

**ANNUAL REPORT 2010-11**

**(APRIL 2010 TO MARCH 2011)**

**Taralabalu Krishi Vigyan Kendra, Davanagere**

**Kadalivana, LIC Colony Layout, B.I.E.T. Road**

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**Submitted to : To,**

**Zonal Project Director  
Zonal Project Directorate-Zone VIII  
ICAR Transfer of Technology Projects,  
MRS, H.A. Farm Post,  
Hebbal, BANGALORE – 560 024**

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**PART I - GENERAL INFORMATION ABOUT THE KVK**

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

KVK Address	Telephone		E mail	Web Address
	Office	Fax		
Taralabalu Krishi Vigyan Kendra Kadalivana, LIC Colony Layout, B.I.E.T. Road, Davanagere – 577 004	08192 – 263462	08192 – 260969	<a href="mailto:dvgtkvk@yahoo.com">dvgtkvk@yahoo.com</a>	www.taralabalukvk.com

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

Address	Telephone		E mail	Web Address
	Office	Fax		
Taralabalu Rural Development Foundation Sirigere – 577541 Chitradurga (Dist.)	08194 – 268829, 268842	08194 - 268847	<a href="mailto:trdf@taralabalu.org">trdf@taralabalu.org</a>	<a href="http://www.taralabalu.org">www.taralabalu.org</a>

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Devaraja T.N.	--	094498 – 56876	<a href="mailto:tngdevaraja@yahoo.co.uk">tngdevaraja@yahoo.co.uk</a>

**1.4. Year of sanction: 2004**

**1.5. Staff Position (as 31<sup>st</sup> March 2011)**

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M/F	Discipline	Highest Qualification (for PC, SMS and Prog. Asstt.)
1	2	3	4	5	6	7
1	Programme Coordinator	Dr. Devaraja T.N.	Programme Coordinator	M	Fisheries	Ph.D. (Aquatic Biology)
2	Subject Matter Specialist	Mr. Basavanagowda M.G	Subject Matter Specialist	M	Horticulture	M.Sc. (Hort.)
3	Subject Matter Specialist	Mr. Mallikarjuna B.O	Subject Matter Specialist	M	Agronomy	M.Sc. (Agri.)
4	Subject Matter Specialist	Dr. Jayadevappa G.K.	Subject Matter Specialist	M	Animal Science	M.V.Sc. (Animal Nutrition)
5	Subject Matter Specialist	Mr. Raghuraja J.	Subject Matter Specialist	M	Agriculture Extension	M.Sc. (Agri.)
6	Subject Matter Specialist	Mr. Prasananna Kumara N.	Subject Matter Specialist	M	Plant Protection	M.Sc. (Agri. Pathology)

7	Subject Matter Specialist	Dr. Pradeep H.M.	Subject Matter Specialist	M	Soil Science	Ph.D. (Soil Science & Agriculture Chemistry)
8	Programme Assistant (Lab Tech.)/T-4	Vacant	Programme Assistant (Lab Tech.)			
9	Programme Assistant (Computer)/ T-4	Mr. Santhosh B.	Programme Assistant	M	Computer	B.Sc. (Computer Science)
10	Programme Assistant/ Farm Manager	Mr. Vijayakumar S.B.	Programme Assistant	M	Farm Manager	M.Sc. (Plant Breeding & genetics)
11	Assistant	Mr. Mallikarjuna S.Gudihindala	Assistant	M	Assistant	B.Com.
12	Stenographer-III	Mrs. Mamatha H. Melmalagi	Stenographer-III	F	Stenographer-III	B.Com. + Shorthand
13	Driver	Mr. Marulasiddaiah N.M.	Driver	M	Driver	BA
14	Driver	Mr. Shivakumara S.	Driver	M	Driver	S.S.L.C.
15	Supporting staff	Mr. Shivakumara B.	Supporting staff	M	Supporting staff	S.S.L.C.
16	Supporting staff	Mr. Shivakumara S.E.	Supporting staff	M	Supporting staff	S.S.L.C.

Name of the incumbent	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/OBC/ Others)
3	8	9	10	11	12
Dr. Devaraja T.N.	12000-420-18300	12840	17-05-05	Permanent	Others
Mr. Basavanagowda M.G	8000-275-13500	8550	21-11-06	Permanent	Others
Mr. Mallikarjuna B.O	8000-275-13500	8275	09-01-08	Permanent	Others
Dr. Jayadevappa G.K.	8000-275-13500	8275	29-01-08	Permanent	Others
Mr. Raghuraja J.	8000-275-13500	8275	23-06-08	Permanent	Others
Mr. Prasananna Kumara N.	8000-275-13500	8275	24-06-08	Permanent	Others
Dr. Pradeep H.M.	8000-275-13500	8275	25-06-08	Permanent	Others
Miss. Kavitha P.	5500-175-9000	6200	01-06-05	Permanent	Others
Mr. Santhosh B.	5500-175-9000	5500	05-09-08	Permanent	Others
Mr. Vijayakumar S.B.	5500-175-9000	5500	23-06-08	Permanent	Others
Mr. Mallikarjuna S.Gudihindala	5500-175-9000	8125	01-06-05	Permanent	OBC
Mrs. Mamatha H. Melmalagi	4000-100-6000	4400	06-06-05	Permanent	Others

Mr. Marulasiddaiah N.M.	3200-85-4900	3455	01-06-05	Permanent	Others
Mr. Shivakumara S.	3200-85-4900	3455	01-06-05	Permanent	Others
Mr. Shivakumara B.	2550-55-2660-60-3200	2780	01-06-05	Permanent	Others
Mr. Shivakumara S.E.	2550-55-2660-60-3200	2780	01-06-05	Permanent	Others

**1.6. Total land with KVK (in ha) : - 15 ha**

S. No.	Item	Area (ha)
1	Under Buildings	1.75
2.	Under Demonstration Units	0.50
3.	Under Crops	7.25
4.	Orchard/Agro-forestry	5
5.	Others	0.5
	Total	15

**1.7. Infrastructural Development:**

**A) Buildings**

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	04.01.2008	550	29.37			Completed
2.	Farmers Hostel	ICAR	04.01.2008	300	18.82			Completed
3.	Staff Quarters	ICAR	04.01.2008	400	19.40			Completed
	1 Programme Coordinator							
	2 SMS (Animal Science)							
	3 SMS (Agri. Extension)							
	4 Farm Manager							
	5 Field Assistant							
	6 Driver							

<b>4.</b>	Demonstration Units					--	--	Completed
	1. Dairy	ICAR	04-01-2008	160	6.41			
	2. Poly House	DBT	1.06.2010	120	149998.00			Completed
	3. Shade Home	DBT	1.06.2010	1818	49997.00			Completed
	4. Zero Energy Cool Chamber	DBT	1.12.2010	2.5	13000.00			Completed
	5. Azolla production unit	RF	2010	3	3000.00			Completed
	6. Fish ponds and Ornamental fish breeding	DBT	2010	700	1,49,955.00			Completed
	7. Fish polyculture pond with horti integration	DBT	2010	600				Completed
	8. Fodder demo units	RF	2010	4000	41428.00			Completed
	9. Erythrina standards for betelvine demo unit	RF	2010	300	1000.00			Completed
<b>5.</b>	Orchards and agro forestry							Completed
	1. Mango	RF	2000	12000	53215.00			Completed
	2. Sapota orchard	RF	2010	4000	44775.00			Completed
	3. Hexagonal and penta planting of coconut garden	RF	2009	4000	9035.00			Completed
	4. Arecanut garden	RF	2007	8000	72228.00			Completed
	5. Tamarind garden	RF	2000	2000	-			Completed
	6. Curry leaf garden	RF	2007	500	-			Completed
	7. Agro forestry with biofuel plants	RF	2000	24000	13166.00			Completed
<b>6</b>	Fencing	ICAR				Under construction		
<b>7</b>	Rain Water harvesting system					To be sanctioned		
<b>8</b>	Threshing floor	ICAR				Under construction		
<b>9.</b>	Farm Godown	ICAR				To be sanctioned		

#### B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Tractor and Trailer	2005	4,99,995/-	1878/- hr	Good
Power tiller Funded by FLD cotton	2008	99400/-	-	Good
Power Tiller	2010	131500/-	-	Good
Tempo Cruiser	2005	4,99,250/-	105075	Good
Hero Honda CD Deluxe	2006	39,298/-	34315	Good
Yamaha Alba	2009	48,309/-	16031	Good

## C) Equipments &amp; AV aids

<b>Name of the equipment</b>	<b>Year of purchase</b>	<b>Cost (Rs.)</b>	<b>Present status</b>
Mixer	2005	3,300/-	Good
Xerox Machine	2006	73,840/-	Good
Digital Camera	2006	19,900/-	Not in working condition
Over Head Projector	2006	19,935/-	Good
TV with DVD Player (Funded by SHIMUL)	2006	11,350/-	Good
Refrigerator (LG)	2007	10,000/-	Good
Computer +LCD	2007	1,00,103/-	Good
VRC System (Funded by UAS, Bangalore)	2008	--	Good
Fax (4 in one)	2009	15,000/-	Good
Digital camera	2010		Good
Generator	2011	100000/-	Good



## 1.8. Details SAC meeting conducted in 2010-11

Sl.No.	Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
1.	20.03.2010	15	13	1. To train horticulture farmers from Siddanur village on Post Harvest Technology	Gave training on grading of vegetable crops. Encouraged them establishing Zero Energy Cool Chamber under DBT project for short term storage of vegetables.
				2. To promote farmers growing organic vegetables and helping them to market those products.	Conducted 10 training programmes for 230 farmers on organic farming in horticulture crops.
				3. To conduct more number of vocational trainings	Conducted 7 training programmes in collaboration with Zilla Panchayath, Davanagere under SGSY project on "Scientific dairy farming"
				4. To arrange farmer-farmer and farmer- scientist interaction programmes	Organized farmer- scientist interaction programme at Sirigere - "Raitha Siri Habba", more then 3000 farmers participated in programme.  Conducted workshop on "Importance of Silicon in Rice farming . 80 progressive farmers participated in the workshop.
				5. To Encourage pulse production among farmers especially as inter crop in maize to improve soil fertility	Popularized velvet beans and cowpea as intercrops in arecanut and coconut plantation gardens.  Popularized maize + red gram, groundnut + redgram, cotton + red gram in the farmers field.
				6. To avoid use of grain such as Ragi for cattle feed and instead use other grains locally available at cheaper cost	Recommendation is made through farm advisory services to use other cereals grains available at cheaper cost like maize powder
				7. To popularize fodder varieties of IGFR I for which it is ready to supply planting material required and to record straw grain yield in demo plots for better comparison among varieties.	Popularized DHN-6 and Guinea grass of IGFR I Dharwad in more than 10 villages of Davanagere Dist.( More then 50 farmers covered)
				8. To popularize subabul tres plantation and Azolla plantation cultivation to alleviate fodder scarcity	Farmer advisory services given to more them 100 dairy farmers and Azolla unit established at KVK

			9. To adopt milking machine in dairy unit	Installed the milking machine in the dairy unit. (Single cow miling machine)
			10. To use Short Message Services (SMS) To disseminate technological information to farmers.	130 farmers are enrolled under this SMS system
			11. To popularize mechanization in agriculture eg.: Paddy transplanter, weeder etc.	Conducted demonstration on paddy transplanting using transplanter and over 100 farmers participated in the programme. Cycle weeder is used in vegetable cultivation by our farmers.
			12. To popularize IFS model arrange farmers, suggested to adopt one acre model of Bavikere developed by Dr. Rudraradhya	Farm / fish pond, Vermicompost , Dairy unit are established.
			13. To popularize flower cultivation in arecanut and coconut plantation in a small scale	Gave technical details to establish 2 polyhouses at Pavada Rangavanahalli and Thurchaghatta.
			14. To Conduct awareness programme for fertilizers and pesticide dealers on correct usage (dosage). To- encourage dealers to register for diploma programme from agriculture collage, Shimoga.	Conducted two training programme on balanced use of fertilizers 26-7-10 and 13-8-2010
			15. To popularize redgram varieties for different seasons and also to standardize the cost of production	Popularized BRG-2 and Maruti varieties among farmers.
			16. To popularize intercropping with Cocoa, Pepper in Arecanut and Coconut	Farmers advisory services to several farmers about the role of intercrops in arecanut and coconut.

**PART II - DETAILS OF DISTRICT**

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

S. No	Farming system
1	Rainfed : Ragi, Maize, Sorghum, Minor millets, Red gram, Black gram, Green gram, Bengal gram, Groundnut, Sunflower, Coconut, Mango, Cotton, Onion
2	Irrigation : (33%) Flood irrigation: Rice, Sugarcane, Arecanut, Vegetables Drip irrigation : Arecanut, Coconut, Pomegranate, Papaya, Sapota, Betel vine
3	Enterprises: Poultry, Fishery, Dairy, Sericulture, Vermicomposting
4	Cropping intensity: 122%

The Taralabalu Krishi Vigyan Kendra is situated in Davanagere district. The district occupies a total geographical area of 5913.4 sq. km. It is spread over 6 taluks, 35 hoblies and 232 gram panchayaths. According to 2011 census, the district comprises total population is 19,46,905 with population density of 329 people /sq. km. The district is primarily agrarian in character and more than 75% of its population depending directly / indirectly on agriculture for their livelihood.

Davanagere district is at center of the state and lies in between latitude of the 75<sup>0</sup>.30' and 76<sup>0</sup>.30' and longitude of 13<sup>0</sup>.45' and 14<sup>0</sup>.50' with MSL of 602.5m. The average rainfall of the district is 644 mm. The variety of soil is medium to deep black and red sandy loam. The district is essentially Kharif region and majority Rabi crops will be taken up with the help of irrigation from Bhadra canal. The district comprises of three agro climatic zones of Karnataka given in section 2.2.

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

S. No	Agro-climatic Zone	Characteristics
	Northern Dry Zone (Zone III)	The zone comprises Harapanahalli Tq. Major soil types of the zone are black and red soils. The main crops growing in the zone are Ragi, Maize, Jowar, Onion, Chilli, Sunflower and Minner millets, Coconut, Mango and Pomegranate.
	Central Dry Zone (Zone IV)	Jagalur, Harihara and Davanagere Taluks come under Zone IV. We find red sandy soil mixed with clayey soil land patches of black soil in the zone. Major crops include Maize, Rice, Jowar, Sunflower, Sugarcane, Ragi, Minor millets, Vegetables, Coconut, Arecanut, Beetlevine, Groundnut, and Pomegranate.
	Southern transitional Zone (Zone VII)	Southern transitional zone includes Channagiri and Honnali taluks. The dominating soil types found are red sandy soil and black cotton soil. Major crops growing the zone are Maize, Rice, Ragi, Cotton, Chilli, Jowar, Groundnut, Arecanut, Coconut, Mango and other Commercial crops.

S. No	Agro ecological situation	Characteristics
	Southern Plateau and Hills	Typical semi-arid zone; About 80 % of the area falls under rainfed farming; Cropping intensity is very low. Soils are shallow and medium, loamy red, Major crops are Rice, maize, sugarcane, Arecanut, coconut and millets.

## 2.3 Soil type

S. No	Soil type	Characteristics	Area in ha
1	Red Sandy Soil (Harihara, Channagiri, Jagalur, Davanagere Tq.)	Low water holding capacity Neutral pH Low Nitrogen content Medium in Phosphorus and Potash	1, 26,000
2	Deep to Medium Deep Black Soil (Jagalur, Davanagere, Harapanahalli)	High water holding capacity Neutral to Alkaline pH Medium in Nitrogen and Phosphorus High Potassium	54,000
3	Mixed Red and Black Soil (Honnali, Jagalur, Harapanahalli)	Medium water holding capacity Neutral pH Medium in Nitrogen, Phosphorus and Potassium content	1, 62,000
4	Sandy Loam Soil (Harapanahalli, Davanagere)	Poor water holding capacity Neutral pH Deficient in Nitrogen, Phosphorus and Potassium	18,000
<b>Total</b>			<b>3, 60,000</b>

**2.4. a) Area, Production and Productivity of major crops cultivated in the district ( 2009-10)**

<b>S. No</b>	<b>Crop</b>	<b>Area (ha)</b>	<b>Production (Metric tons)</b>	<b>Productivity (kg /ha)</b>
1	Paddy	1,13,955	625820	5492
2	Jawar	26843	42820	1595
3	Bajra	645	452	700
4	Maize	186823	745809	3922
5	Ragi	10362	15537	1499
6	Wheat	482	367	761
7	Navane	381	191	500
8	Same	125	0	0
9	Redgram	6878	6897	1003
10	Blackgram	260	69	264
11	Horsgram	2681	1835	685
12	Greengram	1999	853	427
13	Fieldbean	1483	579	390
14	Cowpea	2468	947	384
15	Bengalgram	8208	2873	350
16	Groundnut	21434	27430	1280
17	Caster	570	538	944
18	Sesamum	1764	1323	750
19	Soyabean	122	89	0
20	Nizer	458	121	265
21	mustered	165	36	216
22	Sunflower	11081	9064	818
23	Safflower	275	122	444
24	Cotton	28761	39162	231
25	Sugercane	10090	1125930	112

(Source: Department of Agriculture, Davanagere. 2009-10 )

**b). Horticultural Crops ( 2009-10)**

<b>S. No</b>	<b>Crop</b>	<b>Area (ha)</b>	<b>Production (Metric tons)</b>	<b>Productivity (t /ha)</b>
1	Mango	2811.90	30392.80	10.81
2	Banana	3004.50	75039.50	24.98
3	Lemon	714.90	1125.20	15.02
4	Sapota	740.37	7169.24	9.68
5	Tomato	2172.2	6933.0	31.92
6	Brinjal	266.24	4691.00	17.62
7	Beans	155.58	1835.6	11.8
8	Onion	4684.7	79190.9	16.90
9	Chilli	981.34	10939.35	11.14
10	Bendi	246.78	1729.46	7.01
11	Watermelon	277.25	8886.4	31.33
12	Bitterguard	54.50	423.50	7.77
13	Ridge guard	19.75	721.63	7.95
14	Cucumber	172.57	2588.50	15.00
15	Coconut	12949.8	883.71	0.0682
16	Arecanut	29604.57	39283.39	1.33
17	Betelvine	922.25	4419.6	4.79
18	Rose	57.07	168.1	2.95

(Source: Department of Horticulture: 2009-10)

### 2.5. Weather data ( 2010)

Month	Rainfall (mm)		Temperature ° C	Relative Humidity (%)
	<b>Normal</b>	<b>Actual</b>		
January-2010	1.9	17.7		
February -2010	1.3	0.0		
March- 2010	4.1	6.7		
April-2010	38.8	55.2		
May-2010	84.2	52.4		
Jun-2010	68.0	73.6		
July-2010	98.1	127.6		
August-2010	79.5	199.6		
Septmber-2010	114.5	137.8		
October-2010	119.3	135.5		
November-2010	40.4	213.4		
December-2010	7.0	0.0		
<b>Total</b>	<b>656.9</b>	<b>1018.5</b>		

\* Source : Department of Agriculture, Davanagere -2010.

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

Category	Population	Production	Productivity
<b>Cattle</b>			
<i>Crossbred</i>	292231		5-6 ltr/ day
<i>Indigenous</i>	57139		
<b>Buffalo</b>			
Sheep			
<i>Crossbred</i>	120		
<i>Indigenous</i>	204789		
<b>Goats</b>			
<b>Pigs</b>			
<i>Crossbred</i>	3100		
<i>Indigenous</i>			
<b>Rabbits</b>	102		
<b>Poultry</b>			
Hens	1520389		
<i>Desi</i>			
<i>Improved</i>			
Ducks			
Turkey and others			



Category	Area (ha)	Production(tons)	Productivity
Fish			
Marine			
Inland	10098	6600	1.5
Prawn			
Scampi			
Shrimp			

(Source: Department of statistics, Davanagere)

2.7 District profile has been prepared and submitted : Yes (2010, August)

### 2.8 Details of Operational area / Villages

Sl.No.	Taluk	Name of the block	Name of the village	How long the village is covered under operational area of the KVK (specify the years)	Major crops & enterprises	Major problem identified	Identified Thrust Areas
01	Davanagere	Davanagere	Kurki	02	Redgram	<ul style="list-style-type: none"> <li>• Uneven crop stand</li> <li>• Low plant population</li> </ul>	<ul style="list-style-type: none"> <li>• Transplanting</li> </ul>
02	Davanagere	Halebislery	Halebislery	02	Rice	<ul style="list-style-type: none"> <li>• No. biofertilizer usage</li> <li>• Improper nutrient management</li> <li>• Stem borer and BPH problem</li> <li>• Indiscriminate use of pesticides</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated pest management</li> </ul>
03	Davanagere	Siddanuru	Siddanuru	02	Tomato	<ul style="list-style-type: none"> <li>• Imbalanced nutrition</li> <li>• Flower and fruit dropping</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated crop management</li> </ul>
04	Davanagere	Davanagere	Kurki Tholahunase	01	Mucuna	<ul style="list-style-type: none"> <li>• Weed infestation</li> <li>• Moisture conservation</li> <li>• Fertility management</li> </ul>	<ul style="list-style-type: none"> <li>• Cover crop as intercrop</li> </ul>

05	Davanagere	Siddanur	Siddanur Elebetur Kadajji Halebisleri	02	Banana, Tomato, Maize, Sesamum	<ul style="list-style-type: none"> <li>• Higher incidence of leaf spot</li> <li>• Poor management of Banana plots</li> <li>• Monocropping poor soil fertility.</li> <li>• Use of higher seed rate</li> </ul>	<ul style="list-style-type: none"> <li>• IDM</li> <li>• ICM</li> </ul>
06	Chennagiri	Basavapatna	Daginakatte Harosagara Basavapatna Belliganudu	02	Areca nut, Paddy, Mango	<ul style="list-style-type: none"> <li>• Higher incidence of hidimundige and Snail</li> <li>• Poor soil management fertility</li> </ul>	<ul style="list-style-type: none"> <li>• IPDM</li> <li>• Green manure crops</li> </ul>
07	Davanagere	Kandagallu	Kandagallu	02	Coconut, Paddy	<ul style="list-style-type: none"> <li>• Incidence of BHC and Mites</li> </ul>	<ul style="list-style-type: none"> <li>• IPM</li> </ul>
08	Harihar	Kurubara halli	Kurubarahalli	01	Mango, Coconut, Paddy	<ul style="list-style-type: none"> <li>• Incidence of leaf hopper fruit fly</li> </ul>	<ul style="list-style-type: none"> <li>• IPM</li> </ul>
09	Jagalur	Rangapura	Rangapura	-	Bengalgram	<ul style="list-style-type: none"> <li>• Wilt and pod borer incidence</li> </ul>	<ul style="list-style-type: none"> <li>• IPDM</li> </ul>
10.	Harapanahalli	Anajigere	Anajigere	02	Sunflower	<ul style="list-style-type: none"> <li>• Powdery mildew Basal collar rot</li> </ul>	<ul style="list-style-type: none"> <li>• IDM</li> </ul>
11	Davanagere	Siddanur	Siddanur Belaranur Halebisleri Halvarthy Rudrakatte	2	Maize	<ul style="list-style-type: none"> <li>• Poor fertilizer management particularly with potash</li> <li>• Stem borer downy mildew and sheath blight</li> <li>• No micronutrient (ZNSO<sub>4</sub>) application</li> <li>• Improper nutrient management. (1bag DAP 25Kg 20:20 25kg potash)</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated nutrient management</li> <li>• Tolerant hybrid</li> </ul>

12	Harapanahali	Anjigere	Anjigere Siddanur.	5	Cotton	<ul style="list-style-type: none"> <li>• Improper spacing and seed rate</li> <li>• Sucking pest</li> <li>• Leaf reddening square drying and boll drying</li> <li>• No macro and micro nutrients sprays.</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated crop management</li> </ul>
13	Harihar	Harihar	Yalavatti Kenchanahalli Holesirigere	3	Fisheries	<ul style="list-style-type: none"> <li>• Low body weight</li> <li>• Less production of fishes</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated fish farming</li> <li>• Aquaculture production in seasonal water bodies</li> </ul>
14	Davanagere	Davaangere	Bullapura				
15	Harapanahalli	Uchangidurga	Kallahalli				
16	Davanagere	Davanagere	Hosachikkanahalli Avaragere Kurki Kukkawada	3	Dairy	<ul style="list-style-type: none"> <li>• Nutrient deficiency</li> <li>• Unhygienic milk production</li> <li>• Diseases</li> </ul>	<ul style="list-style-type: none"> <li>• Animal feeding</li> <li>• Clean milk production</li> <li>• Vaccination and Deworming</li> </ul>

