

**TARALABALU RURAL DEVELOPMENT FOUNDATION'S**  
**TARALABALU KRISHI VIGYAN KENDRA, DAVANAGERE**

**ANNUAL PROGRESS REPORT**

**(April 2011 – March 2012)**



**TARALABALU KRISHI VIGYAN KENDRA**

**Kadalivana, LIC Colony layout, B.I.E.T. Road,  
DAVANAGERE- 577 004**

**KARNATAKA STATE**

**Phone: 08192-263462, Fax: 08192-260969**

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**Website: [www.taralabalukvk.com](http://www.taralabalukvk.com)**

**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 MicroBiology)
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	Agricultural 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	Mr. Revanasiddappa G.B.P.	Programme Assistant (Lab Tech.)	M	Lab Technicien	M.Sc. (Seed Technology)
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	Existing Pay band	Grade Pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/OBC/ Others)
3	8	9	10	11	12
Dr. Devaraja T.N.	37400-67000	9000	17-05-05	Permanent	Others
Mr. Basavanagowda M.G	15600-39100	5400	21-11-06	Permanent	Others
Mr. Mallikarjuna B.O	15600-39100	5400	09-01-08	Permanent	Others
Dr. Jayadevappa G.K.	15600-39100	5400	29-01-08	Permanent	Others
Mr. Raghuraja J.	15600-39100	5400	23-06-08	Permanent	Others
Mr. Prasananna Kumara N.	15600-39100	5400	24-06-08	Permanent	Others
Dr. Pradeep H.M.	15600-39100	5400	25-06-08	Permanent	Others
Mr. Revanasiddappa	9300-34800	4200	11-04-12	Permanent	Others
Mr. Santhosh B.	9300-34800	4200	05-09-08	Permanent	Others
Mr. Vijayakumar S.B.	9300-34800	4200	23-06-08	Permanent	Others
Mr. Mallikarjuna S.Gudihindala	15600-39100	5400	01-06-05	Permanent	Others
Mrs. Mamatha H. Melmalagi	5200-20200	2400	26-06-05	Permanent	Others
Mr. Marulasiddaiah N.M.	5200-20200	2000	01-06-05	Permanent	Others
Mr. Shivakumara S.	5200-20200	2000	01-06-05	Permanent	Others
Mr. Shivakumara B.	5200-20200	1800	01-06-05	Permanent	Others
Mr. Shivakumara S.E.	5200-20200	1800	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	5.0
5.	Others	0.5
	<b>Total</b>	<b>15</b>

## 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							
4.	Demonstration Units							
	1. Dairy	ICAR	04-01-2008	160	6.41			Completed
	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. Ornamental fish breeding unit	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
	10. Biogas unit	RF	2011	04	29920.00			Completed
	11. Fish cum paddy cultivation unit	ICAR	2011	1600	13071.00			Completed
5.	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

6.	Fencing	ICAR	31-03-2011	930 feet	11,0000-00		Completed
7.	Rain Water harvesting system					To be sanctioned	
8.	Threshing floor	ICAR	31-03-2011		2,00,000-00		Completed
9.	Farm Godown	ICAR				To be sanctioned	
10.	Portable Carp hatchery	ICAR	31-03-2011		2,25,000-00		Completed
11.	Bore wells (2 No.s)	ICAR	31-03-2011		3,00,000-00		Completed
12.	Irrigation system	ICAR	31-03-2011		1,00,000-00		Completed
13.	Borewell recharge unit	RF	01-06-2011		64,585-00		Completed

### B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Tractor and Trailer	2005	4,99,995/-	2275 hours	Good
Power tiller Funded by FLD cotton	2008	99400/-	--	Good
Power Tiller	2010	131500/-	--	Good
Tempo Cruiser	2005	4,99,250/-	1,29,972	Good
Hero Honda CD Deluxe	2006	39,298/-	41,332	Good
Yamaha Alba	2009	48,309/-	24,096	Good

### C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
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
Generator	2011	100000/-	Good

### 1.8. Details SAC meeting conducted in 2011-12

Sl. No.	Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
1.	29-04-2011	20	08	To encourage organic farming among farmers.	<p>Conducted workshop on 'organic native seed exchange fair' in which organically grown seeds (Agriculture crops, Horticulture crops) were exchanged by the farmers at free of cost (16-5-2011).</p> <p>Conducted 10 day training programme on 'Organic farming in Horticulture crops' to horticulture department officials (NPOF).</p> <p>KVK specialists delivered 6 guest lectures on organic farming on different occasions. Conducted workshop on 'Save native traditional paddy varieties' in collaboration with Sharana Muddana Savayava Krishikara Balaga, Kumbalore, where organically grown paddy seeds were distributed at free of cost. Preparation and usage of Dhashaparna, Jeevamrutha and bejambrutha was included in KVK trainings. Conducted workshop on "Organic milk production".</p>
				To develop format for collecting feed back from farmers after the training programme is over and to collect the farmers opinion.	Formats developed and feed back taken in 9 training programmes.
				To involve scientists from ARS, Kathalagere in KVK programmes	Scientist from ARS, Kathalagere are invited as resource persons in many KVK programmes like Agriculture Technology Week and workshops 'Paddy Seed Production', mechanization in paddy transplanting and also in important days of celebrations.

			<p>KVK should take lead role in solving pest and disease problems.</p>	<p>Last year KVK has conducted 3 FLD's on and 1 OFT on:</p> <ol style="list-style-type: none"> <li>1. Integrated pest and disease management in Arecanut.</li> <li>2. Snails management in Arecanut.</li> <li>3. Integrated pest management in bengalgram and OFT on management of storage pests in pulses.</li> </ol> <p>Conducted Awareness Campaign on 'Black Headed Caterpillar in Coconut' in collaboration with Coconut Development Board, Bangalore and Department of Horticulture, Davanagere.</p> <p>Diagnostic field visits are conducted to diaganise pest and disease problem along with Department of Horticulture and Agriculture.</p> <p>Guest lectures were given in field days organized by department of agriculture conducted workshop on betelvine pest and disease management .</p>
			<p>To conduct need based trainings.</p>	<p>Conducted trainings on Azolla and Vermicompost Production in Siddanur village under NICRA project. 4 Azolla unit and 4 vermicompost unit established.</p> <p>Conducted soil sampling training and soil test campaign in Siddanuru, Davanagere taluk.</p>
			<p>Suggested to popularize the technologies of state agriculture technologies.</p>	<p>KVK conducting FLD's on the technologies developed by University of Agricultural Sciences, Bengaluru and Dharwad along with other state and central government institutions.</p>
			<p>To conduct more number of entrepreneurship development programmes at village level for the benefit of women.</p>	<p>Conducted training on preparation of Agarabatti enterprise in Siddanur village.</p> <p>Trained 80 women SHGs in "Dairy and Vermicompost enterprises".</p>



			To develop different types of nurseries at KVK farm.	Shade home and polyhouse were established in KVK farm with financial assistance from Department of Biotechnology, New Delhi following seedlings were produced and sold to farmers. Drumstick (PKM-1) 2549 numbers, Curry leaf (local) 477 seedlings, Citrus (Jagalore local) 363 seedlings, Mango (Alphanso) 4000 no's and Arecanut (local) 3000 no's and sold to 222 farmers.
			To do more of publicity work for erythrina standards.	OFT on 'Gall wasp tolerant erythrina standards for betelvine' is continued for second year. Workshop conducted addressing the same problem under ATMA, 23 betelvine growers were participated, also conducted off campus training at Alur on 'Recent advances in production of betelvine' where in 30 growers were participated.
			Papaya mealy bug has affected mulberry plantation and SMS (plant protection) to solve this problem.	Personnel from Sericulture Department has taken technical advice and brought parasitoid from NBAIL, Bengaluru and released them in affected mulberry garden.
			KVK to plan for Flagship programme	Flagship programmes for our KVK is 'Enhancing production and productivity in horticulture crops- specially Banana and Arecanut'
			To upload district profile of Davanagere in KVK website	Davanagere district profile 2011 is prepared and uploaded to KVK website: <a href="http://www.taralabalukvyk.com">www.taralabalukvyk.com</a>
			Suggested to give advisory services based on soil test results.	Fertilizer application recommendations are made to all the farmers based on soil test report. In all 393 advisories were given in April-December 2011.

