

# **ACTION PLAN OF KVK, GADAG**

Prepared by

**K.H.PATIL KRISHI VIGYAN KENDRA**

**Hulkoti-582 205 Dist : GADAG, Karnataka State**

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**ACTION PLAN (2010-11)  
OF**

**K.H. PATIL KRISHI VIGYAN KENDRA, HULKOTI, GADAG DISTRICT**

**GENERAL INFORMATION ABOUT THE KRISHI VIGYAN KENDRA, GADAG**

1.	Name and address of KVK with Phone, Fax and e-mail	:	K.H. Patil Krishi Vigyan Kendra Hulkoti – 582205 Dist.: Gadag Phone : (08372) 289606 Fax : (08372) 289474 E-mail : khpatil_kv_k_hulkoti@yahoo.com kvkhulkoti@gmail.com
2.	Name and address of host organization with Phone, Fax and e-mail	:	Agricultural Science Foundation Hulkoti – 582205 District: Gadag Phone : (08372) 289069 Fax : (08372) 289474 E-mail : asf_hulkoti@yahoo.co.in
3.	Name of the Programme Coordinator Residence Phone Number/ Mobile No.	:	Dr. L.G.Hiregoudar Phone (R) : (08372) 289772 (M) : 09448358772
4.	Year of sanction	:	1985
5.	Year of start of activities	:	1985
6.	Major farming systems/enterprises	:	A) <i>Field crop based Farming systems</i> (i) Chilli + Onion + Cotton, Onion + Chilli (ii) Groundnut – Rabi jowar/wheat (iii) Greengram – Sunflower / Rabi jowar / wheat /Bengalgram (iv) Maize – Bengalgram / wheat (Irrigated) (v) Kharif jowar + Tur (vi) Bt Cotton B) <i>Horticulture based Farming systems</i> (i) Vegetable Crops (Irrigated condition) (ii) Flower crops (irrigated) (iii) Mango (mainly dryland) C) <i>Major Enterprises</i> (i) Dairy farming (ii) Sheep rearing (iii) Goat rearing
7.	Name of agro-climatic zone	:	<ul style="list-style-type: none"> <li>▪ Northern Dry Zone (Region – 2) comprising of Gadag, Ron, Naragund and Mundaragi blocks</li> <li>▪ Semi transitional Zone -8 comprising of Shirhatti block</li> </ul>
8.	Soil type	:	Deep black to medium black soils, red sandy soil and red clay soils
9.	Annual rainfall (mm)	:	612 mm

**10. Staff Strength as on 01-03-2010:**

	Programme Coordinator	Subject Matter Specialists	Programme Assistant	Administrative Staff	Auxiliary Staff	Supporting Staff	Total
Sanctioned	1	6	3	2	2	2	16
Filled	1	6	2	2	2	2	15

**11. Details of staff as on 01-03-2010:**

Sl. No.	Sanctioned post	Name of the incumbent	Discipline	Pay scale	Date of joining	Permanent/Temporary
1.	Programme Coordinator	Dr. L.G. Hiregoudar	Programme Coordinator	16400-22400	05.09.1992	Permanent
2.	Subject Matter Specialist	Mr. S.K.Mudlapur	SMS (Plant Protection)	10000-15200	26.09.1994	Permanent
3.	Subject Matter Specialist	Mr. S.H.Adapur	SMS (Ag. extension)	10000-15200	23.06.1995	Permanent
4.	Subject Matter Specialist	Smt. S.S.Rayanagoudar	SMS (Home Science)	10000-15200	26.06.1995	Permanent
5	Subject Matter Specialist	Mr. V.D.Vaikunthe	SMS (Agronomy)	10000-15200	01.07.1995	Permanent
6	Subject Matter Specialist	Mr. K.T.Patil	SMS (Horticulture)	10000-15200	01.07.1995	Permanent
7	Subject Matter Specialist	Mr. N.H.Bhandi	SMS (Soil Science)	8000-13500	01.06.2005	Permanent
8	Programme Assistant	Dr. B.M. Muragod	Programme Assistant (Animal Husbandry)	5500-9000	25.06.2007	Permanent
9	Computer Programmer	Smt. L.C. Koravanavar	Programme Assistant (Computer Programmer)	5500-9000	01.06.2005	Permanent
10	Farm Manager	Mr. Suresh Halemani	Programme Assistant (Farm manager)	5500-9000	01.02.2009	Temporary
11	Accountant/ Superintendent	Mr. M.B. Jakkanagoudar	Accountant/ Superintendent	5500-9000	25.06.2007	Permanent
12	Stenographer	Mr. Manju D.	Stenographer	4000-6000	11.06.2007	Permanent
13	Driver	Mr. N.L. Hadapad	Driver	3200-4900	03.09.1992	Permanent
14	Driver	Mr. G.D. Madivalar	Driver	3200-4900	20.07.1995	Permanent
15	Supporting staff	Mr. S.B. Kotabagi	Clerk cum Fieldman	3050-4590	18.07.1985	Permanent
16	Supporting staff	Mr. V.R. Navalli	Village Work Attendant	3050-4590	20.07.1993	Permanent

## 12. Plan of Human Resource Development of KVK personnel during 2010-11

Sl. No	Discipline	Area of training required	Institution where training is offered	Approximate duration (days)	Training fee (Rs.)
1.	Home Science	Value Addition	CFTRI, Mysore	10	15,000/-
2.	Horticulture	Green House Management	UAS, Dharwad	05	-
3.	Agronomy	Integrated Farming System	UAS, Dharwad	05	-
4.	Extension	Market led Extension	MANAGE, Hyderabad	05	-

## 13. Infrastructure:

### i) Land

Total Area (ha)	Area Cultivated (ha)	Area occupied by buildings and roads (ha)	Area with demonstration units (ha)
20	20	1.5	0.5

### ii) Buildings

Admn. Building			Trainees Hostel			Staff Quarters			Demonstration Unit		
Plinth area (m <sup>2</sup> )	Cost (Rs. in lakhs)	Year	Plinth area (m <sup>2</sup> )	Cost (Rs. in lakhs)	Year	Plinth area (m <sup>2</sup> )	Cost (Rs. in lakhs)	Year	No.	Plinth area (m <sup>2</sup> )	Cost (Rs. in lakhs)
800	33.46	1996	550	17.26	1997	400	45.00	2006	Dairy, sheep & goat	150	6.63
									Vermicompost	350	5.30
									Nursery	150	3.00

### iii) Vehicles

Type of vehicle	Model	Actual cost (Rs.)	Total kms. Run	Present status
Bolero SLX	2009	6.90	24966 Kms	Good
Mahindra Tractor	2003	5.00	1045 hours	Good
Motor cycle	2005	0.40	77829 Kms	Good
Motor cycle	2009	0.50	8043 Kms	Good

#### iv) Equipments and AV aids

Sl. No.	Name of Equipments	Date of purchase	Cost (Rs. in lakhs)	Present status
1	Computer	2003	1.25	Good
2	Camera	1998	0.14	Good
3	Television	1999	0.28	Good
4	Amplifier	1998	0.15	Good
5	Fax	2004	0.25	Good
6	OHP	2004	0.25	Good
7	Hipro lab model gin machine	2006	0.70	Good
8	Seed delinting machine	2006	0.18	Good
9	Cotton seed sorter	2007	0.50	Good
10	Seed treatment drum	2007	0.40	Good
11	Lap top Computer	2007	0.54	Good
12	LCD	2007	0.56	Good
13	Ceramic black board	2007	0.12	Good
14	Rotavator	2008	0.92	Good
15	Rotary weeder	2009	0.90	Good

#### 14. Details of SAC meeting conducted during 2009-10

Sl. No	Date	Major recommendations of SACs which are to be implemented during 2010-11
1.	14-07-2009	<ul style="list-style-type: none"> <li>➤ To demonstrate TAG-26 Groundnut variety under FLD</li> <li>➤ To introduce Bidari breed of Goat, Kenguri breed of Sheep and Swarnadhara breed of Poultry in Gadag district</li> <li>➤ To organize training in green house technology</li> </ul>
2.	02-01-2010	<ul style="list-style-type: none"> <li>➤ Implement IFS model in one village and make it model for other farmers with assistance from UAS, Dharwad</li> <li>➤ Enhance quantity of improved seeds</li> <li>➤ Develop precision farming model in KVK farm</li> <li>➤ Strengthen livestock activities of KVK</li> <li>➤ Provide technical back-up for NABARD Special Programme in 5 village of Ron block</li> <li>➤ Impart trainings to VVV Club Members</li> <li>➤ To set up packing facilities for SHG products</li> </ul>

## 15. Plan of Work for 2010-11

### Profile of Gadag District

#### 1) Major farming systems/enterprises

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

#### 2) Description of Agro-climatic Zone & major agro ecological situations

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 <sup>o</sup> c. This zone is drought prone. <b>Kharif crops grown:</b> Greengram, Groundnut, Onion + Chilli, Sunflower, Maize <b>Rabi crops grown:</b> 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. <b>Kharif crops grown:</b> Green gram, Jowar, Bt cotton, Groundnut, Sunflower, Millets, Maize, Onion, Chilli <b>Rabi crops grown:</b> Rabi jowar, Sunflower, Desi cotton, Bengal gram, Wheat

#### 3) Soil types

Sl. 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
<b>Total</b>			<b>393285</b>

**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

**5) Weather data (January 2009- December 2009)**

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)
		Maximum	Minimum	
January	0	30.8	14.8	48
February	0	31.0	18.9	49
March	13.1	36.4	20.8	57
April	48.1	38.4	22.1	44
May	56.4	37.5	21.0	43
June	140.9	33.4	22.3	61
July	59.8	33.2	19.9	71
August	66.9	29.8	20.1	69
September	155.7	28.3	19.2	61
October	162.6	29.8	18.9	57
November	24.4	30.0	15.0	60
December	75.6	28.0	12.0	54
<b>Total</b>	<b>804.2</b>			

Source: District Statistical Office

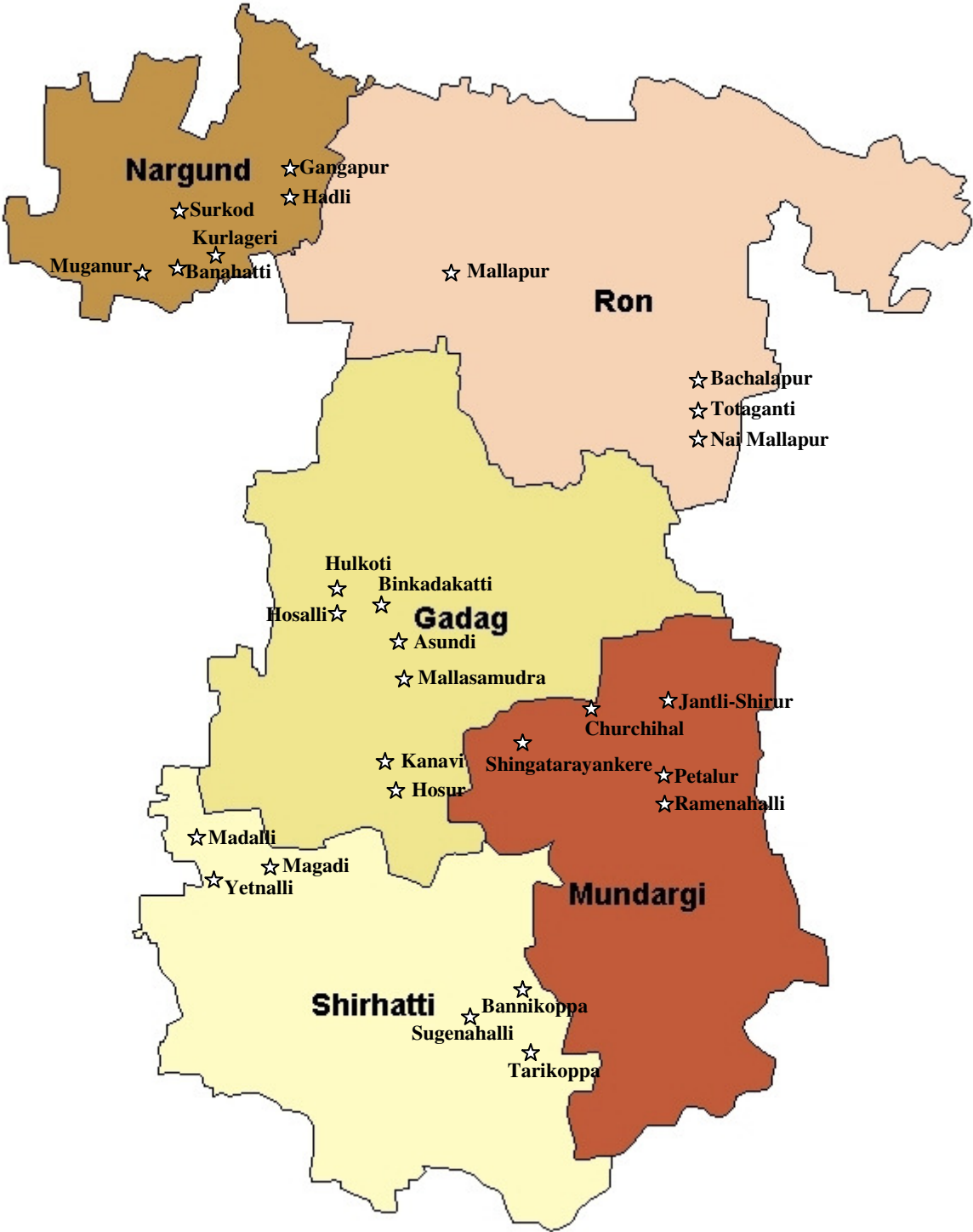
**6) Production and Productivity of Livestock, Poultry, Fisheries etc. in the district**

Category	Population	Production	Productivity
<b>Cattle</b>			
<i>Crossbred</i>	15418	49950 L. milk/day	5.22 Kg/day
<i>Indigenous</i>	158588	45014 L/day	2.40 Kg/day
<b>Buffalo</b>	80234	64088 L/day	2.80 Kg/day
<b>Sheep</b>			
<i>Crossbred</i>			
<i>Indigenous</i>	313459	158 tons(Meat)	15 Kg/animal
<b>Goats</b>	172411	134 tons(Meat)	16 Kg/animal
<b>Poultry birds (egg production)</b>	158656	72 lakh/year	100 per year

Source: District Statistical Office



**GADAG DISTRICT MAP SHOWING PROPOSED VILLAGES FOR KVK INTERVENTIONS**



**TABLE 1: OPERATIONAL AREA DETAILS FOR 2010-11**

Sl. No.	Taluk	Blocks/ groups of villages	Major crops & enterprises being practiced	Major problems identified	Identified thrust areas
1.	Gadag	Asundi Cluster (Comprising of Asundi, Mallasamudra and Binkadakatti)	• Greengram	• Abiotic Stress	• Integrated Crop Management • Seed Production • Pulse beetle management
				• Poor seed replacement ratio	
				• Powdery mildew & yellow vein mosaic disease	
				• Incidence of pulse beetle	
		Hulkoti Cluster (Hulkoti and Hosalli)	• Bunch Groundnut	• Abiotic stress	• Introduction of drought tolerant variety • ICM • Seed production
				• Leaf spot disease	
				• Imbalanced nutrition	
				• Incidence of leaf minor	
				• Incidence of collar rot	
		• Onion	• Poor seed replacement ratio	• ICM and introduction of Arka Kalyan variety • Seed production	
			• Improper sowing method		
			• Poor keeping quality		
			• High incidence of purple blotch		
			• Imbalanced nutrition		
• Chilli	• Non availability of quality seeds	• ICM • Post harvest management • Murda complex management • Anthracnose management			
	• Abiotic stress				
	• Murda complex				
	• High incidence of anthracnose				
	• Imbalanced nutrition				
• Bt Cotton	• Improper post harvest management	• ICM • Organizing campaigns			
	• Improper harvesting of fruit for seed purpose				
	• Imbalanced nutrition				
• Brinjal	• Lack of knowledge on production technology	• Management of shoot & fruit borer			
	• High incidence of sucking pest				
• Ridge gourd	• High incidence of shoot and fruit borer	• Introduction of Arka Sujata and Arka Sumit			
• Chrysanthemum	• Cultivation of local variety				
• Chrysanthemum	• Imbalanced nutrition	• INM • Pinching • Introduction of Aster crop			
	• Fluctuation in prices				

Sl. No.	Taluk	Blocks/ groups of villages	Major crops & enterprises being practiced	Major problems identified	Identified thrust areas		
			• Rabi Jowar	<ul style="list-style-type: none"> <li>• Abiotic stress</li> <li>• Lack of value addition</li> </ul>	<ul style="list-style-type: none"> <li>• Spacing management</li> <li>• Seed priming</li> <li>• Preparation of jowar flakes</li> </ul>		
			• Mango	<ul style="list-style-type: none"> <li>• High incidence of mango hopper &amp; fruit fly</li> <li>• Incidence of powdery mildew</li> <li>• Improper orchard management</li> <li>• Improper post harvest management</li> <li>• Improper nutrition</li> </ul>	<ul style="list-style-type: none"> <li>• Management of hopper, powdery mildew &amp; fruit fly</li> <li>• Orchard management</li> <li>• Post harvest management</li> <li>• Management of nutrition</li> </ul>		
			• Dairy animals	<ul style="list-style-type: none"> <li>• Improper nutrition</li> </ul>	<ul style="list-style-type: none"> <li>• Nutrition management</li> </ul>		
			• Calf	<ul style="list-style-type: none"> <li>• Incidence of worms</li> </ul>	<ul style="list-style-type: none"> <li>• Deworming</li> </ul>		
			• Goat	<ul style="list-style-type: none"> <li>• Low productivity of milk in local breed</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction of Bidari breed</li> </ul>		
			• Sheep	<ul style="list-style-type: none"> <li>• Low productivity of meat &amp; wool in local breed</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction of Ramboullete breed</li> </ul>		
			• Employment	<ul style="list-style-type: none"> <li>• Lack of subsidiary occupations</li> </ul>	<ul style="list-style-type: none"> <li>• Vocational trainings</li> </ul>		
			• Poor utilization of resources	<ul style="list-style-type: none"> <li>• Improper irrigation &amp; fertigation in Bt. Cotton, Brinjal, Tomato</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction of precision farming practice</li> </ul>		
			• Extension services	<ul style="list-style-type: none"> <li>• Lack of Extension Services</li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of resource centres with assistance from host Institution</li> </ul>		
			• Greengram, Groundnut, Bt. Cotton, Onion and Flowers	<ul style="list-style-type: none"> <li>• Lack of intime advisory services</li> </ul>	<ul style="list-style-type: none"> <li>• Kharif campaigns</li> </ul>		
		• Self employment	<ul style="list-style-type: none"> <li>• Lack of self employment opportunities</li> </ul>	<ul style="list-style-type: none"> <li>• Vocational trainings in gardening</li> </ul>			
		2.	Shirahatti	Bannikoppa Cluster (Comprising of Bannikoppa, Tarikoppa, Sugnahall & Hadagali)	<ul style="list-style-type: none"> <li>• Soil and water conservation</li> </ul>	<ul style="list-style-type: none"> <li>• Low soil fertility due to high erosion</li> </ul>	<ul style="list-style-type: none"> <li>• Soil &amp; Water Conservation and promotion of Vermicompost for resource management</li> </ul>
					<ul style="list-style-type: none"> <li>• Greengram</li> </ul>	<ul style="list-style-type: none"> <li>• Moisture stress</li> <li>• Seed shattering</li> </ul>	<ul style="list-style-type: none"> <li>• Abiotic stress management</li> <li>• Introduction of selection-4 variety</li> </ul>