## 2.9 Priority thrust areas

S. No	Thrust area
1.	Integrated crop management in Rice, Tomato
2.	Intercropping in Arecanut
3.	Transplanting in Redgram
4.	Integrated disease management in banana, sunflower
5.	Integrated pest and disease management in arecanut , coconut, mango, Bengalgram
6.	Integrated crop management in maize and cotton.
7.	Integrated fish farming
8.	Animal feeding

**PART III - TECHNICAL ACHIEVEMENTS**

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

<b>OFT</b>				<b>FLD</b>			
<b>1</b>				<b>2</b>			
<b>Number of OFTs</b>		<b>Number of farmers</b>		<b>Number of FLDs</b>		<b>Number of farmers</b>	
<b>Targets</b>	<b>Achievement</b>	<b>Targets</b>	<b>Achievement</b>	<b>Targets</b>	<b>Achievement</b>	<b>Targets</b>	<b>Achievement</b>
12	11	59	40	18	17	347	209

<b>Training</b>				<b>Extension Programmes</b>			
<b>3</b>				<b>4</b>			
<b>Number of Courses</b>		<b>Number of Participants</b>		<b>Number of Programmes</b>		<b>Number of participants</b>	
<b>Targets</b>	<b>Achievement</b>	<b>Targets</b>	<b>Achievement</b>	<b>Targets</b>	<b>Achievement</b>	<b>Targets</b>	<b>Achievement</b>
140	172	-	5835	-	623	-	4221

<b>Seed Production (Qtl.)</b>		<b>Planting materials (Nos.)</b>	
<b>5</b>		<b>6</b>	
<b>Target</b>	<b>Achievement</b>	<b>Target</b>	<b>Achievement</b>
20	56	60000	75000

<b>Livestock, poultry strains and fingerlings (No.)</b>		<b>Bio-products (Kg)</b>	
<b>7</b>		<b>8</b>	
<b>Target</b>	<b>Achievement</b>	<b>Target</b>	<b>Achievement</b>
-	-	100	373



6	Livestock Nutrition	Fodder production	Less palatable and more of oxalic acid content in co-4 fodder	Assessment of nutritive value and yield performance of co-4 and DHN-6 Napier fodder varieties		2	-	-	2		75000 cuttings	-	-	-
		Dairy production	Lack of energy and proteins to milch animals	Supplementation of Ragi grain as a locally available energy source along with Azolla for Lactating cows		01	01	01	10		40 kgs of Azolla culture			25 tonnes of vermicompost.
	Breeding	Poultry Production		Performance of portable hatchery for quality chicks production	-	-	-	02	-	-	-	-	-	-
7.	Integrated Disease Management	Banana	Higher incidence of leaf spot	-	Integrated Management of leaf spot in banana	26		-	14	Hexaconozol-201				Trichoderma 17 kg.
8	Integrated Disease Management	Arecanut	Incidence of hidimundige and snails	Management of snails in arecanut garden	Integrated management of hidimundige in arecanut	11	-	-	08	DAP- 6 q/t Potash- 4 q/t Borax- 10 kg Blitox- 2 kg Rogar- 4 lt Papaya - 100 kg Lamats- 0.5 kg				Trichoderma – 30 kg
9.	Integrated Pest Management	Coconut	Incidence of BHC	-	Integrated management of BHC in Coconut	13	-	-	6					Neem oil 17 lt ( 1000 ppm)

10.	Integrated Pest Management	Mango	Higher incidence of leaf hopper and fruit fly	-	Integrated management of leaf hopper and fruit fly in Mango	08	-	-	08	Chloropyr iphos- 20 lt. Imidacloprid – 1 lt.			Fruitfly – 50 no. traps	
11.	Integrated Pest and disease Management	Bengal gram	Wilt and pod borer incidence	-	Integrated management of wilt and pod borer in Bengalgam	10	-	-	08	Profenophos 4/t Chloropyr iphos 6/t			Trichoderma – 15 kg	
12.	Integrated Disease management	Sunflower	Powder and mildew and collar rot	-	Integrated Disease management in powdery mildew sunflower hybrid KBSH-53	15	-	-	07	KBSH-53-15 kg.			Trichoderma – 16 kg.	
13.	Integrated Crop Management	Sesamum	Lower yield Use of higher seed rate No. proper inter cropping		Inter cropping of sesamum and redgram to active higher productivity and net income	-	-	05	-	Sesamum- 4.5 kg.  Redgram – 8.0 kg.	-	-	-	-
14	Integrated crop management	maize	Low yield due to sheath blight no intercropping Improper nutrient management	<ul style="list-style-type: none"> <li>Assessment of plant geometry in mage</li> <li>Yield and income maximization in maize</li> </ul>	Integrated crop management in hybrid maize (NAH-1137)	06	-	02	5	NAH-1137-0.78			-	-
15	Integrated crop management	Ragi	Reduced yield due to use of local varieties No inter cropping No seed treatment	-	Integrated crop management in H YV ragi MR-6 AND (KMR-301)	02	-	01	03	KMR-0.80 301 MR-6-0.35	Assosprillum			5kg
16	Integrated Crop management	Cotton	Close spacing Square and boll drying No macro nutrient spraying Grading	-	Integrated crop management in cotton	06	-	-	03	-	-	-	-	-

17	Integrated Crop management	Betelvine	Gall midge incidence to Betelvine standards	Revival of betelvine gardens using Gall wasp tolerant erythrina spp. standards	-	-	-	-	-	-	-	-	Erythrina seedlings-200 no.s Erythrina stumps- 500 no.s	
17	Integrated crop management	Coconut	Higher pest incidence due to lack of Resistance in palms	Assessment of TNAU coconut nutritional tonic to strengthen coconut palms	-	01	-	-	-	-	-	-	Planting materials	
18	Integrated nutrient management	Banana	Lower bunch weight Low yield	-	Foliar application of 'Banana Special' to increase productivity in banana	02	-	-	02	-	-	-	-	
19	Integrated crop management	Drumstick	Lower yield due to use of local varieties.	-	Production technology of HYV 'Dhanraj' as a intercrop in coconut garden.	01	-	-	-	-	-	-	-	
17	Aquaculture production in seasonal water bodies	Fisheries	Ordinary common carp does not attain marketable size but dedicate more energy towards reproduction in seasonal water bodies fetching low market price.	-	Assessment of body weight gain between ordinary common carp and Amur common carp in inland ponds.	02	-	-	08	-	-	-	1200	-
18	Integrated fish farming	Fisheries	Aquaculture production is low in comparison to the district potential.	-	Integrated fish cum prawn culture in freshwater pond.	06	-	-	05	-	-	-	3200	



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

## 1. Mucuna

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
1.	Assessment of mucuna as intercropping in arecanut	IIHR, Hesaragatta	Mucuna	1	-	-	-

No. of farmers covered															
OFT				FLD				Training				Others (Specify)			
General		SC/ST		General		SC/ST		General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-

## 2. Redgram

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1.	2	3	4	5	6	7	8
2	Enhancing the productivity in redgram production system	UAS, Dharwad	Redgram	1	-	-	-

-															
FLD				Training				Others (Specify)							
General		SC/ST		General		SC/ST		General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

## 3. Rice

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1.	2	3	4	5	6	7	8
3	Integrated crop management in rice	UAS, Bangalore	Rice	-	1	5	-

-															
FLD				Training				Others (Specify)							
General		SC/ST		General		SC/ST		General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
-	-	-	-	12	-	-	-	92	-	19	-	-	-	-	-

## 4. Tomato

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1.	2	3	4	5	6	7	8
4	Integrated nutrient management in Tomato	IIHR, Hesaraghatta	Tomato	-	1	-	-
-							
General		FLD		Training		Others (Specify)	
M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16
-	-	-	-	10	-	2	-

## 5. Mango

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1.	2	3	4	5	6	7	8
5.	Micronutrient management in Mango through foliar application of Mango Speical	IIHR, Hesaraghatta	Mango	-	1	-	-
-							
General		FLD		Training		Others (Specify)	
M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16
-	-	-	-	04	-	-	-

## 6. Fodder

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1.	2	3	4	5	6	7	8
6	Production of DHN-6 Fodder	IGFRI, Dharwar	Fodder production	05	-	2	-
-							
General		FLD		Training		Others (Specify)	
M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16
05	-	-	-	-	-	-	-

## 7. Dairy

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others (Specify)								
1.	2	3	4	5	6	7	8								
7.	Feeding Azolla and Ragi grain along with ASMM in Dairy Animals	NIANP, Bangalore	Dairying	05	-	01	-								
		-													
General		SC/ST		FLD		Training		Others (Specify)							
M	F	M	F	M	F	M	F	M	F						
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
05	-	-	-	-	-	-	-	22	01	16	02	-	-	-	-

## 8. Poultry

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others (Specify)								
1.	2	3	4	5	6	7	8								
8	Production of Quality chicks-portable hatchery	TANVASU, Namakkal	Poultry	-	01	-	-								
		-													
General		SC/ST		FLD		Training		Others (Specify)							
M	F	M	F	M	F	M	F	M	F						
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
-	-	-	-	01	-	-	-	-	-	-	-	-	-	-	-

## 9. Banana

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others (Specify)								
1.	2	3	4	5	6	7	8								
9	Integrated Management of leaf spot in Banana	UAS, Bangalore	Banana	-	01	01	-								
		-													
OFT		SC/ST		FLD		Training		Others (Specify)							
M	F	M	F	M	F	M	F	M	F						
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
-	-	-	-	13	-	07	-	17	-	09	-	-	-	-	-

## 10. Arecanut

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1.	2	3	4	5	6	7	8
10	Integrated management of hidimundige in arecanut	AICRP (Shimoga)	Arecanut	-	01	01	-
OFT		FLD		Training		Others (Specify)	
General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16
-	-	-	-	06	-	04	-
General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16
-	-	-	-	06	-	04	-

## 11. Arecanut

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1.	2	3	4	5	6	7	8
11	Management of snails in arecanut	UAS, Bangalore	Arecanut	01	-	01	-
OFT		FLD		Training		Others (Specify)	
General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16
03	-	2	-	-	-	-	-
General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16
03	-	2	-	-	-	-	-

## 12. Sesamum

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1.	2	3	4	5	6	7	8
12	Intercropping of sesamum and redgram to achieve higher productivity and income	UAS, Bangalore	Sesamum	01	-	01	-
OFT		FLD		Training		Others (Specify)	
General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16
03	-	2	-	-	-	-	-
General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16
03	-	2	-	-	-	-	-

## 13. Mango

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others (Specify)								
1.	2	3	4	5	6	7	8								
13	Integrated management of leaf hoppers and fruit fly in mango	IIHR	Mango	-	01	01	-								
OFT		FLD				Training		Others (Specify)							
General		SC/ST		General		SC/ST		General		SC/ST					
M	F	M	F	M	F	M	F	M	F	M	F				
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
-	-	2	-	03	-	02	-	05	-	03	-	-	-	-	-

## 14. Bengalgram

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others (Specify)								
1.	2	3	4	5	6	7	8								
14	Integrated management of wilt and pod borer in bengalgram	UAS, Bangalore	Bengal gram	-	01	01	-								
OFT		FLD				Training		Others (Specify)							
General		SC/ST		General		SC/ST		General		SC/ST					
M	F	M	F	M	F	M	F	M	F	M	F				
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
-	-	-	-	03	-	07	-	03	-	07	-	-	-	-	-

## 15. Sunflower

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others (Specify)								
1.	2	3	4	5	6	7	8								
15	Integrated disease management in powdery mildew resistance sunflower hybrid KBSH-53	UAS, Bangalore	Sunflower	-	01	01	-								
OFT		FLD				Training		Others (Specify)							
General		SC/ST		General		SC/ST		General		SC/ST					
M	F	M	F	M	F	M	F	M	F	M	F				
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
-	-	-	-	3	-	4	-	11	-	04	-	-	-	-	-

## 16. Maize

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted											
				OFT	FLD	Training	Others (Specify)								
1.	2	3	4	5	6	7	8								
16.	Integrated crop management in hybrid maize	U A S Bangalore	Maize	02	01	6	-								
OFT		FLD				Training		Others (Specify)							
General		SC/ST		General		SC/ST		General		SC/ST					
M	F	M	F	M	F	M	F	M	F	M	F				
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
9	1	-	-	10	1	1	-	79	2	17	1	-	-	-	-

## 17. Ragi

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted											
				OFT	FLD	Training	Others (Specify)								
1.	2	3	4	5	6	7	8								
17	Integrated crop management in HYV In ragi	UAS Bangalore	Ragi	-	01	3	-								
OFT		FLD				Training		Others (Specify)							
General		SC/ST		General		SC/ST		General		SC/ST					
M	F	M	F	M	F	M	F	M	F	M	F				
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
-	-	-	-	12	6	1	-	13	6	1	-	-	-	-	-

## 18. Cotton

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted											
				OFT	FLD	Training	Others (Specify)								
1.	2	3	4	5	6	7	8								
18	Integrated crop management in cotton	UAS Dharwad and UAS Bangalore	Cotton	-	01	06	-								
OFT		FLD				Training		Others (Specify)							
General		SC/ST		General		SC/ST		General		SC/ST					
M	F	M	F	M	F	M	F	M	F	M	F				
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
-	-	-	-	33	1	22	4	135	13	63	03	-	-	-	-

**19. Coconut**

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1.	2	3	4	5	6	7	8
19	Assessment of TNAU coconut nutritional tonic to strengthen coconut palms	TNAU, Coimbatore	Coconut	1	-	01	-
OFT		FLD		Training		Others (Specify)	
General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16
4	1	-	-	-	-	-	-

**20. Betelvine**

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1.	2	3	4	5	6	7	8
20	Revival of betelvine gardens using gall wasp tolerant erythrina spp. standards	KVK, Mandya	Betelvine	1	-	01	-
OFT		FLD		Training		Others (Specify)	
General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16
4	-	01	-	-	-	01	-

**21. Banana**

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1.	2	3	4	5	6	7	8
21	Foliar Application of Banana special to increase productivity in banana	IIHR, Bangalore	Banana	-	01	01	-
OFT		FLD		Training		Others (Specify)	
General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16
06	03	02	-	06	03	-	-

## 22. Drumstick

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted											
				OFT	FLD	Training	Others (Specify)								
1.	2	3	4	5	6	7	8								
22	Production technology of HYV 'Dhanraj' as intercrop in coconut gardens	UAS, Bangalore	Drumstick	-	01	-	-								
				OFT		FLD		Training		Others (Specify)					
General		SC/ST		General		SC/ST		General		SC/ST					
M	F	M	F	M	F	M	F	M	F	M	F				
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
08	01	02	-	-	-	-	-	-	-	-	-	-	-	-	-

## 23. Fisheries

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted											
				OFT	FLD	Training	Others (Specify)								
1.	2	3	4	5	6	7	8								
19	Assessment of weight gain between ordinary common carp and Amur common carp in inland ponds.	CIFA, Bhuvaneshwar KVAFSU, Bidar	Fisheries	01	-	02	-								
				OFT		FLD		Training		Others (Specify)					
General		SC/ST		General		SC/ST		General		SC/ST					
M	F	M	F	M	F	M	F	M	F	M	F				
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
08	-	02	-	-	-	-	-	12	02	-	-	-	-	-	-



## 24. Fisheries

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted											
				OFT	FLD	Training	Others (Specify)								
1.	2	3	4	5	6	7	8								
20	Integrated fish cum prawn culture in freshwater pond.	UAS, Bangalore	Fisheries	-	01	06	Group discussion Field visit Radio talks								
OFT		FLD				Training				Others (Specify)					
General		SC/ST		General		SC/ST		General		SC/ST		General		SC/ST	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
-	-	-	-	05	-	-	-	100	40	55	20	-	-	-	-

**PART IV – On Farm Trial****4.A1. Abstract on the number of technologies assessed in respect of crops**

<b>Thematic areas</b>	<b>Cereals</b>	<b>Oilseeds</b>	<b>Pulses</b>	<b>Commercial Crops</b>	<b>Vegetables</b>	<b>Fruits</b>	<b>Flower</b>	<b>Plantation crops</b>	<b>Tuber Crops</b>	<b>TOTAL</b>
Integrated Nutrient Management	1									<b>1</b>
Varietal Evaluation										
Integrated Pest Management	-	-						1		<b>1</b>
Integrated Crop Management	1	1	1					1		<b>4</b>
Integrated Disease Management										
Small Scale Income Generation Enterprises										
Weed Management			1							<b>1</b>
Resource Conservation Technology										
Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique										
Mushroom cultivation										
<b>Total</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>		<b>7</b>

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

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

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

Thematic areas	Cattle	Poultry	Piggery	Rabbitry	Fisheries	TOTAL
Evaluation of Breeds	-	-	-	-	-	-
Nutrition Management	01	-	-	-	-	01
Disease of Management	-	-	-	-	-	-
Value Addition	-	-	-	-	-	-
Production and Management	-	-	-	-	-	-
Feed and Fodder	-	-	-	-	01	01
Small Scale income generating enterprises	-	-	-	-	-	-
<b>TOTAL</b>	<b>01</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>01</b>	<b>02</b>

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

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

#### 4.B. Achievements on technologies Assessed

1. **Assessment of mucuna as intercropping in arecanut:** Mucuna intercropping reduced the weed infestation conserved soil moisture and improved the soil fertility
2. **Enhancing the productivity in Redgram production System:** Transplanting and wider spacing improved the yield.
3. **Assessment of nutritive value and yield performance of CO-4 and DHN-6 Napier fodder varieties:** It is observed that animals like DHN-6 fodder better than Co-4, DHN-6 is highly succulent and has increased milk yield
4. **Supplementation of ragi grain as locally available energy source along with azolla for lactating cows:** Azolla is very much liked by Dairy Animals  
Feeding Azolla along with gain mix has resulted in increased milk yield and quality
5. **Intercropping of sesamum to achieve higher productivity and net income:** Inter cropping with redgram followed by ragi transplanting will yield. Higher income rather than simply ragi sowing.
6. **Management of snails in arecanut garden :** Poisoned bait management is very good control method for snail management. Immediately after death of snail after consuming poisoned food, snails have to covered with cowdung or soil to protect the animals feeding the snails.
7. **Plant Geometry in maize:** Spacing with 45x30cm is better as compared to other practices. There is not much difference between technology Option 1 and 2.
8. **Yield and income maximization in maize :** Intercropping with French bean in maize found to be profitable instead of sole cropping.
9. **Assessment of body weight gain between ordinary common carp and Amur common carp in inland ponds:** Amur common carp was observed to attain additional body weight ( 20.1 % extra) in comparison with ordinary common carp in the same culture period of 10 months. Amur carp has contributed 10.30 % to the total yield in comparison to 6.58 % of ordinary common carp on an average.
10. **Assessment of coconut nutritional tonic to strengthen coconut palms:** Noticed healthy foliage.
11. **Revival of Betel vine gardens using gall wasp to lerant *erythrina* standards:** Noticed good establishment of *erythrina* spp.

## 4.B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha
Integrated Nutrient Management	Maize	<b>Farmers Practice:</b> Sole crop Maize ( 45 X 20 cm)	5	5	1
		<b>Technology Option-2:</b> Maize and French bean 2:2			
	Coconut	Assessment of coconut nutritional tonic to strengthen coconut palms.	05	05	-
Varietal Evaluation					
Integrated Pest Management	Arecanut	<b>Farmers practice:</b> Farmers use locally available fact for snail control	05	05	01
		<b>Technology Option-2:</b> Use of ripened papaya manure collection and destruction			
		<b>Technology Option-3:</b> Use of rice bran / Papaya with 10 gm of methomyl / kg bait			
	Betel vine	Revival of betel vine gardens using gall wasp tolerant erythrina sp standards.	05	05	-
Integrated Crop Management	Redgram	Enhancing the productivity in Redgram production system	03	03	-
	Sesamum	<b>Farmers Practice:</b> Broad casting of horsgram or Ragi after harvest of sesamum	05	05	01
		<b>Technology Option-2:</b> Use of sesamum seeds sequence cropping; Ragi after harvest of sesamum			
		<b>Technology Option-3:</b> Inter cropping of sesamum and redgram (8:2) Transplanting of ragi after harvest of sesamum			
	Maize	<b>Farmers Practice:</b> 45 X 20 cm	05	05	01
		<b>Technology Options-2:</b> 60 X 30 cm			
<b>Technology Options-3:</b> 45 X 30 cm					
Weed Management	Mucuna	Assessment of mucuna as intercropping in arecanut	04	04	-
Aquaculture Production	Fisheries	Assessment of body weight gain between ordinary common carp and Amur common carp in inland ponds.	10	10	0.12
<b>Total</b>					

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

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

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Evaluation of breeds	-	-	-	-
Nutrition management	Cattle	Feeding Ragi grain along with Azolla to lactating cows	05	05
Disease management	-	-	-	-
Value addition	-	-	-	-
Production and management	-	-	-	-
Feed and fodder	Cattle	Nutritive Value and yield performance of DHN-6 fodder	05	05
Small scale income generating enterprises	-	-	-	-
Aquaculture production in seasonal water bodies	Fisheries	Assessment of body weight gain between ordinary common carp and Amur common carp in inland ponds.	10	05
<b>Total</b>			<b>20</b>	<b>15</b>

#### 4.B.4. Technologies Refined under Livestock and other enterprises : Nil

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

##### Results of On Farm Trial

##### 1. Mucuna

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Mucuna	Rainfed	Weed problem, Moisture conservation and fertility management	Assessment of mucuna as intercropping in arecanut	04	Farmers Practice	<ul style="list-style-type: none"> <li>Number of pods per plant</li> <li>Yield (q/ha.)</li> </ul>	- -	Mucuna intercropping reduced the weed infestation conserved soil moisture and improved the soil fertility	Farmers were very happy with results and it is spread to another 50 acres	-	-
					Technology Option-1 Arecanut + Cowpea	<ul style="list-style-type: none"> <li>Number of pods per plant</li> <li>Yield (q/ha.)</li> </ul>	14.80 4.50				
					Technology Option-2 Arecanut + Mucuna	<ul style="list-style-type: none"> <li>Number of pods per plant</li> <li>Yield (q/ha.)</li> </ul>	42.30 6.60				

Contd..

Technology Assessed	Source of Technology	Production (t/ha.)	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	-	-		-	-
Technology option 2	UAS, Bengaluru	4.50		10,500-00	2.4
Technology option 3	IIHR, Hesaragatta	6.60		28450-00	4.6

## 2. Redgram

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Redgram	Rainfed	To achieve uniform crop stand and better establishment of plants	Enhancing the productivity in redgram production system	03	<b>Farmers Practice:</b> Monocropping Close spacing	<ul style="list-style-type: none"> <li>Plant height (cm)</li> <li>No. of pods/plant</li> <li>Yield (q/ha.)</li> </ul>	149 51.7 3.1	Transplanting and wider spacing improved the yield.	Farmers happy with results, But the transplanting was laborious and time consuming.	-	-
					<b>Technology Option-1:</b> Direct sowing of redgram seeds	<ul style="list-style-type: none"> <li>Plant height (cm)</li> <li>No. of pods/plant</li> <li>Yield (q/ha.)</li> </ul>	163 54.7 3.4				
					<b>Technology Option-2:</b> Transplanting of 40 days old seedlings which raised in polythene bags	<ul style="list-style-type: none"> <li>Plant height (cm)</li> <li>No. of pods/plant</li> <li>Yield (q/ha.)</li> </ul>	172 59.3 3.6				

Contd..