			<p>To Launch the NICRA project in a big way inviting politicians, SAC members, progressive farmers and public representatives.</p>	<p>NICRA project was launched on 20<sup>th</sup> May 2011 by His Holiness Dr. Shivamurthi Shivacharya Mahaswamiji inaugurated the office at Siddanur, Davanagere taluk. Member of Parliament Sri. G.M. Siddeshwara, Zilla Panchayth, Taluk Panchayath and Gram Panchayath elected representatives were present. SAC members, and Progressive farmers from neighbouring villages were present.</p>
			<p>Suggested to carryout NICRA works more systematically and generate good data on scientific lines.</p>	<p>Works under NICRA projects were carried out in systematic way, data related to weather (Temperature, wind speed, rain gauge, open pan evaporimeter), Implements usage data, works of natural resource management, Data related to nursery and sericulture entrepreneurship are recorded in systematic way.</p>
			<p>To visit Hirehalli KVK to collect ideas related to NICRA.</p>	<p>Visited KVK Tumkur along with 40 farmers from Siddanur village to see the activities under NICRA.</p>
			<p>To give prestige, profit and partnership to farmers.</p>	<p>New KVK name board has been installed in administrative building depicting prestige, profit and partnership to farmers.</p>
			<p>Suggested to give more importance to mechanization in Agriculture and to provide more information through custom hiring centre</p>	<p>Under NICRA, seed cum fertilizer drill, post hole digger, bund farmer, weed cutter, chain pully, water lifting pump and others are provided to Siddanuru farmers through custom hiring centre. 6 paddy transplanting machines were provided by Department of Agriculture and 600 acres has been transplanted and KVK specialists participated as resource persons. Cycle weeders, Groundnut Strippers and Weeders ( 2 each) were demonstration to farmers of SHGs. Under DBT project and same has been displayed and demonstrated in KVK.</p>

			Suggested to purchase coconut climber from Coimbatore KVK and popularize among farmers.	Demonstrated to farmers
			Suggested to prepare and attach village coverage map to KVK website	KVK village coverage map prepared for the year 2005 to 2010 and attached to KVK website.
			KVK to concentrate an seed production / planting material production in big way.	<p>KVK has produced and distributed the following seeds / planting materials (April -2011 to December – 2011) to the farmers.</p> <ol style="list-style-type: none"> <li>1. Paddy (Nellur Sona)- 30 kg</li> <li>2. Redgram (BRG-1) – 80 kg</li> <li>3. Bhendi (Arka anamika) – 92 kg</li> <li>4. Cowpea (C- 152)-30 kg</li> <li>5. Castor- 30 kg</li> <li>6. Drumstick (PKM-1)- 1670 no.s</li> <li>7. Curry leaf- 328 no.s</li> <li>8. Mango (Alphonso)- 1808 no.s</li> <li>9. Papaya – 8 no.s</li> <li>10. Jack fruit- 16 no.s</li> <li>11. Lemon – 860 no.s</li> <li>12. Arecanut (Thirthahalli local)- 3245 no.s</li> <li>13. Sapota- 58 no.s</li> <li>14. Azolla- 35.5 kg</li> <li>15. Ornamental fishes- 9489 no.s</li> <li>16. Ornamental palm – 24 no.s</li> <li>17. DHN-6 / Co-3- 1,28,200 no.s</li> <li>18. Napier- 9500 no.s</li> </ol>
			Suggested to use drudgery reducing equipments like fodder cutting and milking machine in animal science activity	Power operated fodder cutting machine and single cow milking machine were purchased with the financial assistance from Department of Bio-technology, New Delhi and are used for demonstration purpose.

			Suggested to establish slatted stall feeding in sheep / goat production	Established with suvara rams from Maharashtra.
			Suggested to use Area Specific Mineral Mixture (ASMM) in repeat breeders.	Area Specific Mineral Mixture is distributed among farmers in the FLD programmes conducted. Also farm advisory services given to farmers in this regard.
			A cow with 10 cents area of fodder area concept should be implemented	Napier (DHN-6) and Guinea Grasses were Promoted with morethan 100 farmers
			Suggested to implement portable carp hatchery in KVK	Portable carp hatchery was inaugurated on 21-02-2012 by Dr. S. Ayyappan, Director General, ICAR, New Delhi.

## PART II - DETAILS OF DISTRICT

### 2.1 Major farming systems/enterprises

Sl. No	Farming system
1	<b>Rainfed system:</b> Maize, Maize+Redgram, Ragi, Ragi+Horsegram, Greengram-Ragi, Minor millets, Jowar, Bengalgram , Redgram, Groundnut, Sunflower, Cotton, Mango.
2	<b>Irrigation</b> (33%) : Rice- Rice, Sugarcane, Arecanut, Banana, Coconut, Papaya, Vegetable crops, Fodder crops.
3	<b>Enterprises:</b> Poultry, Dairy, Sheep/ Goat rearing, Fisheries, Vegetable nursery, Nursery
4	<b>Cropping intensity:</b> 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 censuses, 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 normal rainfall of the district is 656.9 mm (Actual 528.8 mm 2011),. 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

S. No	Agro-climatic Zone	Characteristics
1	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.
2	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.
3	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
1	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 ( 2010-11)**

S. No	Crop	Area (ha)	Production (Metric tons)	Productivity (kg /ha)
1	Rice	66595	225372	3384
2	Jowar	12451	26357	2117
3	Ragi	10968	14775	1347
4	Maize	179190	517830	2890
5	Bajra	540	480	888
6	M.Millets	163	130	800
<b>I</b>	<b>Total Cereals:</b>	<b>269907</b>	<b>784945</b>	<b>2908</b>
1	Tur	10292	9604	<b>933</b>
2	Horsegram	8	5	<b>687</b>
3	Blackgram	44	28	<b>625</b>
4	Greengram	1425	275	<b>193</b>
5	Cowpea & other	434	216	<b>498</b>
6	Avare	787	483	<b>614</b>
<b>II</b>	<b>Total Pulses:</b>	<b>12990</b>	<b>10611</b>	<b>817</b>
	<b>Total Foodgrains:</b>	<b>282897</b>	<b>795556</b>	<b>2812</b>
1	Groundnut	15299	16691	1091
2	Sesamum	200	227	1137
3	Sunflower	705	472	670
4	Castor	401	337	840
5	Niger	360	109	304
6	Mustard	135	41	304
<b>III</b>	<b>Total Oilseeds:</b>	<b>17100</b>	<b>17878</b>	<b>1046</b>
<b>IV</b>	<b>Commercial Crops:</b>			
1	Cotton	24196	41372	291
2	Sugarcane Planted	3994	0	0
2a	Sugarcane Ratoon	2763	0	0
3	Tobacco (VFC)	320	190	593
3a	Tobacco (Beedi)	0	0	0
		<b>31273</b>	<b>41561</b>	<b>883</b>
	<b>GRAND TOTAL</b>	<b>331270</b>	<b>854996</b>	<b>4741</b>

(Source: Department of Agriculture, Davanagere. 2010-11 )