Sl. No.	Taluk	Blocks/ groups of villages	Major crops & enterprises being practiced	Major problems identified	Identified thrust areas
				<ul style="list-style-type: none"> <li>• Incidence of pod borer &amp; leaf eating caterpillar</li> <li>• Incidence of powdery mildew</li> <li>• Labour problem for weeding</li> <li>• Incidence of pulse beetle</li> </ul>	<ul style="list-style-type: none"> <li>• ICM</li> <li>• Introduction of Twin Wheel Hoe Weeder</li> <li>• Pulse beetle management at household storage level</li> </ul>
			<ul style="list-style-type: none"> <li>• Bunch Groundnut</li> </ul>	<ul style="list-style-type: none"> <li>• Abiotic stress</li> <li>• Low productivity of local variety</li> <li>• Imbalanced nutrition</li> <li>• High incidence of leaf minor &amp; collar rot</li> <li>• Poor seed replacement</li> </ul>	<ul style="list-style-type: none"> <li>• <i>In-situ</i> soil moisture conservation practices</li> <li>• Introduction of GPBD-4 &amp; TAG-24 variety</li> <li>• ICM</li> <li>• Collar rot management</li> <li>• Seed production</li> </ul>
			<ul style="list-style-type: none"> <li>• Sunflower</li> </ul>	<ul style="list-style-type: none"> <li>• Imbalanced nutrition</li> <li>• Abiotic stress</li> <li>• Incidence of leaf eating caterpillar</li> <li>• Incidence of powdery mildew &amp; leaf spot</li> <li>• Drudgery in earhead cutting</li> </ul>	<ul style="list-style-type: none"> <li>• ICM</li> <li>• Spacing management</li> </ul>
			<ul style="list-style-type: none"> <li>• Bt. Cotton</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of knowledge on production technology</li> <li>• Lack of intercropping systems</li> </ul>	<ul style="list-style-type: none"> <li>• ICM</li> <li>• Spacing management</li> <li>• Promotion of intercropping system in Bt. Cotton</li> </ul>
			<ul style="list-style-type: none"> <li>• Onion</li> </ul>	<ul style="list-style-type: none"> <li>• Low productivity due to imbalanced nutrition</li> <li>• Labour problem for weeding</li> <li>• Incidence of purple blotch</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction of Arka Kalyan</li> <li>• ICM</li> <li>• Chemical weeding</li> </ul>
			<ul style="list-style-type: none"> <li>• Chilli</li> </ul>	<ul style="list-style-type: none"> <li>• Non availability of quality seed</li> <li>• Murda complex</li> <li>• Powdery mildew</li> </ul>	<ul style="list-style-type: none"> <li>• Seed production</li> <li>• Murda complex &amp; powdery mildew management</li> </ul>

Sl. No.	Taluk	Blocks/ groups of villages	Major crops & enterprises being practiced	Major problems identified	Identified thrust areas
				<ul style="list-style-type: none"> <li>• Imbalanced nutrition</li> </ul>	<ul style="list-style-type: none"> <li>• INM</li> </ul>
			<ul style="list-style-type: none"> <li>• Rabi Jowar</li> </ul>	<ul style="list-style-type: none"> <li>• Moisture stress</li> <li>• Lack of value addition</li> </ul>	<ul style="list-style-type: none"> <li>• <i>In-situ</i> soil moisture conservation</li> <li>• Spacing management</li> <li>• Seed priming</li> <li>• Promotion of jowar flakes</li> </ul>
			<ul style="list-style-type: none"> <li>• Desi Cotton</li> </ul>	<ul style="list-style-type: none"> <li>• Moisture stress</li> <li>• Non availability of quality seeds</li> </ul>	<ul style="list-style-type: none"> <li>• <i>In-situ</i> soil moisture conservation</li> <li>• Seed production of DDHC-11 variety</li> <li>• ICM</li> </ul>
			<ul style="list-style-type: none"> <li>• Crop diversification</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of crop diversification</li> </ul>	<ul style="list-style-type: none"> <li>• Promotion of fruit crops under dryland</li> </ul>
			<ul style="list-style-type: none"> <li>• Self employment</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of self-employment</li> </ul>	<ul style="list-style-type: none"> <li>• Vocational trainings on vermicompost, dairy, sheep &amp; goat rearing</li> </ul>
			<ul style="list-style-type: none"> <li>• Dairy animals</li> </ul>	<ul style="list-style-type: none"> <li>• Low production of milk due to poor nutrition</li> </ul>	<ul style="list-style-type: none"> <li>• Promotion of balanced nutrition through Azolla feeding</li> </ul>
			<ul style="list-style-type: none"> <li>• Sheep</li> </ul>	<ul style="list-style-type: none"> <li>• Low of productivity of wool and meat</li> <li>• Infestation of worms</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction of Ramboulette breed</li> <li>• Deworming</li> </ul>
			<ul style="list-style-type: none"> <li>• Poultry birds</li> </ul>	<ul style="list-style-type: none"> <li>• Low egg productivity</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction of Swarnadhara breed birds</li> </ul>
			<ul style="list-style-type: none"> <li>• Drudgery in cooking</li> </ul>	<ul style="list-style-type: none"> <li>• Drudgery in cooking &amp; collecting firewood</li> <li>• Drudgery in cutting of Jowar stalks</li> </ul>	<ul style="list-style-type: none"> <li>• Promotion of Envirofit Chulha</li> <li>• Promotion of improved sickle</li> </ul>
		Magadi, Yetnalli, Madolli, Keralli & Parasapur	<ul style="list-style-type: none"> <li>• Greengram, Spreading Groundnut, Chilli and Rabi Jowar</li> </ul>	<ul style="list-style-type: none"> <li>• Abiotic stress</li> <li>• Non availability of improved seeds</li> <li>• Lack of advisory services</li> </ul>	<ul style="list-style-type: none"> <li>• Kharif &amp; rabi campaign</li> <li>• Seed production</li> </ul>
			<ul style="list-style-type: none"> <li>• Nutrition</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of awareness on health, hygiene and nutrition</li> </ul>	<ul style="list-style-type: none"> <li>• Awareness on nutrition, balanced diet, deficiency diseases</li> </ul>

Sl. No.	Taluk	Blocks/ groups of villages	Major crops & enterprises being practiced	Major problems identified	Identified thrust areas
3.	Ron	Totaganti Cluster (Comprising of Totaganti, Nai Mallapur & Bachalapur)	• Greengram	• Abiotic stress	<ul style="list-style-type: none"> <li>• <i>In-situ</i> soil moisture conservation</li> <li>• Introduction of Selection-4 variety</li> <li>• Management of pod borer &amp; powdery mildew</li> <li>• Introduction of Twin wheel hoe weeder</li> </ul>
				• Cultivation of local variety	
				• Incidence of pod borer and powdery mildew	
				• Labour problem in pod picking	
			• Drudgery	• Drudgery in weeding and labour problem in Greengram crop	<ul style="list-style-type: none"> <li>• <i>In-situ</i> soil moisture conservation</li> <li>• INM</li> <li>• Introduction of GPBD-4</li> <li>• Management of collar rot &amp; leaf minor</li> </ul>
			• Groundnut	• Abiotic stress	
				• Imbalanced nutrition	
				• Incidence of leaf spot	
				• Incidence of collar rot and leaf minor	
			• Sunflower	• Abiotic stress	<ul style="list-style-type: none"> <li>• <i>In-situ</i> soil moisture conservation</li> <li>• Wider row spacing</li> <li>• INM</li> <li>• Management of caterpillar &amp; powdery mildew</li> </ul>
				• Imbalanced nutrition	
				• Incidence of leaf eating caterpillar & powdery mildew	
			• Onion	• Abiotic stress	<ul style="list-style-type: none"> <li>• <i>In-situ</i> soil moisture conservation</li> <li>• INM</li> <li>• Introduction of Arka Kalyan</li> <li>• Seed production</li> <li>• INM</li> </ul>
				• Low keeping quality of bulb	
• High incidence of purple blotch					
• Non availability of quality seeds					
• Imbalanced nutrition					
• Bengalgram	• Incidence of wilt	<ul style="list-style-type: none"> <li>• Introduction of JG-11 variety</li> <li>• Management of pod borer</li> </ul>			
	• Incidence of pod borer				
• Drudgery	• Drudgery in harvesting of crop	• Introduction of Cotton hand gloves			
• Rabi Jowar	• Moisture stress	<ul style="list-style-type: none"> <li>• Spacing management</li> <li>• Seed priming</li> <li>• Introduction of CSV-22 variety</li> </ul>			
	• Poor fodder quality				

Sl. No.	Taluk	Blocks/ groups of villages	Major crops & enterprises being practiced	Major problems identified	Identified thrust areas
			<ul style="list-style-type: none"> <li>Value addition</li> </ul>	<ul style="list-style-type: none"> <li>Lack of value addition</li> </ul>	<ul style="list-style-type: none"> <li>Value addition in Jowar</li> </ul>
			<ul style="list-style-type: none"> <li>Nutrition</li> </ul>	<ul style="list-style-type: none"> <li>Lack of awareness on health &amp; hygiene and nutrition</li> </ul>	<ul style="list-style-type: none"> <li>Awareness on health &amp; hygiene and nutrition</li> </ul>
			<ul style="list-style-type: none"> <li>Drudgery</li> </ul>	<ul style="list-style-type: none"> <li>Drudgery in cooking &amp; collecting firewood</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of Envirofit Chulha</li> </ul>
			<ul style="list-style-type: none"> <li>Dairy (Buffaloe)</li> </ul>	<ul style="list-style-type: none"> <li>Less intake of feed</li> <li>Low milk yield</li> </ul>	<ul style="list-style-type: none"> <li>Enrichment of dry fodder</li> <li>Balanced nutrition</li> </ul>
			<ul style="list-style-type: none"> <li>Sheep</li> </ul>	<ul style="list-style-type: none"> <li>Low productivity of wool &amp; meat</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of Ramboulette breed</li> </ul>
			<ul style="list-style-type: none"> <li>Goat</li> </ul>	<ul style="list-style-type: none"> <li>Low milk production</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of Bidari breed</li> </ul>
4.	Naragund	Banahatti Cluster (Comprising of Banahatti, Kurlageri & Muganur)	<ul style="list-style-type: none"> <li>Maize</li> </ul>	<ul style="list-style-type: none"> <li>Low productivity of crops due to soil sodicity</li> <li>Incidence of stem borer and armyworm</li> </ul>	<ul style="list-style-type: none"> <li>Soil reclamation</li> <li>INM</li> <li>Management of armyworm &amp; stem borer</li> </ul>
			<ul style="list-style-type: none"> <li>Wheat</li> </ul>	<ul style="list-style-type: none"> <li>Improper irrigation</li> <li>Cultivation of non descript variety (Nirmal)</li> <li>Imbalanced nutrition</li> <li>Drudgery in harvesting of Wheat stalks</li> </ul>	<ul style="list-style-type: none"> <li>Water management</li> <li>Introduction of GW-322 variety</li> <li>INM</li> <li>Introduction of improved Sickle</li> </ul>
			<ul style="list-style-type: none"> <li>Sunflower</li> </ul>	<ul style="list-style-type: none"> <li>Imbalanced nutrition</li> <li>Incidence of caterpillar and powdery mildew</li> <li>Drudgery in cutting earhead</li> </ul>	<ul style="list-style-type: none"> <li>Poor seed setting</li> <li>INM</li> <li>Management of caterpillar &amp; powdery mildew</li> <li>Cotton hand gloves for harvesting of earhead</li> </ul>
			<ul style="list-style-type: none"> <li>Bengalgram</li> </ul>	<ul style="list-style-type: none"> <li>High incidence of wilt</li> <li>Incidence of pod borer</li> <li>High incidence of rust</li> <li>Improper schedule of irrigation</li> <li>Drudgery in harvesting of Bengalgram</li> </ul>	<ul style="list-style-type: none"> <li>ICM</li> <li>Introduction of JG-11 variety</li> <li>Rust management</li> <li>Irrigation management</li> <li>Cotton hand gloves for harvesting</li> </ul>
				<ul style="list-style-type: none"> <li>Drudgery in weeding</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of Twin Wheel Hoe</li> </ul>

Sl. No.	Taluk	Blocks/ groups of villages	Major crops & enterprises being practiced	Major problems identified	Identified thrust areas
					Weeder
			<ul style="list-style-type: none"> <li>• Drudgery</li> </ul>	<ul style="list-style-type: none"> <li>• Drudgery in cooking</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction of Envirofit Chulha</li> </ul>
			<ul style="list-style-type: none"> <li>• Dairy Cow</li> </ul>	<ul style="list-style-type: none"> <li>• Low milk production due to imbalanced nutrition</li> <li>• Drudgery in churning of Butter</li> </ul>	<ul style="list-style-type: none"> <li>• Balanced nutrition</li> <li>• Promotion of green fodder cultivation</li> <li>• Introduction of Butter churner</li> </ul>
			<ul style="list-style-type: none"> <li>• Self employment</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of employment</li> </ul>	<ul style="list-style-type: none"> <li>• Vocational training in dairy</li> </ul>
5.	Munda ragi	Petalur cluster (Comprising of Petalur, Ramenahalli, Janthli Sirur, Kadampur & Churchihal)	<ul style="list-style-type: none"> <li>• Problematic Soil</li> </ul>	<ul style="list-style-type: none"> <li>• Low productivity due to sodicity of soil</li> </ul>	<ul style="list-style-type: none"> <li>• Reclamation of sodic soils</li> </ul>
			<ul style="list-style-type: none"> <li>• Greengram</li> </ul>	<ul style="list-style-type: none"> <li>• Unsustainable production due to moisture stress</li> <li>• Incidence of pod borer and powdery mildew</li> <li>• Labour problem for weeding</li> </ul>	<ul style="list-style-type: none"> <li>• Sustainable management practices</li> <li>• Pod borer and powdery mildew management</li> <li>• Introduction of Twin Wheel How Weeder</li> </ul>
			<ul style="list-style-type: none"> <li>• Spreading Groundnut</li> </ul>	<ul style="list-style-type: none"> <li>• Imbalanced nutrition</li> <li>• Incidence of rootgrub</li> <li>• Incidence of leaf minor</li> </ul>	<ul style="list-style-type: none"> <li>• INM</li> <li>• Management of rootgrub and leaf minor</li> </ul>
			<ul style="list-style-type: none"> <li>• Sunflower</li> </ul>	<ul style="list-style-type: none"> <li>• Abiotic stress</li> <li>• Imbalanced nutrition</li> <li>• High incidence of caterpillar and powdery mildew</li> <li>• Improper Irrigation</li> <li>• Drudgery in earhead cutting</li> </ul>	<ul style="list-style-type: none"> <li>• Wider row spacing and <i>in-situ</i> soil moisture conservation</li> <li>• INM</li> <li>• Management of caterpillar and powdery mildew</li> <li>• Irrigation management</li> <li>• Introduction of cotton hand gloves</li> </ul>
			<ul style="list-style-type: none"> <li>• Onion</li> </ul>	<ul style="list-style-type: none"> <li>• Moisture stress</li> <li>• Inter cultivation not possible due to criss-cross sowing</li> <li>• Non availability of labours for weeding</li> <li>• Poor keeping quality</li> <li>• Incidence of purple blotch</li> <li>• Non availability of</li> </ul>	<ul style="list-style-type: none"> <li>• In-situ soil moisture conservation</li> <li>• Single row sowing</li> <li>• Chemical weed management</li> <li>• INM</li> <li>• Introduction of Arka Kalyan variety</li> <li>• Seed production</li> </ul>



Sl. No.	Taluk	Blocks/ groups of villages	Major crops & enterprises being practiced	Major problems identified	Identified thrust areas
				quality seeds	
			<ul style="list-style-type: none"> <li>Maize</li> </ul>	<ul style="list-style-type: none"> <li>Low productivity due to imbalanced nutrition</li> <li>Incidence of army worm</li> <li>Improper Irrigation</li> <li>Drudgery in cutting of Maize stalk</li> </ul>	<ul style="list-style-type: none"> <li>INM</li> <li>Armyworm management</li> <li>Water management</li> <li>Introduction of improved sickle</li> </ul>
			<ul style="list-style-type: none"> <li>Rabi Jowar</li> </ul>	<ul style="list-style-type: none"> <li>Abiotic stress</li> </ul>	<ul style="list-style-type: none"> <li>Spacing management</li> <li>In-situ soil moisture conservation and seed priming</li> </ul>
			<ul style="list-style-type: none"> <li>Self Employment</li> </ul>	<ul style="list-style-type: none"> <li>Lack of self employment opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Vocational trainings through Dairy and Vermicompost</li> </ul>
			<ul style="list-style-type: none"> <li>Drudgery</li> </ul>	<ul style="list-style-type: none"> <li>Drudgery in cooking and collecting firewood</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of Envirofit Chulha</li> </ul>
			<ul style="list-style-type: none"> <li>Nutrition</li> </ul>	<ul style="list-style-type: none"> <li>Problematic drinking water</li> <li>Lack of awareness on health &amp; hygiene and Nutrition &amp; Balanced Diet</li> </ul>	<ul style="list-style-type: none"> <li>Soaking of drumstic seeds in water</li> <li>Awareness on health, hygiene and Nutrition</li> </ul>
			<ul style="list-style-type: none"> <li>Goat</li> </ul>	<ul style="list-style-type: none"> <li>Low productivity of milk</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of Bidari breed</li> </ul>
			<ul style="list-style-type: none"> <li>Sheep</li> </ul>	<ul style="list-style-type: none"> <li>Low productivity of wool &amp; meat</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of Rabmoullete breed</li> </ul>
			<ul style="list-style-type: none"> <li>Poultry birds</li> </ul>	<ul style="list-style-type: none"> <li>Low egg productivity</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of Swarnadhara breed birds</li> </ul>

## **SUMMARY OF LIST OF THRUST AREAS FOR THE KVK FOR 2010-11**

- i) Abiotic stress management strategies in Greengram, Groundnut, Sunflower, Rabi Jowar.
- ii) Soil Reclamation
- iii) Soil and Water Conservation
- iv) Soil Fertility Management
- v) Integrated Crop Management strategies in Greengram, Groundnut, Onion & Chilli
- vi) Seed production activities in Greengram, Groundnut, Onion, Bengalgram and Vegetable Crops
- vii) Organization of Kharif and Rabi campaign for knowledge dissemination
- viii) Establishment of resource centre in the selected villages for knowledge dissemination and input supply
- ix) Up-gradation of local Sheep and Goat for high meat, wool and milk production
- x) Introduction of improved poultry birds
- xi) Value addition
- xii) Introduction of drudgery reduction equipments
- xiii) Women and child health, hygiene and nutrition