Technology Assessed	Source of Technology	Production (t/ha.)	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	-	4.0		7,220-00	1.93
Technology option 2	UAS, Bengaluru	4.4		9680-00	2.29
Technology option 3	UAS, Dharwad	4.6		10120-00	2.45



## 3. Fodder Production

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Fodder Production	Irrigated	Dairy Animals require good quality roughages to meet the nutrients and bulk requirement. Feeding co- 4 Napier has resulted in wastage. Therefore giving DHN-6 fodder has given good response.	Assessment of nutritive value and yield performance of co-4 and DHN-6 Napier fodder varieties	05	<b>Farmer Practice:</b> Growing Napier Cross Fodders  <b>Technology Option-1:</b> Growing Co-4 Napier variety  <b>Technology Option-2:</b> Growing DHN-6 Fodder variety	<ul style="list-style-type: none"> <li>Fodder yield</li> <li>Palatability</li> <li>Milk yield</li> </ul>	33.6 tonnes per year / AC  87.4 tonnes per year / AC  81.6 tonnes per year /AC	It is observed that animals like DHN-6 fodder better than Co- 4, DHN- 6 is highly succulent and has increased milk yield	DHN-6 Fodder voluntary intake by the animals is good  <ul style="list-style-type: none"> <li>Fodder yield is also good</li> <li>Milk production increased</li> </ul>	-	-

Contd..

Technology Assessed	Source of Technology	Production (t/ha.)	Please give the unit (kg/ha, t/ha, lit/day/ animal)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	Local	Fodder yield	Tones/ acre/Annum	Rs.16,800/AC/annum	1.4 : 1.0
Technology option 2	TNAU, Coimbatore	Fodder Yield	Tones/ acre/Annum	Rs. 43680/AC/annum	2.13: 1.0
Technology option 3 (Recommended)	IGFRI, Dharwad	Fodder Yield	Tones/ acre/Annum	Rs. 39,120/AC/annum	1.91: 1.0

## 4. Dairying

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Dairying	Stall feeding of Dairy animals	Feeding Dairy animals with feeds and feeding stuffs low in Energy, Protein and Minerals has resulted in lower production	Supplementation of Ragi grain as a locally available energy source along with Azolla for Lactating cows	05	<p><b>Farmer Practice:</b> Rice brass cakes + Kitchen wastes+ Roughage</p> <p><b>Technology Option-1:</b> Cattle feed + ASMM+ Roughage</p> <p><b>Technology Option-2:</b> Cattle feed+ASMM+Ragi+Azolla+Azolla+Roughages</p>	• Milk yield and LMR	<p>No increase in the milk production (1.024)</p> <p>24 % increase in the milk yield (1.027)</p> <p>40 % increase in the milk yield (1.028)</p>	<p>Azolla is very much liked by Dairy Animals Feeding Azolla along with gain mix has resulted in increased milk yield and quality</p>	•Farmers are showing interest in growing Azolla, as it is liked by animals and also reduces the feeding cost	-	-

## Contd..

Technology Assessed	Source of Technology	Production (t/ha.)	Please give the unit (kg/ha, t/ha, lit/day/ animal)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	
Technology option 1 (Farmer's practice)	-	Milk yield and Lactometer Reading	Liters/day/animal	Rs. 2-3/Litre/day/animal	1.3:1.0
Technology option 2	KVAFSU, Bidar			Rs. 4.5 / lt/day/animal	1.9:1.0
Technology option 3 (Recommended)	NIANP, Bangalore	Lactometer Reading		Rs. 7-8/lt/day/animal	2.2:1.0

## 5. Sesamum

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Sesamum	Rainfed	Higher seed rate brad casting	Intercropping of sesamum and redgram to achieve higher productivity and net income	05	<b>Farmers Practice:</b> Broadcasting of ragi after harvest of sesamum	<ul style="list-style-type: none"> <li>Yield</li> <li>B:C</li> </ul>	2.2 qt 11.8 qt	Inter cropping with redgram followed by ragi transplanting will yield. Higher income rather than simply ragi sowing. B:C ratio is more in technology option -3	Farmers feels that intercropping of redgram with sesamum improves soil fertility and transplanting of ragi yield more.	-	-
					<b>Technology Option-1:</b> Use of sesamum seeds sequence cropping: Ragi after harvest of sesamum	<ul style="list-style-type: none"> <li>Yield</li> <li>B:C</li> </ul>	3.9 q/t 12.1 q/t				
					<b>Technology Option-2:</b> Intercropping of sesamum and redgam transplanting of ragi after sesamum harvest.	<ul style="list-style-type: none"> <li>Yield</li> <li>B:C</li> </ul>	3.88 q/t 9.70 qt (ragi) 3.20 q/t (Redgram)				

Contd..

Technology Assessed	Source of Technology	Production (q/ha.)	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice): Broadcasting of ragi after harvest of sesamum		Sesamum- 2.2 Ragi - 11.8	-	25,740-00	2.70
Technology option 2: Sesamum cropping: Ragi after harvest of sesamum	UAS, Bangalore	Sesamum – 3.9 Ragi – 12.1	-	35930-00	3.42
Technology option 3: Intercropping of sesamum with redgram Transplanting of ragi after harvest of sesamum	UAS, Bangalore	Sesamum – 3.88 Ragi - 9.7 Redgram - 3.2	-	44374-00	3.69

## 6. Arecanut

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Arecanut	Irrigated	Incidence of snail	Management of snails in arecanut garden	05	<b>Farmers Practice:</b> Use of salt for snail control	<ul style="list-style-type: none"> <li>• % control</li> <li>• Yield</li> <li>• B:C ratio</li> </ul>	40  6.10 2.11	Poisoned bait management is very good control method for snail management. Immediately after death of snail after consuming poisoned food snails have to covered with cowdung or soil to protect the animals feeding the snails.	Farmer feels that use of poisoned bait method is use effective as we take care against the died snails after consuming poisoned food	-	-
					<b>Technology Option-1:</b> Use of ripened papaya manual collection and destruction	<ul style="list-style-type: none"> <li>• % control</li> <li>• Yield</li> <li>• B:C ratio</li> </ul>	60  8.30 2.68				
					<b>Technology Option-2:</b> Use of papaya / Rice bran bait with 10 gm of methoml /kg bait	<ul style="list-style-type: none"> <li>• % control</li> <li>• Yield</li> <li>• B:C ratio</li> </ul>	80  9.80 3.03				

Contd..

Technology Assessed	Source of Technology	Production (q/ha.)	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice): Use of common sail	Farmers Practice	6.1	-	48,300-00	2.11
Technology option 2: Use of ripened papaya manual collection and destruction	UAS, Bangalore	8.3	-	78100-00	2.68
Technology option 3: Use of rice bran / Papaya bait with 10 gm methomyl / kg bait	UAS, Bangalore	9.8	-	97500-00	3.03

## 7. Maize

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Maize	Rainfed	Low yield and improper spacing	Plant Geometry in maize	05	<b>Farmers practice</b> 45x20 cm	<ul style="list-style-type: none"> <li>Plant height</li> <li>No of rows/cob</li> <li>Yield q/ha</li> </ul>	170.3 13.5 48.4	Spacing with 45x30cm is better as compared to other practices. There is no much difference b/w technology Option 1 and 2	Farmers expressed that spacing with 45x30cm is better for getting higher yield with Intercropping with pulses.	-	-
					<b>Technology option: 1</b> 60x30 cm, UAS Bangalore	<ul style="list-style-type: none"> <li>Plant height</li> <li>No of rows/cob</li> <li>Yield q/ha</li> </ul>	172.9 15.3 57.2				
					<b>Technology option: 2</b> (45x30)cm U A S Dharwad	<ul style="list-style-type: none"> <li>Plant height</li> <li>No of rows/cob</li> <li>Yield q/ha</li> </ul>	173.3 15.4 57.8				

## Contd..

Technology Assessed	Source of Technology	Production (t/ha.)	Please give the unit (kg/ha, t/ha, lit/day/ animal)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	
Technology option 1 (Farmer's practice): 45x20cm		48.4		26140	2.74
Technology option 2: 60 x30 cm	UAS, Bangalore	57.2		33620	3.24
Technology option 3 (Recommended) 45 X 30 cm	UAS, Dharwad	57.8		34130	3.27

## 8. Maize

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Maize	Rainfed	<ul style="list-style-type: none"> <li>Sole cropping</li> <li>No INM</li> </ul>	Yield and income maximization in maize	05	1 sole crop of maize (45x20cm)  2 Maize and French bean 2:2	Plant ht(cm) No of rows/cob Plant ht(cm) Yield No of rows/cob FB (%Germination plant ht	169.4 13.9 169.8  14.0 89.2  43.2	Intercropping with French bean in maize found to be profitable instead of sole cropping.	If we go for intercropping with French beans ,in maize. Early income can be get from 45 DAS. Left over vegetative parts will add to so it as organic matter.	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
1 Sole crop maize 45x20cm	-	47.8 q/ha		26130	2.80
2 maize and French bean 2:2 (60x30cm) (30x15cm)	UAS Bangalore	38.5q/ha 18.56 q/ha		30773	2.83

- Maize- Rs. 850/q
- French beans -Rs. 8 / kg

## 9. Fishery

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1.	2	3	4	5	6	7	8	9	10	11	12
Fisheries	Irrigated and Rainfed	Ordinary common carp does not attain marketable size but dedicate more energy towards reproduction in seasonal water bodies fetching low market price.	Assessment of body weight gain between ordinary common carp and Amur common carp in inland ponds.	10	<p><b>Technology Option-1:</b></p> <p>a) Scientific stocking of ordinary common carp fingerlings along with other carps in a ratio of 4: 4: 2 of sliver carp, grass carp and common carp.</p> <p>b) Growth monitoring in regular time intervals.</p> <p>c) @ 4000 fingerling/ acre stocking density.</p> <p>d) Moderate supplementation of artificial feed.</p> <p><b>Technology Option-2:</b></p> <p>a) Scientific stocking of Amur common carp with other carps in a ratio of 4: 4: 2 of sliver carp, grass carp and Amur carp</p> <p>b) Growth monitoring in regular time intervals.</p> <p>c) @ 4000 fingerling/ acre stocking density</p> <p>Moderate supplementation of artificial feed.</p>	<p><b>Common carps</b></p> <ul style="list-style-type: none"> <li>• Body weight</li> <li>• Yield</li> <li>• B:C</li> </ul> <p><b>Amur common carps</b></p> <ul style="list-style-type: none"> <li>• Body weight</li> <li>• Yield</li> <li>• B:C</li> </ul>	<p>490 gm</p> <p>15.8 kg</p> <p>2.03</p> <p>590 gm</p> <p>31.4 kg</p> <p>2.45</p>	Amur common carp was observed to attain additional body weight ( 20.1 % extra) in comparison with ordinary common carp in the same culture period of 10 months. Amur carp has contributed 10.30 % to the total yield in comparison to 6.58 % of ordinary common carp on an average.	• Good to have improved culturable species	-	-

Contd..

Technology Assessed	Source of Technology	Production (t/ha.)	Please give the unit (kg/ha, t/ha, lit/day/ animal)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	
Technology option 1	CIFA, Bhuvaneshwar	-	79 kg	980	2.03
Technology option 2	KVAFSU, Bidar	-	159 kg	4224	2.45



## 10. Coconut

Cr op/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Coconut	Rainfed	Higher incidence of pest & diseases due to lack of resistance in coconut palms	Assessment of coconut nutritional tonic to strengthen coconut palms	05	Coconut nutritional Tonic	<ul style="list-style-type: none"> <li>Percent incidence of mites &amp; CBHC.</li> <li>No of nuts /palm.</li> </ul>	-	On going	Noticed healthy foliage	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
<b>Technology option 1 (Farmer's practice)</b> Application of complex Fertilizers (17:17:17 @ 150 g/plant)	-	The study is continued			
<b>Technology option 2</b> FYM-50 kg /palm/ year 500 : 320 :1200 g NPK / palm / year 5 kg Neem cake / palm / year 50 kg borax / palm / year econeem plus 1 % (10 ml /plam) 3 times per year	POP UAS Bangalore.				
<b>Technology option 3</b> FYM-50 kg / palm / year 500 : 320 :1200 g NPK/ palm/ year 5 kg Neem cake /palm / year TNAU coconut nutritional tonic (200 ml/palm) twice a year at 6 months interval	TNAU Coimbatore				

## 11. Betelvine

Crop	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1.	2	3	4	5	6	7	8	9	10	11	12
Betelvine	Irrigated	Higher incidence of gall wasp to Betel vine standards resulting in crop loss	Revival of Betel vine gardens using gall wasp tolerant <i>erythrina</i> standards	05	Gall wasp tolerant <i>erythrina</i> spp.	<ul style="list-style-type: none"> <li>Percent incidence of gall wasp</li> </ul>	-	On going	Noticed good establishment of <i>erythrina</i> spp.	-	

Contd..

Technology Refined	Source of Technology for Technology Option1 / Justification for modification of assessed Technology Option 1	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13		14	15	16	17
<b>Technology Option- 1 (best performing Technology Option in assessment)</b> Use of susceptible <i>erythrina</i> standard to establish betelvine gardens	-	The study is continued			
<b>Technology Option -2 (Modification over Technology Option 1)</b> Use of alternate standards (Borle munda Drumstick and sesbania)	UAS Bangalore				
<b>Technology Option- 3 (Another Modification over Technology Option 1)</b> Use of Gall wasp tolerant <i>erythrina</i> sp standards	KVK, Mandya UAS, Bangalore.				

#### 4.C2. Details of each On Farm Trial for assessment:

##### 1. Mucuna:

- 1 **Title of Technology Assessed:** Assessment of mucuna as intercropping in arecanut
- 2 **Problem Definition :** Weed problem, moisture conservation and fertility management
- 3 **Details of technologies selected for assessment:**
  - Technology Option- 1:** Arecanut (No intercropping)
  - Farmers practice**
  - Technology Option-2:** Arecanut + Cowpea
  - Technology Option-3:** Arecanut \_ Mucuna
- 4 **Source of technology:**
  - Technology Option- 1:** -
  - Farmers practice**
  - Technology Option-2:** UAS, Bangalore
  - Technology Option-3:** IIHR, Hesaragatta
- 5 **Production system and thematic area:** Rainfed and Intercropping
- 6 **Performance of the Technology with performance indicators:** 1. Number of pods per plant 2. Yield (q/ha.)
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring**  
**Techniques: -**
- 8 **Final recommendation for micro level situation:** Mucuna is the best intercrop for the arecanut crop. Mucuna reduced the incidence of weed infestation and conserved the moisture to a greater extent. A large quantity foliage fallen will also increased the soil fertility.
- 9 **Constraints identified and feedback for research:** Mucuna is spreading and climbing one. It will climb the arecanut tree. In matured trees harvesting may become problematic. Since, the mucuna is spreaded all over the plot.
- 10 **Process of farmers participation and their reaction: :** Farmers participation was excellent, they were actively participated in OFT, The technology was spread to another 50 acres.

## 2. Fodder Production:

1. **Title of Technology Assessed:** Assessment of nutritive value and yield performance of DHN-6 fodder over Co-4
2. **Problem Definition :** Napier fodder varieties are generally high yielding but are fibrous and leaves are serrated on maturity. Therefore, lot of fodder is being wasted by the animals and there by resulting in nutrient deficiency.
3. **Details of technologies selected for assessment:** Production of DHN-6 Fodder (Dharwad Hybrid Napier-6 i.e. Sampoorna)
4. **Source of technology:** IGFRI, Dharwar
5. **Production system and thematic area:** Irrigated condition and Fodder crops production
6. **Performance of the Technology with performance indicators:** Fodder yield is on par with the Co-4 i.e., 80-85 tonnes/ acre/annum. No fodder wastage, voluntary intake by animals increased.
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring**  
**Techniques:** - Farmers have expressed good opinion about the fodder. Farmers says the fodder should be harvested before flowering and fed to animals. The spines in the flower (cob) is creating respiratory problem in animals.
8. **Final recommendation for micro level situation:** Grow this fodder in open space with good irrigation facility. 3' x 2' space is ideal for growing and also for doing agricultural operations.
9. **Constraints identified and feedback for research:** -
10. **Process of farmers participation and their reaction:** Through field day farmers are made aware of the fodder variety and its nutritive value. Also farmers to farmers spread is observed. Lot of people are coming forward to grow this fodder and we have supplied cuttings to more than 50 farmers.

### 3. Azolla

1. **Title of Technology Assessed:** Supplementation of Ragi grains as a locally available energy source along with Azolla for Lactating cows
2. **Problem Definition :** Feeding animals with feeds and feeding stuffs low in energy, proteins and minerals has resulted in lower production
3. **Details of technologies selected for assessment:** Production and feeding of Azolla to Dairy Animals along with grain mixture along with Area specific mineral mixture
4. **Source of technology:** NIANP, Bangalore
5. **Production system and thematic area:** Stall feeding of dairy animals.
6. **Performance of the Technology with performance indicators:** Feeding Azolla to Dairy Animals has increased milk production by 25-30%. Also the cost of milk production is less (Rs. 6/- per lt/day) and net returns is more (Rs. 8 / lt / day)
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring**  
**Techniques:** Azolla production is very easy and farmers are showing interest in growing and feeding to their animals
8. **Final recommendation for micro level situation:** Construct 2 to 3 Azolla ponds of 20'x4'x1' size for growing Azolla in shade. Use 2-3 kg Azolla / day/ animal along with concentrate feeds.
9. **Constraints identified and feedback for research:** Azolla growth is very poor during summer. Farmers are struggling to maintain the units during summer period.
10. **Process of farmers participation and their reaction:** Training programme and Group meeting. Farmers are showing interest in Azolla cultivation and feeding to their animals. KVK has supplied Azolla cultivate to more than 40 farmers this year.

#### 4. Sesamum

1. **Title of Technology Assessed:** Intercropping of sesamum and redgram to achieve higher productivity and net income
2. **Problem Definition :** Lower yield, use of higher seed rate
3. **Details of technologies selected for assessment:**
  - Technology Option- 1:** Broad casting of ragi after harvest of sesamum
  - Farmers practice**
  - Technology Option-2:** Sequence cropping: Sowing of ragi after harvest of sesamum
  - Technology Option-3:** Intercropping of sesamum and redgram  
Transplanting of ragi after harvest of sesamum
4. **Source of technology:** UAS, Bangalore
5. **Production system and thematic area:** Rainfed, Integrated crop management
6. **Performance of the Technology with performance indicators:**
  - Technology Option- 1:** Yield: Sesamum – 2.2 B:C Ratio: 2.7  
Ragi – 11.8
  - Farmers practice**
  - Technology Option-2:** Sesamum – 3.9, B:C Ratio: 3.42  
Ragi – 12.1
  - Technology Option-3:** Sesamum – 3.88, B:C Ratio: 3.69  
Ragi - 9.7  
Redgram - 3.2
7. **Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring**  
**Techniques: -**
8. **Final recommendation for micro level situation:** Intercropping of sesamum with redgram yields more improves soil fertility transplanting of ragi yields more
9. **Constraints identified and feedback for research: -**
10. **Process of farmers participation and their reaction:** Farmers feel happiness over the technology that intercropping sesamum with redgram gives higher yield there by increasing the fertility status of soil

## 5. Arecanut

1. **Title of Technology Assessed:** Management of snails in arecanut garden
2. **Problem Definition :** Snail are becoming serious pests of important horticulture crops. This pest causing economic damage to these crops. Farmers use common salt and some of them use metaldehyde that is not available in right time and harmful to children in vicinity, so an alternative way of controlling this pest is required.
3. **Details of technologies selected for assessment:**
  - Technology Option- 1:** Use of common salt
  - Farmers practice**
  - Technology Option-2:** Use of ripened papaya, Manual collection and destruction
  - Technology Option-3:** Use of papaya/rice bran bait with 10 gm methomyl / kg bait.
4. **Source of technology:**
5. **Production system and thematic area:** Irrigated, IPM
6. **Performance of the Technology with performance indicators:**
  - Technology Option- 1:** Use of common salt- control of snails 40 %
  - Farmers practice**
  - Technology Option-2:** Use of ripened papaya, manual collection and destruction – Control of snails – 60 %
  - Technology Option-3:** Use of rice bran bait 10 gm methomyl/ kg bait- Control of snails – 80%
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring**

**Techniques:** - Farmers feels that use of poisoned bait method effectively control the snail problem.
8. **Final recommendation for micro level situation:** Rice bran bait mixed with methomyl poison control the snail problem in arecaut gardens.
9. **Constraints identified and feedback for research:** -
10. **Process of farmers participation and their reaction:** Farmers expressed that snails are effectively controlled by using poisoned bait method. This method is economically feasible and viable.

## 6. Maize

1. **Title of Technology Assessed** : Plant Geometry in hybrid maize
2. **Problem Definition** : Low yield and closer spacing higher seed rate
3. **Details of technologies selected for assessment** :

**Technology Option- 1:** 45 x 20 cm

**Farmers practice**

**Technology Option-2:** 60 x 30 cm

**Technology Option-3:** 45 x 30 cm

4. Source of technology : Famers practice, UAS Bangalore, UAS, Dharwad
5. Production system and thematic area : Maize mainly grown in rainfed condition, now gaining importance among the farming community. Improper spacing and higher seed rate. ICM is any answer for higher net returns.
6. Performance of the Technology with performance indicators :

Technology	Plant height	No of rows/cob	Yield q / ha
Option 1	170.3 cm	13.5	48.4
Option 2	172.9 cm	15.3	57.2
Option3	173.3 cm	15.4	57.8

7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques** : Nil
8. **Final recommendation for micro level situation** : 45x30cm spacing is better as compared to closer spacing.
9. **Constraints identified and feedback for research** : Weed managements after 35DAS Under heavy rainfall do not permit for wedding.
10. **Process of farmers participation and their reaction** : Farmers participated actively as maize is a important remunerative crop. They expressed that public seeds should be available at proper time to all the farmers.



## 7. Maize

1. **Title of technology Assessed:** yield and income maximization is maize

2. **Problem Definition :** Sole cropping is common practice and poor soil nutrient status. No additional income.

3. **Details of technologies selected for assessment :**

**Technology Option -1:** Sole crop Maize

Closer spacing (45X20), No intercropping

**Technology Option-2:** Maize and French bean (2:2) An addition yield. 1-2 t/ha.

4. **Production system and thematic area :** Rainfed, Maize is an important crop of the district and it is a remunerative crop. Most of the farmers are not practicing the intercropping system as going for sole crop. Introduced the intercropping of beans.

5. **Performance of the Technology with performance indicators :**

Technology	Plant height (cm)	No of rows/cob	% Germination is French bean
<b>Option1</b> Sole cropping	169.4	13.9	-
<b>Option 2</b> Maize and French bean 2:2			
Maize	169.8	14.0	89.2
French Bean	43.2		

6. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring**

**techniques:** Intercropping with French bean in maize is better to get early income after 45 DAS. After harvest of French beans vegetative part left over will add to soil to improve the soil fertility.

7. **Final recommendation for micro level situation :** Intercropping with pulse and French bean is the best in maize instead of sole cropping..

8. **Final recommendation for micro level situation :** Nil

9. **Process of farmers participation and their reaction :** Participation was good and they explained that early income can be obtained if we go for intercrops.

## 8. Fisheries

1. **Title of technology Assessed:** Assessment of body weight gain between ordinary common carp and Amur common carp in inland ponds.
2. **Problem Definition :** Ordinary common carp does not attain marketable size but dedicate more energy towards reproduction in seasonal water bodies fetching low market price.
3. **Details of technologies selected for assessment :**

### Technology Option -1:

- a) Scientific stocking of ordinary common carp fingerlings along with other carps in a ratio of 4: 4: 2 of sliver carp, grass carp and common carp.
- b) Growth monitoring in regular time intervals.
- c) @ 4000 fingerling/ acre stocking density.
- d) Moderate supplementation of artificial feed.

### Technology Option-2:

- a) Scientific stocking of Amur common carp with other carps in a ratio of 4: 4: 2 of sliver carp, grass carp and Amur carp
  - b) Growth monitoring in regular time intervals.
  - c) @ 4000 fingerling/ acre stocking density
- Moderate supplementation of artificial feed.

