 lamb	2250	1125	
3	Goat	Jamunapari Local Cross	Meat	2 kids	3200	1600	

13.E.Utilization of hostel facilities

Accommodation available (No. of beds)

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
October 2008	236	708	
November 2008	374	748	
December 2008	215	430	
January 2009	190	380	
February 2009	153	366	
March 2009	75	225	
April 2009	110	330	
May 2009	214	428	
June 2009	312	624	
July 2009	281	562	
August 2009	295	590	
September 2009			

13.F. Database management

S. No	Database target	Database created
1	Resource inventory of the District	<ol style="list-style-type: none"> 1. Nine fold classification of land 2. Number and size of operational holdings 3. Weather parameters of the district. (for a minimum period of ten years) 4. Details of soil profile 5. Detailed cropping pattern (for a minimum period of ten years) 6. Area, production and productivity of major crops 7. Details of livestock wealth in the district 8. Production and productivity of livestock

S. No	Database target	Database created
		9. Area under irrigation from different sources 10. Details on input agencies 11. Details on infrastructural facilities available for production, post harvest and marketing 12. Details of institutional credit facilities
2	Database for Technologies assessed and Refined	Started
3	Frontline Demonstrations Database	Started
4	Training Database	Training database is created
5	Database of Extension Programmes	Database of extension programmes is created
6	Seeds and Planting Material Database	Database is created
7	Database of farmers visit to our KVK	Started
8	Database of SHGs	Database is created
9	Database of soil test	Started
10	Database of survey made for need based trainings	Database is created

13.G. Details on Rain Water Harvesting structure and micro-irrigation system

Amount sanctioned (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.)		
100000	1000067	Graded bund construction	5054.68 cm	88	43	18050	2831	39	6420	8.00 ha.
		Construction of waste weirs								
		1. 1.52 feet crust length	5 Nos.							
		2. 1.83 feet crust length	7 Nos.							
		3. 2.44 feet crust length	4 Nos.							
		4. 2.74 feet crust length	3 Nos.							
		5. 3.00 feet crust length	3 Nos.							
		Farm pond	2 Nos.							
		Infiltration wells								
		a) Infiltration Well	9 Nos.							
		b) Common tank	1 No.							
		Bore well recharge pit	1 No.							
		Sub surface dam	2 Nos.							
		Soak pits	147							
		Drip irrigation system for Dry land Horticulture	5 Ha.							
		Check dam	1							
		Rain gauge & accessories	1							

PART XIV - FINANCIAL PERFORMANCE**14.A. Details of KVK Bank accounts**

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
KVK	State Bank of India	Gadag	0838	K.H.Patil Krishi Vigyan Kendra, Hulkoti	10824829153	523600001	SBIN0000838

14.B. Utilization of funds under FLD on Oilseed*(Rs. in Lakhs)*

Item	Released by ICAR		Expenditure		Balance as on 1 st April 2009
	Kharif 2008	Rabi 2008-09	Kharif 2008	Rabi 2008-09	
Inputs	1.05	0.00	1.049	1.75	-1.749
Extension activities	0.15	0.00	0.149	0.225	-0.241
TA/DA/POL etc.	0.225	0.00	0.225	0.374	-0.372
TOTAL	1.425	0.00	1.423	2.349	-2.362

14.C. Utilization of funds under FLD on Pulses*(Rs. in Lakhs)*

Item	Released by ICAR		Expenditure		Balance as on 1 st April 2009
	Kharif 2008	Rabi 2008-09	Kharif 2008	Rabi 2008-09	
Inputs	1.225	0.00	1.225	1.398	-1.397
Extension activities	0.175	0.00	0.175	0.198	-0.194
TA/DA/POL etc.	0.265	0.00	0.262	0.299	-0.299
TOTAL	1.665	0.00	1.662	1.895	-1.890

14.D. Utilization of funds under FLD on Cotton*(Rs. in Lakhs)*

Item	Released by ICAR		Expenditure		Balance as on 1 st April 2009
	Kharif 2008	Rabi 2008-09	Kharif 2008	Rabi 2008-09	
Inputs	0.35	0.700	0.35	0.700	0.00
Extension activities / TA/DA/POL etc.	0.15	0.300	0.15	0.299	0.001
TOTAL	0.50	1.00	0.50	0.999	0.001

14.E. Utilization of KVK funds during the year 2008-09 and 2009-10 (Upto August 2009)

a) During the year 2008-09

(Rs. in lakh)				
S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	a) Pay & Allowances	40.00	40.00	39.998
	b) Pay & Allowances (arrears)	24.39	24.39	24.39
2	Traveling allowances	1.00	1.00	0.998
3	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	2.20	2.20	2.198
B	POL, repair of vehicles, tractor and equipments	1.20	1.20	1.199
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	0.90	0.90	0.897
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	0.80	0.80	0.798
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	0.75	0.75	0.748
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	0.30	0.30	0.298
G	Training of extension functionaries	0.20	0.20	0.20
H	Maintenance of buildings	0.30	0.30	0.30
I	Farmers Field School	0.25	0.25	0.249
J	Library	0.10	0.10	0.099
TOTAL (A)		72.39	72.39	72.372
B. Non-Recurring Contingencies				
1	Works	-	-	-
2	Equipments	0.15	0.15	0.15
3	Vehicle (Four wheeler)	6.00	6.00	6.00
4	Vehicle (Two Wheeler)	0.50	0.50	0.50
TOTAL (B)		6.65	6.65	6.65
C. REVOLVING FUND		-	-	-
GRAND TOTAL (A+B+C)		79.04	79.04	79.022

b) During the year 2009-10 (upto August, 2009)