**TABLE.2 Abstract of Interventions Proposed Based On the Identified Problems during 2010-11**

Sl. No.	Crop/Enterprise	Identified Problem	Interventions				
			Title of OFT if any	Title of FLD if any	Title of Training if any	Title of Training for extension personnel if any	Others
1	Greengram	• Abiotic stress	Refinement of resource conservation technologies for sustainable production	ICM in greengram	ICM	ICM	Field day
		• Powdery mildew and yellow vein mosaic disease • Imbalanced nutrition	-	-	As above	As above	As above
		• Labour problem for weeding	-	Introduction of Twin Wheel Hoe Weeder	Drudgery reducing equipments	-	Method demonstration
		• Non availability of quality seeds	-	-	Seed production in greengram	-	Seed production
		• Incidence of pulse beetles	Management of pulse beetles	-	-	-	-
2	Bunch groundnut	• Abiotic stress	Assessment of K-6 variety and ICGV-91114 for drought tolerance	-	ICM	-	Field day
		• Imbalanced nutrition • Incidence of leaf minor • Cultivation of low productive local variety	Micro nutrient management		ICM	ICM	• Field day • Seed production

Sl. No.	Crop/Enterprise	Identified Problem	Interventions				
			Title of OFT if any	Title of FLD if any	Title of Training if any	Title of Training for extension personnel if any	Others
		<ul style="list-style-type: none"> <li>Collar rot</li> </ul>	Collar rot management	-	Collar rot management	-	-
		<ul style="list-style-type: none"> <li>Drudgery in shelling</li> </ul>	-	Demonstration of groundnut decorticator with separator	-	-	-
3	Spreading groundnut	<ul style="list-style-type: none"> <li>Low productivity due to moisture stress</li> </ul>	Resource conservation technologies for sustainable production	-	Resource conservation technologies	Resource conservation technologies	-
3	Summer groundnut	<ul style="list-style-type: none"> <li>Low production of local variety</li> <li>Imbalanced nutrition</li> </ul>	-	-	ICM	ICM	<ul style="list-style-type: none"> <li>Field day</li> <li>Seed production</li> </ul>
		<ul style="list-style-type: none"> <li>Poor keeping quality</li> <li>High incidence of purple blotch</li> </ul>	<ul style="list-style-type: none"> <li>Assessment of Agri found light red variety</li> <li>Thrips management</li> </ul>	Introduction of Arka Kalyan	ICM	ICM	Field day, literature
		<ul style="list-style-type: none"> <li>Non availability of quality seed</li> </ul>	-	-	Seed production	-	Seed production & seed supply
5	Chilli	<ul style="list-style-type: none"> <li>Murda complex</li> </ul>	Management of murda complex	-	Management of murda complex	-	Field day
		<ul style="list-style-type: none"> <li>High incidence of Anthracnose</li> </ul>	Anthracnose management	-	Management of Anthracnose	-	

Sl. No.	Crop/Enterprise	Identified Problem	Interventions				
			Title of OFT if any	Title of FLD if any	Title of Training if any	Title of Training for extension personnel if any	Others
6	Bt. Cotton	<ul style="list-style-type: none"> <li>Imbalanced nutrition</li> <li>High incidence of sucking pest</li> </ul>	-		ICM	-	-
		<ul style="list-style-type: none"> <li>Lack of knowledge on production technology</li> </ul>	-	-	-	-	Campaigns & development of literature
7	Desi cotton	<ul style="list-style-type: none"> <li>Low productivity of Jayadhar cotton</li> <li>Moisture stress</li> <li>Non availability of quality seed</li> </ul>	-	ICM in DDHC-11 variety	ICM	ICM	<ul style="list-style-type: none"> <li>Field day</li> <li>Seed production</li> </ul>
8	Sunflower	<ul style="list-style-type: none"> <li>Moisture stress</li> <li>Imbalanced nutrition</li> <li>Incidence of powdery mildew and leaf spot</li> </ul>	Bio-fertilizer management		ICM	ICM	<ul style="list-style-type: none"> <li>Field day</li> <li>Literature</li> </ul>
		<ul style="list-style-type: none"> <li>Drudgery in cutting of ear head</li> </ul>	Assessment of Cotton cloth hand gloves	-	-	-	Supply of Cotton cloth hand gloves
9	Bengalgarm	<ul style="list-style-type: none"> <li>Incidence of wilt</li> <li>Incidence of pod borer</li> <li>Drudgery in harvesting</li> </ul>	Assessment of various types of hand gloves	Introduction of JG-11 variety along with ICM	ICM	ICM	Field day, Seed production

Sl. No.	Crop/Enterprise	Identified Problem	Interventions				
			Title of OFT if any	Title of FLD if any	Title of Training if any	Title of Training for extension personnel if any	Others
10	Rabi jowar	<ul style="list-style-type: none"> <li>Moisture stress</li> <li>Low productivity of Maladandi (M35-1)</li> </ul>	<ul style="list-style-type: none"> <li>Assessment of Anuradha variety for higher productivity</li> <li>Resource conservation technologies for sustainable production</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of CSV-22</li> </ul>	<ul style="list-style-type: none"> <li>ICM</li> <li>Resource conservation technologies</li> </ul>	<ul style="list-style-type: none"> <li>ICM</li> <li>Resource conservation technologies</li> </ul>	<ul style="list-style-type: none"> <li>Field day</li> </ul>
		<ul style="list-style-type: none"> <li>Drudgery in cutting of jowar stalks</li> </ul>	-	Serrated sickle	Serrated sickle	-	Supply of serrated sickle
11	Maize	<ul style="list-style-type: none"> <li>Low productivity due to soil sodicity</li> </ul>	-	-	Soil fertility management	Soil fertility management	-
		<ul style="list-style-type: none"> <li>Imbalanced nutrition and incidence of stem borer and army worm</li> </ul>	-	ICM	ICM	-	<ul style="list-style-type: none"> <li>Field day</li> <li>Literature</li> </ul>
12	Wheat	<ul style="list-style-type: none"> <li>Improper irrigation</li> </ul>	-	<ul style="list-style-type: none"> <li>INM</li> <li>Stem borer management</li> </ul>	Water management	Water management	-
		<ul style="list-style-type: none"> <li>Cultivation of non descript variety (Nirmala)</li> </ul>	-	Introduction of GW-322 and UAS-304 variety	ICM	ICM	Field day

Sl. No.	Crop/Enterprise	Identified Problem	Interventions				
			Title of OFT if any	Title of FLD if any	Title of Training if any	Title of Training for extension personnel if any	Others
		<ul style="list-style-type: none"> <li>• Drudgery in harvesting of wheat stalks</li> </ul>	-	Serrated sickle	-	-	Supply of sickle
13	Brinjal	<ul style="list-style-type: none"> <li>• High incidence of shoot &amp; fruit borer</li> </ul>	-	Shoot & fruit borer management	Shoot & fruit borer management	-	<ul style="list-style-type: none"> <li>• Field day</li> <li>• Literature</li> </ul>
14	Chrysanthemum	<ul style="list-style-type: none"> <li>• Imbalanced nutrition</li> </ul>	Boron nutrition	INM	INM	INM	-
		<ul style="list-style-type: none"> <li>• Non opening of buds</li> </ul>	Usage of potassium nitrate & GA for bud opening	-	INM	-	-
		<ul style="list-style-type: none"> <li>• Fluctuation of prices of Chrysanthemum</li> </ul>	-	Introduction of Aster for better market price	ICM	-	<ul style="list-style-type: none"> <li>• Field day</li> <li>• Literature</li> </ul>
15	Tomato	<ul style="list-style-type: none"> <li>• Leaf curl incidence</li> </ul>	-	Introduction of Arka Abha variety	ICM	-	Field day
16	French bean	<ul style="list-style-type: none"> <li>• Low productivity of local variety</li> </ul>	-	Introduction of Arka Suvida variety	ICM	-	Field day
17	Ridge gourd	<ul style="list-style-type: none"> <li>• Low productivity of local variety</li> </ul>	-	Introduction of Arka Sujata and Sumit varieties	ICM	-	Field day

Sl. No.	Crop/Enterprise	Identified Problem	Interventions				
			Title of OFT if any	Title of FLD if any	Title of Training if any	Title of Training for extension personnel if any	Others
18	Mango	• Improper nutrition	Assessment of foliar application of nutrients	-	INM	INM	-
		• Incidence of powdery mildew	-	Management of powdery mildew	Management of powdery mildew	-	-
		• Incidence of mango hopper	-	Management of mango hopper	Management of mango hopper	-	-
		• Improper orchard management	-	-	Orchard management	-	-
18	Goat	• Low productivity of milk of local breeds	-		Goat management	-	Supply of bucks
19	Sheep	• Low productivity of meat & wool • Endoparasite incidence	Management of endoparasites	• Ecto and endo parasite management	Sheep management	-	Supply of Rams
20	Poultry birds	• Low egg production	-	Introduction of Swarnadhara breed of poultry birds	Management of backyard poultry	-	Supply of birds
21	Cattle	• Incidence of tick	Tick management	-	Management of tick	-	-



Sl. No.	Crop/Enterprise	Identified Problem	Interventions				
			Title of OFT if any	Title of FLD if any	Title of Training if any	Title of Training for extension personnel if any	Others
22	Nutrition and Balanced Diet	<ul style="list-style-type: none"> <li>Lack of awareness</li> </ul>	-	-	Awareness on nutrition, diet and deficiency diseases	Awareness on nutrition, diet and deficiency diseases	-
23	Self employment	<ul style="list-style-type: none"> <li>Lack of self employment opportunities</li> </ul>	-	-	Vocational training in dairy, goat, seed production, value addition in major crops and vermicomposting		

**TABLE 2A. Target set for number of interventions to be implemented during 2010-11**

S. No	Particulars of intervention	Target number / Quantity
01	<b>On Farm Trial</b>	21
02	<b>Front Line Demonstration (other than oil seeds, pulses and cotton)</b>	377
03	<b>Front Line Demonstration (Oilseeds)</b>	115
04	<b>Front Line Demonstration (Pulses)</b>	100
	<b>Training Programmes</b>	
01	Farmers and farm women	82 Courses
02	Extension personnel	12 Courses
03	Sponsored programmes	36 Courses
04	Vocational Programmes	11 Courses
	<b>Extension Programmes</b>	
01	Field Day	12
02	Kisan Mela (Technology Week)	02
03	Kisan Ghosthi	02
04	Exhibition	01
05	Film Show	15
06	Method Demonstrations	35
07	Farmers Seminar on Azolla cultivation	01
08	Workshop	02
09	Group meetings	20
10	Lectures delivered	02
11	Newspaper coverage	15
12	Radio coverage	06
13	TV coverage	05
14	Radio Programmes	07
15	TV Programmes	06
16	Publications	05
17	Popular articles	08
18	Extension Literature	10
19	Advisory Services	60
20	Scientific visit to farmers field	50
21	Farmers visit to KVK	15
22	Diagnostic visits	10
23	Field visits	100
24	Exposure visits	05
25	Ex-trainees Sammelan	05
26	Agriculture Camps	02
27	Clinic day	--
28	Soil health Camp	02
29	Animal Health Camp	02
30	Agri mobile clinic	--
31	Soil test campaigns	03
32	Farm Science Club Conveners meet	--
33	Self Help Group Conveners meetings	10
34	Mahila Mandals Conveners meetings	--
35	Celebration of Nutrition week	01
36	PRA exercise conducted	05
37	Survey on socio economic improvement through Animal Science to SHG women	--
38	Awareness on Cotton contract farming	--
39	Distribution of BT cotton seeds under contract farming in collaboration with Cotton Corporation of India	--
40	Insect trap awareness campaign	--
41	AIDS awareness campaign	--
42	Awareness on KVK activities to Tribes	--
43	Formation of Joint Liability Groups	10
	<b>Production and supply of seed materials</b>	
01	1) Cereals	25 Qts.
02	ii) Oilseeds	45 Qts.
03	iii) Pulses	50 Qts.
04	iv) Vegetables	17 Qts.
05	v) Flower crops	--

06	vi) Others (Specify)	--
	<b>Production and supply of Planting materials</b>	
01	Fruits	4000
02	Spices	
03	Vegetables	
04	Forest species	
05	Ornamental crops	
06	Plantation crops	
07	Others (Simaroubha)	2000
	<b>Production and supply of bio-products</b>	
01	Bio agents	1.20 Qts.
02	Bio fertilizers	
03	Bio pesticides	
	<b>Production and supply of livestock material</b>	
01	Sheep	
02	Goat	
03	Fisheries	
04	Others (Specify)	
01	<b>Number of soil samples to be analyzed</b>	<b>630</b>
02	<b>Number of water samples to be analyzed</b>	<b>130</b>
03	<b>Number water samples to be analyzed</b>	<b>10</b>

**TABLE. 3 PLAN OF ON FARM TESTING FOR 2010-11**

**ASSESSMENT NO. 01**

1. Title of the On Farm Trial : Evaluation of Kadiri-6 and ICGV-91114 Groundnut (Bunch) varieties for drought tolerance
2. State whether it is Assessment / Refinement : Assessment
3. Agro-Ecological Zone : Northern dry zone-3, Region-2
4. Production System : Medium and big farmers production system under rainfed situation
5. Problem identified : Erratic rainfall & long dry spells results in low productivity in existing varieties of Groundnut
6. Number of farmers and area affected in the operational villages : 5000 farmers in an area of 15000 ha
7. Thrust areas : Assessment of Kadari-6 and ICGV-91114 variety against drought tolerance
8. Rationale for proposing the OFT : Kadari-6 variety is drought tolerant having bold kernals, high oil content & high yielding. ICGV-91114 is also drought resistant, has high oil content and resistant to tikk disease.
9. Technology Option-1 with Source {Recommended practice and extent of its adoption} : Local variety (TMV-2)  
Extent of yield loss 35-40%
10. Technology Option-2 with Source {Recommended practice and extent of its adoption} : GPBD-4 variety  
Extent of its adoption : 35%  
Level of yield loss during long dry spells : 25-30%
11. Technology Option-3 being assessed along with justification with Source : (i) Evaluation of K-6 variety which is drought tolerant having bold kernals, high oil content and high yielding  
(ii) Evaluation of ICGV-91114 variety which also can withstand long dry spells and yield better

**Source** : ARS, Kadari and ANGRAU, Anatapur district and ICRISAT, Hyderabad

12. Budget proposed : 0.4 ha

Sl. No.	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options			
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)
1.	GPBD-4 (Pods)	0.75 Qt.	3500/-	2625/-	K-6 (Pods) ICGV-91114	0.75 Qt. 0.75 Qt.	5500/- 5500/-	4125/- 4125/-

12. Area (ha.) for implementing : 1.2 ha

- i) Technology Option 1 (Farmer's Practice) : 0.4 ha
- ii) Technology Option 2 (Recommended Practice) : 0.4 ha
- iii) Technology option 3 : 0.4 ha

13. Grand Total Cost proposed per OFT : Rs. 4125/-

14. Total Number of OFTs proposed : 03

15. Total budget required : Rs. 12375/-

## ASSESSMENT NO.2

1. Title of the On Farm Trial : Micronutrient management in groundnut
2. State whether it is Assessment / Refinement : Assessment
3. Agro-Ecological Zone : North dry zone-3, Region-2
4. Production System : Medium & big farmers production system under irrigation system
5. Problem identified : Micronutrient deficiency
6. Number of farmers and area affected in the operational villages : 5000 farmers in an area of 15000 ha.
7. Thrust areas : Micronutrient management
8. Rationale for proposing the OFT : Major part of soils are deficit in Fe, Zn and Boron. Hence its management can ensure better yield.

### 9. Technology Option I

Sl. No	Technological Options	Details of technology
1.	Farmer's Practice	Application of only major nutrients
2.	Name of the fertilizer & quantity	DAP @ 50 kg/ ha
3	Extent of Yield loss	30 %
4	Method of use	Basal application during sowing in seed rows

### 10. Technology Option II

Sl. No	Technological Options	Details of technology
1	Recommended Practices	Soil application of FeSO <sub>4</sub> and ZnSO <sub>4</sub> @ 25kg/ha each
2	Extent of its adoptions	20%
3	Source of technology	UAS, Dharwad
4	Reasons for low adoptions	Increasing multi micronutrient deficiency in groundnut ecosystem will not be rectified by use of one or two nutrients, hence its adoption will not increase the crop yield to significant level which can be rectified by use of multi micro nutrients application.

### 11. Technology Option III

<b>Details of Technology</b>	<b>Source of Technology</b>	<b>Justification</b>
Soil application of FeSO <sub>4</sub> and ZnSO <sub>4</sub> @ 25kg/ha each & Boran @ 4 kg/ha	ICRISAT, Hyderabad	Balanced use of micronutrient along with major nutrient helps in getting higher yield, better quality and incidence of diseases will be less.

### 12. Budget proposed for OFT

Sl. No	<b>Critical Inputs for Technology Option 2 (Recommended Practice)</b>				<b>Critical inputs for other technology Options</b>			
	<b>Name</b>	<b>Qty (Kg)</b>	<b>Unit Cost (Rs.)</b>	<b>Total Cost (Rs.)</b>	<b>Name</b>	<b>Qty (Kg)</b>	<b>Unit Cost (Rs.)</b>	<b>Total Cost (Rs.)</b>
1	FeSO <sub>4</sub>	10	60	600	FeSO <sub>4</sub>	10	60	600
2	ZnSO <sub>4</sub>	10	38	380	ZnSO <sub>4</sub>	10	38	380
3					Boran	2	300	600
	<b>Total</b>			<b>980</b>	<b>Total</b>			<b>1580</b>

### 13. Area (ha.) For implementing

- i. Technology Option 1 (Farmer's Practice) : 0.4 ha
  - ii. Technology Option 2 (Recommended Practice) : 0.4 ha
  - iii. Technology option 3 : 0.4 ha
14. Grand Total Cost proposed per OFT : Rs. 2560/-
15. Total Number of OFTs proposed : 3
16. Total budget required : Rs. 7680/-

### ASSESSMENT NO. 3

1. Title of the On Farm Trial : Collar rot management in Groundnut
2. State whether it is Assessment / Refinement : Assessment
3. Agro-Ecological Zone : Northern dry zone
4. Production System : Medium and big farmers production system under rainfed condition
5. Problem identified : Incidence of collar rot disease is affecting the Groundnut productivity. The disease occurs immediately after germination of crop and it will continue throughout the crop season. The yield loss is about 35-40%
6. Number of farmers and area affected in the operational villages : More than 3000 farmers in about 8000 ha area
7. Thrust areas : Management of collar rot in Groundnut
8. Rationale for proposing the OFT : Seed treatment with Vitawax and Trichoderma controls the disease within the seed (seed borne) as well as externally by suppressing the colonization of Rhizosphere at root zone
9. Technology Option-1 with Source {Farmers practice} : Seed treatment with captan @ 2gm/kg of seed  
Extent of yield loss 15-25%
10. Technology Option-2 with Source {Recommended practice and extent of its adoption} : Seed treatment with Trichoderma @ 4 gm/kg seed  
Source : UAS, Dharwad  
Extent of its adoption : 15-20%
11. Technology Option-3 being assessed along with justification with Source : Seed treatment with Vitawax @ 3gms + Trichoderma Viridae @ 4 gm/kg seed.  
**Source** : UAS, Dharwad  
**Justification** : Vitawax & Trichoderma are combination of systematic and contact bio-fungicide. These both effectively control diseases within the seed as well as externally by suppressing the colonization of rhizosphere at the root zone.