4. **Source of Technology:** CIFA, Bhuvaneshwar, KVAFSU, Bidar
5. **Production system and thematic area :** Rainfed and Irrigated, Aquaculture production in seasonal water bodies
6. **Performance of the Technology with performance indicators :**

Technology	Body Weight (gm)	Yield (kg)	B:C
Option1	490	15.8	2.03
Option 2	590	31.4	2.45

7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques:**
8. **Final recommendation for micro level situation :** Amur common carp was observed to attain additional body weight ( 20.1 % extra) in comparison with ordinary common carp in the same culture period of 10 months. Amur carp has contributed 10.30 % to the total yield in comparison to 6.58 % of ordinary common carp on an average.
9. **Constraints identified and feedback for research :** Timely availability of Amur common carp seeds, provision of good quality fingerlings for the benefit of interested farmers. Few more field trials / demonstrations needed to be performed.
10. **Process of farmers participation and their reaction :** Farmers found Amur common carp species to be useful with its extra body weight adding to the total yield.

## 9. Coconut

1. **Title of Technology Assessed :** Assessment of coconut nutritional tonic to strengthen coconut palm.
2. **Problem Definition :** Higher incidence of pest & diseases due to lack of resistance in coconut palms.
3. **Details of technologies selected for assessment :** TANU coconut tonic – 200 / palm – twice a year at 6 months interval.
4. **Source of technology :** TNAU, Coimbatore
5. **Production system and thematic area :** Irrigated /Rainfed, Integrated nutrient Management
6. **Performance of the Technology with performance indicators :** New flush /fronds have healthy & Green . They are devoid of any incidence of CBHC. Small portion of < 5% reduction in mites incidence.
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques :** Farmers need repetition of the some technology for another two to three years to know the worthiness of the technology.
8. **Final recommendation for micro level situation :** -
9. **Constraints identified and feedback for research :**
  - Difficulties in selection of pencil thickness root
  - Labour intensive.
  - Need to formulate the solution for soil application
10. **Process of farmers participation and their reaction :** Good response for the utilization of technology.

## 10. Betelvine

1. **Title of Technology Assessed :** Revival of Betel vine gardens using gall wasp to tolerant *erythrina* spp standard.
2. **Problem Definition :** Higher incidence gall wasp to Betelvine standards resulting in crop loss.
3. **Details of technologies selected for assessment :** use of gall wasp tolerant *erythrina* spp standards.
4. **Source of technology :** KVK, Mandya, UAS Bangalore.
5. **Production system and thematic area :** Irrigated , Integrated pest Management
6. **Performance of the Technology with performance indicators :** Noticed good establishment of seedlings in the main field.
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques :** There is a need to conduct the demonstration for half an acre as sole standard crop *erythrina* spp.
8. **Final recommendation for micro level situation :** -
9. **Constraints identified and feedback for research :**
  - Farmers still feel planting of two/more standards & better then sole crop.
  - Lack of availability of good quality seedlings.
  - Need for seed production of these varieties .
10. **Process of farmers participation and their reaction :**
  - Earlier fair response for the technology.
  - After noticing good sprouting percentage they are convinced about the technology.

## 11 . Redgram

1. **Title of Technology Assessed** : Enhancing the productivity in redgram production system
2. **Problem Definition** : To achieve uniform stand and better establishment of plants
3. **Details of technologies selected for assessment** : Farmers practices: Monocropping, Close spacing  
 Technology Option-2: Direct sowing of redgram seeds ( 90 cm x 15 cm)  
 Technology Option-3: Transplanting of 40 days old crop which raised in polythene bags.
4. **Source of technology** : Farmers practice: -  
**Technology Option-2**: UAS, Bangalore  
**Technology Option-3**: UAS, Bangalore
5. **Production system and thematic area** : Rainfed and attaining optimum plant population and uniform stand
6. **Performance of the Technology with performance indicators** : Plant height, number of pods per plant and yield (q/ha)
8. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques** :
8. **Final recommendation for micro level situation** : -
9. **Constraints identified and feedback for research** : Transplanting activities will be laborious and time consuming
10. **Process of farmers participation and their reaction** : Farmers participation was good, farmers were happy with high yield due to new technology.

4.D1. Results of Technologies Refined : Nil

4.D.2. Details of each On Farm Trial for refinement to be furnished: Nil

**PART V – FRONTLINE DEMONSTRATIONS**

**5.A. Summary of FLDs implemented during 2010-11**

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
1.	Oilseeds	Irrigated	Rabi/Summer 2010-11	Sunflower	-	KBSH-53	IDM	Integrated disease management in powdery mildew resistant in sunflower hybrid KBSH-53	3	3	04	03	07	-
2.	Pulses	Rainfed	Rabi-2010-11	Bengalgram	A-1	-	IPDM	Integrated management of wilt and pod borer in bengalgram	5	5	07	03	10	-
3.	Cereals	Irrigated	Kharif-2010	Rice	Nallur Sona		Integrated pest and nutrient management	Integrated crop management in rice	5	5	-	12	12	-
		Rainfed	Kharif – 2010-11	Maize	-	NAH-1137	Integrated crop management	Integrated crop management in hybrid maize	5	5	01	11	12	-
4.	Millets	Rainfed	Kharif – 2010-11	Ragi	MR-6 KMR-301	-	Integrated crop management	Integrated crop management in HYV ragi	2.6 6.4	2.6 6.4	- 1	07 11	07 12	-
5.	Vegetables	Rainfed	Kharif 2010	Tomato	US Agri 618		Nutrient management	Integrated nutrient management in tomato	5	5	2	10	12	-
		Rain fed	Roebi/Summer-2010-11	Drumstick	Dhanraj	-	Production technology of HYV	Variety 'Dhanraj'	5.0	5.0	02	09	11	-

6	Fruits	Rainfed	Rabi-2010	Mango	Alphonso		Micronutrient management	Micronutrient management in mango through foliar application of mango special	4	1.6	-	4	4	-
		Irrigated	Kharif-2010-11	Banana	Pachabale	-	Integrated disease management	Integrated management of leaf spot in banana	4	4	07	13	20	-
		Rainfed	Rabi / Summer 2010-11	Mango		Alphonso	Integrated pest management	Integrated management of in leaf hopper and fruit fly in mango	2	2	02	03	05	-
		Irrigated	Roebi/Summer-2010-11	Banana	Yalakki	-	Integrated nutrient management	Banana Special	4.0	4.0	02	09	11	-
7	Commercial	Rainfed	Kharif 2010-11	Cotton	-	MRC-6918 MRC-7918 MRC-7918	Integrated crop management	Integrated crop management in cotton	15	24	26	34	60	-
8.	Plantation	Irrigated	Kharif-2010-11	Arecanut	Theerthahalli local	-	Integrated disease management	Integrated management of hidimundige in arecanut	1.5	1.5	04	06	10	-
		Irrigated	Rabi/Summer 2010-11	Coconut	Tiptur tall	-	Integrated pest management	Integrated management of BHC in coconut	5	5	02	08	10	-
9.	Poultry	Intensive Rearing System	2011	-	-	-	Breeding	Performance of portable hatchery for quality chicks production	01 no.	01 No.	-	01	01	Non availability of fertile eggs for chicks production.
10.	Common carps	Rainfed and Irrigated	Kharif-2010	Fisheries	-	-	Integrated fish farming	Integrated fish cum prawn culture in freshwater pond.	5 ponds	5 ponds	-	05	05	-

## 5.A. 1. Soil fertility status of FLDs plots during 2010-11

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
3.	Cereals	Irrigated	Kharif 2010	Rice	Nallur Sona		Integrated pest and nutrient management	Integrated crop management in rice	Kharif 2010	L	M	M	Rice
		Rain fed	Kharif 2010	maize	-	NAH 1137	Integrated crop management	Integrated crop management in hybrid maize	kharif	L	M	M	Maize
4.	Millets	Rainfed	Kharif 2010	ragi	KMR301 MR-6	-	ICM	ICM In HYU in ragi	Kharif 2010	L	M	M	Green gram
5.	Vegetables	Rainfed	Kharif -2010	Tomato	US Agi - 618		Nutrient management	Integrated nutrient management in Tomato	Kharif 2010	M	M	M	Tomato
		Rainfed	Rabi/Summer-2010-11	Drumstick	Dhanraj	-	Production technology of HYV	Variety Dhanraj	Rabi/Summer-2010-11	M	M	M	coconut
8.	Fruit	Rainfed	Rabi-2010	Mango	Alphanso		Macronutrient management	Micronutrient management in mango through foliar application of mango special	Rabi-2010	L	M	M	Mango
		Irrigated	Rabi/Summer-2010-11	Banana	Yelakki	-	Integrated nutrient Management	Banana special	Rabi/Summer-2010-11	M	M	M	Arecanut

Note: L=Low, M= Medium



## 5.B. Results of Frontline Demonstrations

### 5.B.1. Crops

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
							H	L	A										
<b>Oilseeds</b>																			
Sunflower	Integrated disease management in powdery mildew resistant sunflower hybrid KBSH-53	-	KBSH-53	Irrigated	07	03	19.1	14.2	17.90	12.80	39.84	17300	42960	25660	2.48	16800	30720	13920	1.82
<b>Pulses</b>																			
Bengalgram	Integrated management of wilt and pod borer in bengalgram	A-1	-	Rainfed	10	05	7.7	4.1	6.6	4.2	57.14	7100	17820	10720	2.50	6400	13340	4940	2.08
<b>Cereals</b>																			
Maize	Integrated crop management in rice	Nallur Sona	-	Irrigated	12	05	103.6	48.0	63.4	55.0	15.3	35,500	57060	21560	1.60	36,900	49,500	12600	1.34
	Integrated crop management in hybrid maize Note: Rs. 850/q	-	NAH-1137	Rainfed	12	05	58.1	47.8	48.9	45.2	8.18	14,500	41565	27065	2.86	14500	38420	23920	2.64
<b>Millets</b>																			
	Integrated crop management in HYV Ragi * Note: Rs. 1,150/q	MR-6	-	Rainfed	07	2.6	25.4	24.0	25.3	16.5	53.3	7350	29095	21745	3.95	5200	18975	13775	3.64
Ragi		KMR-301	-	Rainfed	16	6.4	27.2	24.3	26.1	16.4	59.1	7300	30015	22715	4.11	5200	18860	13660	3.62

Vegetables																			
Tomato	Integrated nutrient management in tomato		US Agri.-698	Rainfed	12	5	45.4	31.5	38.5	34.5	11.6	65,500	1,90,000	1,24,500	2.90	59,800	1,65,000	1,05,200	1.76
Drumstick	Production technology of variety Dhanraj in coconut	Dhanraj	-	Rainfed	11	5.0	M	M	M	145	26.2	31576	73200	41624	2.31	29816	58000	28184	1.94
<b>Fruit</b>																			
Banana	Integrated management of leaf spot in banana	Pacchabale	-	Irrigated	20	04	556.7	434.3	560.1	429.9	30.28	75000	280000	205000	3.73	80000	214950	134950	2.68
Mango	Integrated management of leaf hopper and fruit fly in mango	-	Alphanso	Rainfed	05	02	Is in progress												
Mango	Micro nutrient management in mango through foliar application mango special	-	Alphanso	Rainfed	04	1.6	Is in progress												
Banana	Foliar application of Banana special for increased bunch height in Banana	Yalakki	-	Irrigated	11	04	193.88	126.50	170.88	107.25	59.32	133716	307584	173868	2.30	117316	193050	75734	1.64

Arecanut	Integrated management of hidimundige in arecanut	Theerthahalli local	-	Irrigated	10	1.5	15 % reduction in hidimundige incidence. Improvement in growth of plant and soil fertility status.												
Coconut	Integrated management of BHC in coconut	Tiptur local	-	Irrigated	10	05	95	66	79	46	71.73	-	-	-	-	-	-	-	-

\* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

\*\* BCR= GROSS RETURN/GROSS COST

H – Highest Yield, L – Lowest Yield A – Average Yield

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

Data on other parameters in relation to technology demonstrated			
Parameter with unit	Demo	Check	Crop
% disease incidence	3 %	20 %	Banana
Plant height (cm)	174.8	179.3	Sunflower
Head diameter (cm)	14.60	11.96	
% pest management incidence	03	16	
Plant height (cm)	36.70	28.40	Bengalgram
% Pod borer incidence	03	20	
% Wilt incidence	05	18	
% BHC incidence	40 %	70%	Coconut
Plant height	170.12	170.10 cm	Maize
No. of rows / cob	14.28	13.55	
Plant height	88.60 cm	76.40 cm	Ragi
No. of ear head / plant	81.50 cm	3.5 ear head	
	5.0 ear head 4.9 ear head		

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

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Yield (q/ha)		% Increase	*Economics of demonstration Rs./unit)				*Economics of check (Rs./unit)					
					Demo	Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR		
Poultry	( Still under demo)																

Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

\*\* BCR= GROSS RETURN/GROSS COST

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

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

### 5.B.3. Fisheries

Type of Breed	Name of the technology demonstrated	Breed	No. of Demo	Units/ Area (m <sup>2</sup> )	Yield (q/ha)			% Increase	*Economics of demonstration Rs./unit) or (Rs./ha)				*Economics of check Rs./unit) or (Rs./m2)				
					Demo		Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
					H	L	A										
Common carps	Integrated fish cum prawn culture in freshwater pond.	-	05	3200	Fish 56	19.58	32.6	-	-	44688	103813	59125	2.32	-	-	-	-
					Prawn 2 q/ha	0.3 q/ha	0.83 q/ha										

\* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

\*\* BCR= GROSS RETURN/GROSS COST

H-High L-Low, A-Average

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

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

### 5.B.4. Other enterprises: Nil

### 5.B.5. Farm implements and machinery: Nil

## 5.B.6. Cotton

### 5.B.6.1. Summary of demonstrations conducted under FLD cotton

Sl. No.	Category	Technology Demonstrated	Hybrid	Season and year	Area (ha)		No. of farmers/ demonstration		
					Proposed	Actual	SC/ST	Others	Total
1.	Production Technology	Integrated crop management	MRC-6918 (Siddanur)	Kharif 2010-11	15	24	26	34	60
			MRC-7918 (Halvarthy)						
			MRC-7918 (Nagarkonda)						

### 5.B.6.2 Production technology demonstrations

#### Performance of demonstrations

Farming situation	Technology Demonstrated	Area (ha)	No. of demo.	Hybrid	Yield (q/ha)		% Increase	Economics of demonstration (Rs./ha)				Economics of local check (Rs./ha)			
					Demo	Local		Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
		Halvarthy 4.8	12	MRC-7918	13.20	10.30	28.15	21800	64680	42880	2.96	22150	50470	28320	2.27
		Nagarkonda 2.4	6	MRC-7918	13.90	10.20	36.27	21800	68110	46310	3.12	23000	49980	26980	2.17

#### Performance of Bt hybrids, Desi hybrids, non-Bt hybrids and Varieties in Front Line Demonstrations in cotton during 2010-11

Category	Farming situation	Technology Demonstrated	Area (ha)	No. of demo.	Variety	Hybrid	Yield (q/ha)		% Increase	Economics of demonstration (Rs./ha)				Economics of local check (Rs./ha)			
							Demo	Local		Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
						MRC-7918	13.20	10.30	28.15	21800	64680	42880	2.96	22150	50470	28320	2.27
						MRC-7918	13.90	10.20	36.17	21800	68110	46130	3.12	23000	49980	26980	2.17

### 5.B.6.3 Integrated pest management demonstrations: Nil

### 5.B.6.4 Demonstrations on farm implements: Nil

### 5.B.6.5 Extension Programmes organized in Cotton Demonstration Plots

Extension activity	No. of Programmes	Participants			SC/ST		
		Male	Female	Total	Male	Female	Total
Demonstrations	4	90	39	129	30	14	44
Exhibition	2	19	12	31	04	01	05
Farmer study tours	1	-	-	-	-	-	-
Field Days	1	35	17	52	17	2	19
Field visits	8	-	-	-	-	-	-
Group discussions	1	38	09	47	9	-	9
Training for Extension Functionaries	3	43	19	62	-	-	-
<b>TOTAL</b>							

Extension activity	No. of Programmes	Participants			SC/IT		
		M	F	T	M	F	T
Training for farmers	06	135	13	148	63	03	66
Video show	03	120	25	145	61	15	76
News paper coverage	03	-	-	-	-	-	-
T.V. Programmes	05	-	-	-	-	-	-

### 5.B.6.6 Technical Feedback on the demonstrated technologies on all crops / enterprise

S. No	Crop / Enterprise	Name of the technology demonstrated	Feed Back
1	Coconut	Integrated management of BHC in Coconut	Need to effectively popularization IPDM practices
2	Arecanut	Integrated management of hidimundige in arecanut	Need to effectively popularization IDM practices
3	Banana	Integrated management of leaf spot in banana	Need to effectively popularization IDM practices
4.	Mango	Integrated management of leaf hopper and fruit fly in manago	Availability of mango fruit trap at RSK level
5.	Bengalgram	Integrated management of wilt and pod borer in bengalgram	Need to effective popularization of IPDM practices
6.	Sunflower	Integrated disease management in powdery mildew resistant sunflower hybrid KBSH-53	Need to popularize IPDM in Sunflower
7.	Cotton	IPM (Sucking pests)	Resistant hybrids against sucking pest
		Spacing (120 x 120) KNO <sub>3</sub> 2 %	Wider spacing is profitable in cotton along with intercropping . Using spraying of KNO <sub>3</sub> 2% retains the bolls inturn increases the yield
8.	Drumstick	Production technology of variety Dhanraj in coconut garden	Seed material may made available in time
	Banana	Foliar application of 'Banana special' for increased bunch height in Banana.	Packaging material need to be attractive
9.	Maize	ICM	Farmers expressed that the filling of the seeds in cob should be complete. Yield will be more.
10.	Fisheries	Integrated fish farming	Good to have improved culturable species
11.	Animal Science	Portable hatchery	Good practice for small farmers

### 5.B.6.7 Farmers' reactions on specific technologies

S. No	Crop / Enterprise	Name of the technology demonstrated	Feed Back
1	Banana	Integrated management of leaf spot in banana	Regular and timely fallow of IDM practices reduces leaf spot incidence
2	Arecanut	Integrated management of hidimundige in arecanut	Proper drainage, loosening the hard soil green manuring and trichoderma application will help in reducing hidimundige
3.	Coconut	Integrated management of BHC in coconut	Timely root feeding and release of bio agent results in reduced BHC incidence
4.	Mango	Integrated management of leaf hopper and fruit fly in Mango	Installation of mango fruit fly trap at proper time mango fruit fly incidence
5.	Sunflower	Integrated disease management in powdery mildew resistant sunflower hybrid KBSH-53	Higher yield, uniform growth and powdery mildew resistant hybrid
6.	Bengal gram	Integrated management of wilt and pod borer in bengalgram	Trichoderma seed treatment and soil application and timely fallow of IPM practices reduces wilt and pod borer.
7.	Cotton	Spraying of the micronutrient (MgSO <sub>4</sub> ) and Macronutrient (KNO <sub>3</sub> )	By giving this spray leaf redding and boll retention has increased with increase in yield.
		Spraying of planofix (3ml / 15 lt)	It has improved the flower retention
8.	Drumstick	Production technology of variety 'Dhanraj' in coconut garden.	Pods harvesting good size, taste & colour. Pods fetch better price than the local varieties.
9.	Banana	Foliar application of 'Banana special ' for increased bunch height in Banana.	Technology helped to increase the bunch height. Good quality fingers are noticed in the bunch.

10	Maize	Introduction of NAH-1137 hybrid	Hybrid performed well and seed should be easily available in markets.
11.	Ragi	ICM and introduction of HYV – Ragi KMR-301	Best for fodder and yield levels are better than other varieties.
12	Fisheries	Integrated fish farming	Good to have improved culturable species
13	Animal Science	Portable hatchery	A boon for small farmer

### 5.B.6.8 Extension and Training activities under FLD

#### Banana

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Group discussion	13	35	Preliminary visit for selection of farmers
2	Training	01	26	Integrated management of leaf spot in banana
3	Field visit to FLD plots	06	-	Method demonstration on spray solution preparation, observation of diseases and diagnostic visit
4	Method demonstration	02	22	Spray solution preparation and spraying method
5.	Paper courage	01	-	Vijayakarnataka
6.	Field day	01	28	

#### Banana

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Group discussion	01	20	Selection of farmers
2	Training	01	09	Integrated nutrient management in banana
3	Field visit to FLD plots	04	-	Regular follow up activities
4	Method demonstration	01	09	Preparation of banana special spray solution
5.	Field day	01	30	Sharing the experience

#### Drumstick

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Group discussion	01	10	Selection of farmers
2	Training	01	12	Production technology of HYV Dhanraj drumstick
3	Field visit to FLD plots	02	-	Regular follow up visit



**Mango**

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Group discussion	01	11	Preliminary visit for selection of farmers
2	Training	02	06 08	Integrated management of leaf hopper and fruit fly in mango
3	Field visit to FLD plots	03	-	Method demonstration on installation of fruit fly traps and spraying, diagnostic visit
4	Method demonstration	02	18	Mango fruit fly trap installation

**Arecanut**

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Group discussion	01	14	Preliminary visit for selection of farmers
2	On Campus training	01	11	Integrated management of hidimundige
3	Field visit to FLD plots	03	01	Fertilizer application, drainage system, Trichoderma application and diagnostic visit
4	Method demonstration	02	21	Enrichment of FYM with trichoderma
5.	Paper courage	01	-	Vijayakarnataka

**Coconut**

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Group discussion	01	16	Preliminary visit for selection of farmers
2	On Campus training	01	13	Integrated management of BHC in coconut
3	Field visit to FLD plots	02	-	Method demonstration on neemazol root feeding
4	Method demonstration	02	-	Root feeding and release of bioagent

**Sunflower**

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Group discussion	01	13	Preliminary visit for farmer selection
2	Training	01	15	Pest and disease management in powdery mildew resistant sunflower hybrid KBSH-53
3	Field visit to FLD plots	04	-	Observation of pest and diseases and diagnostic visit
4	Method demonstration	02	21	Trichoderma application and pests diagnosis

**Bengalgram**

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Group discussion	01	13	Preliminary visit for farmer selection
2	Training	01	10	Integrated management of wilt and pod borer in bengalgram
3	Field visit to FLD plots	03	-	Disease diagnosis, observation of pest and diseases and trichoderma application
4	Method demonstration	02	17	Spraying method and spray solution preparation
5.	Field Day	01	-	Sharing experience of farmer

**Cotton**

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Field Day	01	52	Sharing the experience
2	Farmers training	06	148	Cotton production technology
3	Media Coverage News paper coverage	03	-	Kannada Prabha Vijayakarnataka Prajavani
4	T.V. Programme	05	-	E-TV Annadatha

**Fishery**

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Farmers identification, Preliminary field visits	3	-	Pond visits, individual farmer interaction, Pond selection, guidelines of FLD
2	Trainings and method demonstrations	6	215	Scientific principles of aquaculture; Significance of Integrated Aquaculture
3	Technical Group discussion and critical inputs distribution	-		Fish fingerlings released to FLD ponds Critical inputs (seed, vitamin mineral mixture etc.) Prawn seed distribution technical discussion Critical inputs distributions
4	Special occasions and field visits	-		Celebrated National Fish Farmers Day Field visit Field visit Field visit - Field visit – Manuring Field visit – Manuring and feeding Field visit- Fish sampling Fish sampling Fish sampling Field visit Field visit- Fish sampling Fish harvesting
5.	Radio talks	02		AIR, Bhadravathi Fish culture as a profitable venture  AIR, Chitradurga Fish culture in farm ponds

**PART VI – DEMONSTRATIONS ON CROP HYBRIDS**

**Demonstration details on crop hybrids**

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demo	Area (ha)	Yield (q/ha)			Check	% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo		Gross Cost			Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
					H	L											A
<b>Cereals</b>																	
Maize	Integrated crop management in hybrid maize	NAH-1137	13	05	58.1	47.8	48.9	45.2	8.18	14500	41565	27065	2.86	14500	38420	23920	2.64
<b>Oilseeds</b>																	
Sunflower	Integrated disease management in powdery mildew resistant sunflower hybrid	KBSH-53	07	03	19.1	14.2	17.9	12.8	39.84	17300	42960	25660	2.48	16800	30720	13920	1.82
<b>Fruit</b> Mango	Integrated management of leaf hopper and fruit fly in mango	Alfanzo	05	02	Is in progress												