**b). Horticultural Crops (2010-11)**

<b>S. No</b>	<b>Crop</b>	<b>Area (ha)</b>	<b>Production (Metric tons)</b>	<b>Productivity (t /ha)</b>
1	Mango	3286.00	31303.76	9.53
2	Banana	3200.69	84731.13	26.47
3	Lemon	107.31	1336.85	12.46
4	Sapota	830.23	7875.01	9.49
5	Tomato	2956.9	85430.7	28.89
6	Brinjal	243.81	6232	25.56
7	Beans	211.03	1782.6	8.45
8	Onion	4974.6	68532.9	13.78
9	Chilli	1051.51	18180.58	17.29
10	Bendi	251.00	1779.00	7.09
11	Cabbage	51.70	1411.00	27.29
12	Radish	88.50	980.00	11.07
13	Beetroot	9.80	45.00	948.00
14	Drumstick	11.27	44.03	300.09
15	Watermelon	314.00	7976.0	25.40
16	Bitterguard	54.50	423.50	7.77
17	Ridge guard	90.75	721.63	7.95
18	Cucumber	172.51	2588.50	15.00
19	Coconut	12949.8	883.71	0.0682
20	Arecanut	30022.00	66712.80	2.22
21	Betelvine	956.25	4459.4	4.66
22	Oil palm	774.40	5209.06	6.73
23	Rose	82.90	168.21	2.03

(Source: Department of Horticulture: 2010-11)

## 2.5. Weather data ( 2011)

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)		
		Mean Maximum ° C	Mean Minimum ° C	Morning	Afternoon	
	Normal	Actual	Actual	Actual		
January-2011	0.0	1.9	27.70	12.49	83.98	88.50
February -2011	0.1	1.3	29.12	13.99	87.25	87.07
March- 2011	0.8	4.1	30.16	19.26	90.89	94.91
April-2011	48.3	38.8	30.36	22.41	89.76	94.44
May-2011	73.8	84.2	31.47	23.10	88.59	91.93
Jun-2011	82.4	68.0	29.17	24.34	88.04	88.99
July-2011	70.3	98.1	29.25	23.14	89.94	92.10
August-2011	86.2	79.5	29.00	22.86	89.12	93.42
Septmber-2011	53.9	114.5	29.23	22.30	92.72	90.11
October-2011	102.5	119.3	--	--	--	--
November-2011	10.4	40.4	--	--	--	--
December-2011	0.3	7.0	--	--	--	--
<b>Total</b>	<b>529</b>	<b>656.9</b>				

\* Source : Department of Agriculture, Davanagere -2011.

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

Category	Population	Productivity
<b>Cattle</b>		
<i>Crossbred</i>	292231	5-6 ltr/ day
<i>Indigenous</i>	57139	
<b>Buffalo</b>		
<i>Crossbred</i>	120	
<i>Indigenous</i>	204789	
<b>Pigs</b>		
<i>Crossbred</i>	3100	
<b>Rabbits</b>	102	
<b>Category</b>	<b>Population</b>	<b>Production(tons)</b>
<b>Poultry</b>		
Hens	1520389	
<b>Fish</b>		
<i>Inland</i>	10098	16000
		1.5 t/ha

(Source: Department of statistics, Davanagere)

2.7 District profile of 2011-12 has been updated and uploaded to KVK website

2.8 Details of operational Area/Villages

Sl. No.	Taluk	Blocks	Name of the villages	If existing How long the village is covered under operation area of the KVK from which year	Major crops and enterprises	Major problems identified	Identified thrust areas
1	Davanagere Harapanahalli	Anagodu	Siddanur Kurki Anjigere	2 year (2009) 6 year (2005) 6 year (2005)	Maize	<ul style="list-style-type: none"> <li>Poor fertilizer management with respect to potash</li> <li>Stem borer and downey mildew</li> <li>No micronutrient application (ZNSO<sub>4</sub>)</li> <li>Weed manace</li> </ul>	<ul style="list-style-type: none"> <li>INM</li> <li>ICM</li> <li>Resistant hybrid</li> </ul>
2	Channagiri Davanagere	Santhebennur	Bomenahalli Garaga Siddanur	3 year (2008) 4year (2007) 2 year (2009)	Ragi	<ul style="list-style-type: none"> <li>Low yield</li> <li>Use of locally available seeds</li> <li>No intercropping system</li> <li>No seed treatment with biofertilizers</li> </ul>	<ul style="list-style-type: none"> <li>ICM</li> <li>Higher production and productivity</li> </ul>
3	Harpanahalli	Harapanahalli	Mydur Budihal Anajigere	5 year (2006) 6 year (2005) 6 year (2005)	Navane Groundnut Sunflower	<ul style="list-style-type: none"> <li>Poor quantity local seeds and low yield</li> <li>No micronutrient applications</li> <li>No seed treatment with bio fertilizers</li> </ul>	ICM
4	Harapanahalli Davanagere Honnali	Taraganahalli	Hoskate Taraganahalli	2 year (2009) 2 year (2009)	Cotton	<ul style="list-style-type: none"> <li>Improper spacing and higher seed rate</li> <li>Leaf reddening and square drying</li> <li>No micro and macro nutrients sprays used</li> <li>No INM</li> </ul>	ICM

5	Davanagere	Anagodu	Siddanur, Igur, Chikkanahalli, Kempnanahalli etc Kandagal, Dhyamanahalli, RG Halli, Thogaleri	2 year (2009) 4 year (2007) 4 year (2007) 1 year (2010) 5 year (2006) 5 year (2006) 5 year (2006) 1 year (2010)	Crossbred cattle, sheep, goat and poultry birds rearing  Crossbred cows	<ul style="list-style-type: none"> <li>• Lower milk production, Infertility problem</li> <li>• Infertility and lower production</li> </ul>	Feeding  Feeding
6	Davanagere	Davanagere	Belavanur Kakkaragolla	3 years (2008) 3 years (2008)	Paddy	<ul style="list-style-type: none"> <li>• Blast</li> </ul>	IDM
7	Davanagere	Anagodu	Kodaganur Nerlige	1 years (2010) 1 years (2010)	Tomato	<ul style="list-style-type: none"> <li>• Early and late blight</li> </ul>	IDM
8	Channagiri	Basavapattana	Daginakatte Harosagere Basavapatna Belliganudu	2 years (2009) 2 years (2009) 2 years (2009) 2 years (2009)	Arecanut	<ul style="list-style-type: none"> <li>• Hidimundige</li> <li>• Snail</li> </ul>	IDM IDM
9	Harihara	Malebennur	Anagavadi Shamjhipura	5 year (2006) 5 year (2006)	Arecanut	<ul style="list-style-type: none"> <li>• Inflorescence drying and Inflorescence caterpillar</li> </ul>	IPDM
10	Davanagere	Davanagere	Siddanuru	2 year (2009)	Redgram	<ul style="list-style-type: none"> <li>• No seed treatment</li> <li>• Pod borer and wilt</li> <li>• Use local variety</li> </ul>	ICM

**2.9 Priority thrust areas**

<b>S. No</b>	<b>Identified problems</b>
1.	Integrated crop management in Rice, Maize, Ragi, Redgram, Sunflower, Cotton, Bengalgram, Tomato, French bean, Banana
2.	Intercropping in Arecanut
3.	Integrated pest and disease management in Arecanut, Coconut, Betelvine
4.	Fish polyculture
5.	Animal nutrition, Clean milk production, Balanced feeding in sheep and High yielding fodder varieties
6.	Mechanization

**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>
05	05	35	35	21	21	286	286

<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>
155	73	2870	2378	169	219	2100	2367

<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>
10.00	7.55	57000	128200

<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>
8000 (liter milk)	6494 liters	2000 (Trichoderma)	240
--	9489 (Ornamental fishes)		