12. Budget proposed : (For 1 Ha)

Sl. No.	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options			
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)
1.	Trichoderma	400gm	200/kg	80/-	Trichoderma	400gm	200/kg	80/-
					Vitawax	300gm	140/100gm	420/-
	<b>Total</b>			<b>80/-</b>				<b>500/-</b>

13. Area (ha.) for implementing :

- i) Technology Option 1 (Farmer's Practice) : 1 ha
- ii) Technology Option 2 (Recommended Practice) : 1 ha
- iii) Technology option 3 : 1 ha

14. Grand Total Cost proposed per OFT : Rs. 580/-

15. Total Number of OFTs proposed : 3

16. Total budget required : Rs. 1740/-

#### ASSESSMENT NO.4

1. Title of the On Farm Trial : Use of biofertilizer in sunflower
2. State whether it is Assessment / Refinement : Assessment
3. Agro-Ecological Zone : Northern dry zone-3, Region-2
4. Production System : Medium and big farmers production system under irrigation system
5. Problem identified : Increased cost of chemical fertilizer
6. Number of farmers and area affected in the operational villages : More than 400 farmers in an area of about 500 ha.
7. Thrust areas : Biofertilizer use
8. Rationale for proposing the OFT : Cost incurred on chemical fertilizers is more. Besides it is causing environmental pollution. Hence there is a need to reduce the use of chemical fertilizers. On the contrary, biofertilizers are available with low cost and help in reducing environmental pollution and increase the crop yield.

#### 9. Technology Option I

Sl. No	Technological Options	Details of technology
1	Farmer's Practice	Very less farmers are using biofertilizer (10%)
2	Name of the fertilizer & quantity	DAP-125 Kg/ha (22-57-0 NPK Kg/ha)
3	Extent of Yield loss	30 %
4	Method of use	Seed treatment

#### 10. Technology Option II

Sl.No	Technological Options	Details of technology
1	Recommended Practices	Application of NPK @ 60:75:60 kg/ha and Azospirillum @ 500gr/ha
2	Extent of its adoptions	20 %
3.	Source of technology	UAS, Dharwad
4.	Reasons for low adoptions	Increasing cost of inorganic fertilizers and unavailability at right time

11. Technology Option III

Details of Technology	Source of Technology	Justification
Application of NPK @ 30:75:60 kg/ha and Azospirillum & Azotobactor @ 500g/ ha each	DOR, Hyderabad	Combined use of Azospirillum and Azotobact or helps in reducing 50 % recommended nitrogen without reducing the yield.

12. Budget proposed for OFT: 0.4 ha

Sl. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options			
	Name	Qty (Kg)	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty (Kg)	Unit Cost (Rs.)	Total Cost (Rs.)
1					Azospirillum	0.50	30	15
2	Azospirillum	0.50	30	15	Azotobactor	0.50	30	15
	<b>Total</b>			<b>15</b>	<b>Total</b>			<b>30</b>

13. Area (ha.) For implementing

- i. Technology Option 1 (Farmer's Practice) : 2.0 ha
- ii. Technology Option 2 (Recommended Practice) : 2.0 ha
- iii. Technology option 3 : 2.0 ha

- 14. Grand Total Cost proposed per OFT : Rs. 45
- 15. Total Number of OFTs proposed : 10
- 16. Total budget required : Rs. 450

## ASSESSMENT NO.5

1. Title of the On Farm Trial : Introduction of new variety for increasing productivity of rabi sorghum in shallow soils
2. State whether it is Assessment / Refinement : Assessment
3. Agro-Ecological Zone : Northern Dry Zone-3, Region-2
4. Production System : Rainfed production System
5. Problem identified : Yields are very low in shallow soils
6. Number of farmers and area affected In the operational villages : More than 850 farmers in about 2640 ha.
7. Thrust areas : Introduction of new variety
8. Rationale for proposing the OFT : This new variety Anuradha is early maturing and this helps in overcoming the problem of receding moisture regime during rabi season
9. Technology Option 1 : M 35-1, yield loss 40-45%
10. Technology Option 2

Recommended practice	Source	Level of Adoption	Reasons for no/low adoption
M 35-1	UAS, Dharwad	100 %	-

### 11. Technology Option 3

Assessment planned	Source	Justification
Variety - Anuradha	MPKV, Rahuri	Anuradha is early maturing, drought tolerant and high yielding variety

### 12. Budget proposed : (For 0.4 ha)

S. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options			
	Name	Qty. (Kg)	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty. (kg)	Unit Cost (Rs.)	Total Cost (Rs.)
	Seeds (M-35-1)	3.0	25	75	Seeds (Anuradha)	3.0	50	150
				75				150

### 13. Area (ha.) for implementing :

- i) Technology Option 1 (Farmer's Practice) : 4.0 ha
- ii) Technology Option 2 (Recommended Practice) : 4.0 ha
- ii) Technology option 3 : 4.0 ha

14. Grand Total Cost proposed per OFT : Rs. 225/-
15. Total Number of OFTs proposed : 10
16. Total budget required : **Rs. 2250/-**

## ASSESSMENT NO. 6

1. Title of the On Farm Trial : Evaluation of Agrifound light red variety of onion for high yielding & better keeping quality bulbs
2. State whether it is Assessment / Refinement : Assessment
3. Agro-Ecological Zone : Northern dry zone-3, Region-2
4. Production System : Big farmers production system under dry land condition
5. Problem identified : In identified villages farmers are using local onion variety (Bellary red) since long time and its bulbs are having low keeping quality. Hence this variety is fetching less price in the market and farmers incur losses.
6. Number of farmers and area affected in the operational villages : More than 3000 farmers in an area of 10000 ha.
7. Thrust areas : Evaluation of new high yielding onion variety
8. Rationale for proposing the OFT : Agrifound light red variety produce good keeping quality bulb & it is high yielding variety
9. Technology Option 1 with Source : Cultivating Bellary red and there is more than 20-25% yield loss (Farmers' practice)
10. Technology Option 2 with Source :
  - Recommending certified Bellary red variety seeds and 40-50% adoption is observed
  - Source: UAS, Dharwad
11. Technology Option 3 being assessed along with justification with Source : Introduction of Agrifound light red onion variety  
**Source:** National Horticultural Research & Development Foundation (NHRDF), Nasik  
**Justification:** Agrifound light red variety is a high yielder and produces good quality bulbs. Hence it fetches higher market price.

12. Budget proposed for OFT : (0.4 ha)

S. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options				
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	
1	Seed (Bellary red variety)	1 Kg	350	350	Seed (Agrifound light red variety)	1 Kg	450	450	
<b>Total</b>				<b>350</b>	<b>Total</b>				<b>450</b>

13. Area (ha.) for implementing :

- i) Technology Option 1 (Farmer's Practice) : 0.4 ha
- ii) Technology Option 2 (Recommended Practice) : 0.4 ha
- iii) Technology option 3 (Alternate practice) : 0.4 ha

14. Grand Total Cost proposed per OFT : Rs.800

15. Total Number of OFTs proposed : 3

16. Total budget required : Rs.2400/-

## ASSESSMENT NO. 7

1. Title of the On Farm Trial : Thrips management in onion
2. State whether it is Assessment / Refinement : Assessment
3. Agro-Ecological Zone : Northern dry zone-3, Region-2
4. Production System : Rainfed
5. Problem identified : Severe thrips infestation is reducing the yield
6. Number of farmers and area affected in the operational villages : More than 3000 farmers in an area of 10000 ha.
7. Thrust areas : Pest management in vegetables
8. Rationale for proposing the OFT : Lamda cyhalothrin @ 0.5 ml/lit is found to be effective chemical resulting in higher yield per unit area
9. Technology Option 1 with Source : Dimethoate (1.75 ml/lit)  
Yield loss: 35-40%
10. Technology Option 2 with Source :
  - Dimethoate @ 1.75 ml/lit
  - Extent of adoption: 60-70%
  - Source: UAS, Dharwad
11. Technology Option 3 being assessed along with justification with Source : Maize as a boarder crop  
Spray of (Lamda)  $\alpha$  -Cyholothrin @ 0.5 ml/lit (two sprays)  
**Source:** NRC for onion and garlic, Pune  
**Justification:**  $\alpha$  -Cyholothrin is a contact and fumigant insecticide. Hence it effectively reduces the thrips infestation in onion. Thereby the productivity of onion crop increases.

12. Budget proposed for OFT : (1 Ha)

S. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options			
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)
1	Dimethoate	750	550	413	L-cyholothrin	200	60	120
<b>Total</b>				<b>413</b>	<b>Total</b>			<b>120</b>

13. Area (ha.) for implementing :

iv) Technology Option 1 (Farmer's Practice) : 1.4 ha

v) Technology Option 2 (Recommended Practice) : 1.4 ha

vi) Technology option 3 (Alternate practice) : 1.4 ha

14. Grand Total Cost proposed per OFT : Rs.533

15. Total Number of OFTs proposed : 03

16. Total budget required : Rs.1599/-



## ASSESSMENT NO. 08

1. Title of the On Farm Trial : Management of Anthracnose in Chilli
2. State whether it is Assessment / Refinement : Assessment
3. Agro-Ecological Zone : Northern dry zone
4. Production System : Medium and big farmers production system under rainfed condition
5. Problem identified : The disease appear on ripened fruit, fruit stalk and spread along with the stem and in severe cases cause die-back symptom on the Chilli plant. The fruit with many spots drop off prematurely, resulting in crop losses up to 30-45%.
6. Number of farmers and area affected in the operational villages : More than 3000 farmers in about 6000 ha area
7. Thrust areas : Management of Anthracnose in Chilli
8. Rationale for proposing the OFT : It is possible to reduce the incidence of Anthracnose in Chilli by spraying Difenconazole and Trichoderma. These reduce the infestation by suppressing the colonization of conidial spores and thus helps in getting better quality Chilli fruit.
9. Technology Option-1 with Source (Farmers' Practice) : Spraying Dithane M-45 @ 2gm/ltr.
10. Technology Option-2 with Source (Recommended Practice and extent of its adoption) : Spraying COC (Copper Oxy Chloride) @ 3gms/ltr or Mancozeb @ 3gm/ltr of water two times.  
Source : UAS, Dharwad  
Adoption : 10-15%
11. Technology Option-3 being assessed along with justification with Source : Foliar spray of Difenconazole @ 1ml/ltr (UAS,Dharwad) with Trichoderma viridae @ 3gm/ltr. (TNAU, Coimbatore)  
**Source :** UAS, Dharwad and TNAU, Coimbatore  
**Justification:** Spraying Difenconazole fungicide with Trichoderma viridae suppress the colonization of conidial spores on fruits & twigs during cloudy weather and thereby increase the production of good quality dry Chilli fruits.

12. Budget proposed : (For 0.4 ha )

Sl. No.	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options			
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)
1.	Copper Oxy Chloride	1 kg.	450/-	450/-	Difenconazole	300 ml	320/100ml	960/-
					Trichoderma viridae	1 Kg.	200/Kg.	200/-
	<b>Total</b>			<b>450/-</b>				<b>1160/-</b>

13. Area (ha.) for implementing : 12 ha

- i) Technology Option 1 (Farmer's Practice) : 4 ha
- ii) Technology Option 2 (Recommended Practice) : 4 ha
- iii) Technology option 3 : 4 ha

14. Grand Total Cost proposed per OFT : Rs. 1610/-

15. Total Number of OFTs proposed : 03

16. Total budget required : Rs. 4830/-

## ASSESSMENT NO. 09

1. Title of the On Farm Trial : Murda disease management in Chilli
2. State whether it is Assessment / Refinement : Assessment
3. Agro-Ecological Zone : Northern dry zone
4. Production System : Medium and big farmers production system under rainfed condition
5. Problem identified : The upward and downward curling of leaf due to heavy infestation of thrips and mites in Chilli resulted in yield loss up to 35-40%.
6. Number of farmers and area affected in the operational villages : More than 3000 farmers in about 6200 ha Area
7. Thrust areas : Management of murda disease
8. Rationale for proposing the OFT : There is heavy incidence of thrips and mites resulting into murda complex disease in Chilli crop. An assessment is proposed as to how a package of technologies can reduce the pest population. Hence, four treatments are proposed to reduce the thrips and mite population, (i) Treat the seeds with imidachloprid, (ii) Soil application of Neemcake, (iii) Jowar as a barrier crop and (iv) Foliar application of imidacloprid and Garlic + Chilli extract.
9. Technology Option-1 with Source {Farmers practice} : Spraying with Dimethoate @ 1.7 ml/ltr  
Extent of yield loss @ 50%
10. Technology Option-2 with Source {Recommended practice and extent of its adoption} :
  - i) Spraying of Dimethoate @ 1.7 ml/ltr of water at 20-25 days after sowing
  - ii) Second Spraying of Dimethoate @ 1.7 ml/ltr of water at 35-40 days after sowing
  - iii) Spray of Dicofol @ 2.5 ml/ltr of water at 60-70 days after sowing
  - iv) Extent of adoption 20-30%

**Source :** UAS, Dharwad

11. Technology Option-3 : i) Seed treatment with Imidachloprid @ 5 gm per kg seed  
 being assessed along ii) Soil application of neem cake @ 250 kg/ha+  
 with justification with Vermicompost @ 5 Qtl/ha ( UAS, Dharwad)  
 Source iii) Sorghum as boarder crop (Six row on all four sides of the  
 cropped field) (Farmers' practice)  
 iv) Mixing Coriander with Chilli (100gm in one kg of Chilli  
 seeds) (Farmers' practice)  
 v) Foliar spray of Imidachloprid @ 0.25ml per liter of water  
 (TNAU, Coimbatore)  
 vi) Foliar spray of Garlic + Green Chilli (1:1) 2.5% with  
 Nimbicidin @ 2.5 ml/litr + Cow urine 10% (CIKS, Chennai)

**Source :** (i)UAS, Dharwad, (ii)CIKS, Chennai & (iii)TNAU, Coimbatore (iv) ITKs followed by farmers

**Justification:** Seed treatment with imidachloprid and soil application of neemcake suppress the thrips & mite pest build-up in the crop. Neemcake has got a repellent and ovicidal effect. Mixed cropping with coriander has repelling effect on the insect. Sorghum as boarder crop checks the thrips and mite spread from field to field. Timely spray of imidachloprid and Garlic+Chilli extract will reduce the spread of the incidence.

12. Budget proposed : (For 0.4 ha)

Sl. No.	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options			
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)
1.	Dimethoate	0.6 ltr.	355/ltr.	213/-	Neemcake	1 Qt.	650/Qt.	650/-
2.	Dicofol	0.3 ltr.	430/ltr.	129/-	Coriander	100 gm	150/250gm	60/-
					Garlic	2 Kg.	70/Kg.	140/-
					Green Chilli	2 Kg.	25/Kg.	50/-
					Imidachloprid (liquid)	40 ml.	213/100ml	85/-
					Imidachloprid	5gm	Rs. 55/5gm	55/-
	<b>Total</b>			<b>342/-</b>				<b>1040/-</b>

13. Area (ha.) for implementing : 06 ha

- i) Technology Option 1 (Farmer's Practice) : 2.4 ha  
 ii) Technology Option 2 (Recommended Practice) : 2.4 ha  
 iii) Technology option 3 : 2.4 ha

14. Grand Total Cost proposed per OFT : Rs. 1382/-

15. Total Number of OFTs proposed : 03

16. Total budget required : Rs. 4146/-

## ASSESSMENT NO. 10

1. Title of the On Farm Trial : Boron nutrition for higher productivity of flowers in Chrysanthemum
2. State whether it is Assessment / Refinement : Assessment
3. Agro-Ecological Zone : Northern dry zone-3, Region-2
4. Production System : Medium and Big farmers production system under irrigation situation
5. Problem identified : Due to boron deficiency peripheral flowers loose turgidity before central flowers fully open & the petals are twisted and turn to cup shape.
6. Number of farmers and area affected in the operational villages : More than 100-120 farmers in an area of about 150-170 ha affected in the operational villages
7. Thrust areas : Nutrition
8. Rationale for proposing the OFT : Application of boron @ 2kg/ha (12 kg borosoil-soil fertiliser) and foliar spray of 0.2% Boric acid for two times at 21 days after planting & at 25% flower bud emergence. This treatment reduces the deficiency of boron in Chrysanthemum and results in good quality and quantity of flowers.
9. Technology Option-1 with Source {Farmers' Practice} : Application of 99:105:57 NPK Kg/ha & 0.5 ton FYM/ha
10. Technology Option-2 with Source {Recommended practice and extent of its adoption} :
  - Application of RDF is 100:150:100 NPK kg/ha
  - 20 tons FYM/ha
  - Extent of its adoption : 30-35%

**Source:** UAS, Dharwad
11. Technology Option-3 being assessed along with justification with Source : Technology Option-2 + Following treatments
  - Boron application @ 2 kg/ha
  - Foliar spray of boric acid 0.2% at 21 days of planting and at 25% flower bud emergence

**Source:** IIHR, Bangalore

12. Budget proposed : (For 0.4 Ha)

Sl. No.	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options			
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)
					Borosoil	5 kg	180	900
					Boric acid	250 gm	150 kg	37
	<b>Total</b>							<b>937</b>

13. Area (ha.) for implementing : 3.60 ha

- i) Technology Option 1 (Farmer's Practice) : 1.20 ha
- ii) Technology Option 2 (Recommended Practice) : 1.20 ha
- iii) Technology option 3 : 1.20 ha

14. Grand Total Cost proposed per OFT : Rs. 937

15. Total Number of OFTs proposed : 03

16. Total budget required : Rs. 2811

## ASSESSMENT NO. 11

1. Title of the On Farm Trial : Usage of Potassium nitrate and Gibberellic Acid for inducing bud opening in Chrysanthemum
2. State whether it is Assessment / Refinement : Assessment
3. Agro-Ecological Zone : Northern dry zone-3, Region-2
4. Production System : Medium and Big farmers production system under irrigation situation
5. Problem identified : Due to short stem length and poor growth, there is poor quality of flowers and late flowering in chrysanthemum crop. Hence, the farmers are not getting good market value.
6. Number of farmers and area affected in the operational villages : More than 100-120 farmers in an area of about 150-170 ha affected in the operational villages
7. Thrust areas : Growth regulation & nutrition
8. Rationale for proposing the OFT : Recommended dose of soil application of potassium & foliar spray of potassium at 25-30 days after planting will enhance the quality of flowers. Further, the foliar spray of growth regulators (Gibberellic acid) will increase the stem length & early flowering and good quality of flowers.
9. Technology Option-1 with Source {Farmers' Practice} : Application of 99:105:57 NPK Kg/ha & 0.5 ton FYM/ha
10. Technology Option-2 with Source {Recommended practice and extent of its adoption} : Application of RDF i.e. 100:150:100 NPK kg/ha  
Extent of its adoption : 30-35%  
Source: UAS, Dharwad
11. Technology Option-3 being assessed along with justification with Source :
  - 1) Application of RDF i.e. 100:150:100 NPK kg/ha
  - 2) Foliar spray of potassium nitrate @ 5% two times i.e. at 25-30 days after planting and second time at 5 days interval.
  - 3) Foliar spray of GA @ 1% at 25-30 days after planting**Source:** IIHR, Bangalore