<b>Commercial crops</b>																	
	Integrated crop management																
	• Siddanur	MRC-6918	42	16.8			11.30	9.8	15.30	21800	54240	32440	2.48	22000	47040	25040	2.13
Cotton	• Halverthy	MRC-7918	12	4.8			13.20	10.30	28.15	21800	64680	42880	2.96	22150	50470	28320	2.27
		MRC-798	06	2.4			13.90	10.20	36.15	21800	68110	46310	3.12	23000	49980	26950	2.17

H-High L-Low, A-Average



Soil fertility management										
Integrated water management	6	74	6	80	97	2	99	171	8	179
Nutrient use efficiency										
Balanced use of fertilizers	4	43	24	67	0	0	0	43	24	67
Soil and water testing	1	50	0	50	0	0	0	50	0	50
Others (pl.specify)										
<b>Livestock Production and Management</b>										
Dairy Management	1	10	0	10	0	0	0	10	0	10
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology	2	37	6	43	0	0	0	37	6	43
Production of quality animal products										
Others :1) Improved integrated livestock rearing	14	0	297	297	0	274	274	0	571	571
2) Sheep rearing	1	9	0	9	1	0	1	10	0	10
Women and child care										
Others (pl.specify)										
<b>Agril. Engineering</b>										
Farm machinery and its maintenance	1	61	0	61	0	0	0	61	0	61
<b>Plant Protection</b>										
Integrated Pest Management	5	38	14	52	10	5	15	48	19	67
Integrated Disease Management	3	69	0	69	14	0	14	83	0	83
<b>Fisheries</b>										
Integrated fish farming	4	170	2	172	152	4	156	322	6	328
Pearl culture										
Fish processing and value addition										
Others :1) Aquaculture in rural farm ponds	1	6	4	10	2	3	5	8	7	15

Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others : 1) Marketing	1	26	0	26	8	0	8	34	0	34
Others (Pl. specify)										
<b>TOTAL</b>	<b>71</b>	<b>1058</b>	<b>490</b>	<b>1548</b>	<b>401</b>	<b>321</b>	<b>722</b>	<b>1459</b>	<b>811</b>	<b>2270</b>

### 7.B.. Farmers' Training including sponsored training programmes (Off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Crop Production</b>										
Weed Management	2	15	0	15	2	0	2	17	0	17
Integrated Crop Management	2	33	1	34	11	0	11	44	1	45
Integrated Nutrient Management	1	12	0	12	2	0	2	14	0	14
Production of organic inputs	1	0	32	32	0	2	2	0	34	34
<b>Horticulture</b>										
<b>a) Vegetable Crops</b>										
Grading and standardization	2	26	7	33	24	3	27	50	10	60
<b>Soil Health and Fertility Management</b>										
Integrated nutrient management	1	24	0	24	0	0	0	24	0	24
<b>Livestock Production and Management</b>										
Dairy Management	1	22	1	23	16	2	18	38	3	41
Animal Nutrition Management										
Animal Disease Management	1	38	1	39	18	3	21	56	4	60
Feed and Fodder technology	1	28	0	28	0	0	0	28	0	28
Production of quality animal products										
Others :1) Improved integrated livestock rearing	17	0	418	418	0	480	480	0	898	898

<b>Plant Protection</b>										
Integrated Pest Management	3	54	0	54	15	0	15	69	0	69
Integrated Disease Management	3	37	0	37	9	2	11	46	2	48
<b>Capacity Building and Group Dynamics</b>										
Formation and Management of SHGs	3	47	0	47	0	0	0	47	0	47
<b>TOTAL</b>	<b>38</b>	<b>336</b>	<b>460</b>	<b>796</b>	<b>97</b>	<b>492</b>	<b>589</b>	<b>433</b>	<b>952</b>	<b>1385</b>

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Dairying	01	10	-	10	-	-	-	10	-	10
Any other (pl.specify)										
<b>TOTAL</b>	<b>1</b>	<b>10</b>	<b>-</b>	<b>10</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>10</b>	<b>-</b>	<b>10</b>

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

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Any other :1) Organic forming	3	63	2	65	10	0	10	73	2	75
2)Communication skills and personality development	1	11	8	19	8	1	9	19	9	28
3)Kitchen gardening	1	33	10	33	7	0	7	40	10	50
<b>Total</b>	<b>5</b>	<b>107</b>	<b>20</b>	<b>127</b>	<b>25</b>	<b>1</b>	<b>26</b>	<b>132</b>	<b>21</b>	<b>153</b>



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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Any other : 1) Organic farming	1	20	1	21	0	0	0	20	1	21
<b>Total</b>	<b>1</b>	<b>20</b>	<b>1</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>1</b>	<b>21</b>

### 7.G. Sponsored training programmes

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>1</b>	<b>Crop production and management</b>										
<b>2</b>	<b>Production and value addition</b>										
2.a.	Organic Farming	02	28	01	29	13	-	13	41	01	42
2.b.	Kitchen gardening	03	50	07	57	27	03	30	78	10	88
2.c.	Medicinal plants	01	28	-	28	01	-	01	29	-	29
<b>3</b>	<b>Livestock production and management</b>										
3a	Dairying	26	-	560	560	-	545	545	-	1105	1105
	<b>Total</b>										

### Details of sponsoring agencies involved

1. CBTMPCS, GKVK, UAS Bangaluru
2. JSYS, Davanagere
3. Zilla panchayath, Davanagere
4. Department of Horticulture, Davanagere
5. Department of Agriculture, Davanagere
6. District Agriculture Training Centre, Davanagere

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

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>1</b>	<b>Livestock and fisheries</b>										
1.a.	Dairy farming	4	0	288	288	0	254	254	0	542	542
<b>2</b>	<b>Agricultural Extension</b>										
1.a.	Capacity building and group dynamics										
2.b.	Others (pl.specify)										
	<b>Grand Total</b>	<b>4</b>	<b>0</b>	<b>288</b>	<b>288</b>	<b>0</b>	<b>254</b>	<b>254</b>	<b>0</b>	<b>542</b>	<b>542</b>

**PART VIII – EXTENSION ACTIVITIES****Extension Programmes (including activities of FLD programmes)**

Nature of Extension Programme	No. of Programmes	No. of Participants (General)			No. of Participants SC / ST			No. of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Field Day	2	36	0	36	14	0	14			
Kisan Mela	1									
Kisan Ghosthi	1									
Exhibition	4									
Film Show	30	363	20	384	78	11	81			
Method Demonstrations	10	91	64	165	20	5	25			
Workshop	1	80		80						
Group meetings										
Lectures delivered as resource persons	40									
Newspaper coverage	51									
Radio talks	10									
TV talks	18									
Popular articles	2									
Extension Literature	56	1092	346	1438	260	70	330			
Advisory Services										
Scientific visit to farmers field	25									
Farmers visit to KVK	323	286	17	303	61	0	61			
Diagnostic visits	29									
Exposure visits	2	69	10	79	13		13			
Animal Health Camp	2	350 Animals treated								
Celebration of important days a) Parthanium awareness week	1	10	15	25	5	7	12			
b)Agriculture Technology Week	1	458	100	558	75	10	85			
c) National Science Day	1	0	40	40	0	28	28			
d)Women in Agriculture Day	1	50	48	98						
e) Kissan Samman Diwas	1	24	3	27						
f)World Water Day	1	0	6	06	0	30	30			
g)World Meteorological Day	1	0	23	23	0	25	25			
Any Other a) Bi-monthly meeting	5									
b) Agricultural Camps	1	45		45	10		10			
c) Agriculture quiz	1	50	100	150	10	20	30	10	2	12
<b>Total</b>	<b>623</b>	<b>2654</b>	<b>792</b>	<b>3457</b>	<b>546</b>	<b>206</b>	<b>752</b>	<b>10</b>	<b>02</b>	<b>12</b>

**PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIALS**

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

<b>Crop category</b>	<b>Name of the crop</b>	<b>Variety</b>	<b>Hybrid</b>	<b>Quantity of seed (qtl)</b>	<b>Value (Rs)</b>	<b>Number of farmers to whom provided</b>
<b>Cereals (crop wise)</b>						
	Paddy	KMP-10		38	37102-00	120
	Ragi	GPU-28		6	9000-00	120
<b>Oilseeds</b>						
<b>Pulses</b>						
	Cowpea	C-152		8	24000-00	160
	Redgram	BRG-1		1	3500-00	20
<b>Commercial crops</b>	Sugarcane	COVC-2003		10	25000-00	20
<b>Vegetables</b>						
	Bhendi	Orka Anamika		3	21000-00	100
<b>Total</b>				<b>56</b>	<b>119602-00</b>	<b>540</b>

## 9.B. Production of planting materials by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Commercial	Sugarcane	COVC-203-165	-	10 tonnes	20,000-00	160
Vegetable seedlings	Bhendi	African Dwarf	-	3 q	15,000	100
	Ridgegourd	Local	-	0.25q	10,000	100
	Drumstick	PKM-1	-	2549	24859-00	144
Fruits	Curry leaf	local	-	477	4754-00	38
	Papaya	Red lady	-	154	1018-00	7
	Amla	NA-1	-	5	150-00	2
	Citrus	Jagalur local	-	363	3460-00	28
	Mango	Alphanso	-	34	1020-00	10
	Ornamental plants	Ornamental palms	-	-	372	9300-00
Medicinal and Aromatic	Lemon Grass Stumps	-	-	-	1085-00	5
Plantation crops	Arecanut	Thirthalli local	-	400	4000-00	2
Fodder crop saplings	Napier Guinea Azolla	DHN-6	-	52000	22,500-00	40
		BG-1	-	15,000	7500-00	20
		Pinnata	-	250 k.g.	5000-00	40
<b>Total</b>					<b>129646-00</b>	<b>618</b>

**9.C. Production of Bio-Products**

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	Number of farmers to whom provided
Bio Agents	Trichoderma	373	27975-00	62
Others: Micro nutrients	Banana special	204	25620-00	65
	Vegetable special	84	10920-00	20
	Mango speical	62	12400-00	16
<b>Total</b>		<b>723</b>	<b>76915-00</b>	<b>163</b>

**9.D. Production of livestock materials**

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
<b>Dairy animals</b>				
Cattle	HF cross	01	-	-
	Jersey cross	02	-	-
Others a) Ornamental	-	7760	12057-00	-
b) Carps + Prawns	-	58 kg	2320-00	-
<b>Total</b>			<b>14377-00</b>	

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

**10. A. Literature Developed/Published**

**(A) KVK News Letter:**

**Name:** Taralabalu Krishi Sinchana, Quarterly, Started in October 2008

**Periodicity:**

Sl.No.	Quarterly ( 2010-11)	Volume	Issue
1.	April – June	3	3
2.	July- September	3	4
3.	October- December	4	1
4.	January- March:	4	2

No. of copies: 500/ issue

**(B) Literature developed/published**

Item	Title	Authors name	Number
Research papers			
Technical reports	Foliar application of 'Banana Special' for higher productivity in Banana.	Basavanagowda.M.G, Pradeep. H.M and Devaraja.T.N	01
	Evaluation of potato genotypes for standard under ambient condition in southern transitional zone of Karnataka	Basavanagowda.M.G , Indiresk.K.M , Ramakrishna Hari, santhosh.K.G	01
	Role of green manuring & integrated nutrient management in increasing potentially of coconut palms.	Basavanagowda.M.G , Mallikarjuna B.O, and Devaraja.T.N	01

	Effect of coconut tonic on coconut palms in Davanagere District.	Basavanagowda.M.G , Pradeep.H.M , Devaraja T.N	01
	Integrated Management of Block headed caterpillar in coconut	Basavanagowda.M.G , Prasanna kumar.N , Devaraja.T.N	01
	Integrated Management of Eriophid mote in coconut.	Basavanagowda.M.G , Pradeep.H.M and Devaraja.T.N	01
	Case study on effect of 'Banana Special' to increase productivity of Banana in Davanagere District.	Basavanagowda.M.G , Raghuraja.J, Pradeep. H.M & Devaraja.T.N	
News letters	Taralabalu Krishi Sinchana	Programme Coordinator	2000 / year
Technical bulletins			
Popular articles	'Garbini Mahiliyarige Satvayuta Aharada' avashykate	Miss. Kavitha P., Dr. Pradeep H.M. & Dr. Devaraja T.N.	Janatavani April, 16, 2010
	Battadalli Samagra Poshakamsha Nirvane	Dr. Pradeep H.M. Mr. Mallikarjuna B.O	Annadata , November 2010
	Rasavri- Gobbaragala Samartha Balakeya Sukha tantrajnana	Dr. Mallikarjuna B.O., Dr. Pradeep H.M. and Dr. Devaraja T.N.	Annadata, November 2010
	Besige Battadalli Sasimadi tantrikategalu	Mr. Mallikarjuna B.O., Dr. Pradeep H.M. and Mr. Prasannakumar N.	Annadata, December 2010
	Dry land Horticulture	Basavanagowda.M.G	01
	Constraints in production technology of vegetable crops.	Basavanagowda.M.G	01
	Need of Nutritive food for pregnant Women.	Kavitha.P. davaraja T.N., Pradeep.H.M and Basavanagowda.M.G	01

	Protection of arecanut plants from inset pests.	Basavanagowda.M.G	01
	Plant protection measures during flowering season in Mango.	Basavanagowda.M.G	01
Kaipidi (Manual)	Samagra Sudharita Hynugarike	Dr. G.K. Jayadevappa	2000
Extension literature	Nutritional Garden	Basavanagowda.M.G, Pradeep.H.M & Devaraja.T.N	3000
	Importance of Indigenously available medicinal plants	Basavanagowda.M.G, Pradeep.H.M & Devaraja.T.N	2000
Others (Pl. specify)			
Abstracts Published	Foliar application of banana special for higher productivity in Banana	Mr. Basavanagowda M.G., Dr. Pradeep H.M.	
	Effect of coconut tonic on coconut palms in Davanagere district	Mr. Basavanagowda M.G.	
	Integrated management of coconut eriophid mite in coconut	Mr. Basavanagowda M.G., Mr. Prasannakumar N.	
<b>TOTAL</b>			



**Radio Talks**

<b>Title</b>	<b>Authors name</b>	<b>Chennel</b>
01. Use of Bio fertilizers in Horticulture crops	Basavanagowda.M.G,	AIR , Bhadravathi and AIR, Chitradurga
02. Clean milk production in Dairy Animals	Dr. Jayadevappa G.K.	AIR, Bhadravathi
03. Insurance in Livestock and its advantages	Dr. Jayadevappa G.K.	AIR, Bhadravathi
04. Improved production technology for higher yield in oilseed crop	Sri. Mallikarjuna B.O	AIR, Bhadravathi
05. Farmers and Scientist interaction in paddy regarding integrated nutrient management and integrated farming system	Sri. Mallikarjuna B.O	AIR, Bhadravathi
06. Management of problematic soils	Dr. Pradeep H.M.	AIR, Bhadravathi
07. Improved production technologies in pulses	Sri. Mallikarjuna B.O	AIR, Bhadravathi
08. Improved cultivation practices in bengalgram	Sri. Mallikarjuna B.O	AIR, Bhadravathi
09. Different food feeding in fisheries	Dr. Devaraja T.N.	AIR, Bhadravathi
10. Improved cultivation practices in summer maize	Sri. Mallikarjuna B.O	AIR, Chitradurga
11. Pest and disease management in paddy	Sri. Prasannakumar N.	AIR, , Chitradurga

**TV Programmes**

<b>Title</b>	<b>Authors name</b>	<b>Chennel</b>
01 Green Manuring in Arecanut	Basavanagowda.M.G,	E-TV Kannada Annadata
02. Feeding of azolla to dairy animals	Dr. Jayadevappa G.K.	E-TV Kannada Annadata
03. Soil sampling methods	Dr. Pradeep H.M	E-TV Kannada Annadata
04. Integrated crop management in NAH-1137 and 2049 in maize	Mr. Mallikarjuna B.O	E-TV Kannada Annadata
04. Production technologies in cotton	Mr. Mallikarjuna B.O	E-TV Kannada Annadata
05. Micro nutrient management in cotton	Mr. Mallikarjuna B.O	E-TV Kannada Annadata
06. Shoot and fruit borer management in brinjal	Sri. Prasannakumara N.	E-TV Kannada Annadata
07. Sucking pest management in cotton	Sri. Prasannakumara N.	E-TV Kannada Annadata
08. Use of green manure crops in paddy and management of seed beds	Mr. Mallikarjuna B.O	E-TV Kannada Annadata
09. Use of planofix in cotton	Mr. Mallikarjuna B.O	E-TV Kannada Annadata
10. Importance of green manure crop in arecanut	Mr. Basavanagowda M.G.	E-TV Kannada Annadata
11. Mechanization in paddy	Mr. Mallikarjuna B.O	E-TV Kannada Annadata
12. Fertilizer management in paddy	Mr. Mallikarjuna B.O	E-TV Kannada Annadata
13. Integrated nutrient management in cotton	Mr. Mallikarjuna B.O	E-TV Kannada Annadata

14. Fish rearing in farm pond	Dr. Devaraja T.N.	E-TV Kannada Annadata
15. Ornamental fish rearing in backyard	Dr. Devaraja T.N.	E-TV Kannada Annadata
16. BPH and leaf roller management in paddy	Sri. Prasannakumara N.	E-TV Kannada Annadata
17. Scientific dairy farming	Dr. Jayadevappa G.K.	E-TV Kannada Annadata
18. Ornamental fish farming	Dr. Devaraja T.N.	E-TV Kannada Annadata

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

S. No.	Type of media (CD / VCD / DVD/ Audio-Cassette)	Title of the programme	Number
1.	CD	Video clipping on TKVK, Davanagere	01

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

**1. Case Study: Role of Banana Special in improving productivity of Banana in Siddanur village of Davanagere district**

**Background:**

- Sri Basavanagowda M.G., Sri Raghuraja J. and Dr. Devaraja T.N.

Banana is one of the important fruit crops of the district. Substantial number of farmers are growing banana crop. The district has 2,167.2 ha. area under banana with total production of 60075 t. and average productivity of the district is 27.72 t/ha. Farmers are spending more than required money on fertilizers. It is of great concern that each farmer is spending 60-70 % of cost of production only on fertilizers. KVK has conducted a survey on banana area and cost of production of crop in the Siddanur cluster of Davanagere taluk. Survey revealed that farmers are applying fertilizers indiscriminately. No farmer is aware of recommended dosage of fertilizers for banana. The role of micronutrients was known to very few farmers. Indian Institute of Horticultural Research, Hesaragatta, Bengaluru is producing micronutrient spray mixture “Banana special” for banana and made it available for our KVK to conduct FLD on the said technology

**KVK intervention:**

**Spray schedule details:**

Taralabalu Krishi Vigyan Kendra selected Siddanur cluster for FLD on use of banana special and Mr. Basavanagowda M.G., SMS (Horticulture) was deputed for the same during 2008-09. As a part of FLD, group meetings, trainings, field visits and field day were conducted. An exposure visit was organized for the group to precision farming area at Dharmapuri district to know the precision farming activities and direct interaction with practicing farmers.

In Siddanur and Kandanakovi villages of Davanagere (tq) twelve farmers were selected for the demonstration on use of banana special, six farmers under grandnaine and six

farmers under yelakki bale variety. Foliar application of Banana special was undertaken as per schedule and observations were recorded. Foliar spray schedule includes six sprays at 5, 6, 7 and 8<sup>th</sup> month of planting. Fifth spray on emerged bunch and sixth spray was given one month after bunch

emergence. The spray concentration should be 5 grams per liter water. For the better results of spray, one shampoo and one lemon liquid should be mixed in 20 liters of spray solution.

**Effect of the technology among demonstrated farmers:**

	<b>G9</b>	<b>Yelakki</b>
Demo Production (Average)	533.9 q/ha	225.9 q/ha
District Productivity (Average)	277.2 q/ha	-
Local check	400.1 q/ha	162.2 q/ha
Per unit expenditure	Rs. 1,40,510-00	1,26,549-00
Gross income	Rs. 3,73,730-00	3,38,850-00
Net income	Rs. 2,33,220-00	2,12,301-00
BC ratio	2.65	2.67

- **Suitability in the existing farming / cropping systems:**

There is micronutrient deficiency observed among all the plots selected for demonstration. So, the technology is suitable to the area under study.

- **Acceptance of the technology by the farmers:**

Farmers have accepted the technology, as it increases the productivity of the crop. It also provides the benefit of reducing the cost of production particularly of fertilizers.

- **Horizontal spread :**

12 families directly and 50 families indirectly have realized the importance of banana special application. More than 550 kg of banana special has been sold through our KVK.

- **Substitution or replacement of commodities:**

The technology substituted the excess use of fertilizers for the crop.

- **Social impact:**

Formation of Siddanuru Bale Belegarara Sangha ( Siddanuru Banana Growers Association) after the successful demonstration of Banana special technology

- **Marketing channels:**

The Banana Growers Association has been linked with **SAFAL** market, Bengalooru. Farmers were taken to **SAFAL** market during the exposure visit arranged by KVK. They are selling the produce to wholesale merchants as well as **SAFAL** market.

- **Establishment of units:**

The success of banana special technology led to the formation of Siddanuru Bale Belegarara Sangha and Sri Done Siddeshwara Vegetable Growers Association. These two Common Interest Groups (CIGs) are supported by NABARD for many agricultural activities. The Vegetable Growers Association has established **vegetable nursery unit** at Siddanuru and selling vegetable seedlings. There is a plan to multiply tissue culture banana seedlings in future.

To encourage organic farming vermicompost units were established and produced compost is being used for the crops. Demonstrations on **Vegetable special**, another product from IIHR, Bengalooru for vegetables were taken up in Siddanuru cluster during past two years.

- **Linkage with development organizations:**

In collaboration with IIHR, Bengalooru, we had conducted farmers scientist interaction for our banana growers. FLD Farmers shared their experiences of using this technology with the gathered scientists and other farmers.

- **CD developed, if any:**

A documentary study on use of banana special by our SMS (Horituclture) was telecasted in Annadata programme of E-TV Kannada.

- **Places and addresses of the farmers concerned or persons who could be contacted:**

Post intervention survey schedule and testimonial from the farmers are enclosed.

- **Publications printed:**

1. The case study was presented as poster presentation on **use of banana special to increase bunch weight in banana** by Mr. M.G.Basavanagowda, SMS (Horticulture), Dr. Pradeep H.M. (Soil Science) and Dr. Devaraja T.N. (Programme Coordinator) at National conference on horticulture biodiversity in eve of Swadesh Prem Jagruthi Sanghosti 2010, Bangalore. (Enclosure-1)
2. The Yashogathe of technology was published in Janathavani, Davanagere local news paper. ( Enclosure-2)

It is clear that there was a 33.44% increase in productivity of G9 variety and 39.27% incase of yelakki bale. Demonstrated technology helped in increasing the bunch weight and shelf life, there by fetching good market price and increased income to farmers. This resulted in purchase of more than 200 kg of Banana special by other than demonstrated farmers in Siddanur cluster.

Frontline demonstration on use of Banana special in Banana helped farmers in micro nutrient management in Banana. These farmers farmed “Siddanur Bale Belegarara Sangha” to help themselves in production and marketing of Banana. 12 farm families directly and 50 farm families indirectly had understood the importance of application of micro nutrients in Banana production. This inturn will help all of them to produce better quality and quantity of banana in a given area. Therefore, our intervention has resulted in increased farm income per unit area with good agriculture practices.

**Evidence:**

The success of this intervention was measured through pre and post assessments (12 No.s) While selecting the farmers for this programme, their family survey was conducted. The data was collected on a prescribed format and the post intervention data was collected on the same format to assess the difference of improvement.

## 2. Case study: Revival of coconut black headed caterpillar (*Opisina arenosella*) by larval parasitoid *Goniozus nephantidis*

- Sri Basavanagowda M.G., Dr. Devaraja T.N. and Dr. Roopa Patil

Coconut is one of the important plantation crops of the district next to areca nut. The district has 12949.8 ha of coconut with production of 883.71 lakh nuts. The average productivity of 120 nuts / palm. Because of heavy incidence of coconut black headed caterpillar (CBHC) and mites nuts productivity has reduced drastically.