(Rs. in lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	a) Pay & Allowances	47.00	23.50	20.390
2	Traveling allowances	1.00	0.50	0.885
3	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	1.45	0.725	0.413
B	POL, repair of vehicles, tractor and equipments	1.10	0.550	0.440
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	1.05	0.525	0.364
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	0.65	0.325	0.00
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	1.61	0.805	0.424
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	1.09	0.545	0.681
G	Training of extension functionaries	0.10	0.050	0.00
H	Maintenance of buildings	0.30	0.050	0.05
I	Farmers Field School	0.25	0.125	0.00
J	Library	0.10	0.050	0.050
K	Extension activities	0.25	0.125	0.012
TOTAL (A)		56.00	28.00	23.709
B. Non-Recurring Contingencies				
1	Works	0.00	0.00	0.00
2	Equipments	-	-	-
3	Vehicle (Four wheeler/Two wheeler)	-	-	-
4	Library	-	-	-
TOTAL (B)		-	-	-
C. REVOLVING FUND		-	-	-
GRAND TOTAL (A+B+C)		56.00	28.00	23.709

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

Year	Opening balance as on 1 st April	Income during the year	Expenditure during the year	Net balance in hand as on 1 st April of each year
April 2006 to March 2007	1.03	15.32	9.30	7.05
April 2007 to March 2008	7.05	7.35	7.16	7.24
April 2008 to March 2009	7.24	17.28	20.33	4.19

PART XV - OTHERS

15. Please include information which has not been reflected above (write in detail).

**INFORMATION ON FARMERS FIELD SCHOOLS (FFS) ORGANIZED BY OUR KVK
DURING THE PERIOD FROM OCTOBER, 2008 TO SEPTEMBER, 2009**

Name of the crop	Title/Topic	Location	No. of farmers	Duration (days)	Number and Details of Activities	Salient findings/results
Summer Groundnut (Under ATMA Project)	Integrated Crop Management in TAG-24 variety	Shingatarayana kerri (Mundargi Taluk)	26	120	<u>9 Activities</u>	i) Farmers learnt that plant population of 30-35 numbers per sq.mtr to be maintained
					ii) Orientation training on FFS	ii) Sowing to be taken after irrigated the land
					iii) Session on land preparation, seed treatment, nutrition and sowing	iii) Second irrigation to be given after 22-25 days after sowing
					iv) Session on germination, plant population and collar rot management	iv) Collar rot is managed by seed treatment and soil treatment with trichoderma
					v) Session on sucking pest management	v) Gypsum application has enhanced shelling percentage and oil content
					vi) Session on gypsum application	vi) Single row sowings saves seed and labour for weeding
					vii) Session on flowering peg initiation and pod formation	vii) Seed rate of 150 kg/ha is ideal
					viii) Training on leaf minor management	viii) Cowpea to be grown as a trap crop for sucking pest management
					ix) Farmers exposure visit to UAS, Dharwad	ix) Yield of 19.95 Qt. per ha was achieved in FFS Plot
					x) Organization of field day	

Budget Sanctioned : Rs. 50,450/-
Budget Actually Spent : Rs. 51,805/-

**INFORMATION ON FARMERS FIELD SCHOOLS (FFS) ORGANIZED BY OUR KVK
DURING THE PERIOD FROM OCTOBER, 2008 TO SEPTEMBER, 2009**

Name of the crop	Title/Topic	Location	No. of farmers	Duration (days)	Number and Details of Activities	Salient findings/ results
Rabi Bengalgram	Integrated Crop Management in Bengalgram	Hombal (Gadag Taluk)	25	120	<u>8 Activities</u>	
					i) Orientation training on FFS	i) Farmers expressed that management of wilt disease by seed treatment and soil treatment with Trichoderma, FYM and Neemcake increased the higher yield.
					ii) Session on land preparation seed and soil treatment, nutrition and sowing of Jowar as border crop.	ii) Soil application of Azospirillum and PSB with vermicompost increases the yield under rainfed situation.
					iii) Session on germination, plant population and installation of pheromone traps	iii) Installation of bird perches, Broadcasting of puffed rice and water pots helps in attraction of birds for control of pod borer.
					iv) Session on management of early instar pod borer with installation of bird perches, water pots	iv) Jowar as border crop to check the pod borer
					v) Spray of 2% Urea, Nipping and NAA spray at 35-45 DAS for higher yield.	v) Spraying of profenophos at 15-20 DAS control the pod borer
					vi) Session on management of pod borer by hand picking and spraying of NPV and pesticides.	vi) Spraying of NPV at 30-35 DAS control the pod borer.
					vi) Organization of Field day	vii) Foliar spray of 2% Urea helps in getting the higher yield
					vii) Harvesting and post harvest management technology	viii) Nipping at the 35-45 DAS increased the yield
						ix) Foliar spray of NAA helps in increasing the flowering and higher yield
						x) Yield 9.4 Qt./ha in FFS Plot

Budget Sanctioned : Rs. 25,000/-
Budget Actually Spent : Rs. 25,000/-