12. Budget proposed : (For 0.4 Ha)

Sl. No.	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options			
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)
					Potassium Nitrate (KNO <sub>3</sub> )	300 gm	120/kg	36
					GA(Gibberellic Acid)	2 gm	50/gm	100
					<b>Total</b>			<b>136</b>

13. Area (ha.) for implementing : 3.60 ha

- i) Technology Option 1 (Farmer's Practice) : 1.20 ha
- ii) Technology Option 2 (Recommended Practice) : 1.20 ha
- iii) Technology option 3 : 1.20 ha

14. Grand Total Cost proposed per OFT : Rs. 136/-

15. Total Number of OFTs proposed : 03

16. Total budget required : Rs. 408



## ASSESSMENT NO. 12

1. Title of the On Farm Trial : Nutrition management in Mango for higher productivity
2. State whether it is Assessment / Refinement : Assessment
3. Agro-Ecological Zone : Northern dry zone-3, Region-2
4. Production System : Big farmers production system under dry land condition
5. Problem identified : Imbalanced nutrition due to the maintenance of crop under rainfed condition
6. Number of farmers and area affected in the operational villages : More than 300 farmers in about 450 ha area
7. Thrust areas : Assessment of foliar nutrition in Mango under dry land condition
8. Rationale for proposing the OFT : Farmers do not apply nutrients through soil. This has resulted in low production of Mango. Hence foliar application is tested to enhance Mango production
9. Technology Option 1 with Source : Application of FYM @ 40 Kg/tree
10. Technology Option 2 with Source :
  - Application of FYM @ 50 Kg/tree and chemical fertilizer dose of 1.0:1.0:1.5 Kg NPK/tree
  - Source: UAS, Dharwad
11. Technology Option 3 being assessed along with justification with Source : Technology Option-2 + Following treatments  
Spraying of water soluble fertilizer (19:19:19 NPK) @ 1% solution- 2 times (June-July & August-September) + spraying of K Rich (13:0:46 NPK) water soluble fertilizer 1% solution 2 times (Dec-Jan and Feb-March) + IIHR Mango special nutrient mixture @ 0.5% - 3 times/year (June-July, Nov-Dec, February-March)

**Source:** IIHR, Bangalore

**Justification:** Due to rainfed condition the farmers over look the fertilizer application. So the application of the nutrient to both soil and as foliar sprays would ensure the crop for its required nutrients to some extent for getting good yield

12. Budget proposed for OFT : (For 10 trees each)

S. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options				
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	
1					1) Foliar Spray				
					(i) 19:19:19 NPK water soluble fertilizer	02 kg	80/kg	160/-	
					(ii) 'K' rich fertiliser 13:0:46 NPK	02 kg	120/kg	240/-	
				(iii) Mango special from IIHR	02 kg	100/kg	200/-		
<b>Total</b>				<b>450</b>	<b>Total</b>				<b>600/-</b>

13. Area (ha.) for implementing :

- i) Technology Option 1 (Farmer's Practice) : 10 trees
- ii) Technology Option 2 (Recommended Practice) : 10 trees
- iii) Technology option 3 (Alternate Practice) : 10 trees

14. Grand Total Cost proposed per OFT : Rs.600/-

15. Total Number of OFTs proposed : 3

16. Total budget required : Rs.1800/-

### ASSESSMENT NO. 13

1. Title of the On Farm Trial : Management of grain storage pest incidence in cereals and pulses at household level
2. State whether it is Assessment / Refinement : Assessment
3. Agro-Ecological Zone : Northern dry zone-3, Region-2
4. Production System : Small and big production system
5. Problem identified : Loss in stored grains (Greengram, Moth bean Cowpea etc.) of pulses due to incidence of pulse beetle
6. Number of farmers and area affected in the operational villages : More than 90% of families face this problem.
7. Thrust areas : Pulse storage at household level.
8. Rationale for proposing the OFT : Recommended practice of using Aluminium Phosphide is not practical for storage of smaller quantities. Moreover, usage of chemical pesticides may pose health hazards to human beings. Hence the OFT is proposed for assessment.
9. Technology Option 1 with Source (Farmers' practice) :
  - Farmers are using boric powder for storage of pulses. As Boric powder is chemical, it causes health hazards
10. Technology Option 2 with Source :
  - Aluminium Phosphide @ 2-3 tablets/ton (Not relevant at household level)
  - Source: UAS, Dharwad
  - Extent of adoption: 10-15%
11. Technology Option 3 being assessed along with justification with Source : Preparation of baits from mixture of ginger powder (30gm), neem leaves (50gm) and sweet flag (Aquarious Culmus) (10 gms) per kg of cereals or pulses.  
  
**Source:** Centre for Indian Knowledge Systems (CIKS), Chennai  
  
**Justification:** The neem and ginger act as repellent and have ovicidal effect on insect and antifeedent. These reduce the incidence of pulse beetles. In addition the raw materials are available locally with less cost and there will not be any adverse effect on health

12. Budget proposed for OFT

S. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options			
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)
1	-	-	-	-	Plastic Moulds	3	250	250
2					Ginger powder	200 gms	75	75
3					Sweet flag	60 gms	25	25
4					Air tight containers	3	300	300
3					Labour charges for the preparation of baits	2	100	200
<b>Total</b>								<b>850</b>

13. Area (ha.) for implementing : Nil

14. Grand Total Cost proposed per OFT : Rs.850

15. Total Number of OFTs proposed : 5

16. Total budget required : Rs.4250

## ASSESSMENT NO. 14

1. Title of the On Farm Trial : Use of Flumethrin 1% Pour-on against tick infestation in Cattle
2. State whether it is Assessment / Refinement : Assessment
3. Agro-Ecological Zone : Northern dry zone
4. Production System : Dairy enterprise
5. Problem identified : Tick infestation
6. Number of farmers and area affected in the operational villages : 70 %.
7. Thrust areas : Effective management of ticks and to check the production loss
8. Rationale for proposing the OFT : Though the tick infestation in cattle can be effectively controlled by topical application of butox, but here the prevention of licking of chemical is difficult, strong concentration may cause death of animal and also hazardous to humans who handle it. So the new concept of application of a topical ectoparasites through Pour-on method using flumethrin 1% comes in handy for the farmers

### 9. Technology Option I

Sl. No	Technological Options	Details of technology
1	Farmer's Practice	Application of tobacco filtered water
2	Name of the chemical & quantity	Tobacco filtered water and no specific quantity
3	Extent of effectiveness	20 %
4	Method of use	Topical application

### 10. Technology Option II

Sl. No	Technological Options	Details of technology
1	Recommended Practices	Topical application of Butox
2	Extent of its adoptions	40 %
3.	Source of technology	KVAFSU, Bidar
4.	Reasons for low adoptions	Lack of awareness and because of its hazardous effect

### 11. Technology Option III

Sl. No	Technological Options	Details of Technology	Source of Technology	Justification
1	Farmer's Practice	Application of tobacco filtered water	-	<ul style="list-style-type: none"> <li>▪ Though the effectiveness is equal in both the technology options, the application of Pour-on is easy and requires less skill</li> <li>▪ Health hazards due to leaking are less</li> <li>▪ Longer residual effect</li> </ul>
2	Technology option (Recommended)	Topical application of Butox	KVAFSU, Bidar	
3	Technology selected for Assessment	Topical application of flumethrin 1 % by Pour-on method	TANUVAS, Chennai	

### 12. Budget proposed for OFT

Sl. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options			
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)
1	Butox	50 ml	70	70	Flumethrin 1%	100 ml	140	140

### 13. Area (ha.) For implementing

- i) Technology Option 1 (Farmer's Practice) : 3 animals
- ii) Technology Option 2 (Recommended Practice) : 3 animals
- iii) Technology option 3 : 3 animals

14. Grand Total Cost proposed per OFT : Rs. 210

15. Total Number of OFTs proposed : 03

16. Total budget required : Rs. 630

## ASSESSMENT NO. 15

1. Title of the On Farm Trial : Control of Endoparasites in Sheep
2. State whether it is Assessment / Refinement : Assessment
3. Agro-Ecological Zone : Northern dry zone
4. Production System : Animal Husbandry
5. Problem identified : Worms
6. Number of farmers and area affected in the operational villages : 500 Nos., 30-50% animals affected
7. Thrust areas : Livestock Disease Management
8. Rationale for proposing the OFT : Worm infestation is common in sheep. So mortality is common in lambs. Hence combination of Alvendazole and Niclosamide will remove the worms (Trematodes, Cestodes and Nematodes) from the Gut and Intestine. So, it increases the growth rate and wool production.

### 9. Technology Option I

Sl. No	Technological Options	Details of technology
1	Farmer's Practice	Castor oil
2	Extent of yield loss	30-40%
3	Name of the variety	-
4	Method of use	Oral Drenching

### 10. Technology Option II

Sl. No	Technological Options	Details of technology
1	Recommended Practices	Albendazole
2	Extent of its adoptions	10-20%
3.	Source of technology	KVAFSU, Bidar
4.	Reasons for low adoptions	Low efficacy

11. Technology Option III

Sl. No	Technological Options	Details of Technology	Source of Technology	Justification
1	Farmer's Practice	Administration of castor oil	-	Castor oil will evacuate calf bowel
2	Technology selected for assessment	Administration of Albendazole and Niclosamide combination @ 5 mg/Kg body weight orally	TANUVAS, Chennai	Broad Spectrum Anthelmintic
3	Technology Option 1	-	-	

12. Budget proposed for OFT (10 sheep)

Sl. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options			
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)
1	Albendazole	1000 ml	400/-	30/-	Albendazole + Niclosamide	1000 ml	600/-	30/-

13. Area (ha.) For implementing

- iv) Technology Option 1 (Farmer's Practice) : 10 sheep
- v) Technology Option 2 (Recommended Practice) : 10 sheep
- vi) Technology option 3 : 10 sheep

14. Grand Total Cost proposed per OFT : Rs. 60/-

15. Total Number of OFTs proposed : 5

16. Total budget required : Rs. 180/-



## REFINEMENT NO. 01

1. Title of the On Farm Trial : Resource conservation technologies for sustainable production in greengram
2. State whether it is Assessment / Refinement : Refinement
3. Agro-Ecological Zone : Northern dry zone-3, Region-2
4. Production System : Small, Medium and Big farmers production system under rainfed situation
5. Problem identified : Erratic rainfall and long dry spell during the crop growth period results in moisture stress. This leads to low productivity of the Greengram crop. This phenomenon recurs almost every year.
6. Number of farmers and area affected in the operational villages : More than 1000 farmers in an area of about 2850 ha affected in the operational villages
7. Thrust areas : Resource conservation
8. Rationale for proposing the OFT : Compartment Bunding, opening of conservation furrows and application of vermicompost will enhance the moisture availability during crop growth period. Seed priming with  $\text{CaCl}_2$  induces the drought tolerance to the crops. The seed treatment with bio-fertilizers enhances the nutrient availability to the crop. Application of neemcake will supply nutrients to the crops, reduces the incidence of soil borne pathogen and works as organic matter to hold more moisture in the soil. Further, the incorporation of crop residue will enhance the moisture availability and nutrients to the next crop.
9. Technology Option-1 with Source {Farmers' Practice} : Cultivation of Greengram with 5:12:0 NPK Kg/ha  
Extent of yield loss : 40-45%
10. Technology Option-2 with Source {Recommended practice and extent of its adoption} :
  - 1) Seed priming with 2%  $\text{CaCl}_2$
  - 2) Seed treatment with Bio-fertilizers
    - Rhizobium 500 gm/12 kg of seed
    - PSB 1250 gm/12 of seeds
  - 3) Application of 12.5:25:0 NPK Kg/ha  
Extent of it's adoption is 25-30%  
Level of yield loss is 30-35%

11. Technology Option-3 : 1) Compartment Bunding  
 being assessed along 2) Application of vermicompost @ 1 qt/ha  
 with justification with 3) Application of neemcake @ 2.5 Qt/ha  
 Source 4) Seed priming with 2% CaCl<sub>2</sub>  
 5) Seed treatment with Bio-fertilizers @  
 • Rhizobium 500gm/12kg of seeds  
 • PSB 1250 gm/12kg of seeds  
 6) Application of 125:25:0 NPK kg/ha  
 7) Opening of conservation furrows (At every 10 mtrs interval)  
 8) Using Twin wheel hoe weeder at weekly interval  
 9) Incorporation of crop residue

12. Budget proposed : (For 0.4 ha)

Sl. No.	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options			
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)
1.	CaCl <sub>2</sub>	200gm	90/kg	18	Bund former (for compartment bunding)	1 No.	950/-	950
2.	Rhizobium	200gm	30/kg	06	Neemcake	01 Qt.	650/Qt.	650
3.	PSB	500gm	30/kg	15	CaCl <sub>2</sub>	200gm	90/kg	18
4.	Seeds S-4 variety	05 kg	60/kg	300	Rhizobium	200gm	30/kg	06
					PSB	500gm	30/kg	15
					Seeds (S-4 variety )	05 Kg	60/kg	300
	<b>Total</b>			<b>339.00</b>				<b>1939.00</b>

13. Area (ha.) for implementing : 3.60 ha

- i) Technology Option 1 (Farmer's Practice) : 1.20 ha  
 ii) Technology Option 2 (Recommended Practice) : 1.20 ha  
 iii) Technology option 3 : 1.20 ha

14. Grand Total Cost proposed per OFT : Rs. 2278/-

15. Total Number of OFTs proposed : 03

16. Total budget required : Rs. 6834/-

## REFINEMENT NO. 02

1. Title of the On Farm Trial : Resource conservation technologies for sustainable production in spreading groundnut
2. State whether it is Assessment / Refinement : Refinement
3. Agro-Ecological Zone : Northern dry zone-3, Region-2
4. Production System : Small, Medium and Big farmers production system under rainfed situation
5. Problem identified : Erratic rainfall and long dry spell during the crop growth stages result in moisture stress. In turn, this leads to low productivity of Spreading Groundnut
6. Number of farmers and area affected in the operational villages : More than 600 farmers in an area of about 1350 ha affected in the operational villages
7. Thrust areas : Resource conservation
8. Rationale for proposing the OFT : Compartment bunding & opening of conservation furrows and repeated harrowing with Twin Wheel Hoe Weeder will conserve the moisture throughout the crop growth period even during long dry spells. Vermicompost and Bio-fertilizers will enhance the nutrients to the crop besides conserving soil moisture. Seed treatment with trichoderma and application of neemcake will reduce the incidence of soil borne pathogens. Neemcake will also supply nutrients to the crop.
9. Technology Option-1 with Source {Farmers' Practice} : Application of 22:60:0 NPK Kg/ha  
Extent of yield loss : 35-40 percent
10. Technology Option-2 with Source {Recommended practice and extent of its adoption} :
  - 1) Application of Vermicompost 1 ton/ha
  - 2) Seed treatment with Trichoderma @ 4gms/kg of seeds
  - 3) Seed treatment with bio-fertilizer
    - Rhizobium 2.5 kg/75 kg of seeds
    - PSB 2.5 kg/75 kg of seeds
  - 4) Application of 25:50:25 NPK Kg/ha & ZnSO<sub>4</sub> 25 kg/ha and Gypsum 500 kg/ha
11. Technology Option-3 being assessed along with justification with Source : Technology Option-2 + Following treatments
  - 1) Compartment Bunding (6X6mtr)
  - 2) Opening of conservation furrows (10mtr interval)
  - 3) Seed treatment with Trichoderma 10gm/kg of seeds
  - 4) Application of neemcake @ 2.50 Qt/ha
  - 5) Inter cultivation with Twin Wheel Hoe Weeder at weekly interval
12. Budget proposed : (For 0.4 Ha.)

Sl. No.	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options			
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)
1.	Trichoderma	120 gm	150/kg	18	Trichoderma	300gm	150/kg	45
2.	Rhizobium	1 kg	30	30	Neemcake	1.00 Qt	650/Qt	650
3.	PSB	1 kg	30/-	30	Rhizobium	1.00 Kg	30/-	30
4.	Gypsum	2 Qt.	300/Qt.	600	PSB	1.00 Kg	30/-	30
5.	ZnSO <sub>4</sub>	10 Kg	40/kg	400	Gypsum	2 Qt.	300/Qt.	60
					ZnSO <sub>4</sub>	10 Kg	40/kg	400
					Twin Wheel Hoe Weeder	1 No.	850/-	850
	<b>Total</b>			<b>1078</b>				<b>2605</b>

13. Area (ha.) for implementing : 3.60 ha

- i) Technology Option 1 (Farmer's Practice) : 1.20 ha
- ii) Technology Option 2 (Recommended Practice) : 1.20 ha
- iii) Technology option 3 : 1.20 ha

14. Grand Total Cost proposed per OFT : Rs. 3683

15. Total Number of OFTs proposed : 03

16. Total budget required : Rs. 11049

### REFINEMENT NO. 03

1. Title of the On Farm Trial : Resource conservation technologies for sustainable production in rabi jowar
2. State whether it is Assessment / Refinement : Refinement
3. Agro-Ecological Zone : Northern dry zone-3, Region-2
4. Production System : Small, Medium and Big farmers production system under rainfed situation
5. Problem identified : In rabi season, receding soil moisture during the crop growth stages results in moisture stress and this leads to low productivity of the Jowar crop in the rabi season.
6. Number of farmers and area affected in the operational villages : More than 850 farmers in an area of about 2640 ha affected in the operational villages
7. Thrust areas : Resource conservation
8. Rationale for proposing the OFT : In Rabi season, compartment bunding & opening of conservation furrows and repeated harrowing with Twin Wheel Hoe Weeder will conserve the moisture throughout the crop growth period. Seed treatment with  $\text{CaCl}_2$  will induce the drought tolerance to the crop. Seed treatment with bio-fertilizers will enhance the nutrients availability to the crop.
9. Technology Option-1 with Source {Farmers' Practice} : Application of 5:12:0 NPK Kg/ha  
Extent of yield loss : 30-35%
10. Technology Option-2 with Source {Recommended practice and extent of its adoption} :
  - 1) Application of 2 tons FYM/ha
  - 2) Seed priming with  $\text{CaCl}_2$
  - 3) Seed treatment with Sulphur & Endosulphan
  - 4) Seed treatment with trichoderma
  - 5) Application of 50:25:0 NPK Kg/ha &  $\text{ZnSo}_4$  15 kg/ha
  - 6) Compartment Bunding at 21 DAS (5X5Mtrs)
11. Technology Option-3 being assessed along with justification with Source : Technology Option-2 plus following treatments
  - 1) Compartment Bunding 15 days before sowing
  - 2) Opening of conservation furrows at 10 mtr interval
  - 3) Application of vermicompost @ 50 Kg/ha
  - 4) Adoption of paired row method of sowing
  - 5) Inter cultivation with Twin Wheel Hoe Weeder at weekly interval