Coconut black headed caterpillar (BTC) *Opisina arenosella* is one of the major pests of coconut palms causing considerable damage to coconut industry and according to a recent survey, about 1.6 million palms are affected in Karnataka alone. Available control measures include mechanical, chemical and biological to control it. The chemical method has been shown to leave persistent Residues. Consumption of tender coconuts from trees applied with synthetic pesticides may pose health hazards. Insecticide of several concerted efforts made for the past two decades to control the pest by synthetic application, the anticipated results have never been achieved in this communication, we report the effectiveness and superiority of biological control over other methods for management of this notorious pest by parasites.

### KV K Intervention

Mr. Prakash.M S/o G.Mallappa, Kotehal village of channagiri Taluk, Davanagere district cultivators 8 acres of coconut from past two decades around 600 plants are accommodated in the 8 acres of area. The productivity of the palms was 40. He has taken all the measures like mechanical (cutting and burning of affected palms) and chemical (Roof feeding of *monocrotophas* 10 ml /palm) methods. By during all these efforts he is unable to control the pest and decided to uproot the palms as they have less productive.

They expressed the problem with officials of Taralabalu Krishi Vigyan Kendra. Scientists from KVK initially surveyed the plot for the occurrences of pest incidence. It was noticed that 65-70% of the palms were affected with this. Scientists contacted the Tamilnadu Agriculture University scientists for obtaining larval parasite *Goniozus nephantidis*. Initial arrangement was made by KVK to procure the parasites. A method demonstration was also did on release of parasites to the palm. Later on the farmer released the parasites 4 times by himself. Slowly the incidence was reduced months after month. Again in the next year they have practiced the same technology in consulting with KVK scientists.

Particulars'	Before	After
Incidence of CBHG in plot	65-70 %	5-10%
Number of nuts / palms	40	140-150
District average	120	
Gross Income (600 Palms )	72000/-	252000/-

### Suitability in the existing farming / cropping system

As the incidence of CBHC is prevailing in the other coconut gardens of the region. So this technology suits to whole area of affected palms.

### Acceptance of the technology by the farmer

Farmers accepted and convinced about the technology as it drastically reduced the pest incidence. It also acts as best alternative to other methods of control.

### **Horizontal spread**

More than 50 farmers are advised in this technology by the KVK. We are diverting the farmers to department of Horticulture for obtaining the *Goniozus nephantidis*.

### **Linkage with developmental organizations**

In collaboration with department of horticulture, Davanagere we have conducted several training programmes on production technology of coconut under coconut development board scheme. Farmers who advised about the technology are diverted to department for getting the *Goniozus nephantidis* parasitoid in the early years Tamilnadu Agriculture University has supplied the culture.

### **CD Developed / Media**

A story on management of CBHC in coconut by our SMS (Horticulture) Mr.Basavanagowda.M.G was telecasted on Anna data programmed of E-TV Kannada.

### **Places and Address of the Farmer who could be contacted**

Mr.Prakash.G S/o Mallappa.G  
Kotehal, Marabanahalli (at post)  
Channagiri Taluk  
Davanagere district-577551  
Phone No: 09448628010

### **Publications Printed**

1) The study was presented as poster presentation on “Integrated Management of black headed caterpillar in coconut by Mr.Basavanagowda.M.G SMS (Horticulture), Prasannakumara.N SMS (Plant Protection), Dr.Devaraja.T.N (Program me Coordinator) at international conference on a coconut Biodiversity for prosperity at Central Plantation Crops Research Institute, Kasargod (Enclosure-1).

2) Folder on management of CBHC in coconut was brought out by Taralabalu KVK (Exclosure-2)

It was clear that, a coconut garden which is going to uproot by the farmer is saved by the KVK effort. *Goniozus nephantidis* is the most effective larval parasitoid in controlling the CBHC. The parasitoid should be released @3000/ha under the coconut trees when the pest is in the 2<sup>nd</sup> &3<sup>rd</sup> instars larval stage. The optimum level of release is 1:8 of parasitoid ratio. Parasitoid should not be released in the crown region since they will be killed by predators like spiders bugs.

This technology helped to reduce the incidence level from 65-70 percent to 5-10 percent. This inturn helps to increase the productivity of the palms contributing to the higher gross income.

### **Evidence**

The success of the technology was measured by post assessment of the farming situation. Initial survey was made on the percent existence of the pest later after the study post survey was made on the percent damage. Increase in number of nuts per palm itself indicates the success of technology in decreasing the incidence.



### 3. Case study: Velvet beans: A superior inter/cover crop in arecanut and coconut plantation of Davanagere district.

-Dr. Pradeep H.M. and Dr. Devaraja T.N.

**Background:** In Davanagere arecanut is the major plantation crop covering an area of 30000 ha. Dominantly arecanut is grown as sole crop in all parts of district. This has increased the weed infestation and raised the microclimate temperature inturn leading to infloresunce drying and premature nuts falling. Some of the intercrops like banana and betelvine etc were grown. But, most of the farmers are not interested in putting effort or getting money from intercrops. Only their interest is in minimizing weed infestation, moisture conservation and fertility maintainance. They want easy ways for getting above results. Hence, velvet beans, a pulse crop can satisfy all the above requirements with minimum care and cost, Taralabalu Krishi Vigyan Kendra started popularizing the velvet beans crop as cover /intercrop in arecanut and coconut plantations.

This programme is important to the farmers because velvet bean is hardy crop needs less maintainance or care. This will spread all over the plot with in 45-50 days of sowing. This will reduce the weeds, reduces moisture loss and fallen foliage or green mulching will improves the soil fertility.

#### **KVK Intervention**

Our KVK has done an on farm trial “Assessment of mucuna as intercropping in arecanut”. Technology options viz, sole arecanut, arecanut + cowpea and arecanut+ mucuna intercropping were carried out in four farmers field. The production system ws rainfed. Some of performance indictors for technology were number of pods per plant and yield. Technology option arecanut+mucuna shown higher net return (28450/ ha), production (6.60 q/ha) and B:C Ratio (4.6) compared to arecanut + cowpea treatment which shown net return (10500/ha), production (4 q/ha) and B:C ratio (2.4)

Assesment requirement such as weed control and moisture conservation was very well happened in arecanut+mucuna option. Foliage fallen by mucuna was very large and it was added biomass and inturn improved the fertility of soil. Farmers were very happy with the results and also monitory benefit from it.

After the success of on farm trial, we started popularization in arceanut and coconut gardens. Krishi Vigyan Kendra provided nearly 150 kg of mucuna seeds to 20 farmers. The list of farmers is enlisted below.

Sl.No.	Farmers name	Address	Mucuna seeds Quantity sold (kg)
1.	Mr. Nagarajappa	Marabanahalli, Channagiri tq	10
2.	Mr. Manjunatha	Kanivebilchi, Channagiri tq	10
3.	Mr. Siddabasappa	Malalakere, Davanagere-tq	12
4.	Mr. Shivappa	Halebislery, Davanagere-tq	07
5.	Mr. Arunkumar	Halebislery, Davanagere-tq	06
6.	Mr. Nataraj	Naraganahalli	02
7.	Mr. Halappa	Davanagere	06
8.	Mr. Jayappa	Kaggi, Channagiri-tq	03
9.	Mr. Govida Naik	Kerebilchi, Channagiri-tq	10
10.	Mr. Prakash	Kotehal, Channagiri-tq	03
11.	Mr. Parameshwarappa H.C.	Dibbadahalli, Harihar-tq	05
12.	Mr. Krishna reddy	Nandihall, Harihar-tq	05
13.	Mr. Shivashankar	Kenchanahalli, Hairhar-tq.	05
14.	Mr. Arunkumar	Somashettihalli, Channagiri-tq	10
15.	Mr. Ramalingappa	Kengunte, Holalkere-tq	03
16.	Mr. Sanakki Basavarajappa	Kengunte, Holalkere-tq	03
17.	Mr. Jayapraksh	Halebislery, Davanagere-tq	16
18.	Mr. Chandrappa C.T.	Shiramangondanahalli, Davangere-tq.	03

Constraints or hurdles identified: Mucuna is spreading and climbing one. It will climb the arceanut tree. In matured trees harvesting may become problematic, since mucuna was spreaded all over the plot.

KVK provided mucuna seeds at minimum cost to farmers and gave all necessary technical crop production information. In one season the crop was spread to more than 75 acres of land. KVK also took the help of department of agriculture and horticulture for popularizing the crop. This made a good impact in popularizing mucuna.

**Effect of the technology/ Process / Results / Impact:****A. Production:**

Arecanut+cowpea

Number of pods per plant: 14.80

Yield (q/ha) : 4.50

Arecanut+mucuna

Number of pods per plant: 42.3

Yield (q/ha) : 6.60

**B. Economic gains:**

Technology option	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net return (Profit) Rs./ha	B:C ratio
Arecanut+cowpea	7500	18000	10500	2.4
Arecanut+ mucuna	7850	36300	28450	4.6

**Price:** Cowpea seeds: Rs. 40/kg

Mucuna seeds: Rs. 55/kg

**C) Suitability in the existing farming / cropping systems:**

Arecanut and coconut are grown as sole crops by major farmers. The weed menace and moisture shortage were major problems. The mucuna intercropping has proved answer for both problems and inturn effective in maintaining the soil fertility.

D) Acceptance of the technology/its sustainability, process in terms of views of farmers:

The technology was already accepted by farmers but its sustainability has to checked still more seasons.

E) Horizontal spread:

It has been grown by nearly 20 farmers with in a area of 75 acres.

F) Marking channels: KVK has shown different ways for marketing of mucuna seeds. Some medicine making companies are the important vendors of mucuna seeds.

#### 4. Case Study : Cycle weeder-handy for the small farmer

-Sri. Mallikarjuna B.O. and Dr. Devaraja T.N.

##### Introduction

Weed is the biggest problem in the crop production. In the recent years, based on the data estimated about 30% of the yield loss is due to weeds. These weeds will remove nearly 25% to 60% of nutrients from the soil which is not available to the crop. Inturn reduces yield and quality of the crop. Weeds not only remove the nutrients and moisture (30 -60%) but also act as host for the pests and pathogens.

Weed management is also a problem because of the lack of the labourer . Therefore in recent years, mechanization is gaining importance in all aspects of the crop production . But the small farmers are facing problem with the mechanization as it is costly to adopt such technologies. Hence, the farmers whose land holding is less than two acres are facing severe problem in the weed management.

##### Problem Definition

A farmers by name Mr. Renukarya and Mr. Mallikarjuna , from Kalahalli and Belavanur ,village Harapanahalli and davanagere taluk met SMS (Agronomy) and discussed regarding the weed management in his one acre area where vegetables were grown. He expressed that weed menace is severe and yields levels are very low. For growing one acre of different vegetables we require about 20-30 men labourers and cost of the labourers are high. The cost of the production is much more when we use labourers for weeding. He was suggested to attend the training programme on mechanization in agriculture during the technology week in September 2010.

Many farmers from Belavanur and kalahalli visited KVK and attended the training programme on the weed management through the mechanization in field crops for small farmers. In the training we had demonstrated the use of cycle weeder for weeding in the vegetables plots. After the training programme, selected group of the farmers were given the cycle weeder for weeding in their own farmers under our technical guidance. We had conducted an off campus training on utilization of the cycle weeder for weeding in vegetables at Belavanur and kalahalli village.

##### KRISHI VIGYANA KENDRA INTERVENTION WITH CYCLE WEEDER

We had conducted an off campus training on utilization of the cycle weeder for weeding in vegetables at Belavanur village. We did suggested to the farmers that it can be used for all the crops like groundnut, sunflower, maize and vegetables with the spacing of 30-40 cm between the lines and 15 -20 cm within the plants. Cycle weeder can penetrate 2-2.5 cm depth in the soil. The efficiency of the cycle weeder is about 1-1.5 acre weeding can be done with a single man. Cycle weeder can be used after 15-20 DAS and their should be enough moisture at time of weeding. The weeding technology was demonstrated in the field where vegetables were grown in the farmers field.

Made frequent visits to the plots where the weeding was done using the cycle weeder in the vegetable crops and collected the data on weed menance , time require for weeding and yield. The following observation were made by the farmer who is using cycle weeder in the vegetables grown throughout the year.

**Table 1. Comparison of manual weeding with modified Cycle weeder in vegetables**

Si.No	Method of weeding	Manual weeding			Cycle weeder		
		Total no of labourers required per ha	Total numbers of labourers	Total Cost	Total no of labourers required	Total numbers of labourers	Total Cost
	Vegetables	18 X4Nos	72	10,800	6X4Nos	24	3,600

**Table 2. Economics of Manual weeding v/s Hand operated Cycle weeder in vegetables**

	Hand weeding	Cycle weeder
Area coverage per (ha)/day	0.398	0.405
No.of labourers required	18	4
Cost of labourers (Rs.)	2700	600
B:C	1.9	2.8

**Inference :** Four men labour could able to weedbetween the rows and in between the plants by hand operated cycle weeder an area of 0.4 ha/day for Rs.600/- but in hand weeding 18 women labourers were required for covering an area of 0.398 ha/day at Rs. 2700/- which saves 2100 per day.

### **FARMERS FEED BACK ON THE TECHNOLOGY**

The farmers using the technology expressed that the weeder is best suited for the farmers whose land holding is 2 acres and if he grows vegetables there is more beneficial. Earlier before the cycle weeder labourers were used for weeding. The main problem with labourers is their inefficiency and demanding high price at peak time of the crop. Farmers expressed that the timely sowing is important in agriculture and timely weeding is also important in agriculture. The farmer has added fly ash to his field and application cycle weeder is very easy as the soil has become fragile. Now, other family members can also use the cycle weeder .He usually does the weeding work in the early morning and evening for 3-4 hrs daily with other regular farm works . Mr Renukarya , retired Agri.scientist expressed that the technology of cycle weeder had used by me and it is best technology for the future agriculture when the land holdings will be reduced. The population is increasing day by day but not the land. There will be be more fragmented land and this will be very suitable for the farmers during the weeding.

## Conclusion

The use of cycle weeder for weeding will be efficient where the soil moisture is optimum and soil should be loose enough to pull the weeder. This is specially designed for the small farmers and farmwomen. Now our taralabalu krishi vigyana Kendra is popularizing technology to the small farmers .This technology is being used by progressive farmers as they are facing the labourers problem.

### 10.D. Details of innovative methodology of Transfer of Technology developed and used during the year

**Farmers Field School:** Tomato is one of the important vegetable crop of the district and farmers are facing lot of problems regarding nutrient management and pest and disease management. So Farmers Field School is a best tool to gather farmers together from sowing to harvest in paddy at Siddanuru village of Davanagere taluk.

**Radio Talks:** Subject Matter Specialists of the KVK gave Radio talks on the problems prevailing in the district. Through this we have reached large number of farmers in a short span of time.

**T.V. Programmes:** The technical interventions for burning problems of the major crops are disseminated through T.V. shows by the scientists. So these technologies will be tried by the large number of farmers in the district and other areas.

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

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1	Paddy	Use of Dashaparana in paddy	As a source of nutrient Nitrogen on for the crop

## Farmer Innovation 1

### Documenting Innovations made by the Farmers

#### 1. Name of the innovation : DASHAPARNA in non-pesticide management

##### a) Description of innovation:

The term dashaparna has two words 'dasha' and 'parna' meaning 'ten' and 'leaf' in kannada language respectively

It is a mixture of ten types of leaves (Neem, Honge, (Lucky plant) *Vitex negundo*, Papaya, Custard apple, Daturi, Lantana, Clerodendron , Glyricidia, Parthenium) at rate of 2 kg minimum. Leaves crushed and mixed with 100 l of cow urine and leave it for 5 to 7 days. Stir it properly and remove the waste after filtering. Then take 1 liter of filtrate and mix with 10 l of water, and now it is ready to spray.

- Spraying can be taken before panicle initiation (60-70 days). This spray can also act as a liquid fertilizer (Urea/Nitrogen) for the different crops. If we spray once in a week for 4 weeks it will be equivalent to 25 kg Urea application.
- Paddy, Maize, Vegetables –first spray after 20-25 days after planting/ sowing.

#### 2. Problem statement:

##### a) Nature and intensity of the problem addressed:

Paddy is the major crop and it is a remunerative crop. Due to excess use of pesticide and fertilizers, the cost of production is increased with reducing the net returns. The pest like BPH, Stem borer, leaf roller and neck blast diseases are severe in causing upto 50 % reduction in yield.

The labourers are demanding for more wages for spraying the chemicals / pesticides in Paddy field.

##### b) Genesis of idea:

Several years ago, there was a situation where continuous use of pesticides in field resulted in death of a labourer. Since then Mr. Devendrappa owner of farm decided not to use the pesticides. He met a friend Mr. Eshwarappa, Kandgal through Bharthiya Kissan Sangh and discussed the usage of pesticide in the farm. Mr. Eshwarappa suggested to go for organic cultivation which is possible by using our own resources (plants) available around us.

**c) Sources of information relevant to the innovation:**

The farmers had attended the state level Kissan Sangha meeting at Bangalore and discussed with many organic farmers and had been to Institute for Cultural Research and Action (ICRA) , Bangalore and bought the books relevant to his interest.

**d) Original innovation or modification of any existing technology:**

Mainly after reading the books from the ICRA, he modified the technology by adding the leaves of some other plants.

**3. Process of Technology Development:**

**a) Conceptualization of idea:**

Due to continuous usage of pesticides and fertilizer in excess resulted in poor yield. Soil health and human health was also affected. So he decided to make an innovative approach where all the above problems should be addressed and then he stumbled upon the idea during his search for an alternative approach which should be eco-friendly and cost effective Dashaparna.

**b) Scientific rationale about the innovation:**

High cost of production, poor quality of Paddy resulted in poor yield with reduced net income. So to solve the above problem he used the dashaparna which is low cost technology and can be used as pesticide and fertilizer for the crops.

**c) Experimentation / trial conducted:**

He conducted the experiment in his own land in area of 15 acres where he was growing paddy with inorganic fertilizers before this method. He started the experiment in year 2003-04 at Kengalahalli, Honnali taluk, Davanagere District on paddy. According to his experience for last 5years in paddy cultivation with application of the dashaparna once in a week for a month is equal to the application of the 25kg urea.



**d) Technical support during the experimentation period:**

Different books brought from ICRA and other publication specially on the plants (leaves) content and uses as medicine / pesticides / fertilizers provided technical information to the farmers.

The progressive farmers (Organic farmers), watching agriculture programs in television and listening to radio, attended the Krishi Ghosti, Krishimelas and collected the information on organic sources used in agriculture.

**e) Supporting data for the innovation:**

The data available is the cost of production in rupees .

Crop	Pesticides used against pest control				Dashaparna used against pest control			
	Cost of production	Gross income	Net income	B:C	Cost of production	Gross income	Net income	B:C
Paddy	16,700/-	21,400/-	4,700/-	1.28	11,000/-	21,400/-	10,400/-	1.94

The farmer was spending Rs. 5000/- for pesticides in the chemical farming as against Rs.150 in dashaparna farming. The average yield obtained in the both practices is 26 q and produce sold at Rs.800/- per quintal

**f) Any resource mobilization from outside for the development of innovation**

Nil

**g) Relative advantages of innovation:**

- Wider and easily adaptable
- It is organic source, it is eco- friendly and no health danger for human beings.
- It is economically viable and inputs are easily available around us.
- By adopting this technology the cost of production for cultivating Paddy in one acre is about Rs. 11000/- and we get the produce about 26 q , sold at Rs. 800/ q and the Gross income is Rs. 21,400. The net return is Rs. 10,400/- per acre. The B:C is about 1.94

#### 4. Replication and Promotion:

##### a) Horizontal spread of innovation and no. of farmers adopting:

The area in 2003-04 was 15 acres and now it has been spread to nearly 450-500 acres in and around his village and taluk. 15 farmers are adopting this technology in the villages like Kukwada, Jeerikatte, Hadadi, Kurki, Ramagondanahalli, Dymanehalli (Davanagere taluk) Mukathenahalli, Taraganahalli, Kankahalli, Doddo Yathinahalli (Honnalli taluk) and Belludi (Harihar taluk).

##### b) Presentation on the innovation in farm journals:

- Attended the meeting and presented about Dashaparna in TEPP (The technopreneur promotion programme) , 2006 January at Davangere.
- Delivered lecture on Dashaparna to farmers / farmwomen at DATC, Kadajji.

##### c) Publications of innovation in farm journals:

No

##### d) Media coverage of the innovation:

Newspaper : Paper clipping enclosed

Radio talk : AIR, Bhadravathi

23-11-2007 : Interview on Agriculture Experience

28-09-2008 : Interview on Agriculture experience specially on dashaparna

##### e) Display of innovation in exhibition / Kisan melas etc.

Attended and exhibited the technology at Krishimela conducted by Department of Agriculture, Honnalli. (2007-08)

##### f) Income generated out of this innovation by the innovator

No, but he has shared this information with other farmers without any consultancy fees.

**g) Feed back from farmers and other agencies**

The farmers who are all practicing this method /technology told that they have reduced the cost of production (i.e. cost of chemicals, pesticides) and net returns had improved. The soil health has also improved.

The farmers who are practicing the Dashaparna

Sl. No.	Name	Village
1.	Mr. D.B. Shankar	Kukwada- Davanagere
2.	Mr. Gururaj	Hadadi- Davanagere
3.	Mr. Narappa	Jearikatte – Davanagere
4.	Mr. Prabhakar	Kurki-Davanagere
5.	Mr. Marulasiddappa	Ramgondanahalli-Davanagere
6.	Mr. Najappa	Dyamanahalli-Davangere
7.	Mr. H.C. Mallikarjunaiah	Mukathenahalli-Honnali
8.	Mr. Ganesh	Taragnahalli - Honnali
9.	Mr. Manu	Kankanahalli- Honnali
10.	Mr. Rajappa	Dodda yathenahalli –Honnali
11.	Mr. Umesh	Belludi- Honnali

**5. Recognition:**

- a) “District Best Farmer” , ZILLA PRAGATHI SHEELA RATTHA” during 2007-08 at GKVK, Bangalore
- b) Best farmer award-2007-08 awarded by AIR, Bhadravathi
- c) District Best Farmer Award for year 2008-09 honored by the University of Agricultural Sciences, Bangalore.
- d) “Krishi pandit Prasasti” awarded at Vidhana Soudha by Government of Karanataka during 2008-09.

[

**6. Supporting documents:**

- a) Action photographs: Attached
- b) Printed material / electronic materials like CD, Video, Clippings  
Yes, Paper clippings attached
- c) Copy of certificate of honour  
No

**7. Profile of Farmers:**

- a) Photograph of the farmer : Attached
- b) Name and address: : Sri K.M. Devendrappa  
Agriculturist  
Kengalahalli-Village  
Honnali-post  
Davanagere-tq.
- c) Phone number: : Landline : 08188- 202072  
: Mobile : 99011-17874
- d) Age ((as on March 31,2010) :49 years
- e) Educational Qualification : B. Sc (PCM)
- f) Landholding (in ha.) : 12 ha.
- g) Farming experience : 28 year  
(in year)
- h) Name of crops / Livestock / : Paddy, Ragi, Coconut, Arecanut, Banana  
other enterprises adopted : 10 animals ( 9 buffaloes 1 Cow)  
by the innovator: Vermicomposting (3 types)  
Bio-digester
- i) Social recognition : Bharathia Kissan Sangha  
Ex District Pradna Karyadrshi (Secreatry)  
Present member  
  
Scientific Advisory Committee Member  
Special Invitees  
Taralabalu Krishi Vigyan Kendra  
Davanagere  
  
NHM-taluk farmer selection committee member  
SDMC (School Development Members Committee Member  
Karnataka state seed corporation Ltd., Member  
Davanagere District Organic farmers Association, Treasurer

2.	Chilli	Use of herbal extract in chilli	To control chilli murda complex
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## **Farmer Innovation 2**

### **Documenting Innovations made by the Farmers**

**1. Name of the innovation:** Management of leaf curl in chilli using Jaali tree (*Acacia fernisiana*) products.

**a) Description of innovation:**

- i) In nursery, sow the seeds three days before the amavasya day (New moonday). Mix the soil under the canopy of Jaali tree with farm yard manure in equal proportion.
- ii) To seedlings, (in 15-20 days) spray the jaali gum or jaali leaf extract solution.
- iii) Transplanting should be done 4-5 days before the hunnime day (Full moonday) on evening hours (After 4 pm).
- iv) During flowering stage spray jaali tree gum or jaali leaf extract or jaali fruit extract solution.