5	Integrated pest and disease management	Bengalgram	Incidence of wilt and pod borer		Integrated management of wilt and pod borer in Bengalgram	02	-	-	11	-	-	-	Trichoderma	37
6	Low yield	Redgram	Use of local varieties, pest and disease problem, improper nutrient management		Integrated crop management in redgram	01	-	-	08	-	-	-	-	-
7	Low yield Pest and disease	Sunflower	Incidence of caterpillar and powdery mildew		Integrated crop management in sunflower									
8	ICM in Cotton	Cotton	Incidence of sucking pests, square and boll drops. No micronutrient application		Integrate crop management in cotton	07	-	-	24	-	-	-	-	-
9	Pest problem and improper nutrient management	Tomato	Imbalanced nutrition had lowered the production and productivity.		Integrated crop management in tomato	03	-	-	04	-	-	-	PSB VAM	1 1
10	Popularization of HYV	French bean	Lower productivity due to use of traditional local varieties		Popularization of HYV Arka Suvidha in French bean	01	-	-	06	0.65	-	--	-	-



11	Inter cropping in arecanut	Velvet beans	Weed problem, moisture conservation and fertility management in arecanut	Assessment of velvet beans as intercropping in Arecanut	-									-	-
12	Micronutrient management	Banana	Lower bunch weigh due to deficiency of micronutrient	-	Use of banana special to increase the bunch weight in banana	04	-	-	13	-	-	-	-	-	-
13	Integrated pest management	Mango	Leaf hopper and fruit fly incidence	-	Integrated management of leaf hopper and fruit fly in mango	02	-	-	10	-	-	-	-	-	-
14	Integrated nutrient management	Mango	Imbalanced nutrition lowered the production and productivity	-	Micronutrient management in mango through foliar application of mango special	-	-	-	04	-	-	-	-	-	-
15	Integrated pest management	Arecanut	Hidimundige incidence	-	Integrated management of hidimundige in arecanut	01	-	-	10	-	-	-	Trichoderma	40	
16	Integrated pest management	Arecanut	Snail incidence	-	Integrated management of snails in arecanut	01	-	-	09	-	-	-	-	-	-
17	Clean milk production	Dairy animals	Unhygienic and low quality milk production	-	Production of clean and quality milk	01	-	-	-	-	-	-	-	-	-
18	Animal nutrition	Sheep	Lower body weight gain	-	Balanced feeding in sheep (Stall feeding method)	-	-	01	-	-	-	30	-	-	-

19	Fodder scarcity	Fodder	Scarcity of good quality of fodder	-	Production of DHN-6 fodder for better yield and performance	01	-	01	01	-	1.5 Lakhs root slips	-	-	-
			Low quality feeding stuffs	-	Enrichment of low quality feeding stuffs i.e. NPN substances	01	-	-	02	-	-	-	-	-
20	Clean milk production	Dairy animals	Unhygienic milk	-	Improved health inturn enhanced milk production through use of cow mats	01	-	-	01	-	-	-	-	-
21	Polyculture of fish	Fisheries	Pond aquaculture production is low in the district and no scientific approach is in practice	-	Polyculture of carps and <i>pangasius</i> sp in inland ponds.	04	-	-	17	-	-	-	-	-
22	Scarcity of fish seeds	Fisheries	Non availability of quality fish fingerlings	-	Production of advanced fish fingerlings of <i>Catla catla</i> in earthen ponds	04	-	-	08	-	-	-	-	-

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

#### 1. Rice

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others								
1.	2	3	4	5	6	7	8								
1	Integrated crop management in rice	UAS, B	Rice	-	01	04	1. Method demonstration 2. Field day 3. Paper coverage								
<b>No. of farmers covered</b>															
				<b>OFT</b>		<b>FLD</b>		<b>Training</b>		<b>Others</b>					
<b>General</b>		<b>SC/ST</b>		<b>General</b>		<b>SC/ST</b>		<b>General</b>		<b>SC/ST</b>		<b>General</b>		<b>SC/ST</b>	
<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>
<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
-	-	-	-	30	02	03	-	93	-	04	-	-	-	-	-

#### 2. Maize

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others (Tv programmes)								
1.	2	3	4	5	6	7	8								
2	Integrated crop management in maize	UAS, B	Maize	-	01	-	04								
<b>No. of farmers covered</b>															
				<b>OFT</b>		<b>FLD</b>		<b>Training</b>		<b>Others</b>					
<b>General</b>		<b>SC/ST</b>		<b>General</b>		<b>SC/ST</b>		<b>General</b>		<b>SC/ST</b>		<b>General</b>		<b>SC/ST</b>	
<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>
<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
-	-	-	-	06	01	15	06	25	-	57	06	-	-	-	-

## 3. Maize

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted											
				OFT	FLD	Training	Others – (TV programme)								
1.	2	3	4	5	6	7	8								
3.	Weed management in hybrid maize	UAS, B	Maize	01	-	02	01								
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
07	-	03	-	-	-	-	-	12	-	20	-	-	-	-	-

## 4. Ragi

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted			
				OFT	FLD	Training	Others (TV programmes)
1	2	3	4	5	6	7	8
4.	Integrated crop management in ragi	UAS, B	Ragi	-	01	04	01

No. of farmers covered															
OFT				FLD				Training				Others			
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
-	-	-	-	10	02	19	02	22	01	25	03	-	-	-	-

## 5. Redgram

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted			
				OFT	FLD	Training	Others
1	2	3	4	5	6	7	8
5.	Integrated crop management in Redgram	UAS, B	Redgram	-	01	01	1. Method demonstration - 03 2. Field visits - 04

## No. of farmers covered

OFT		FLD				Training				Others					
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
-	-	-	-	08	-	02	-	08	-	02	-	-	-	-	-

## 6. Bengalgram

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted			
				OFT	FLD	Training	Others
1	2	3	4	5	6	7	8
6.	Integrated pest and disease management in Bengalgram	UAS, B	Bengalgram	-	01	02	Folder on 'Integrated management of pod borer in bengalgram'

## No. of farmers covered

OFT		FLD				Training				Others					
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
-	-	-	-	04	-	06	-	08	-	12	-				

## 7. Sunflower

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted			
				OFT	FLD	Training	Others
1	2	3	4	5	6	7	8
7	Integrated crop management in sunflower	UAS, B	Sunflower		01	-	-

## No. of farmers covered

OFT				FLD				Training				Others			
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
-	-	-	-												

## 8. Cotton

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted			
				OFT	FLD	Training	Others
1	2	3	4	5	6	7	8
8	Integrated crop management in Cotton	UAS, B	Cotton	-	01	07	24

## No. of farmers covered

OFT				FLD				Training				Others			
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
-	-	-	-	22	01	19	02	92	17	78	15	-	-	-	-

## 9. Tomato

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others								
1.	2	3	4	5	6	7	8								
9.	Integrated crop management in tomato	UAS (B)	Tomato	-	01	03	Group discussion – 01 Newspaper coverage - 03								
No. of farmers covered															
OFT				FLD				Training				Others			
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
-	-	-	-	-	-	08	02	-	-	34	04	-	-	-	-

## 10. French bean

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others								
1.	2	3	4	5	6	7	8								
10.	Popularization of HYV Arka Suvridha in French bean	IIHR, Bengaluru	French bean	-	01	01	Group discussion-1 Field visits- 4 Field day-1 Paper coverage- 2 TV programme-1								
No. of farmers covered															
OFT				FLD				Training				Others			
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	0	03	0	13	00	03	00	40	00	06	00

## 11. Velvet beans

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others								
1.	2	3	4	5	6	7	8								
11.	Assessment of velvet beans as intercropping in Arecanut	IIHR, Bengaluru	Velvet beans	01	-										
<b>No. of farmers covered</b>															
OFT				FLD				Training				Others			
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. Banana