12. Budget proposed : (For 0.4 Ha)

Sl. No.	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options			
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)
1.	CaCl <sub>2</sub>	9 gm	90/kg	8	CaCl <sub>2</sub>	90 gm	90/kg	8
2.	Endosulphan	9 ml	350/ltr	3	Endosulphan	9 ml	350/ltr.	3
3.	Sulphur	12 gm	80/kg	1	Sulphur	120 gm	80/kg	1
4.	Trichoderma	10 gm	120/kg	1	Trichoderma	10 gm	120/kg	1
5.	ZnSO <sub>4</sub>	6 kg.	40	240	ZnSO <sub>4</sub>	6 kg.	40/-	240
6.	Vermicompost	20 kg.	3	60	Vermicompost	20 kg.	3/-	60
					Twin Wheel Hoe Weeder	1 No.	850	850
	<b>Total</b>			<b>313</b>				<b>1163</b>

13. Area (ha.) for implementing : 3.60 ha

- i) Technology Option 1 (Farmer's Practice) : 1.20 ha
- ii) Technology Option 2 (Recommended Practice) : 1.20 ha
- iii) Technology option 3 : 1.20 ha

14. Grand Total Cost proposed per OFT : Rs. 1476/-

15. Total Number of OFTs proposed : 03

16. Total budget required : Rs. 4428/-

#### REFINEMENT NO. 4

1. Title of the On Farm Trial : Refinement of cotton cloth hand gloves for harvesting of bengalgram & sunflower for drudgery reduction
2. State whether it is Assessment / Refinement : Refinement
3. Agro-Ecological Zone : Northern dry zone-3, Region-2
4. Production System : Small and big production system
5. Problem identified : Scratching and Injury to palms due to pricking while harvesting bengalgram & sunflower crops result in reduced harvesting efficiency
6. Number of farmers and area affected in the operational villages : All farm women involved in harvesting sunflower and bengalgram crops
7. Thrust areas : Drudgery reduction and enhancing harvesting efficiency
8. Rationale for proposing the OFT : Bare hand cutting of sunflower earhead and Bengalgram plants cause injury to palms due to scratches and irritation to skin thereby reduces harvesting efficiency. Hence OFT is proposed on assessment of Cotton cloth hand gloves.
9. Technology Option 1 with Source :
  - Harvesting with bare hand and it causes scratches & injury to palm
10. Technology Option 2 with Source :
  - Source: K.H.Patil KVK, Hulkoti

**Justification:** In 2009-10 an assessment on use of cotton hand gloves for harvesting of bengalgram was conducted. Farm women gave the opinion that the hand gloves are good. Their efficiency in harvesting of bengalgarm is more and the drudgery is less as there is less injury and pain to the palms. They also expressed that the durability of the gloves must be increased by the use of thick cloth, with easy and flexible movement of fingers to increase the harvesting efficiency.

11. Technology Option 3 being assessed along with justification with Source : Refinement of cotton cloth hand gloves with thick cotton cloth, jeans cloth & rexine material with different patterns/shapes of gloves for cutting of earhead in sunflower and uprooting of bengalgram.

**Justification:** Based on the farm women's feed back, thick cotton cloth, jeans material and rexine material with two different models

of hand gloves were proposed for more durability, to increase the harvesting efficiency and to reduce the drudgery of farm women in harvesting, the refinement is planned.

12. Budget proposed for OFT

S. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Options			
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)
1	By hand	-	-	-	Thick cotton cloth hand gloves Model – I	1 pair	150	150
					Model – II	1 pair	150	150
					Jeans cloth hand gloves Model-I	1 pair	200	200
					Model-II	1 pair	200	200
					Rexine material hand gloves Model-I	1 pair	200	200
					Model-II	1 pair	200	200
<b>Total</b>								<b>1100</b>

13. Area (ha.) for implementing : Nil

- i) Technology Option 1 (Farmer's Practice) : 10 ha
- ii) Technology Option 2 (Recommended Practice) : -
- iii) Technology option 3 : 10 ha

14. Grand Total Cost proposed per OFT : Rs.1100

15. Total Number of OFTs proposed : 5

16. Total budget required : Rs.5500/-



**Table 4. Season-wise plan of Front Line Demonstrations (FLD) for 2010-11  
(Minimum of two technologies and 20 demonstrations in each discipline)**

**A. Other than oil seeds pulses and cotton**

**KHARIF**

Thrust area	Crop / livestock / enterprises	Yield gap (q/ha) or (number/unit)			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha) / Number	No. of farmers
		District average yield	Potential yield	Farmers' yield			Name & Quantity (kg/ha) or number/unit	Cost (Rs./ha) or Rs./unit		
Management of stem borer and army worm in maize	Maize	53	58	48	<ul style="list-style-type: none"> <li>Incidence of stem borer and army worm (Farmers do not take spray)</li> </ul>	<ul style="list-style-type: none"> <li>Spraying of Profenophos</li> <li>Broad casting of rice or wheat bran and monocrotophos with Jaggery</li> </ul>	Profenophos – 750 ml	350	5	12
							Monocrotophos – 250 ml	125		
							Wheat or rice bran – 62.5 Kg	220		
							Jaggery – 4 Kg	128		
<b>Total</b>							<b>823</b>			
Integrated Nutrient Management	Maize	53	58	48	<ul style="list-style-type: none"> <li>Application of 120:60:30 NPK Kg/ha</li> <li>Non application of micro nutrients like FeSO<sub>4</sub> &amp; ZnSO<sub>4</sub></li> </ul>	<ul style="list-style-type: none"> <li>Application of 150:75:37.5 NPK Kg/ha</li> <li>ZnSO<sub>4</sub> – 25 Kg/ha</li> <li>FeSO<sub>4</sub> – 25 Kg/ha</li> </ul>	ZnSO <sub>4</sub> – 25 Kg	1000	4	10
							FeSO <sub>4</sub> – 25 Kg	600		
<b>Total</b>							<b>1600</b>			
Management of Shoot and fruit borer in Brinjal	Brinjal	178	460	300	<ul style="list-style-type: none"> <li>Incidence of shoot and fruit borer (Farmers do not take up spray)</li> </ul>	<ul style="list-style-type: none"> <li>Installation of water traps</li> <li>Spraying of Carbosulfan</li> </ul>	Water traps – 8 Nos.	360	4	10
							Lucin lures – 24 No.	288		
							Carbosulfan – 750 ml	560		
<b>Total</b>							<b>1208</b>			
ICM in onion	Onion	67	150	80	<ul style="list-style-type: none"> <li>Cultivation of local variety</li> <li>Improper nutrition</li> <li>No use of Potash</li> <li>Incidence of thrips and purple blotch (No spray is taken)</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of high yielding Arka Kalyan onion variety along with ICM</li> </ul>	Seeds 3 Kgs	<b>1200</b>	13	33
							Trichoderma – 25 gm/ha	<b>5</b>		
							Difenconazole – 500 ml/ha	<b>1420</b>		
							<b>Total</b>	<b>2625</b>		

Thrust area	Crop / livestock / enterprises	Yield gap (q/ha) or (number/unit)			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha) / Number	No. of farmers
		District average yield	Potential yield	Farmers' yield			Name & Quantity (kg/ha) or number/unit	Cost (Rs./ha) or Rs./unit		
Introduction of high yielding variety	Ridge gourd	58	85	36	• Cultivation of low yielding local variety	• Introduction of high yielding Ridge gourd variety Arka Sumit	Seeds 4 Kg	1200	06	15
Introduction of high yielding variety in flower crop	Aster	NA	100	NA	• Introduction of crop for replacement of chrysanthemum for getting better market price	• Introduction of high yielding variety Chaina Aster Kamini	Seeds 500 gm	2500	1.2	03
Integrated Nutrient management	Chrysanthemum	35	80	46	• Application of 99:105:57 NPK Kg/ha	• Application of 100:150:100 NPK Kg/ha • Foliar spray of water soluble 19:19:19 NPK • Foliar spray of multiplex	Water soluble 19:19:19 – 4.5 Kg	450	4	10
							Multiplex – 2.5 Kg	550		
<b>Total</b>								<b>1000</b>		
Drudgery	Twin wheel hoe weeder	-	-	-	• -	• Twin wheel hoe weeder	20 weeders	900	10 Nos.	10 SHGs
Drudgery	Fuel saving device	-	-	-	• -	• Demonstration of Envirofit chulha	S-4100 model	2600	3 Nos.	3
Drudgery	Groundnut decorticator with separator	-	-	-	• -	• Groundnut decorticator with separator	3 units	3000	3 Nos.	30
<b>Total</b>								<b>1110</b>		
Introduction of new poultry bird	Poultry	-	180-190 eggs/hen/year	155-160 eggs/hen/year	• Low productivity of egg in local breeds	• Introduction of new poultry breed - Swarnadhara	Swarnadhara breed 5 +1 (Hen + cock) (6 weeks old)	210	25 units (5+1)	25
Ecto-endo parasite management	Sheep	15-20 Kg	25-30 Kg	21-24 Kg	• Loss of body weight	• Drenching of closantal suspension	Closantal oral suspension @ 15 mg/Kg body weight on '0' day & repeat after 60 days	200/unit	30 units	30
								Cost/unit Rs.200 For 30 unit Rs.6000		

Thrust area	Crop / livestock / enterprises	Yield gap (q/ha) or (number/unit)			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha) / Number	No. of farmers
		District average yield	Potential yield	Farmers' yield			Name & Quantity (kg/ha) or number/unit	Cost (Rs./ha) or Rs./unit		
Endoparasite management	Buffaloe	2.7 lit/day	7 lit/day	5 lit/day	<ul style="list-style-type: none"> <li>Reduced milk yield</li> </ul>	<ul style="list-style-type: none"> <li>Application of vetfen (oral dosage)</li> </ul>	Vetfen Bolus-1.5 gm 1 bolus/animal Repeat after 21 days (5 mg/kg)	<b>Rs.150/unit</b>	30 units	36

## RABI

Thrust area	Crop / livestock / enterprises	Yield gap (q/ha) or (number/unit)			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha) / Number	No. of farmers
		District average yield	Potential yield	Farmers' yield			Name & Quantity (kg/ha) or number/unit	Cost (Rs./ha) or Rs./unit		
Demonstration of CSV-22 variety	Rabi jowar	5.75	14-15	8-10	<ul style="list-style-type: none"> <li>Poor fodder quality</li> <li>Lack of high yielding variety for deep black soil</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of CSV-22 variety for higher production in deep black soil</li> </ul>	Seeds – 8 Kg (CSV-22)	240	10	25
Introduction of high yielding variety	Wheat	10.50	30-35	24-25	<ul style="list-style-type: none"> <li>Cultivation of non descript variety (Nirmal) (low yielding)</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of GW-322 and UAS-304 varieties for rust resistant &amp; higher productivity</li> </ul>	Seeds – 75 Kg (GW-322) Seeds-UAS-304	3750	5	12
Stem borer management in wheat	Wheat	10.50	30-35	24-25	<ul style="list-style-type: none"> <li>Incidence of stem borer in wheat (No spray is taken)</li> </ul>	<ul style="list-style-type: none"> <li>Spraying of Profenophos</li> </ul>	Profenophos – 750 ml	350	10	25
Introduction of high yielding improved variety	Tomato	75	200	110 (Hybrid)	<ul style="list-style-type: none"> <li>Introduction of high yielding variety for replacement of hybrids as they are susceptible to pest &amp; disease and costs of seeds is high</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of Arka Abha for leaf curl &amp; wilt resistance</li> </ul>	Seeds 400 gm	2000	4	10
Introduction of high yielding variety	French bean	65	100	48	<ul style="list-style-type: none"> <li>Local variety winged bean is low yielding</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of new high yielding variety Arka Suvidha</li> </ul>	Seeds 75 Kgs	9000	1.2	03
Drudgery reduction	Rabi Jowar	-	-	-	<ul style="list-style-type: none"> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>Demonstration of serrated sickle developed by Dev Agro. Bangalore</li> </ul>	Serrated sickle	150	20	20
Drudgery reduction	Irrigated wheat	-	-	-	<ul style="list-style-type: none"> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>Serrated sickle in harvesting of wheat</li> </ul>	Improved sickle	150	20	20

## SUMMER

Thrust area	Crop / livestock / enterprises	Yield gap (q/ha) or (number/unit)			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha) / Number	No. of farmers
		District average yield	Potential yield	Farmers' yield			Name & Quantity (kg/ha) or number/unit	Cost (Rs./ha) or Rs./unit		
Mango hopper fruit fly and powdery mildew management	Mango	350	750	420	<ul style="list-style-type: none"> <li>• Untimely spray for hopper management and do not take spray for fruit fly</li> <li>• Spray of sulphur is taken only once</li> </ul>	<ul style="list-style-type: none"> <li>• Spraying with neem seed kernel extract at bud burst stage</li> <li>• Spraying of Carbaryl @ 3 gm/lit</li> <li>• Spraying of Thiomethoxam @ 0.25 ml/ltr</li> <li>• Hanging of fligh-T trap with bador lures</li> <li>• Spraying sulphur @ 3 gm/lt</li> <li>• Spraying Hexaconazole @ 1 ml/lit</li> </ul>	NSKE – 50 Kg	325	4	10
							Carbaryl – 2 Kg gm	840		
							Imidacloprid – 250 ml	575		
							Fligh – T traps – 10 Nos.	670		
							Bador lures – 20 Nos.	700		
							Sulphur – 1.25 Kg	160		
							Hexaconazole – 1.5 L	690		
							<b>Total</b>	<b>3960</b>		

**B. Oil seeds  
KHARIF**

Thrust area	Crop	Yield gap (q/ ha )			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha)	No. of farmers
		District average yield	Potential yield	Farmers' yield			Name & Quantity (kg/ha)	Cost (Rs./ha)		
Insitu soil moisture conservation	Groundnut (Bunch)	5-7	15-16	10-12	<ul style="list-style-type: none"> <li>• Abiotic stress during Peg initiation stage</li> </ul>	<ul style="list-style-type: none"> <li>• Compartment bunding</li> <li>• Paired row method of sowing</li> </ul>				
Introduction of GPBD-4 variety along with ICM	Groundnut (Bunch)	5-7	15-16	10-12	<ul style="list-style-type: none"> <li>• Incidence of leaf spot disease (Farmers do not take up spray)</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction of GPBD-4 variety</li> </ul>	<ul style="list-style-type: none"> <li>• GPBD-4 Pods – 200</li> </ul>	3500	10	25
					<ul style="list-style-type: none"> <li>• Imbalanced nutrition (Potash and gypsum are not applied by farmers)</li> </ul>	<ul style="list-style-type: none"> <li>• Application of micro nutrient &amp; biofertilisers</li> </ul>	<ul style="list-style-type: none"> <li>• Rhizobium – 2.5</li> <li>• PSB – 2.5</li> <li>• ZnSO4 – 2.5</li> <li>• Gypsum – 500</li> </ul>	88		
					<ul style="list-style-type: none"> <li>• Incidence of collar rot (No seed treatment by farmers)</li> </ul>	<ul style="list-style-type: none"> <li>• Seed treatment with Trichoderma</li> </ul>	<ul style="list-style-type: none"> <li>• Trichoderma – 1.250</li> </ul>	200		
					<ul style="list-style-type: none"> <li>• Incidence of leaf minor (No spray is taken by farmers)</li> </ul>	<ul style="list-style-type: none"> <li>• Soil application of Trichoderma &amp; FYM</li> <li>• Spraying of monocrotophos</li> </ul>	<ul style="list-style-type: none"> <li>• Trichoderma – 2.5</li> <li>• Monocrotophos – 1 lit</li> </ul>	400		
Introduction of KBSH-53 along with ICM	Sunflower	5.1	10-12	7-8	<ul style="list-style-type: none"> <li>• Abiotic stress</li> </ul>	<ul style="list-style-type: none"> <li>• Compartment bunding</li> <li>• Wider row method of sowing</li> </ul>	-	-	10	25
					<ul style="list-style-type: none"> <li>• Imbalanced nutrition (NPK 11:29:0 Kg/ha)</li> </ul>	<ul style="list-style-type: none"> <li>• CaCl<sub>2</sub> seed priming</li> <li>• Application of micronutrients &amp; biofertilisers</li> </ul>	<ul style="list-style-type: none"> <li>• Calcium Chloride – 150 gm</li> <li>• Azospirillum – 500 gm</li> <li>• ZnSO4 – 10 Kg</li> <li>• Boron – 1 Kg</li> </ul>	18		
					<ul style="list-style-type: none"> <li>• Incidence of SND</li> </ul>	<ul style="list-style-type: none"> <li>• SND management</li> </ul>	<ul style="list-style-type: none"> <li>• Imidacloprid – 100 ml</li> </ul>	230		
					<ul style="list-style-type: none"> <li>• Incidence of leaf eating caterpillar (No spray is taken)</li> </ul>	<ul style="list-style-type: none"> <li>• Spray of Profenophos</li> </ul>	<ul style="list-style-type: none"> <li>• Profenophos – 750 ml</li> </ul>	375		
					<ul style="list-style-type: none"> <li>• High incidence of powdery mildew (No spray is taken)</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction of KBSH-53</li> </ul>	<ul style="list-style-type: none"> <li>• Seeds – KBSH-53 – 5 Kg</li> </ul>	1250		
						<ul style="list-style-type: none"> <li>• Spray of Propiconazole</li> </ul>	<ul style="list-style-type: none"> <li>• Propiconazole – 500 ml</li> </ul>	574		

**RABI : Nil**

Thrust area	Crop	Yield gap (q/ ha)			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha)	No. of farmers District average yield
		District average yield	Potential yield	Farmers yield			Name & Quantity (kg/ha)	Cost (Rs./ha) or Rs./unit		