**2. Problem statement:**

**a) Nature and intensity of the problem address:**

Leaf curl disease is most devastating in chilli growing areas. Leaf curl is common disease occurring in chilli during crop maturing crop period. This has become untreatable latest even with chemicals. Farmers face huge loss of crop due to this dreadful disease.

**b) Genesis of idea:**

This farmer Mr. Eshwarappa K.G. is always a man of organic thinker. He always tries some organic home made products for the control of pests and disease. He read some articles in old books that the soil below neem and jaali were precious. This point made him to try the above innovation.

**c) Sources of information relevant to the innovation:**

Some old books and discussion of Mr. Eshwarappa with old aged people ones regarding the biocontrol nature of some trees and plants. These information motivated him to try the above innovation.

**e) Original innovation or modification of any existing technology:**

Mr. Eshwarappa has just practically tried the information from old books and thoughts of old aged farmers and made necessary modifications as per his need.

### 3. Process Technology Development

**a) Conceptualization of idea:**

Leaf curl in chilli was endemic in nature and it was difficult to control through chemicals. This Farmer thinking was that every disease can be controlled by organic methods and he just followed organic ways to control leaf curl disease in chilli.

**b) Scientific rationale about the innovation:**

Farmer had known that the soil of neem and jaali trees are very precious in terms of biocontrol nature. He had also known that neem and jaali tree products were having special nature because of their bitter taste. He just tried jaali tree soil and jaali tree leaf gum and fresh seeds for the control of leaf curl in chilli.

**c) Trial conducted:**

He conducted trial in his own farm. After the success he just told this to his friends and relatives. Some of them followed it and found encouraging results.

**d) Technical support during the experimentation period:**

No technical support from any body. He tried on his own and succeeded in this innovation.

**e) Supporting data for the innovation:**

He has not collected any data on the innovation. He just used it and saved the amount that otherwise would have spent for the chemical control of leaf curl in chilli.

**f) Relative advantages of innovation:**

Innovation is highly adaptable and eco friendly in nature. It is economically viable and having high benefit cost ratio.

**4. Replication and promotion:****a) Horizontal spread of innovation and no. of farmers adopting**

This innovation (ha) spread to many organic and inorganic farmers. This might have spread to more than 100 farmers.

**b) Presentation of innovation in scientific farmers:**

Farmer has presented this innovation in many seminars, farmers meetings etc.

**c) Publication of the innovation in farm journal:**

No

**d) Media coverage of the innovation**

Radio – AIR, Bhadravathi

**e) Display of innovation in exhibitons / kisan meals etc**

No

**f) Income generated out of this innovation by the farmers**

The innovation controlled the leaf curl effectively. It just saved the amount used to control the diseases using chemicals.

**g) Feedback from farmers and other agencies**

Small farmers told that the technology is easily adoptable and economically viable.

**5. Recognition****a) Institutional acceptance of the innovation**

No

**b) Recognition in the form of honours / certificates / awards etc**

No

**6. Supporting documents****a) Action photographs:**

Attached

**b) Printed material / electronic materials like CD, Video, Clippings etc.**

No

**c) Copy of certificate of honour**

No

**7. Profile of farmers****a) Photograph of the farmer : Attached**

**b) Name and address** : Mr. Eshwarappa K.G.  
S/o Muregappa K.G.  
Kandagal (p)-577 514  
Davanagere-tq & dist.  
Karnataka

**c) Mobile No.** : 96632-46243



d) **Age** : 55 years

e) **Educational qualification** : B. A.

f) **Landholdings** : 3 ha.

g) **Farming experience** : 40 years

h) **Name of crops / livestock /other enterprises adopted by the innovator:**

Paddy, Maize, Coconut, Arecanut, Vegetables  
Dairy

i) **Social recognition:**

- a. Secretary, Belku Savayava Krishi Parivar (Regd.)
- b. Member, Taralabalu Rural Development Foundation, Sirigere

#### 10.F. Indicate the specific training need analysis tools

- Identification of courses for farmers/farm women: Group meetings at Gram panchayath, Taluk panchayath, Meeting with executive officer and Raith Seva Kendra  
feed back
- Rural Youth: Raith Seva Kendra intervention, personal contacts, paper advertisement.
- Inservice personnel: Departments direct contact.

#### 10.G. Field activities

- i. Number of villages adopted: 1
- ii. No. of farm families selected: 208
- iii. No. of survey/PRA conducted: 1 base line survey and 1 PRA (Siddanuru)

**10.H. Activities of Soil and Water Testing Laboratory**

**Status of establishment of Lab : Established**

1. Year of establishment : 2011(April)  
 2. List of equipments purchased with amount :

<b>Sl. No</b>	<b>Name of the Equipment</b>	<b>Qty.</b>	<b>Cost</b>
1	Digital conductivity meter	1	12,860-00
2	Digital PH meter	1	11,033-00
3	Flame photometer	1	48,375-00
4.	Spectrophotometer	1	42,570-00
5.	Macro Block digestion system: KIL 08 L	1	96212-00
6.	Distillation system KJELO DIST EAS VA	1	177268-00
7.	Digital Burette utration system	1	53212-00
8.	Quartz single distillation model with 4 Lt/hr capacity	1	31482-00
9.	Quartz double distillation unit with 1.5 Lt/hr capacity	1	64130-00
10.	Hot air oven	1	29786-00
11.	Hot plate Rectangular	1	6784-00
12.	Water bath	1	5724-00
13.	Digital Analytical balance capacity 210 gm	1	69960-00
14.	Table top balance capacity 10 kg	1	6890-00
15.	Heating mantle capacity 250 ml	1	1908-00
<b>Total</b>		<b>15</b>	<b>6,58,194-00</b>

**Details of samples analyzed so far since establishment of SWTL: Nil**

**Details of samples analyzed during the 2010-11 : Nil**

### 10.I. Technology Week celebration

Period of observing Technology Week: From 13-09-2010 to 17-9-2010

Total number of farmers visited : 652

Total number of agencies involved : 05

Number of demonstrations visited by the farmers within KVK campus : 07 ( Vermicompost, Dairy, Azolla production unit, Fodder production, Fish farming unit, Shadhome, Poly house and Existing crop units)

#### Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Gosthies			
Lectures organized	5	652	Dairy, Fodder crops, Vegetables, Ragi, Maize, Paddy, Redgram
Exhibition	1 (Five days)	652	
Film show	5	652	
Fair			
Farm Visit	5	652	
Diagnostic Practicals			
Supply of Literature (No.)	3	1956	
Supply of Seed (q)			
Supply of Planting materials (No.)			
Bio Product supply (Kg)			
Bio Fertilizers (q)			
Supply of fingerlings			
Supply of Livestock specimen (No.)			
Total number of farmers visited the technology week		652	1. Production of vermicompost 2. Improved production practices in Banana 3. Onion

**10. J. Interventions on drought mitigation:** Nil (However, District Agriculture Contingency plan is prepared and submitted)

**B. Major area coverage under alternate crops/varieties:** Nil

**C. Farmers-scientists interaction on livestock management:** Nil

**D. Animal health camps organized :** Nil

**E. Seed distribution in drought hit states**

**F. Large scale adoption of resource conservation technologies:** Nil

**G. Awareness campaign:** Nil

## PART XI. IMPACT

### 11.A. Impact of KVK activities

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Vermicomposting	45	13	-	-

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

#### Case study : “Impact of Front Line Demonstration on High Yielding variety GPU-28 of Ragi” in Kurki village

-Raghuraja J., SMS (Agri.Extension) and Dr. Devaraja T.N., Programme coordinator

#### Introduction:

Ragi, the staple food of poor men growing in the country since time immemorial. Increased area under maize has resulted in decreased area under minor millets, oil seeds and pulses in the last decade or so. The trend is same in ragi also. In davanagere District ragi is grown in 10362 ha, (15912 ha, 2008-09) with total production 15537 tones (23845.5 tons. 2008-09) and productivity 1499 kg/ha. (Source: Department of Agriculture, Davanagere 2009-10) Ragi, which is predominantly grown by poor and marginal farmers uses locally available varieties. These local varieties are poor yielders and less fodder production, resulting in little income to the farmers.

#### KVK interventions:

Taralabalu Krishi Vigyan Kendra conducted Frontline Demonstration on “Popularization of High Yielding Variety GPU-28 of Ragi” during kharif – 2007. Subject Matter Specialist of Agronomy was incharge of this FLD. Twenty four farmers selected for this FLD in the following villages-1. Mellakatte (8 farmers) 2. Tholahunse ( 5 farmers) and 3. Kurki ( 11 farmers) in davanagere taluk.

On-campus training on “Production Technology in (GPU-28) ragi” was conducted on 25-6-2007. In the training important topics like seed treatment, application of fertilizer based on soil test results, spacing, seed rate, intercultivation and weed management were explained. Field visits (18-7-07 and 16-9-07) for regular monitoring and field day was conducted on 12-10-2007. Demonstrated variety i.e. GPU-28 of ragi produced yield of 22.00 q/ha when compared to 14.00 q/ha yield of local check.

## Results and Discussion:

Village survey conducted during February 2011 to know the spread of GPU-28 ragi variety among farmers in Kurki village.

**Table-1** Number of farmers growing GPU-28 variety among ragi growing farmers in Kurki village.

(N=320)

GPU-28		Other varieties	
Number	Percent	Number	Percent
256	80	64	20

It is clear from table-1 that among 320 ragi growing farmers, 256 farmers (80%) are growing GPU-28 variety and only 20% growing other varieties performance of GPU-28 variety in terms of yield, size of fingers, quality of grains and quantity and quality of fodder produced played major role in opting for the same. Demonstrated farmers had provided seeds (GPU-28) for neighboring farmers.

During the survey, farmers revealed that average yield of GPU-28 variety is 19.00-20.50 q/ha, in comparison to other varieties 14.00 to 15.95 q/ha. Correspondingly, income generated was Rs. 19000/- /ha., and Rs. 14000/ha incase of GPU-28 and other ragi variety respectively.

Since ragi is grown in rainfed and less fertile land, normally minimum efforts are devoted for crop management practices and in put application when compared to paddy or maize. Considering prevailing prices in the market, farmers cannot afford to spend more on inputs and management practices for production of ragi. In this situation GPU-28 variety introduced by KVK became best sought after ragi variety for ragi growing farmers in kurki village.

Front Line Demonstration conducted by Taralabalu Krishi Vigyan Kendra, Davanagere on ‘Popularization of High Yielding Variety GPU-28 of Ragi’ in Kurki village of Davanagere district almost replaced old local varieties of ragi. Yield levels and fodder quantity and quality used for rearing animals was found compatible with conditions prevailing in the village.

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

**PART XII – LINKAGES****12.A. Functional linkage with different organizations**

<b>Name of organization</b>	<b>Nature of linkage</b>
District Institute of Education training, Department of public instruction.	Kitchen garden training programme
Department of Animal Husbandry and Veterinary Science, Davanager	Trainings, Animal Health Camps, Input for FLD
Department of Agriculture, Davanagere	Trainings, Field visits, Diagnostic field visits, Field day, Lectures, bi-monthly meetings, Agriculture technology week celebration and agriculture surveys
Department Horticulture, Davanagere	Trainings, Field visits, Diagnostic field visits
Department of District Watershed Development, Davanagere	Trainings
Department of fisheries, Davanagere	Trainings, Field visits
Department of forestry, Davanagere	Supply of seedlings
Karnataka State Seed Corporation	Supply of seed materials for FLDs
Department of Social Welfare	Programme participation
District Information centre	Collection of basic information of the district
Canara Bank, State Bank of India, State Bank of mysore, Shiva Sahakari Bank,	SHG A/C and KVK A/C
NABARD	Formation of farmers groups
Karnataka Oilseed Federation	Supply of seed for FLDs
University of Agricultural Sciences, Bangalore, Dharwad	Technology transfer, Knowledge update and Bi-monthly meetings.
JSYS. CBTMPCS (UAS, Bangalore)	Trainings
IGFRI, Dharwad	Supply inputs to FLDs
Zilla Panchayath, Davanagere	Trainings under various programmes
ZARS, Navile. Shimoga	Fish FLDs
KVKs of Shimoga, Mandya, Chitradurga, Tumkur A, Gadag, Belgaum and Mysore	Intrraction and exchange of ideas

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

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Nutritional Garden Training	February -2010	Jala Samavardhana Yojana Sangha, Davanagere	1,50,000/-
Establishment of Rural Bio Resource Complex for Sustainable Rural Livelihood Security through Bio-technological Approaches in Davanagere District of Central Karnataka	1 April, 2009 (On going)	Department of Bio technology, New Delhi	26,6840/-
Technology Demonstration Component of ‘National Initiative on Climate Resilient Agriculture’	Feb. 2011 (on going)	ICAR	30,00,000/-
SGSY, Zilla Panchayath, Davanagere	Feb. 2011	Zilla Panchayath, Davanagere	6,13,000/-
CBTMPCS, UAS, Bangalore	January-Feb. 2011	UAS, Bangalore	4,50,000/-

**12.C. Details of linkage with ATMA**

a) Is ATMA implemented in your district                      Yes

Role of KVK in preparation of SREP ?

Visited villages and collected basic data for preparation of SREP.

If yes, role of KVK in preparation of SREP of the district?

**Coordination activities between KVK and ATMA during 2010-11**

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
05	Extension Programmes				
	Kisan Mela				
	Technology Week			01	Financial Support for organizing seminars, exhibition stalls etc.



**12.D. Programmes implemented under National Horticultural Mission: Nil**

**12.E. Nature of linkage with National Fisheries Development Board : Nil**

**12.F. Details of linkage with RKVY: Nil**

**12. G. Kisan Mobile Advisory Services**

<b>Month</b>	<b>No. of SMS sent</b>	<b>No. of farmers to which SMS was sent</b>	<b>No. of feedback / query on SMS sent</b>
April 2010	2	101	-
May	3	101	-
June	2	101	-
July	1	101	-
August	-	-	-
September	-	-	-
October	-	-	-
November	1	101	-
December	-	-	-
January 2011	-	-	-
February	-	-	-
March	-	-	-

**PART XIII- PERFORMANCE OF INFRASTRUCTURE IN KVK**

**13.A. Performance of demonstration units (other than instructional farm): Nil**

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

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.	Cost of inputs	Gross income	
<b>Cereals</b>									
Paddy	16-07-2010	01-11-2010	1.5	KMP 101	Grain	38 q	25,000-00	41800-00	
Maize	03-06-2010	20-10-2010	1.5	Commercial	Grain	59 q	30,000-00	42000-00	
Ragi	02-07-2010	15-11-2010	2.5	GPU-28	Grain	3 q	2500-00	3000-00	
Paddy	16-12-2010	16-03-2010	1.5	Sonamashuri	Grain	30 q	23000-00	32704-00	
<b>Pulses</b>									
Cowpea	23-05-2010	25-07-2010	1.5	C-152	Grain	14 q	2600-00	3120-00	
Cowpea	15-12-2010	20-02-2011	1.0	C-152	Grain	15 q	3000-00	4500-00	
Redgram	03-06-2010	10-01-2011	1.5	BRG -1 &2	Pods	23 q	42000-00	50000-00	
<b>Oilseeds</b>									
<b>Fibers</b>									
Cotton	08-06-2011	31-03-2011	0.75	Commercial	Lint	1 q	8000-00	7600-00	
Spices & Plantation crops									
<b>Vegetables</b>									
Tomato	01-10-2010	02-02-2011	0.25	Commercial	Vegetative part	3 q	4000-00	4500-00	
Chilli	01-10-2010	10-02-2011	0.25	Commercial	Vegetative part	3 q	3500-00	4500-00	
Brinjal	01-10-2010	26-02-2011	0.25	Commercial	Vegetative part	5 q	3000-00	5000-00	
Bhendi	10-06-2010	20-09-2010	0.25	Commercial	Vegetative part	10 q	8000-00	15000-00	
Others (specify)									

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

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1	Trichoderma	373	11190	27975	-

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

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1.	Cross bred cows	HF x	Milk Dung	87,000 15 TLs	- -	1,30,000 15,000	Planning to increase the number of dairy animals ( 10)
2.	Carps + Prawns	-	Food fish	58 kg	-	2320	-
3.	Ornamental fish	-	Ornamental	7760 no.	-	12057	-

**13.E. Utilization of hostel facilities**

Accommodation available (No. of beds): 30

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
APRIL2010	90	6	
MAY2010	59	1	
JUNE2010	75	6	
JULY2010	270	16	
AUGUST2010	704	24	
SEPTEMBER2010	916	15	
OCTOBER2010	555	17	
NOVEMBER2010	916	13	
DECEMBER2010	279	12	
JANUARY2011	395	16	
FEBRUARY2011	201	7	
MARCH2011	653	24	

**13.F. Database management:** Farmers data base KVK contact is being constructed

**13.G. Details on Rain Water Harvesting structure and micro-irrigation system:** (Rain water harvesting from roof of farmers hostel to fish pond has been established in KVK farm

#### 14 F Status of Revolving Fund (Rs. Lakhs)

Year	Opening Balance	Income during the year	Expenditure during the year	Net Balance in hand as on 1 <sup>st</sup> April of each year
April 2008 to March 2009	0.418	3.075	2.843	0.650
April 2009 to March 2010	0.650	10.072	10.038	0.684

#### 15. Details of HRD activities attended by KVK staff during 2010-11

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Mallikarjuna B.O.	SMS (Agronomy)	Farm Mechanization	KVK, JSS, Suttur, Mysore	17-18 June 10
Mallikarjuna B.O.	SMS (Agronomy)	Fodder production and Green land management	IGFRI, Jhansi, UP	27-9-10 to 1-10-10
Mallikarjuna B.O.	SMS (Agronomy)	Cotton FLD progress (2009-10) and Action plan (2010-11)	KVK, Mudurai, Tamil Nadu	14-06-2010 to 15-06-2010
Prasannakumar N.	SMS (Plant protection)	Technology management for harnessing oilseed and pulse productivity	NBAII, Bangalore	27-07-2010 to 30-07-2010
Prasannakumar N.	SMS (Plant protection)	National Consultation on Strategies for deployment Conservation of Parasitods of important papaya mealy bug	NBAII, Bangalore	30-10-2010
Prasannakumar N.	SMS (Plant protection)	Mass production of parasitoids against papaya mealy bug	NBAII, Bangalore	28-10-2010 to 29-10-2010
Prasannakumar N.	SMS (Plant protection)	Bio fuel workshop	MGIRED, Bangalore	17-01-2010 to 18-01-2010

Pradeep H.M.	SMS (Soil Science)	Production technology of banana special	IIHR, Hesaragatta	12-05-2010
Pradeep H.M.	SMS (Soil Science)	Remote sensing and GIS importance to agriculture	MANAGE, Hyderabad	19-09-2010 to 23-09-2010
Raghuraja J.	SMS (Agri. Extension)	Team work and building alliance for development	KKID, Coimbatore	18-03-2010 to 22-03-2010
Raghuraja J.	SMS (Agri. Extension)	Workshop on district agriculture contingency plan-2010	UAS, Bangalore	21-10-2010
Dr. Devaraja T.N. Pradeep H.M Raghuraja J.	Programme coordinator SMS (Soil Science) SMS (Agri. Extension)	Pre- Action Plan meeting- 2011-12	UAS, Bangalore	11-03-2011 to 12-03-2011
Dr. Devaraja T.N.	Programme coordinator	Bio fuel	Bangalore	04-01-2011
Dr. Devaraja T.N.	Programme coordinator	National Initiative on Climate Resilient in Agriculture	CRIDA, Hyderabad	01-07-2010
Dr. Devaraja T.N.	Programme coordinator	National Initiative on Climate Resilient in Agriculture	Ahmadnagar	03-02-2011 to 05-02-2011
Dr. Devaraja T.N. Dr. Basavaraja K.P.	Programme coordinator TRDF Board Member	5 <sup>th</sup> National Conference of KVK	Udaipur, Rajasthan	22-12-2010 to 24-12-2010
Dr. Devaraja T.N.	Programme coordinator	Annual Review Meeting	KVK, Dharwad	03-10-2010 to 05-10-2010
Dr. Devaraja T.N.	Programme coordinator	Action Plan – 2011-12	ZPD, Bangalore	19-03-2011 to 20-03-2011

**16. Other important and relevant information which has not been reflected above:**

1. **Raitha Siri Habba:** With blessings of Sri Taralabalu Jagadguru Dr. Shivamurthy Shivacharya Mahaswamiji, a farmers- scientists interactive programme organized at Sirigere on ‘organic farming- Opportunities and Challenges’. More than 3000 farmers attended the function. Sri Umesh Katti, Honorable Minister for Agriculture, GoK and Sri S.A. Ravindranath, Honorable Minister for Horticulture, GoK, were present in the function as a chief guests
2. Special Days Celebrated
  - a. National Science Day
  - b World Water day
  - c. World Meteorological Day
  - d. International Women Day
  - f. Kissan Summan Diwas.
  - g. Parthenium Awareness Day
  - h. Women in Agriculture Day
3. Conducted one day training for extension functionaries ( School teachers) on ‘Kitchen Gardening’ in collaboration with District Institute for Education and Technology, Davanagere. Over 50 participants obtained information on nutritional garden.
4. **Department of Bio Technology sponsored project works:** Following Demon Units were established: a) Vermicompost Production Unit at Halebisleri, Siddanuru, Belavanuru and KVK farm b) Vermicelli Production Unit at Halebisleri c) Candal Making Unit at Naganuru d) Areca Plate Making Unit at Hosachikkanahalli. e) Nursery Production Unit at Siddanuru) Poultry Unit at Hosachikkanahalli were established under producing substantial income to the farmers. (All the villages are in Davanagere taluk)
5. Exposure visits were organized to Krishi Mela at UAS, B and UAS, D.- sponsored by Department of Bio Technology, New Delhi.
6. **National Imitative on Climate Resilient Agriculture (NICRA) Project Works:** Action plan prepared and presented in front of CRIDA Director at Zonal Project Directorate, Bangalore and action plan approved. Accordingly implements were purchased and selected village i.e. Siddanuru, Davangere taluk surveyed (Village level and at family level), group meeting, CRMC formed and PRA conducted.
7. Annual Report of Taralabalu Rural Development Foundation (Host institution) 2009-10 prepared and presented before General Body Meeting of Taralabalu Rural Development Foundation.
8. Several sponsored / collaborative activities like trainings, visits were conducted (sponsoring agencies: Zilla Panchayath, Department of Agriculture, Department of Horticulture, District Watershed Department, CBTMPCS, UAS, Bangalore, JSYS, Davangere) which has enhanced the visibility of our KVK.
9. Fodder demo unit at KVK covering DHN-6, COFS-29, Guinea grass, CO-3 and Lucerne varieties. Sold 75,000/- numbers seed sets of these varieties and earned Rs. 38,000/-
10. Erythrina standards demo unit: To tackle gall wasp problem in betelvine supporting plant erythrina was developed in KVK.
11. Dr. Devaraja T.N. presented paper on “ Fisheries and alternate livelihood generation at National workshop on “Social justice and governance and livelihood practices” held in MSW department, Davanagere University on 30-03-2011.