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others (Tv/paper/radio)								
1.	2	3	4	5	6	7	8								
12.	Use of Banana special to increase the bunch weight in banana	IIHR, Bengaluru	Banana	-	01	04	03								
<b>No. of farmers covered</b>															
OFT				FLD				Training				Others			
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
				04	01	05	-	35	-	15	-	-	-	-	-



## 13. Arecanut

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others								
1.	2	3	4	5	6	7	8								
13.	Integrated management of hidimundige in arecanut	UAS(B)	Arecanut	-	01	01	-								
No. of farmers covered															
OFT				FLD				Training				Others			
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
-	-	-	-	07	-	03	-	08	-	04	-	-	-	-	-

## 14. Arecanut

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others								
1.	2	3	4	5	6	7	8								
14.	Integrated management of snails in arecanut	UAS(B)	Arecanut	-	01	01	-								
No. of farmers covered															
OFT				FLD				Training				Others			
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
-	-	-	-	04	-	06	-	06	-	08	-	-	-	-	-

**15. Mango**

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others								
1.	2	3	4	5	6	7	8								
15.	Micronutrient management in mango thorough foliar application of mango special	IIHR (B)	Mango	-	01	-	04 (Group discussion & Field visits)								
<b>No. of farmers covered</b>															
OFT				FLD				Training				Others (Group discussion)			
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
-	-	-	-	06	-	-	-	-	-	-	-	10	-	-	-

**16. Mango**

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others								
1.	2	3	4	5	6	7	8								
16.	Integrated management of leafhopper and fruitfly in mango	UAS(B)	Mango	-	01	02	-								
<b>No. of farmers covered</b>															
OFT				FLD				Training				Others			
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
-	-	-	-	02	-	03	-	05	-	08	-	-	-	-	-

## 17. Dairy

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others								
1.	2	3	4	5	6	7	8								
17.	Use of balanced cattle feed, ASMM & Saaf kit	NIANP, (B) & NDDB (Gujarath)	Cattle	-	05	01	-								
<b>No. of farmers covered</b>															
<b>OFT</b>				<b>FLD</b>				<b>Training</b>				<b>Others</b>			
<b>General</b>		<b>SC/ST</b>		<b>General</b>		<b>SC/ST</b>		<b>General</b>		<b>SC/ST</b>		<b>General</b>		<b>SC/ST</b>	
<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>
<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
-	-	-	-	04	01	-	-	20	02	07	01	-	-	-	-

## 18. Fodder

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others								
1.	2	3	4	5	6	7	8								
18.	Production of DHN-6 fodder crop for better yield and performance	IGFRI (Dharwad)	Fodder	-	05	02	-								
<b>No. of farmers covered</b>															
<b>OFT</b>				<b>FLD</b>				<b>Training</b>				<b>Others</b>			
<b>General</b>		<b>SC/ST</b>		<b>General</b>		<b>SC/ST</b>		<b>General</b>		<b>SC/ST</b>		<b>General</b>		<b>SC/ST</b>	
<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>
<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
-	-	-	-	04	-	-	01	15	05	01	04	-	-	-	-

## 19. Sheep

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others								
1.	2	3	4	5	6	7	8								
19	Balanced feeding in sheep	KVAFSU, Bidar	Sheep	-	05	01	-								
No. of farmers covered															
OFT				FLD				Training				Others			
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	-	-	-	27	-	-	-	-	-	-	-

## 20. Dry fodder

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others								
1.	2	3	4	5	6	7	8								
20.	Enrichment of low quality feeding stuffs	KVAFSU, Bidar	Dry fodder	-	10	01	-								
No. of farmers covered															
OFT				FLD				Training				Others			
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
-	-	-	-	04	01	-	-	19	01	-	-	-	-	-	-

## 21. Dairy animals

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others								
1.	2	3	4	5	6	7	8								
21.	Use of rubber mats for dairy animals	KVAFSU, Bidar	Dairy animals	-	02	01	-								
No. of farmers covered															
OFT				FLD				Training				Others			
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
-	-	-	-	01	01	-	-	15	05	-	-	-	-	-	-

## 22. Fisheries

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others								
1.	2	3	4	5	6	7	8								
22.	Polyculture of carps and <i>pangasius sp.</i> In inland ponds	UAS, Bengaluru	Fisheries	-	01	04	Guest lecture- 1 Exposure visit – 1 Radio talk – 1 TV programmes – 4 Workshops -1 Field Day-1								
No. of farmers covered															
OFT				FLD				Training				Others			
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	-	02	-	22	-	08	-	-	-	-	-

## 23. Fisheries

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted											
				OFT	FLD	Training	Others								
1.	2	3	4	5	6	7	8								
23.	Production of advanced fish fingerlings of <i>Catla catla</i> in earthen ponds	UAS, Bengaluru	Fisheries	-	01	04	Broucher on 'Fish is everybody's food'								
<b>No. of farmers covered</b>															
<b>OFT</b>				<b>FLD</b>				<b>Training</b>				<b>Others (National Fish Farmers Day)</b>			
<b>General</b>		<b>SC/ST</b>		<b>General</b>		<b>SC/ST</b>		<b>General</b>		<b>SC/ST</b>		<b>General</b>		<b>SC/ST</b>	
<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>
<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
-	-	-	-	02	-	-	-	18	-	04	-	30	12	15	09

### PART IV - On Farm Trial

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

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management								01		01
Weed Management	01									01
<b>Total</b>	<b>01</b>							<b>01</b>		<b>02</b>

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

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

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

#### 4.B. Achievements on technologies Assessed and Refined: Nil

##### 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
Intercropping	Velvet benas	Assessment of velvet beans as intercropping in Arecanut	10	10	1.2
Weed management	Maize	Weed management in hybrid maize	10	10	1.0
<b>Total</b>			<b>20</b>	<b>20</b>	<b>2.2</b>

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

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

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

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

##### Results of On Farm Trial

##### 1. 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>Weed menace</li> <li>No integrated approach for weed management</li> <li>Low yield</li> </ul>	Weed management in hybrid maize	10	<b>Farmers practice:</b> Hand weeding and inter cultivation operations	<ul style="list-style-type: none"> <li>Plant height</li> <li>No of rows/cob</li> <li>Total no. of weeds / m<sup>2</sup></li> <li>Yield q/ha</li> </ul>	164.3 cm 12.2 34.15 (30 DAS) 78.6 (60 DAS) 42.4	Application of pre-emergent weedicide atrazine @ 1.25 kg a.i. / ha. At 0-3 DAS and spraying of 2, 4 D sodium salt 80 WP @ 0.5 kg a.i. / ha at 30 DAS had reduced the weeds	Farmers experienced that application 2-4-D is better after 30 DAS to reduce the weed problem if there is heavy rains after 20 DAS.	-	-
					<b>Technology option: 2</b> Pre-emergent application of atrazine – 50 WP 0-3 DAS (2.5 kg/ha)	<ul style="list-style-type: none"> <li>Plant height</li> <li>No of rows/cob</li> <li>Total no. of weeds / m<sup>2</sup></li> <li>Yield q/ha</li> </ul>	170.4 cm 13.8 22.46 (30 DAS) 69.83 (60 DAS) 45.8				



					<b>Technology option: 3</b> Pre-emergent application of atrazine 50 WP@a.i. kg/ha ( 0-3 DAS) & post – emergent application of 2, 4 D sodium salt 80 WP @ 0.5 a.i. / ha (30 DAS)	<ul style="list-style-type: none"> <li>• Plant height 171.2</li> <li>• No of rows/cob 14.5</li> <li>• Total no. of weeds / m<sup>2</sup> 22.4 ( 30 DAS) 38.0 (60 DAS)</li> <li>• Yield q/ha 46.2</li> </ul>				
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Contd..