**SUMMER**

Thrust area	Crop	Yield gap (q/ ha)			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha)	No. of farmers District average yield
		District average yield	Potential yield	Farmers yield			Name & Quantity (kg/ha)	Cost (Rs./ha) or Rs./unit		
Introduction of TAG-24 variety along with ICM	Groundnut	10.00	22-25	15-16	<ul style="list-style-type: none"> <li>Low productivity of local variety</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of TAG-24 variety</li> <li>Broad bed furrow method of sowing</li> </ul>	Pods TAG-24 – 200 Kg	3500	5	10
					<ul style="list-style-type: none"> <li>Imbalanced nutrition (Non application of gypsum and Zinc)</li> </ul>	<ul style="list-style-type: none"> <li>Application of micronutrients &amp; usage of biofertiliser</li> </ul>	Rhizobium – 2.5 Kg	88	10	25
							PSB-2.5 Kg	88		
							ZnSO <sub>4</sub> – 25 Kg	900		
							Gypsum – 500 Kg	1375		
					<ul style="list-style-type: none"> <li>Incidence of leaf eating caterpillar</li> </ul>	<ul style="list-style-type: none"> <li>Spray of profenophos</li> </ul>	Profenophos – 750 ml	375		
					<ul style="list-style-type: none"> <li>Incidence of collar rot (No seed treatment)</li> </ul>	<ul style="list-style-type: none"> <li>Seed treatment with trichoderma</li> <li>Soil application of trichoderma + FYM</li> </ul>	Trichoderma – 1.25 Kg	200		
<ul style="list-style-type: none"> <li>Incidence of leaf minor</li> <li>Improper schedule of irrigation</li> </ul>	<ul style="list-style-type: none"> <li>Spray of monocrotophos</li> <li>Irrigation management</li> </ul>	Monocrotophos – 1 lit	385							
Introduction of KBSH-53 along with ICM	Sunflower	8.5	15-20	15-16	<ul style="list-style-type: none"> <li>Imbalanced nutrition (Non application of Zinc, Boron and Gypsum)</li> </ul>	<ul style="list-style-type: none"> <li>Application of micro nutrients &amp; biofertiliser</li> </ul>	Azospirillum – 500 gm	18	15	25
							ZnSO <sub>4</sub> – 10 Kg	360		
							Gypsum – 100 Kg	275		
							Boron – 1 Kg	215		
					<ul style="list-style-type: none"> <li>Incidence of SND</li> </ul>	<ul style="list-style-type: none"> <li>Spray of Imidacloprid</li> </ul>	Imidacloprid – 100 ml	230		
					<ul style="list-style-type: none"> <li>Incidence of leaf eating caterpillar (No spray is taken)</li> </ul>	<ul style="list-style-type: none"> <li>Spray of Profenophos</li> </ul>	Profenophos – 750 ml	375		
					<ul style="list-style-type: none"> <li>Incidence of powdery mildew</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of KBSH-53</li> <li>Spray of Propiconazole</li> </ul>	Seeds(KBSH-53) – 5 Kg	1250		
		Proiconazole – 500 ml	574							
<ul style="list-style-type: none"> <li>Improper schedule of irrigation</li> </ul>	<ul style="list-style-type: none"> <li>Irrigation management</li> </ul>	-	-							

**C. Pulses  
KHARIF**

Thrust area	Crop	Yield gap (q/ ha )			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha)	No. of farmers District average yield
		District average yield	Potential yield	Farmers yield			Name & Quantity (kg/ha)	Cost (Rs./ha or Rs./unit)		
Introduction of Selection-4 & ICM	Greengram	2.89	8-10	3-4	<ul style="list-style-type: none"> <li>Moisture stress</li> <li>Cultivation of local variety</li> <li>Incidence of leaf defoliator (Sphingid moth)</li> <li>Incidence of powdery mildew &amp; leaf spot (No control measures are taken)</li> </ul>	<ul style="list-style-type: none"> <li>Compartment bunding</li> <li>Seed priming with CaCl<sub>2</sub></li> <li>Opening of conservation furrows at the interval of 8-10 mtr</li> <li>Demonstration of Selection-4 variety</li> <li>Usage of bio-fertiliser, seed treatment &amp; soil application</li> <li>Spraying of Profenophos</li> <li>Spraying of Propiconazole</li> </ul>	Greengram seed (Selection-4) -12.5 Kg	750	20	50
							Bio-fertiliser			
							a) Azospirillum-10 Kg	400		
							b) PSB – 10 Kg	400		
							c) Rhizobium – 500 gm	25		
							Vermicompost – 5 Qtl.	1350		
							Profenophos -0.25 lit	267		
Propiconazole – 0.25 lit	287									
CaCl <sub>2</sub> – 360 gm	28									



## RABI

Thrust area	Crop	Yield gap (q/ ha)			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha)	No. of farmers District average yield
		District average yield	Potential yield	Farmers yield			Name & Quantity (kg/ha)	Cost (Rs./ha) or Rs./unit		
Introduction of JG-11 & ICM	Bengalgram	10	25	15-18	Incidence of pod borer wilt and rust (High dosage of chemicals for control of pod borer and no control measures for rust and wilt)	<ul style="list-style-type: none"> <li>• Seed treatment with Trichoderma</li> <li>• Seed treatment with Rhizobium</li> <li>• Soil application                             <ul style="list-style-type: none"> <li>a) Azospirillum</li> <li>b) PSB</li> <li>c) Vermicompost</li> </ul> </li> <li>• Installation of pheromone traps with lures</li> <li>• Spraying of profenophos</li> <li>• Spraying of NPV</li> <li>• Spraying of Acephate</li> <li>• Spraying of Propiconazole</li> <li>• Bird perches</li> <li>• Jowar as border crop</li> <li>• Putting water pots</li> <li>• Broadcasting of puffed rice</li> </ul>	JG-11 seeds – 62.5 Kg	2500	20	50
							Trichoderma – 625 gm	120		
							Rhizobium – 1 kg	40		
							Pheromone traps – 8 No.	144		
							Lures – 24 No.	192		
							NPV – 250 LE	405		
							Propiconazole – 0.25 lit	287		

## SUMMER

Thrust area	Crop	Yield gap (q/ ha )			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha)	No. of farmers District average yield
		District average yield	Potential yield	Farmers yield			Name & Quantity (kg/ha)	Cost (Rs./ha) or Rs./unit		

## D. Cotton KHARIF

Thrust area	Crop	Yield gap (q/ ha )			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha)	No. of farmers District average yield
		District average yield	Potential yield	Farmers yield			Name & Quantity (kg/ha)	Cost (Rs./ha) or Rs./unit		
Introduction of Bt. Cotton along with ICM	Bt. Cotton	10-12	25-30	20-22			Seeds – 1.25 Kg	1875	10	25
					<ul style="list-style-type: none"> <li>Incidence of sucking pest</li> </ul>	<ul style="list-style-type: none"> <li>Spray of Imidacloprid (2 times)</li> </ul>	Imidacloprid -300 ml	645		
					<ul style="list-style-type: none"> <li>Incidence of alterneria leaf spot</li> </ul>	<ul style="list-style-type: none"> <li>Spray of Hexaconazole (2 times)</li> </ul>	Hexaconazole – 500 ml	225		
					<ul style="list-style-type: none"> <li>Square &amp; tender bolls dropping</li> <li>Leaf reddening</li> </ul>	<ul style="list-style-type: none"> <li>Spray of MgSO<sub>4</sub> &amp; NAA (2 times)</li> <li>Spray of potassium nitrate</li> </ul>	MgSO <sub>4</sub> – 1.250 Kg	150		
						NAA – 400 ml	200			
						Potassium nitrate – 2 Kg	220			

## RABI

Thrust area	Crop	Yield gap (q/ ha )			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha)	No. of farmers District average yield
		District average yield	Potential yield	Farmers yield			Name & Quantity (kg/ha)	Cost (Rs./ha) or Rs./unit		
ICM in desi cotton	Cotton	2.75	8-10	4-5	<ul style="list-style-type: none"> <li>Moisture stress</li> </ul>	<ul style="list-style-type: none"> <li>Compartment bunding</li> <li>Opening of conservation furrow</li> </ul>	-	-	20	50
					<ul style="list-style-type: none"> <li>Low productivity of local variety</li> </ul>	<ul style="list-style-type: none"> <li>Demonstration of DDHC-11 variety</li> </ul>	Seeds (DDHC-11) – 10 Kg	500		
					<ul style="list-style-type: none"> <li>Square dropping</li> </ul>	<ul style="list-style-type: none"> <li>Spray of NAA</li> </ul>	Azospirillum – 12.5 Kg PSB-12.5 Kg Vermicompost – 5 Qtl	500 500 1500		
						<ul style="list-style-type: none"> <li>Spray of Potassium nitrate</li> </ul>	NAA – 200 ml	100		
						Potassium nitrate – 2 Kg	220			

## SUMMER : Nil

Thrust area	Crop	Yield gap (q/ ha )			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha)	No. of farmers District average yield
		District average yield	Potential yield	Farmers yield			Name & Quantity (kg/ha)	Cost (Rs./ha) or Rs./unit		

**TABLE- 5 : Plan For Training Programmes For Extension Functionaries During 2010-11**

<b>Crop / Enterprise</b>	<b>Identified Thrust Area</b>	<b>Organization</b>	<b>Training Course Title</b>	<b>No. of Courses</b>	<b>Skill to be transferred</b>
<i>In-situ</i> soil moisture conservation	Moisture stress management	Karnataka State Department of Agriculture	<i>In-situ</i> soil moisture conservation practices	02	Methods of <i>In-situ</i> soil moisture conservation practices
Groundnut	Enhancement of productivity	Karnataka State Department of Agriculture	Integrated Crop Management Practices	02	Relevant skills based on the need assessment
Sunflower	Caterpillar and Powdery mildew management	Karnataka State Department of Agriculture	Management of Caterpillar and powdery mildew	02	
Bt Cotton	Integrated Crop Management	Karnataka State Department of Agriculture	ICM	01	
Maize	Soil fertility management	Karnataka State Department of Agriculture	Soil fertility management	01	
Onion + Chilli	Post harvest technology	Karnataka State Department of Agriculture	Post harvest management in Onion and Chilli	01	
Nutrition	Health	<ul style="list-style-type: none"> <li>• Mahila Samukhya</li> <li>• Department of Women &amp; Child Welfare</li> </ul>	Importance of Balanced diet, Nutrition, Health, Hygiene and Deficiency diseases	03	Layout of Kitchen Garden
Drudgery	Drudgery reduction	Department of Women & Child Welfare	Drudgery reducing equipments	05	Demonstration of drudgery reducing equipments
High value Horticulture crop	Protected cultivation of high value crop with flower and vegetable	State Department of Horticulture	Cultivation of high value Horticulture crop under protected condition	01	Layout, planting and fertigation method
Bio-Pesticides	Preparation & usage of bio-pesticides to crops	Karnataka State Department of Agriculture	Preparation and usage of bio-pesticides	01	Method demonstration on preparation of Neem & Pongamia paste

\* Training title should specify the major technologies/skills to be transferred / refreshed.

**Table- 6: Plan of vocational training programmes for Young Farmers (Rural Youth) during 2010-11**

<b>Crop / Enterprise</b>	<b>Identified Thrust Area</b>	<b>Training title*</b>	<b>No. of programmes</b>	<b>Duration (days)</b>	<b>Skill to be transferred</b>
Dairy	Self Employment	Scientific dairy farming	03	05	Dairy management skills
Gardening	Self Employment	Gardening Techniques	01	10	Gardening Skills
Entrepreneurship	EDP Skills	EDP in Agriculture	03	05	Skills in Production, Processing and Marketing of agriculture produce
Value addition	Food processing	EDP & Food processing	01	30	Preparation of value added products and instant mixes
Vermicompost Technology	Usage and preparation of vermicompost	Vermicompost production technology and usage	02	-	<ul style="list-style-type: none"> <li>• Preparation of bed</li> <li>• Value addition to vermicompost</li> </ul>
Bio-pesticides	Preparation of Bio-pesticides	Preparation and usage of Bio-pesticides	01	-	Preparation methods & schedule of usage

\* Training title should specify the major technology/skill to be transferred.

**Table – 7 : Plan of training programmes for farmers/farm women during 2010-11**

<b>Crop / Enterprise</b>	<b>Major problem</b>	<b>Identified Thrust Area</b>	<b>Training Course Title*</b>	<b>No. of Courses</b>	<b>Skill to be transferred</b>
Greengram	Abiotic stress	<i>In-situ</i> soil moisture conservation	<i>In-situ</i> soil moisture conservation practice	02	<i>In-situ</i> soil moisture conservation method
	Low productivity due to powdery mildew and pod borer	Management of powdery mildew & pod borer	Management of pod borer and powdery mildew	02	Identification of disease, pod borer and chemicals for control
	Low productivity of local variety	Introduction of S-4 variety	ICM in S-4 variety	02	Identification of morphological characteristics of S-4 variety
Bengalgram	Incidence of wilt	Introduction of JG-11 variety along with ICM	ICM	02	Identification of wilt and varietal characters of JG-11 variety
	Incidence of pod borer	IPM	IPM	02	Identification of pest & IPM Package
	Drudgery in harvesting	Use of cotton hand gloves	Use of cotton hand gloves	02	Method of harvesting
Groundnut	Abiotic stress	Moisture conservation	<i>In-situ</i> moisture conservation	02	Moisture conservation methods
	Imbalanced nutrition	ICM and introduction of GPBD- 4 & TAG-24 varieties	ICM	03	Identification of characters of varieties
	Low productivity of local variety				
	Incidence of leaf minor	Leaf minor management	Leaf minor management	02	Identification of disease and chemicals for control
Sunflower	Imbalanced nutrition	Balanced nutrition	INM	02	Symptoms of deficiency & quantity and method of application of nutrients
	Powdery mildew	<ul style="list-style-type: none"> <li>Management of powdery mildew</li> <li>Introduction of KBSH-53</li> </ul>	ICM in KBSH-53	02	Identification of disease and it's management
	Drudgery in cutting of ear head	Drudgery reduction	Use of Cotton cloth hand gloves for harvesting	02	Use of cotton cloth hand gloves
Hybrid Cotton	Lack of Knowledge on production technology	ICM	ICM in Bt. Cotton	02	Identification of ICM practices

<b>Crop / Enterprise</b>	<b>Major problem</b>	<b>Identified Thrust Area</b>	<b>Training Course Title*</b>	<b>No. of Courses</b>	<b>Skill to be transferred</b>
Desi Cotton	Low productivity of Jayadhar and imbalanced nutrition	Introduction of DDHC-11 variety	ICM	02	Identification of characteristics of DDHC-11
Maize	Problematic soils and Improper irrigation	Soil & Water management	Soil fertility and irrigation management	02	Methods of soil fertility management & irrigation
	Imbalanced nutrition	INM	INM in Maize	02	Deficiency symptoms & nutrient application
	Drudgery in cutting of stalks	Improved sickle for harvesting	Harvesting tools in Maize	01	Method of cutting
Rabi Jowar	Moisture stress	Moisture conservation	Soil moisture conservation practices and seed priming	03	Methods of soil moisture conservation practices and seed treatment with CaCl <sub>2</sub>
	Low productivity of Maladandi (M35-1) variety	Introduction of CSV-22 variety	ICM in CSV-22	02	Morphological characteristics of CSV-22 variety
Wheat	Low productivity of local variety	Introduction of improved variety (GW-322)	ICM	01	Morphological characteristics of variety (GW-322)
	Drudgery in harvesting of stalks	Improved Sickles	Harvesting of Wheat stalks with improved sickle	01	Method of harvesting
Onion	Poor quality of bulb	Introduction of Arka Kalyan variety	ICM in Onion	02	Characteristics of Arka Kalyan variety
Chilli	Anthrachnose disease	Management of anthracnose	Management of anthracnose	02	Identification of disease and methods of control
	Murda complex	Murda complex management	Murda complex management	02	Identification of disease and chemicals for control
	Poor quality of dry Chilli	Post harvest management	PHT in Chilli	02	Identification of PHT technology
Mango	Improper orchard management	Orchard management	Orchard management	02	Relevant skills
	No diversification	Promotion of dry land horticulture	dry land horticulture	02	Relevant skills
	Incidence of hoppers & powdery mildew	Management of hoppers and powdery mildew	Management of hoppers and powdery mildew	02	Identification of disease and chemicals for

<b>Crop / Enterprise</b>	<b>Major problem</b>	<b>Identified Thrust Area</b>	<b>Training Course Title*</b>	<b>No. of Courses</b>	<b>Skill to be transferred</b>
					control
Tomato	Poor keeping quality on leafcurl incidence	Introduction of Arka Vikas	ICM	01	Morphological characteristics of variety
Brinjal	Shoot & fruit borer	Management of shoot & fruit borer	Management of shoot & fruit borer	01	Identification of symptoms, pest and chemicals for control
Frenchbean	Low productivity of local variety	Introduction of Arka Suvida variety	ICM	01	Identification of Morphological characteristics of variety
Ridge gourd	Low productivity of local variety	Introduction of Arka Sujit and Sumit variety	ICM	01	Identification of characteristics of variety
Chrysanthemum	Imbalanced nutrition	INM	INM	01	Dosage & method of application of nutrients
	Improper pinching	Pinching management	Pinching in Chrysanthemum	01	Method of pinching
Aster	Introduction of Aster crop	Introduction of Aster crop	ICM	01	Relevant skills in production technology
Dairy Enterprises	Imbalanced nutrients	Nutrient management	Nutrient management	04	Type and methods of preparation of nutrients
	Worm Infestation	Management of worms	Ecto and endo parasite management	02	Identification of ecto & endo parasite management
Sheep	Low productivity of meat & wool	Up gradation of local sheep with Ramboulette breed	Up gradation of local sheep	02	Identification & characteristics of Ramboulette breed
Goat	Low productivity of milk	Up gradation of local goat with Bidari breed buck	Up gradation of local goat	02	Identification & characteristics of Bidari breed buck
Poultry	Low productivity of eggs in local breeds	Introduction of Swarnadhara breed	Rearing of improved breed	02	Identification of breed characteristics
Fuel saving devices	Drudgery & non availability of fuels	Fuel efficiency & to reduce drudgery	Drudgery reducing tools	03	Operation of envirofit chulha
Human nutrition	Nutrition deficiency	Nutrition	Balanced diet	03	Deficiency symptoms
Farm implements	Drudgery in weeding	Drudgery reduction	Drudgery reduction equipments	02	Operation of weeder & Sickle



\* Training title should specify the major technology/skill to be transferred.

**Table 8. Plan for sponsored training programme during 2010-11**

<b>Crop/ Enterprise</b>	<b>Identified Thrust Area</b>	<b>Sponsored Organization</b>	<b>Training course title*</b>	<b>No. of Courses</b>	<b>Sponsored Agency</b>	<b>Skill to be transferred</b>
Soil	Soil fertility management	KSDA (Agriculture Department)	Soil fertility management	03	--	Relevant skill will be transferred based on need assessment
All crops	Soil moisture conservation	Watershed Development Department	<i>In-situ</i> soil moisture conservation	3	--	
Oil seeds	ICM	KSDA	ICM	3	--	
Pulses	ICM	KSDA	ICM	2	--	
Soil, Water & Crop Management	Water Management	CADA	Soil, Water & crop management in command area	5	--	
Vocational Training	Self Employment	NABARD	Income Generation Programme	5	--	
Dairy Enterprises	To increase Milk Production	Zilla Panchayat	Management of milch animals	8	--	
Horticulture Crops	To enhance Productivity	NABARD (VVV clubs)	ICM in fruit and vegetable crops	5	--	
Fruits & vegetables	Processing	State Department of Horticulture	Fruit and vegetable processing	02	--	

\* Programme title should specify the major technologies/skills to be transferred /refreshed.