## Farmer Field School in Tomato:

KVK has conducted FFS on Integrated crop management in Tomato

**Technology:** Integrated crop management in Tomato

**Area:** 1. 5 acre (Demonstration)

2. 5 acre ( Farmers Practice)

**Collaborator:** Mr. Ravi M.B.

**Participants :** 20 No.

**Facilitator :** Agronomist, Soil Scientist, Horticulture and Plant protection

**Place:** Siddanur, Davanagere tq.

### Number and details of activities

Sl.No.	DATE	Activities	No. of Participants
1.	28-06-2010	<ul style="list-style-type: none"> <li>• Selection of farmers</li> <li>• Importance of FFS</li> <li>• Ballot box test</li> <li>• Critical inputs, behaviors in FFS</li> </ul>	20
2.	12-07-2010	<ul style="list-style-type: none"> <li>• AESA –Study of environment</li> <li>• Management of nutrients discover and pest in Nursery</li> </ul>	20
3.	09-08-2010	<ul style="list-style-type: none"> <li>• Group Dynamics</li> <li>• Soil sampling techniques</li> <li>• Improved Agronomic practices, hand preparation and fertilizer management.</li> <li>• Group dynamics</li> </ul>	20
4.	31-08-2010	<ul style="list-style-type: none"> <li>• AESA- Heavy rainfall from last 10 days</li> <li>• Management of pest and disease in tomato</li> <li>• Taken observations of plant height. No. of flowers / plant</li> <li>• Staking</li> <li>• Group dynamics</li> </ul>	20

5.	15-09-2010	<ul style="list-style-type: none"> <li>• Farmers Scientists interaction during technology week</li> <li>• Visit to the tomato plots and shade home at our farm.</li> <li>• Information on “ Mechanization is part of organic farming”</li> </ul>	20
6.	25-10-2010	<ul style="list-style-type: none"> <li>• AESA</li> <li>• Field day</li> <li>• Closing function distribution of certificates</li> </ul>	20

### Results

Sl.No.	Technology	Hybrid	Yield (t/ha.)	Gross ratio	Gross returns	Net Returns	B:C
1.	Integrated crop management	US, Agri 698	40.4	65500	202000	136500	3.08
			34.5	59000	172500	113500	2.92

Price of tomato: Rs. 3 to 10 / kg



PART XIV - FINANCIAL PERFORMANCE								
<b>14.</b>	<b>Details of KVK Bank Accounts :</b>							
<b>A.</b>								
	<b>Bank Account</b>	<b>Name of the Bank</b>	<b>Location</b>	<b>Branch Code</b>	<b>Account Name</b>	<b>Account Number</b>	<b>MICR Number</b>	<b>IFSC Number</b>
	With Host Institute :	Canara Bank	Vidyanagar, DAVANAGERE - 577004	1813	Taralabalu Rural Development Foundation	101143	Yet the Branch to get	CNRB 0001813
	With KVK :	State Bank of India	P.J. Extension, DAVANAGERE - 577002	5624	Taralabalu Krishi Vigyan Kendra	30166599498	577002002	SBIN 0005624
		Canara Bank	Vidyanagar, DAVANAGERE - 577004	1813	Taralabalu Krishi Vigyan Kendra (Salary)	10144	Yet the Branch to get	CNRB 0001813
		Canara Bank	Vidyanagar, DAVANAGERE- 577004	1813	Taralabalu Krishi Vigyan Kendra (Activities)	10145	Yet the Branch to get	CNRB 0001813

<b>14.B. Utilization of Funds under FLD on Oilseeds (Rs. in Lakhs)</b>						
<b>Opening Balance as on 1.4.2009</b>					<b>Rs.</b>	<b>-0.110</b>
<b>Items</b>	<b>Sanction by ICAR</b>		<b>Expenditure</b>		<b>Unspent Balance as on 31.3.10</b>	
	<b>Kharif 2009</b>	<b>Rabi 2009-10</b>	<b>Kharif 2009</b>	<b>Rabi 2009-10</b>		
	<b>GN: 5 ha</b>	<b>SN: 10 ha</b>	<b>GN: 5 ha</b>	<b>SN: 10 ha</b>		
Inputs	0.175	0.350	0.175	0.072	0.278	
Extension Activities	0.025	0.050	0.025	0.050	0.000	
TA/DA/POL	0.037	0.075	0.037	0.073	0.002	
<b>Total</b>	<b>0.237</b>	<b>0.475</b>	<b>0.237</b>	<b>0.195</b>	<b>0.280</b>	
<b>Grant Released during the Year</b>					<b>0.237</b>	
<b>Closing Balance as on 31.3.2010</b>					<b>Rs.</b>	<b>-0.305</b>
<b>14.C. Utilization of Funds under FLD on Pulses (Rs. in Lakhs)</b>						
<b>Opening Balance as on 1.4.2009</b>					<b>Rs.</b>	<b>-0.682</b>
<b>Items</b>	<b>Sanction by ICAR</b>		<b>Expenditure</b>		<b>Unspent Balance as on 31.3.10</b>	
	<b>Kharif 2009</b>	<b>Rabi 2009-10</b>	<b>Kharif 2009</b>	<b>Rabi 2009-10</b>		
	<b>RG: 10 ha</b>	<b>BG: 15 ha</b>	<b>RG: 10 ha</b>	<b>BG: 15 ha</b>		
Inputs	0.350	0.525	0.243	0.000	0.632	
Extension Activities	0.050	0.075	0.050	0.000	0.075	
TA/DA/POL	0.075	0.112	0.075	0.000	0.112	
<b>Total</b>	<b>0.475</b>	<b>0.712</b>	<b>0.368</b>	<b>0.000</b>	<b>0.819</b>	
<b>Grant Released during the Year</b>					<b>0.712</b>	
<b>Closing Balance as on 31.3.2010</b>					<b>Rs.</b>	<b>-0.338</b>

<b>14.D. Utilization of Funds under FLD on Cotton [Prod. Tech]</b>						
<b>Opening Balance as on 1.4.2009</b>					<b>Rs.</b>	<b>0.003</b>
<b>Items</b>	<b>Released by ICAR</b>		<b>Expenditure</b>		<b>Unspent Balance as on 31.3.10</b>	
	<b>Kharif 2009</b>	<b>Rabi 2009-10</b>	<b>Kharif 2009</b>	<b>Rabi 2009-10</b>		
<b>Cotton : 50 Acres</b>						
Essential Inputs @ Rs.1400 Per Demon. Per Acre		1.050		0.906	0.144	
POL/Veh. Hiring / Meals / Printed Materials, etc. @ Rs.600/Acre		0.450		0.450	0.000	
<b>Total</b>	<b>0</b>	<b>1.500</b>	<b>0</b>	<b>1.356</b>	<b>0.144</b>	
<b>Grant Released during the Year</b>					<b>1.403</b>	
<b>Closing Balance as on 31.3.2010</b>					<b>Rs.</b>	<b>0.05</b>
<b>Utilization of Funds under FLD on Cotton [Farm Implements]</b>						
<b>Opening Balance as on 1.4.2009</b>					<b>Rs.</b>	<b>0.090</b>
<b>Items</b>	<b>Released by ICAR</b>		<b>Expenditure</b>		<b>Unspent Balance as on 31.3.10</b>	
	<b>Kharif 2009</b>	<b>Rabi 2009-10</b>	<b>Kharif 2009</b>	<b>Rabi 2009-10</b>		
Purchase of New Equip.s		0.000		0.000	0.000	
Contingency for Demon. of already provided equipments		0.000		0.000	0.000	
<b>Total</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	
<b>Closing Balance as on 31.3.2010</b>					<b>Rs.</b>	<b>0.090</b>

<b>14.E. Utilization of KVK Funds during the Year 2010-11 (Rs. In Lakh)</b>				
<b>Sl. No.</b>	<b>Name of the Head</b>	<b>Sanction</b>	<b>Release</b>	<b>Expenditure</b>
1	2	3	4	8
	<b>Opening Balance as on 1.4.2010</b>		0.99	
<b>A] RECURRING ITEMS :</b>				
1	(a) Pay & Allowances of 2010-11	41.00	40.00	40.99
	(b) Pay & Allowances of Arrears of 6th CPC 1.1.06 To 31.3.11)	49.68	49.67	49.68
2	Travelling Allowances	1.25	1.25	1.25
3	Contingencies	13.00	13.00	12.96
	[A] Office Contingency	2.00	2.00	1.99
	[B] POL, Hiring, Maintenance of Vehicles	1.60	1.60	1.59
	[C] Stipend / Meals for Trainees	1.05	1.05	1.05
	[D] Teaching Materials for Training	0.65	0.65	0.65
	[E] FLD (Other than Oilseeds & Pulses)	2.05	2.05	2.05
	[F] OFT - On Farm Testing	0.65	0.65	0.65
	[G] Training to Extension Personnel	0.10	0.10	0.09
	[H] Maintenance of Buildings	0.30	0.30	0.30
	[ I ] Extension Activities	0.30	0.30	0.30
	[J] Farmers Field School	0.25	0.25	0.24
	[K] Chemicals & Glasswares for SWTL	2.50	2.50	2.50
	[L] Petty Items for SWTL	1.00	1.00	1.00
	[M]Soil & Plant Sample Processing & Storage Facility	0.50	0.50	0.50
	[N] Maintenance of Library	0.05	0.05	0.05
	<b>Total - A</b>	<b>104.93</b>	<b>103.92</b>	<b>104.88</b>

<b>B] NON-RECURRING ITEMS :</b>				
1	Works :	21.00	21.00	20.98
	(a) Threshing & Drying Yard	2.00	2.00	2.00
	(b) Fencing-Cum_Compound Wall	11.00	11.00	11.00
	(c) Road Formation	3.00	3.00	3.00
	(d) Bore Well (2 No.s)	3.00	3.00	3.00
	(e) Land Levelling	1.00	1.00	0.99
	(f) Irrigation System	1.00	1.00	0.99
2	Equipments & Furniture	16.50	16.50	16.50
	(a) Furniture & Furnishing	2.00	2.00	2.00
	(b) SWTL - Equipments	10.00	10.00	10.00
	(c) Rotavator	0.15	0.15	0.15
	(d) EPABX System	0.50	0.50	0.50
	(e) Seed Driller	0.25	0.25	0.25
	(f ) Land Leveller	0.20	0.20	0.20
	(g) Bund Former	0.15	0.15	0.15
	(h) Generator	1.00	1.00	1.00
	(i) Portable Carp Hatchery	2.25	2.25	2.25
3	Library (Books & Journals)	0.10	0.10	0.08
	<b>Total - B</b>	<b>37.60</b>	<b>37.60</b>	<b>37.56</b>
<b>C] REVOLVING FUND :</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	<b>GRAND TOTAL (A + B + C)</b>	<b>142.53</b>	<b>141.52</b>	<b>142.44</b>
	<b>Closing Balance as on 31.3.2011</b>		<b>0.07</b>	

<b>14.F. Status of Revolving Fund (Rs. in Lakhs) :</b>				
<b>Year</b>	<b>Opening Balance as on 1.04.2004</b>	<b>Income During the Year</b>	<b>Expenditure During the Year</b>	<b>Net Balance in Hand as on 1st April of each Year</b>
April 2004 To March 2005	0.000	1.000	0.000	1.000
April 2005 To March 2006	1.000	0.008	0.681	0.327
April 2006 To March 2007	0.327	2.312	2.085	0.554
April 2007 To March 2008	0.554	2.721	2.856	0.419
April 2008 To March 2009	0.419	3.075	2.844	0.650
April 2009 To March 2010	0.650	10.072	10.038	0.684
April 2010 To March 2011	0.684	18.963	18.959	0.688

# SUMMARY FOR 2010-11

## I. TECHNOLOGY ASSESSMENT

### Summary of technologies assessed under various crops

Thematic areas	Crop	Name of the technology assessed	No. of trials
Integrated Pest Management	Betelvine	Revival of betelvine gardens using gall wasp tolerant <i>erythrina</i> spp. standards	05
	Arecanut	Management of snails in arecanut gardens	05
Integrated Crop Management	Redgram	Enhancing the productivity in redgram production system	03
	Coconut	Coconut nutritional tonic to strengthen coconut palm	05
	Sesamum	Intercropping of seasmum and redgram to achive higher productivity and net income	05
Weed Management	Mucuna	Assessment of mucuna as intercropping in Arecanut	04
Others: Spacing in Maize Inter cropping in maize	Maize	Plant geometry metry in maize for yield maximization	05
	Maize	Inter cropping in maize for yield and income maximization	05
<b>Total</b>			

### Summary of technologies assessed under livestock

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials
Nutrition Management	Dairy	Supplementation of ragi grain as a local available energy resource for lactating cows	05
Fodder Production	Fodder	Assessment of nutritive value and yield performance of CO-4 and DHN-6 Napier fodder variety.	05
<b>Total</b>			<b>10</b>

### Summary of technologies assessed under various enterprises

Thematic areas	Enterprise	Name of the technology assessed	No. of trials
Aquaculture production in seasonal water bodies	Fisheries	Assessment of body weight gain between ordinary common carp and amur common carp in inland ponds	10

Summary of technologies assessed under home science: Nil





## Other crops

Crop	Thematic area	Name of the technology demonstrated	No. of KVKs	No. of Farmer	Area (ha)	Yield (q/ha)		% change in yield	Other parameters		*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
						Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Cereals																		
Rice	Integrated pest and nutrient management	Integrated crop management in rice		12	5	63.4	55.0	15.3	-	-	35500	57060	21560	1.60	36900	49500	12600	1.34
Maize	ICM	Integrated crop management in Hybrid maize	-	12	5	48.9	45.2	8.18	Plant Height-170.2 cm No. of cob-14-28	170.10 13.55	14500	41565	27065	2.86	14500	38420	23920	2.64
Ragi	ICM	Integrated crop management in HYV Ragi-MR-6	-	07	2.6	25.3	16.5	53.3	Plant Height-80.60 cm	76.40 3.50	7350	29095	21745	3.95	5200	13975	13775	3.64
		KMR-301		12	6.4	26.1	16.4	59.1	Plant.Height-81.50 Head- 4.9	76.40 3.50	7300	30015	22175	4.11	5200	18860	13660	3.62
Sunflower	IDM	IDM in powdery mildew resistant sunflower hybrid KBSH-53		07	3.0	17.9	12.80	39.84	Plant Height-174.8 Head diameter-14.6 % disease incidence-3	179.3 11.96 16	17300	42960	25660	2.48	16800	30720	13920	1.8





**Livestock**

Category	Thematic area	Name of the technology demonstrated	No. of KVKs	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
						Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Poultry	Poultry breed	Performance of portable hatchery for quality chicks production	-	01	01													

**Fisheries**

Category	Thematic area	Name of the technology demonstrated	No. of KVKs	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
						Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Common carps	Integrated fish farming	Integrated fish cum prawn culture in fresh water pond	-	5	3200	Fish-32.6 Prawn-0.83 q/ha	-	-	-	-	44688	103813	59125	2.32	-	-	-	-

**Other enterprises:** Nil**Women empowerment:** Nil**Farm implements and machinery:** Nil**Other enterprises:** Nil

**Demonstration details on crop hybrids**

Crop	Name of the Hybrid	No. of farmers	Area (ha)	Yield (kg/ha) / major parameter			Economics (Rs./ha)			
				Demonstration	Local check	% change	Gross Cost	Gross Return	Net Return	BCR
<b>Cereals</b>										
Maize	NAH-1137	13	5	48.9	45.2	8.18	14500 14500	41565 38420	27065 23920	2.86 2.64
<b>Oilseeds</b>										
Sunflower	KBSH-53	7	3	17.9	11.8	39.84	17300 16800	42960 30720	25660 13920	2.48 1.82
<b>Fruit</b>										
Mango	Alphanso	05	2	Is in progress						
<b>Total</b>										

## IV. Training Programme

### Farmers' Training including sponsored training programmes (On campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Crop Production</b>										
Seed production	1	51	4	55	11	1	12	62	5	67
Integrated Crop Management	6	98	19	117	54	9	63	152	28	180
Integrated Nutrient Management	2	28	0	28	8	0	8	36	0	36
Production of organic inputs	3	13	39	52	0	3	3	13	42	55
Others : 1) Environment Management Plan	5	113	36	149	14	4	18	127	40	167
2) Seed Treatment	1	4	5	9	0	0	0	9	0	9
<b>Horticulture</b>										
<b>a) Vegetable Crops</b>										
Others : 1) Kitchen Gardening	1	0	12	12	1	7	8	1	19	20
<b>d) Plantation crops</b>										
Production and Management technology	2	72	9	81	25	0	25	97	9	106
Others :1) Organic farming in Horticulture crops	3	51	1	52	0	0	0	51	1	52
2) Use of banana special as a micro nutrient mixture in banana	1	6	3	9	0	0	0	6	3	9
<b>g) Medicinal and Aromatic Plants</b>										
Production and management technology	1	28	0	28	1	0	1	29	0	29
Others :1) Importance of indigenously available medicinal plants	1	1	9	10	3	9	12	4	18	22

<b>Soil Health and Fertility Management</b>										
Integrated water management	6	74	6	80	97	2	99	171	8	179
Balanced use of fertilizers	4	43	24	67	0	0	0	43	24	67
Soil and water testing	1	50	0	50	0	0	0	50	0	50
<b>Livestock Production and Management</b>										
Dairy Management	1	10	0	10	0	0	0	10	0	10
Feed and Fodder technology	2	37	6	43	0	0	0	37	6	43
Others :1) Improved integrated livestock rearing	14	0	297	297	0	274	274	0	571	571
2) Sheep rearing	1	9	0	9	1	0	1	10	0	10
<b>Agril. Engineering</b>										
Farm machinery and its maintenance	1	61	0	61	0	0	0	61	0	61
<b>Plant Protection</b>										
Integrated Pest Management	5	38	14	52	10	5	15	48	19	67
Integrated Disease Management	3	69	0	69	14	0	14	83	0	83
<b>Fisheries</b>										
Integrated fish farming	4	170	2	172	152	4	156	322	6	328
Others :1) Aquaculture in rural farm ponds	1	6	4	10	2	3	5	8	7	15
<b>Capacity Building and Group Dynamics</b>										
Others : 1) Marketing	1	26	0	26	8	0	8	34	0	34
<b>TOTAL</b>	<b>71</b>	<b>1058</b>	<b>490</b>	<b>1548</b>	<b>401</b>	<b>321</b>	<b>722</b>	<b>1459</b>	<b>811</b>	<b>2270</b>





<b>Production of Inputs at site</b>										
<b>Capacity Building and Group Dynamics</b>										
Formation and Management of SHGs	3	47	0	47	0	0	0	47	0	47
<b>TOTAL</b>	<b>38</b>	<b>336</b>	<b>460</b>	<b>796</b>	<b>97</b>	<b>492</b>	<b>589</b>	<b>433</b>	<b>952</b>	<b>1385</b>

**Training for Rural Youths including sponsored training programmes (on campus)**

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Dairying	01	10	-	10	-	-	-	10	-	10
<b>TOTAL</b>	<b>01</b>	<b>10</b>	<b>-</b>	<b>10</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>10</b>	<b>-</b>	

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

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

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Any other : 1) Organic farming	1	20	1	21	0	0	0	20	1	21
<b>Total</b>	<b>1</b>	<b>20</b>	<b>1</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>1</b>	<b>21</b>

### Sponsored training programmes

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>1</b>	<b>Crop production and management</b>										
<b>2</b>	<b>Production and value addition</b>										
2.a.	Organic Farming	02	28	01	29	13	-	13	41	01	42
2.b.	Kitchen gardening	03	50	07	57	27	03	30	78	10	88
2.c.	Medicinal plants	01	28	-	28	01	-	01	29	-	29
<b>3</b>	<b>Livestock production and management</b>										
3a.	Dairying	26	-	560	560	-	545	545	-	1105	1105
	<b>Total</b>										

### Details of sponsoring agencies involved

1. CBTMPCS, GKVK, UAS Bangaluru
2. JSYS, Davanagere
3. Zilla panchayath, Davanagere
4. Department of Horticulture, Davanagere
5. Department of Agriculture, Davanagere
6. District Agriculture Training Centre, Davanagere

### Details of vocational training programmes carried out by KVKs for rural youth

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>1.</b>	<b>Livestock and fisheries</b>										
1.a.	Dairy farming	4	0	288	288	0	254	254	0	542	542
<b>2</b>	<b>Agricultural Extension</b>										
2.a.	Capacity building and group dynamics										
	<b>Grand Total</b>	<b>4</b>	<b>0</b>	<b>288</b>	<b>288</b>	<b>0</b>	<b>254</b>	<b>254</b>	<b>0</b>	<b>542</b>	<b>542</b>

### V. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	-	-	-	-
Diagnostic visits	29	-	-	-
Field Day	02	50	-	50
Group discussions	-	-	-	-
Kisan Ghosthi	01	-	-	-
Film Show	30	472	-	472
Self -help groups	-	-	-	-
Kisan Mela	-	-	-	-
Exhibition	4	-	-	-
Scientists' visit to farmers field	25	-	-	-
Plant/animal health camps	02	-	-	-
Farmers' seminar/workshop	1	80	-	80
Method Demonstrations	10	180	-	180
Celebration of important days	07	957	-	957
Special day celebration	-	-	-	-
Exposure visits	02	92	-	92
Others : Bio-monthly meeting	05	-	-	-
Agriculture quiz	01	192	-	192
<b>Total</b>	<b>119</b>	<b>2023</b>		<b>2023</b>

**Details of other extension programmes**

Particulars	Number
Electronic Media	
Extension Literature	02
News Letter	04
News paper coverage	50
Technical Articles	04
Technical Bulletins	-
Technical Reports	03
Radio Talks	12
TV Talks	18
Animal health amps (Number of animals treated)	02 (350 animals)

**VI. PRODUCTION OF SEED/PLANTING MATERIAL****Production of seeds by the KVKs**

Crop category	Name of the crop	Name of the variety (if hybrid pl. specify)	Quantity of seed (q)	Value (Rs)	Number of farmers
Cereals	Paddy	KMP-101	38 q	37102	120
	Ragi	GPU-28	6q	9000	120
Oilseeds					
Pulses	Redgram	BRG-1	1 q	3500	20
	Cowpea	C-152	8 q	24000	160
Commercial crops	Sugarcan	COVC-2003-165	10 tonnes	25000	20
Vegetables	Bhendi	African dwarf	3 q	21000	100
<b>Total</b>				<b>119602</b>	<b>560</b>

### Production of planting materials by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Number	Value (Rs.)	Number of farmers to whom provided
Commercial						
Vegetable seedlings						
	Ridgegourd	Local	-	0.25q	10,000-00	100
	Drumstick	PKM-1		2549	24859-00	144
	Curry leaf	local	-	477	4754-00	38
Fruits	Papaya	Red lady	-	154	1018-00	7
	Amla	NA-1	-	5	150-00	2
	Citrus	Jagalur local	-	363	3460-00	28
	Mango	Alphanso	-	34	1020-00	10
Ornamental plants	Ornamental palms	-	-	372	9300-00	22
Medicinal and Aromatic	Lemon Grass Stumps	-	-	-	1085-00	5
	Arecanut	Thirthalli local	-	400	4000-00	2
Plantation crops						
Spices			-			
Tuber			-			
	Napier, Guinea, Azolla	DHN-6	-			40
		BG-1	-	52000	22,500-00	20
		Azolla	-	15,000	7500-00	40
Fodder crop saplings		pinnata		250 k.g.	5000-00	
<b>Total</b>					<b>94646-00</b>	<b>458</b>

### Production of Bio-Products

Bio Products	Name of the bio-product	Quantity	Value (Rs.)	No. of Farmers
		Kg		
Bio Agents	Trichoderma	373	27975	62
	Banana Special	204	25620-00	65
	Vegetable Special	84	10920-00	20
Others	Mango Special	62	12400-00	16
<b>Total</b>			<b>76915</b>	<b>162</b>

**Production of livestock and related enterprise materials**

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
<b>Dairy animals</b>				
Cattle	HF cross	01	-	-
	Jersey cross	02	-	-
Others a) Ornamental		7760	12057-00	-
b) Carps + Prawns		58 kg	2320-00	-
<b>Total</b>			<b>14377-00</b>	

**VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS 2010-11**

Samples	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
Soil	51	45	45	5100-00
Water	44	40	40	2200-00
<b>Total</b>	<b>95</b>	<b>85</b>	<b>85</b>	<b>7300-00</b>

**VIII. SCIENTIFIC ADVISORY COMMITTEE**

<b>Number of SACs conducted</b>
01

**IX. NEWSLETTER**

<b>Number of issues of newsletter published</b>
04

**X. RESEARCH PAPER PUBLISHED: Nil**

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

(But Rainwater harvest from roof of farmers hostel to fish pond has been established in KVK farm).

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