Technology Assessed	Source of Technology	Production (q/ha.)	Please give the unit (kg/ha, q/ha, lit/day/ animal)	Net Return (Profit) in Rs./ha	BC Ratio
13	14	15	16	17	
<b>Technology option 1 (Farmer's practice):</b> Hand weeding and inter cultivation operations	Farmer's practice	42.4	q/ha	26,520-00	2.47
<b>Technology option -2:</b> Pre-emergent application of atrazine – 50 WP 0-3 DAS (2.5 kg/ha)	UAS, Bangalore	45.8	q/ha	29,590-00	2.59
<b>Technology option -3:</b> Pre-emergent application of atrazine 50 WP@a.i. kg/ha ( 0-3 DAS) & post –emergent application of 2, 4 D sodium salt 80 WP @ 0.5 a.i. / ha (30 DAS)	UAS, Bangalore	46.2	q/ha	29,710-00	2.59

Maize: Rs. 1050-00/ qt.

## 2. Velvet beans

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
Velvet beans	Rainfed	Weed problem, Moisture conservation and fertility management	Assessment of velvet beans as intercropping in arecanut	10	<b>Farmers Practice</b>	No. of pods per plant	-	Velvet beans 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 100 acres.	-	-
						Yield qt/ha	-				
					<b>Technology Option-1</b> Arecanut + Cowpea	No. of pods per plant	15.5				
						Yield (q/ha)	4.5				
					<b>Technology Option-2</b> Arecanut + Velvet beans	No. of pods per plant	39.7				
						Yield (q/ha)	6.4				

Contd..

Technology Assessed	Source of Technology	Production (q/ha.)	Please give the unit (kg/ha, q/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	4.5	q /ha.	10500-00	2.4
Technology option 3	IIHR, Bengaluru	6.6	q /ha.	28450-00	4.5

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

##### 1. Maize:

- 1 **Title of Technology Assessed:** Weed management in hybrid maize
- 2 **Problem Definition :** Maize is a important crop of the district and yield levels are low due to improper weed management. Weed severity is observed in maize after 20 DAS, under heavy rains. So weed is a major problem

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

**Technology Option- 1:** Hand weeding and inter cultivation operations  
**Farmers practice**

**Technology Option-2:** Pre- emergent application of atrazine – 50 WP 0-3 DAS (2.5 kg/ha)

**Technology Option-3:** Pre- emergent application of atrazine 50 WP@a.i. kg/ha ( 0-3 DAS) & post –emergent application of 2, 4 D sodium salt 80 WP @ 0.5 a.i. / ha (30 DAS)

4 **Source of technology:**

**Technology Option- 1:** Farmers practice

**Technology Option-2:** UAS, Bengaluru

**Technology Option-3:** UAS, Bengaluru

5 **Production system and thematic area:** Rainfed and weed management

6 **Performance of the Technology with performance indicators:**

	<b>Technology Option-1</b>	<b>Technology Option-2</b>	<b>Technology Option-3</b>
Plant height (cm)	164.3	170.4	171.2
No. of rows/cob	12.2	13.8	14.5
Total No. of weeds/mt <sup>2</sup> (30 DAS)	34.15	22.46	22.40
Total No. of weeds/mt <sup>2</sup> (60 DAS)	78.6	69.83	38.0
Yield (q/ha)	42.4	45.8	46.2

7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: -**

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

9 **Constraints identified and feedback for research:** Nil

10 **Process of farmers participation and their reaction:** Good and farmers are aware of this technology but they are using heavy dosage.

## 2. Velvet beans:

- 1 **Title of Technology Assessed:** Assessment of velvet benas 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 + Velvet benas
- 4 **Source of technology:**
  - Technology Option- 1:** -
  - Farmers practice**
  - Technology Option-2:** UAS, Bengaluru
  - Technology Option-3:** IIHR, Bengaluru
- 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:** Velvet benas is the better intercrop for the arecanut crop. Velvet beans reduced the incidence of weed infestation and conserved the moisture to a greater extent. A large quantity of foliage fallen will also increased the soil fertility.
- 9 **Constraints identified and feedback for research:** Velvet beans is spreading and climbing one. It will climb the arecanut tree. In matured trees harvesting may become problematic. Since, velvet beans is spreading 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.

4.D.1. Results of technologies refined – Nil

4.D.2. Details of each onfarm trail for refinement - Nil

**PART V-FRONTLINE DEMONSTRATIONS****5.A. Summary of FLDs implemented during 2011-12**

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
1.	Oilseeds	Rainfed	Rabi/Summer	Sunflower	-	KBSH-53	Integrated crop management	Integrated crop management practices	05	02	-	05	05	demonstration vitiated due to poor and no germination of seed and same has been informed to authority, UAS (B) and suggested to bring back the seeds
2.	Pulses	Rainfed	Kharif- 2011	Redgram	BRG-2	-	Integrated crop management	Integrated crop management in redgram	05	05	02	08	10	-
		Rainfed	Rabi – 2011-12	Bengalgram	A-1	-	Integrated pest and disease management	Integrated management of pod borers and wilt in bengalgram	05	05	08	04	12	-

3.	Cereals	Irrigated	Khariif- 2011	Rice	JJL, Jayashree	-	Integrated pest and nutrient management	Integrated crop management in rice	15	15	03	32	35	-
		Rainfed	Khariif-2011	Maize		NAH- 2049 NAH- 1137	Integrated crop management	Integrated crop management in hybrid maize	20	20	28	12	40	
4.	Millets	Rainfed	Khariif-2011	Ragi	KMR-301 MR- 6 GPU-28		Integrated crop management	Integrated crop management in ragi	20	20	28	12	40	
5.	Vegetables	Rainfed	Khariif- 2011	French bean	Arka Suvudha	-	Popularization of HYV	HYV Arka Suvudha	01	02	03	12	15	-
6	Commercial	Rainfed	Khariif- 2011	Cotton		MRC- 7918	Integrated crop management	Integrated crop management	20	22.5	23	32	55	-
7	Plantation crops	Irrigated	Khariif – 2011	Arecanut	Thirathahalli local	-	Integrated disease management	Integrated management of hidimundige in arecanut	02	02	03	07	10	-
		Irrigated	Khariif – 2011	Arecanut	Thirathahalli local	-	Integrated pest management	Integrated management of snail in arecanut	05	05	06	04	10	-
8	Fruits	Rainfed	Rabi-2010- 11	Mango	-	Alphanso	Integrated pest management	Integrated management of leaf hopper and fruit fly in mango	02	02	03	02	05	-
		Rainfed	Rabi 2010-11	Mango	-	Alphanso	Integrated nutrient management	Foliar application of mango special	04	2.4	-	06	06	-
		Irrigated	Rabi-2011	Banana	Grandnaine	-	Low bunch weigh in banana	Use of banana special to increase the bunch weigh in banana	04	04	02	08	10	-

9.	Dairy	Semi interior rearing	2011	Cattle	HFX	-	Clean milk production	Production of clean and quality milk from dairy animals	05 units	05 units	-	05	05	-
10	Fodder	Irrigated	Kharif-2011	Fodder	DHN-6 (Sampoorna)	-	Good quality fodder produciton	Production of DHN-6 fodder crop for better yield and performance	05	05	01	04	05	-
11	Sheep	Stall feeding	2012	Sheep	Bellary X	-	Conservation of energy for meat production	Balanced feeding of sheep in stall method	05	05	01	04	05	-
12	Fodder	-	2011	Cattle	Local	-	Enrichment of straw	Enrichment of low quality feeding stuffs with NPN substances	10	10	-	10	10	-
13	Dairy	Semi interior rearing system	2011	Milch cows	HFX	-	Hygienic management of cattle	Use of rubber mats in dairy cattle	02	02	-	02	02	-
14.	Common carps	-	Rabi-2010-11	Fisheries	<i>Carps and Pangasius sp.</i>	-	Polyculture of fish	Polyculture of carps and <i>pangasius sp.</i> In inland ponds	0.58	0.58	02	05	07	-
15	Fisheries	-	Kharif 2011-12	Fisheries	<i>Catla catla</i>	-	Scarcity of quality fish fingerlings	Production of advanced fish fingerlings of <i>Catla catla</i> in earthen ponds	0.16	0.16	-	02	02	-