**Table 9: Details of Extension programmes planned for 2010-11**

Month	Block & village	Extension programme*	Its relation to KVK activities (Tables 2 to 6)**	Expected category of participants	Remarks
1	2	3	4	5	6
April	<p><b>Gadag</b> Asundi Binkadakatti Mallasamudra</p> <p><b>Mundargi</b> Petalur Ramenahalli</p> <p><b>Shirahatti</b> Bannikoppa Tarikoppa Sugenahalli</p>	<ul style="list-style-type: none"> <li>• Kharif Campaign</li> <li>• Soil Testing</li> </ul>	<ul style="list-style-type: none"> <li>• Training &amp; Demonstration</li> <li>• Front Line Demonstration</li> </ul>	<p>600</p> <p>100</p>	
May	<p><b>Ron</b> Totaganti Nai Mallapur Bachalapur</p> <p><b>Naragund</b> Kurlageri Banahatti</p>	<ul style="list-style-type: none"> <li>• Kharif Campaign</li> <li>• Soil testing</li> </ul>	Training & Demonstration	500	
June	All the identified villages of Gadag	<ul style="list-style-type: none"> <li>• Seminar on Simaroubha</li> </ul>	Training & value addition	300	
August	<b>Shirahatti</b> Bannikoppa	<ul style="list-style-type: none"> <li>• Field Day on Greengram</li> </ul>	FLD	100	
September	<b>Mundaragi</b> Peta Alur	<ul style="list-style-type: none"> <li>• Field Day on Groundnut</li> </ul>	FLD	100	
	All the identified villages	<ul style="list-style-type: none"> <li>• Technology Week Celebration</li> </ul>	Mandated activities	2000	
	<b>Naragund</b> Kurlageri	<ul style="list-style-type: none"> <li>• Field Day on Maize</li> </ul>	FLD	150	
	<b>Gadag</b> Asundi	<ul style="list-style-type: none"> <li>• Field Day on Ridge gourd</li> </ul>	FLD	100	
October	All the identified villages of the Gadag district	<ul style="list-style-type: none"> <li>• Rabi Campaign</li> <li>• Demonstration of envirofit chulha</li> <li>• World Food Celebration Day</li> </ul>	Training & Demonstration	<p>800</p> <p>300</p>	

Month	Block & village	Extension programme*	Its relation to KVK activities (Tables 2 to 6)**	Expected category of participants	Remarks
	<b>Gadag</b> Asundi	• Field Day on Chrysanthemum & Aster	FLD	150	
November	<b>Shirahatti</b> Bannikoppa	• Field Day on Onion • Demonstration of Azolla	FLD FLD	150 100	
	<b>Gadag</b> Asundi	• Field Day on Chilli	FLD	150	
December	<b>Naragund</b> Banahatti	• Field Day on Sunflower • Demonstration on Azolla	FLD FLD	100 100	
	<b>Shirahatti</b> Bannikoppa	• Field Day on Bt Cotton • Demonstration on Azolla	FLD FLD	150 100	
	<b>MUNDARAGI</b> Peta Alur	• Women in Agriculture Day	Celebration	150	
	<b>Gadag</b> Mallasamudra	• Field Day on Tomato	FLD	100	
January	<b>Ron</b> Totaganti Mallapur Bachalapur	• Animal Health Camp	Training	150	
	<b>Naragund</b> Kurlageri	• Field Day on Bengalgram	FLD	100	
	All the identified villages	• Technology Week Celebration	Mandated activities	2000	
February	<b>Shirahatti</b> Bannikoppa	• Field Day on Desi Cotton & rabi Jowar	FLD	100	
March	<b>Ron</b> Totaganti	• Field Day on Summer Groundnut	FLD	150	

**Table 10: Details of print & electronic media coverage planned for 2010-11**

Sl. No.	Nature of literature/publications and no. of copies	Proposed title of the publication
1	Leaflet – 2000	• Importance of value addition in Amla
	Leaflet – 2000	• Drudgery reduction equipments
2	Leaflet – 5000	• <i>In-situ</i> soil moisture conservation practices
3	Leaflet – 3000	• Production technology in Onion
4	Leaflet – 3000	• Grain Storage
5	Handouts-5000	• Management of pest and disease in Groundnut, Sunflower, Bengalgram, Greengram, Chilli and Mango
6	Handouts-5000	• Production technology in Groundnut, Sunflower, Cotton, rabi Jowar, Wheat, Maize
7	Handouts-2000	• Technology for high meat and wool production in Sheep
Sl. No.	Nature of media coverage	Proposed title of the programme to be telecasted/ broadcast
1	Radio talk	Dry land agronomic practices
2	Radio talk	INM in Oilseeds
3	Radio talk	ICM in Bt Cotton
4	Radio talk	Quality bulb production in Onion
5	Radio talk	Soil fertility management
6	Television	Dry land Mango orchard management
7	Television	Anthracoze management in Chilli

**Table 11: Nature of collaborative activities planned for 2010-11**

Thrust area	Collaborative Organizations	Nature of activities*	No. of Activities
• Productivity enhancement & self employment	NABARD & Nationalized Banks	Training	06
• ICM in Oilseeds, Pulses and Cotton	Karnataka State Department of Agriculture	Training	10
• Establishment of Resource Centre	Deshpande Foundation, USA	Resource Centre for disseminating of knowledge & inputs	01
• Transfer of technology	Karnataka State Department of Agriculture	Implementation of Filed School	01
• Self Employment	Zilla Panchayat, SGSY Programme	Training	10
• Soil and Water Conservation	District Watershed Development Department	Training	10
• Soil, crop & water management	CADA, Belgaum	Training	05

\*Specify the activity like training, meetings, seminars, campaigns, workshops

**Table 12: Financial status of revolving fund and plan for its utilization (Rs. In lakhs)**

Opening balance as on 01.04.2009	Expenditure incurred during 2009-10	Receipts during 2009-10	Closing balance as on 31.03.2010	Proposed expenditure during 2010-11	Proposed receipts during 2010-11
1.84	3.83	4.00	2.01	5.00	8.00

**Table 13: Physical status of revolving fund and plan for its utilization**

Opening stock position of materials* as on 01.04.2009 (Quantity in Quintals)	Quantity produced during 2009-10 (in Qtls.)	Quantity sold during 2009-10 (in Qtls.)	Closing stock position as on 31.03.2010 (in Qtls.)	Expected production during 2010-11 (in Qtls.)	Expected number of beneficiaries
Vermicompost:5	Vermicompost 280.0	Vermicompost 270.50	Vermicompost 5.0	400	15
Earthworms	Earthworms : 1.16	1.16	-	1.20	50
Amla Products	0.45	0.36	0.09	0.50	--
Cotton: 45.0	Cotton : 45.00	Cotton : 45.0	Nil	Cotton : 50.0	260
Groundnut : 3.0	Groundnut : 13.0	Groundnut : 13.0	Nil	Groundnut : 20.0	10
Greengram : 4.0	Greengram : 4.0	Greengram : 4.0	Nil	Greengram : 6.0	95
Rabi Jowar : 2.50 Qt	Rabi Jowar : 2.50	Rabi Jowar : 2.50	Nil	Rabi Jowar : 8.0	60
Onion : 2.50 Qt	Onion : 2.50	Onion : 2.50	Nil	Onion : 6.0	225
Ridge gourd : 0.30	Ridge gourd : 0.30	Ridge gourd: 0.30	Nil	Ridge gourd : 0.60	40
Mango grafts : 5000 nos.	Mango grafts : 5000 nos.	Mango grafts : 5000 nos.	Nil	Mango grafts : 4000 nos.	150

**Table 14. Plan for utilization of Revolving Fund (2010-11)**

Amount to be invested (Rs.)	Purpose	Expected production	Approximate value of the produce (Rs.)
50,000/-	Preparation & sale of Neem soap and Pongamia soap	500 kg	50,000/-
25,000/-	Value addition of vermicompost with bio-fertilizer and Vam Culture	20 tonns	60,000/-
150000/-	Seed production of Bengalgram (JG-11)	50.00 Qt.	175000/-
125000/-	Cotton (DDHC-11) seed production	30.00 Qt. seed 18.00 Qt. Kapas	90000/- 99000/-
	Seed grading (processing) (Greengram, Bengalgram, Rabi Jowar & Wheat)	1000 bags @ Rs. 50/-	50000/-
450000/-	Onion seed production	1710 kgs.	684000/-
6000/-	Preparation of Amla products	30 kg Amla Candy 10 kgs Amla powder 10 Kg Amla Supari	12000/-
40000/-	Purchase of Twin wheel hoe weeders	50 nos.	42500/-
15000/-	Fabrication of Kissan Cookers	30 nos.	18000/-
15000/-	Soil & Water Testing	Soil Samples 630	31500/-
		Analysis of water samples – 60	4500/-

**Table 15: Status of KVK farm and Demonstration units**

No. of blocks	Area	Source of irrigation	Season	Crop/enterprise/ demonstration units	Size (no. of units/area)	Expected output	
						Quantity	Value (Rs.)
14	20 ha	Bore well as protective irrigation for about 4 ha. land	Kharif	Onion + Chilli	2.00	120 Qt	60000
				Chilli	-	5 Qt	25000
				Cotton	2.00	12 Qt	30000
				Green gram	1.20	5 Qt	15000
				Ground nut	5.20	43 Qt	107500
			Rabi	Rabi Jowar	2.00	25 Qt	25000
				Wheat	0.40	3 Qt	6000
				Bengalgram	0.40	3 Qt	9000
			Perennial	Simaroubha	0.40	3 Qt	1500
				Amla	0.10	10 Qt	20000
Guava	1.20	45 Qt		22500			
Mango	0.80	2 ton		80000			
01	-	-	-	Vermicompost & Earthworms production Units	100' X 40'	50 tons	125000

**16 . Are there any activities planned for production and supply (Either buy back or directly farmer to farmer) of seeds/ planting material/Bio-agents etc. In villages (other than KVK farm) so that public private partnership is utilized. Please give details in the following format**

Sl. No	Seeds/Planting material/Bio-agent	Name of the public-private partnership arranged	Quantity of output expected (Qtl)
1.	Onion seed production	KVK identified JLG/SHG members	17
2.	Groundnut	KVK Identified JLG/SHG member	35
3.	Bengalgram	KVK identified JLG/SHG members	50
4.	Greengram	KVK identified JLG/SHG members	15

**17. What is the extent of cultivable wasteland in your district? Are there any specific activities planned to be implemented in these wastelands by the KVK during 2010-11. Please give details.**

Cultivable wasteland in Gadag district is very less. Hence no activities are proposed.

**18. National Horticulture Mission (NHM) is being implemented through out the country. You are requested plan for implementing some of the activities envisaged in NHM in your district in collaboration with district head of department of horticulture. Please give details of any such plans for 2010-11**

National Horticultural Mission is being implemented in Gadag district from 2009-10. During 2010-11, KVK has planned to organize training programmes for NHM assisted farmers in collaboration with State Department of Horticulture. Apart from training, KVK has planned farm advisory services for farmers covered under National Horticultural Mission.

**19. Whether ATMA is functioning in your district? YES/NO**

Agricultural Technology Management Agencies (ATMA) is in operation in Gadag district since 2008-09. Under ATMA, KVK proposed to organize field school and training programmes.

Strategic Research and Extension Plan (SREP) has been prepared.

**20. What type of scientist-Farmer linkages are proposed by your KVK for 2010-11?**

KVK proposed to establish Resource Centres in the identified villages for speedy technology dissemination. This centre acts as a platform for scientist-farmer linkage. Apart from this, KVK has network of farmer groups and field school programmes which facilitate for scientist-farmer linkage.

Mobile based farm advisory, weather and marketing services are already being rendered to the farmers. A total of 600 farmers have registered for the service.

**21. Activities of soil, water and plant testing laboratory**

Year of establishment of lab	Equipments available	No. of samples planned To be analyzed and reported 2009-10				No. of farmers benefited	Revate realized (Rs.)	Target for the year 2010-11	Availability of chemical and glass work satisfactory or not
		Soil	Plant	Water	Other				
2005-06	1. pH Meter 2. Conductivity bridge 3. Spectro photometer 4. Flame photometer 5. Physical balance 6. Chemical balance 7. Water Distillation Unit 8. Kjeldal digestion and distillation unit 9. Shakers (2 No's) 10. Refrigerator 11. Oven 12. Hot plate 13. Grinder	426	28	37	-	394	26175	Soil samples-650  Water samples-130  Plant samples-250  Other samples -40	Satisfactory

**22. Details of budget utilization (2009-10)**

Sl. No.	Particulars	Sanctioned	Released	Expenditure
<b>A. Recurring Contingencies</b>				
1	<b>Pay &amp; Allowances</b>	5100000	5100000	5098985
2	<b>Traveling allowances</b>	100000	100000	99946
3	<b>Contingencies</b>			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	195000	195000	194992
B	POL, repair of vehicles, tractor and equipments	160000	160000	159948
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	105000	105000	140960
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	65000	65000	64678
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	161000	161000	160471
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	109000	109000	108911
G	Training of extension functionaries	10000	10000	9850
H	Maintenance of buildings	30000	30000	30000
I	Extension activities	30000	30000	29622
J	Farmers' Field School	25000	25000	25000
K	Library	10000	10000	9886
<b>TOTAL (A)</b>		<b>6100000</b>	<b>6100000</b>	<b>6097249</b>
<b>B. Non-Recurring Contingencies</b>				
1	<b>Works</b>	-	-	-
2	<b>Equipments including SWTL &amp; Furniture</b>	-	-	-
3	<b>Vehicle</b> (Four wheeler/Two wheeler, please specify)	-	-	-
4	<b>Library</b> (Purchase of assets like books & journals)	-	-	-
<b>TOTAL (B)</b>		-	-	-
<b>C. REVOLVING FUND</b>		-	-	-
<b>GRAND TOTAL (A+B+C)</b>		<b>6100000</b>	<b>6100000</b>	<b>6097249</b>



23. Details of Budget Estimate (2010-11) - ICAR KVKs alone may consider Pay and Allowances based on VI Pay Commission Orders from ICAR, for rest of the KVKs please estimate based on the existing norms, since ICAR is yet to take decision in this regard.

(Rs. In lakhs)

Sl. No.	Particulars	Budget estimate
<b>A. Recurring Contingencies</b>		
1	<b>Pay &amp; Allowances</b>	55.067
2	<b>Traveling allowances</b>	3.000
3	<b>Contingencies</b>	
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	2.500
B	POL, repair of vehicles, tractor and equipments	1.750
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	1.250
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	1.500
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	2.000
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	1.250
G	Training of extension functionaries	0.300
H	Maintenance of buildings	0.500
I	Establishment of Soil, Plant & Water Testing Laboratory	
J	Library	0.300
K	Maintenance of STL	0.250
<b>TOTAL (A)</b>		<b>70.267</b>
<b>B. Non-Recurring Contingencies</b>		
1	<b>Works</b>	53.000
2	<b>Equipments &amp; Furnitures</b>	5.000
3	<b>Vehicle</b> (Four wheeler/Two wheeler, please specify)	-
4	<b>Library</b> (Purchase of assets like books & journals)	0.250
<b>TOTAL (B)</b>		<b>58.250</b>
<b>C. REVOLVING FUND</b>		-
<b>GRAND TOTAL (A+B+C)</b>		<b>128.267</b>

**24. Targets for E-linkage activities for 2010 - 11**

<b>Sl. No</b>	<b>Nature of activities</b>	<b>Likely period of completion (please set the time frame)</b>	<b>Remarks if any</b>
01	Final installation of E-Linkage facility	June 2010	Need training on use of all the facilities provided under e-linkage
02	Creation of web-site	Updation of Website – May 2010	-
03	Development of Technological Models with modules in major disciplines	January – 2011	Need training on development of technological models.
04	Creation and maintenance of relevant database system for KVK as follows 1. OFT 2. FLD 3. Training database 4. Seeds & planting material 5. Extension activities 6. Database of farmers visiting to our KVK 7. District database 8. Database of SHGs 9. Database of soil test 10. Database of survey made for need based trainings	Feb – 2011	
05	Any other (Please specify)	-	-

**25. Activities planned under Rainwater Harvesting Scheme during 2010-11 (only to those KVKs which are already having scheme under Rain Water Harvesting)**

<b>S. No</b>	<b>Activities planned during 2009-10</b>	<b>Remarks if any</b>
1	Training of farmers on various rain water harvesting structures	No. of courses : 12 No. of farmers : 360
2	Establishment of rain water harvesting structures in farmers field under KVK guidance	No. of farmers : 25

**26. Please give details of activities planned, other than those listed above.**

## **ACTIVITIES PROPOSED UNDER FARMERS FIELD SCHOOL (FFS)**

### **Title of FFS: Integrated Crop Management in Bt Cotton**

Problem Definition: In Gadag district area under Bt Cotton is picking up and it contributes to the district economy to considerable extent. The farmers are not fully aware about Bt Cotton production aspects. Incidence of sucking pest and mired bug problems are affecting the net income of farmers. Farmers have been using mixture of 2-3 pesticides to control the pest menace, which resulted in increasing the cost of production apart from destroying the beneficial natural predators, parasitoides and fungus. This calls for an approach to involve the farmers in management of pest through eco-friendly means i.e., Integrated Crop Management through Farmers' Field School concept.

### **MAIN OBJECTIVES OF FARMERS' FIELD SCHOOL**

- I) To provide basic agro-ecological knowledge and skills on Bt Cotton production throughout the crop season through participatory means.
- II) To reduce the cost of cultivation incurred mainly on pesticides
- III) To enhance Farmers' participatory decisions on the management of pest.
- IV) To increase the net income of farmers
- V) To conserve the natural predators, parasitoids and fungus.

### **SCIENTIFIC RATIONALE OF FARMERS' FIELD SCHOOL**

The FFS approach helps to understand the problem and its causes through participatory approach. It helps to study the agro-ecological system of the production and adopt environment friendly measures to tackle the problem.

### **THE LEARNING PROCESS INVOLVED IN FARMERS' FIELD SCHOOL**

Integrated Crop Management training through FFS approach is unique in many ways. It holds farmers interest till end of the programme. The training which stretches throughout the Bt Cotton season addresses the production technology and more importance to pest menace and its control through eco-friendly methods. Life cycle and nature of damage of each pest is studied by the farmers. They understand the beneficial and non-beneficial insects. Farmers can be able to study the agro-ecological analysis of their production system and learn the role of community in addressing the pest menace.

## ACTORS IN FARMERS' FIELD SCHOOL

**Participants of Farmers' Field School:** These are the leading farmers selected by villagers

**Collaborator:** Is farmer/farmwomen who gives land for conducting field studies in throughout the cropping season.

**Facilitator:** Facilitator is a technically competent farmer to lead the group of leading farmers through exercises. The facilitator will participate in discussion sessions as contributor rather than a leader in arriving at an agreed consensus.

### Priorities of Farmers' Field School:

- Agro-eco-system analysis of Bt Cotton production system
- Management of pest through eco-friendly means
- Reduction of cost of production
- Community role in addressing the problem

### Budget details:

Sl. No.	Particulars	Amount (Rs.)
1.	Critical input for conducting ICM in Bt Cotton	4000.00
2.	Refreshment during Ten Training Programme @ 600/programme	6000.00
3.	Farmers' Field School Kits	2500.00
4.	Bags & Caps	2000.00
5.	Field day expenditure	3000.00
6.	Publishing material expenditure	1500.00
7.	Honorariums for one facilitator for 10 visits @ 400/visit	4000.00
8.	Stationary & other expenditure	2000.00
	<b>Total</b>	<b>25000.00</b>