## 5.A.1. Soil fertility status of FLDs plots during 2011-12

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
1.	Cereals	Irrigated	Kharif – 2011	Rice	JJL, Jayashree	-	Integrated pest and nutrient management	Integrated crop management in rice	Kharif – 2011	L	M	M	Rice
		Rainfed	Kharif-2011	Maize	BRG-2	HAH-1137 NAH-2049	Integrated crop and nutrient management	Integrated crop management and intercropping	Kharif – 2011	L	M	M	Maize
2.	Millets	Rainfed	Kharif-2011-12	Ragi	KMR-301 MR-6 GPU-28	-	Integrated crop management	Integrated crop management in high yielding ragi variety	Kharif-2011-12	L	M	M	Cotton
3.	Pulses	Rainfed	Kharif-2011	Redgram	BRG-2	-	Integrated crop management	Integrated crop management in redgram	Kharif-2011	L	M	M	Maize
		Rainfed	Rabi-2011-12	Bengalgram	A-1	-	Integrated pest and disease management	Integrated management of pod borers and wilt in bengalgram	Rabi-2011-12	L	M	M	Maize
4	Oilseeds	Irrigated	Rabi/ Summer 2011	Sunflower	-	KBSH-53	Integrated crop management	Integrated crop management in sunflower	Kharif-2011	L	M	M	Ragi
5	Commercial	Rainfed	Kharif-2011	Cotton	-	MRC-7918	Integrated crop management	Integrated crop management in cotton	Kharif-2011	L	M	M	Maize



6.	Vegetables	Rainfed	Kharif-2011	French bean	Arka Suvidha	-	Popularization of HYV	HYV Arka Suvidha	Kharif-2011	L	M	M	Tomato Chilli
		Rainfed	Kharif-2011	Tomato	-	-	Integrated pest and nutrient management	Integrated crop management in tomato	Kharif-2011	L	M	M	Maize Tomato
7.	Fruit	Irrigated	Kharif-2011	Banana	Grandnaine	-	Integrated Crop Management	Use of Banana special in Banana	Kharif – 2011	M	M	M	Banana
		Rainfed	Rabi – 2010-11	Mango	-	Alphanso	Integrated pest management	Integrated management of leaf hoppers and fruit fly in mango	Rabi – 2010-11	M	M	M	Mango
		Rainfed	Rabi – 2010-11	Mango	-	Alphanso	Integrated pest management	Integrated management of leaf hoppers and fruit fly in mango	Rabi – 2010-11	M	M	M	Mango
8	Plantation crop	Irrigated	Kharif – 2011	Areca nut	Thirthahalli local	-	Integrated disease management	Integrated management of hidimundige in areca nut	Kharif – 2011	M	M	M	Areca nut
		Irrigated	Kharif – 2011	Areca nut	Thirthahalli local	-	Integrated pest management	Integrated management of snail in areca nut	Kharif – 2011	M	M	M	Areca nut

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>Cereals</b>																				
Rice	Integrated crop management in Rice	JJL, Jayashree	-	Irrigated	35	15	90.0	49.0	65.0	56.0	16.1	36,700	71,500	34800	1.94	37300	61600	24300	1.65	
Maize + Redgram	Integrated crop management and intercropping in hybrid maize	BRG-2	NAH-2049	Rainfed	12	8.4	53.5	46.2	50.00	41.3	21.0	18500	63750	45250	3.44	18000	44604	26604	2.47	
			NAH-1137	Rainfed	28	11.6	55.4	45.2	50.90	41.3	21.2	18350	64472	45972	3.48	18000	44604	26604	2.47	
							4.4	4.1	3.8											
<b>Millet</b>																				
Ragi	Integrated crop management in HYV ragi	KMR-301	-	Rainfed	13	5.2	25.6	21.2	23.4	14.9	57.04	12100	26910	14810	2.22	10500	17135	6635	1.63	
		MR-6	-	Rainfed	10	4.0	22.2	18.4	20.3	14.7	38.00	12100	23345	11245	1.92	10700	16905	6205	1.57	
		GPU-28	-	Rainfed	20	8.0	21.2	14.7	21.2	14.7	44.2	12100	24380	12280	2.04	10500	16905	6405	1.61	
<b>Pulses</b>																				
Redgram	Integrated crop management in Redgram	BRG-2	-	Rainfed	10	05	4.5	3.0	3.7	3.5	5.7	8015	14800	6785	1.85	7850	14000	6150	1.78	
Bengalgram	Integrated management of pod borer and wilt in bengalgram	A-1	-	Rainfed	12	05	8.9	5.4	8.3	5.4	53.57	9500	24900	15400	2.62	7500	16200	8700	2.16	

<b>Plantation crop</b>																			
Areca nut	Integrated management of hidimundige in areca nut	Thirthahalli local	-	Irrigated	10	02	18.9	15.3	18.3	11.7	56.41	75500	237900	162400	3.15	65200	152100	86900	2.33
	Integrated management of snail in areca nut	Thirthahalli local	-	Irrigated	10	05	19.1	13.9	17.1	14.2	20.42	75000	222300	147300	2.96	69500	184600	115100	2.65
<b>Vegetables</b>																			
Tomato	Integrated crop management in Tomato		-	Rainfed	10	02	37.0	26.5	31.8	28.9	9.9	66700	190800	124100	2.86	60300	165000	104700	2.73
French bean	Popularization of HYV Arka Suvidha in French bean	Arka Suvidha	-	Rainfed	15	02	932	749	844.3	614	37.5	38715	84430	45715	2.18	32953	49120	16167	1.49
<b>Fruit</b>																			
Mango	Integrated management of leaf hopper and fruit fly in mango	-	Alphanso	Rainfed	05	02	17.4 t/ha	12.4 t/ha	16.2 t/ha	12.9 t/ha	25.55	40800	291600	250800	-	45300	154800	109500	-
Mango	Foliar application of mango special	-	Alphanos	Rainfed	06	2.4	14.0 t/ha	10.10 t/ha	11.6 t/ha	10.1 t/ha	6.42	30500	116000	85500	3.8	28000	101000	73000	3.6
Banana	Use of Banana special to increase the bunch weight in banana	Grandnanine	-	Irrigated	10	04	640.75	507.37	618.03	483.8	27.74	145390	432621	287231	2.97	136425	338660	213235	2.48
<b>Cotton</b>	Integrated crop management in cotton	-	MRC-7919	Rainfed	55	20	11.2	6.9	9.5	7.9	20.2	23600	38950	15350	1.65	24000	32390	8390	1.34

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

Crop	Data on other parameters in relation to technology demonstrated		
	Parameter with unit	Demo	Check
Rice	Plant Height (cm)	79.7	72.0
Maize	Plant height (cm)	175.9	172.3
	No. of seeds/cob	14.3	11.3
Ragi	Plant height (cm)	88.72	73.40
	No. of earhead/plant	4.10	3.10
Bengalgram	% pod borer incidence	4	25
	% wilt incidence	3	15
Redgram	No. of pods/plant	54.6	49.0
Arecanut	% Snail incidence	8	45
Arecanut	% Hidimundige incidence	15	40
Mango	% leaf hopper incidence	6	20
	% Fruit fly incidence	5	15
Mango	No. of fruits/plant	671	616
Banana	Bunch weight (kg)	41.06	29.3
	No. of hands in the bunch	12.7	08
	No. of fingers in the bunch	237	202
Tomato	Plant Height (cm)	74.7	64.5
	No. of fruits/plant	34.6	30.0
French Bean	Plant height (cm)	46.95	38.7
	No. of branches/plant	4.66	3.2
	Pod length (cm)	16.2	12.8

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

### 1. Dairy Cattle

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Yield				% Increase	*Economics of demonstration Rs./unit)				*Economics of check (Rs./unit)			
					Demo			Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	AV										
Dairy cattle	Production of clean and quality milk	HFX	05	05	1.3	0.5	1.22	00	14.5	2400	5640	3240	2.35	1800	3000	1200	1.67

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
p <sup>H</sup> Lactometer Reading	6.6-7.0 1.028-1.029	6.4 – 6.5 1.024 – 1.025

### 2. Fodder crop

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
					H	L	AV										
Fodder crop	Production of DHN-6, crop for better yield and performance	DHN-6 (Sampoora)	05	(0.1 ha) 05	60000 kg / cut	5000 0kg/ cut	55000 kg / cut	30000 kg / cut	45	25000	22500	57550	3.3	25000	45000	20000	1.8

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
Texture of the fodder	Smooth	Fibrous
Palatability and voluntary intake	Highly palatable, Voluntary intake is more	Less palatable, Voluntary intake is less

### 3. Sheep

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Yield units			Check if any	% Increase	*Economics of demonstration (Rs./unit)				*Economics of check (Rs./unit)			
					Demo					Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	AV										
Sheep	Balanced feeding in sheep (Stall Feeding)	Bellary X	05	05	8.15	7.60	7.80	3.60	46	1200	2340	1140	2.00	720	1080	360	1.5

## 4. Fodder

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Yield (q/ha)			Check if any	% Increase	*Economics of demonstration (Rs./unit)				*Economics of check (Rs./unit)			
					Demo					Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	AV										
Fodder	Enrichment of low quality feeding stuffs with NPN substances for better utilization among cattle	All cattle	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-

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
Palatability	More	Less
Voluntary intake	High	Low
Wastage of fodder	Nil	40 % wastage

## 5. Dairy

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Yield (q/ha)			Check if any	% Increase	*Economics of demonstration (Rs./unit)				*Economics of check (Rs./unit)			
					Demo					Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	AV										
Dairy cattle	Improved health, in turn enhanced milk production through use of cow mats	HFX	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-

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
Incidence of mastitis	Nil	-
Ectoparasite infestation	> 5 %	More
<b>Quality of milk</b>		
pH	6.8	6.5
Corrected lactometer reading	1.028	1.024



## 5.B.3. Fisheries

Type of Breed	Name of the technology demonstrated	Breed	No. of Demo	Area (ha)	Yield (q/ha)			Check if any	% Increase
					Demo				
					H	L	A		
Carps and <i>Pangasius sp.</i>	Polyculture of carps and <i>Pangasius sp.</i>	Carps and <i>Pangasius sp.</i>	07	0.58 ha	58.33	48.33	54.15	20	170.75

*Economics of demonstration (Rs./unit) or (Rs./ha)				*Economics of check (Rs./unit) or (Rs./m2)			
Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
75863.00	208312.00	132449.00	2.75	-	-	-	-

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
Body weight gain in g.	Average body weight of fish in FLD ponds in 10 months was 1000 g.	Average body weight of fish in general tanks does not cross 600 g in 10 months.

## Fisheries

Type of Breed	Name of the technology demonstrated	Breed	No. of Demo	Area (ha)	Yield		% Increase
					Demo	Check if any	
<i>Catla catla</i>	Production of advanced fish fingerlings of <i>Catla catla</i> in earthen ponds	<i>Catla catla</i>	02	0.16	368750 No.s	-	-

*Economics of demonstration (Rs./ha)				*Economics of check Rs./unit) or (Rs./m2)			
Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
220937	368750	147812	1.67	-	-	-	-

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

#### Cotton

#### 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 in cotton	MRC-7918	Kharif 2011	20	22	23	33	55

#### 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
Rainfed	Integrated crop management in cotton	13.2 (Siddanuru)	33	MRC-7918	9.5	7.9	20.20	23600	38950	15350	1.65	24000	32390	8390	1.34
		4.8 (Siddanuru Thanda)	12	MRC-7918	9.2	7.5	22.26	22800	37720	14920	1.65	24100	30750	6650	1.27
		4.0 (Guru Siddapura)	10	MRC-7918	8.5	7.8	8.97	22000	36125	14125	1.64	24000	33150	9150	1.38

#### Performance of Bt hybrids, Desi hybrids, non-Bt hybrids and Varieties in Front Line Demonstrations in cotton during 2011-12

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
Bt. Hybrid	Rainfed	Integrated crop management production technology	22	55	-	MRC-7918	9.5	7.9	20.20	23600	38950	15350	1.65	24000	32390	8390	1.34
							9.2	7.5	22.26	22800	37720	14920	1.65	24100	30750	6650	1.27
							8.5	7.8	8.97	22000	36125	14125	1.64	24000	33150	9150	1.38

### Extension Programmes organized in Cotton Demonstration Plots

Extension activity	No. of Programmes	Participants			SC/ST		
		Male	Female	Total	Male	Female	Total
Demonstrations	03	47	08	55	21	07	28
Exhibition	01	58	15	73	18	12	30
Field Days	01	43	16	59	24	11	35
Field visits	08	47	03	50	14	01	15
Group discussions	02	58	19	77	28	13	41
Training for Extension Functionaries ( Bi- monthly workshop)	01	18	07	25	-	-	-
<b>TOTAL</b>	<b>16</b>	<b>271</b>	<b>68</b>	<b>339</b>	<b>105</b>	<b>44</b>	<b>149</b>

Extension activity	No. of Programmes	Participants			SC/IT		
		Male	Female	Total	Male	Female	Total
Training for farmers	07	170	32	202	78	15	93
Video show	04	114	17	131	47	10	57
News paper coverage	04	-	-	-	-	-	-
T.V. Programmes (E-TV, Annadatha)	04	-	-	-	-	-	-
<b>TOTAL</b>	<b>19</b>	<b>284</b>	<b>49</b>	<b>333</b>	<b>125</b>	<b>25</b>	<b>150</b>

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

#### Technical Feedback on the demonstrated technologies on all crops / enterprise

S. No	Crop / Enterprise	Name of the technology demonstrated	Feed Back
1	Maize	Integrated crop management in maize	Hybrids should be suited for rainfed and seed filling should be complete. Seeds should be made available in plenty to farmers through Raitha Samparka Kendra .
2	Bengalgram	Integrated crop management of pod borers and wilt in Bengalgram	Need effective popularization of integrated pest and disease management practices.
3	Arecanut	Integrated management of hidimundige in arecanut	Need effective popularization of integrated disease management practices.
4	Arecanut	Integrated management of snail in arecanut	Need effective popularization of integrated pest management practices.
5.	Mango	Integrated management of leaf hopper and fruit fly in mango	Need to make availability of fruit fly traps at Raitha Samparka Kendra
6	French bean	Popularization of HYV Arka Suvidha in French bean	Need to provide more seeds for demonstration purpose before seed distribution it should be treated with bio fertilizers.

7	Rice	Integrated crop management rice	Even with all technologies farmers got black grains
8	Ragi	Integrated crop management in high yielding ragi variety	
9	Redgram	Integrated crop management in redgram	Even with ICM practices the incidence of pod borer was noticed
10	Sunflower	Integrated crop management in sunflower	
11	Tomato	Integrated crop management in Tomato	Need to make vegetable special available at RSK level
12	Velvet beans	Assessment of velvet beans as intercropping in arecanut	Harvesting of arecanut may become problem since velvet beans will spread all over the plot.
13	Dairy cattle	Production of clean and quality milk	Use of rubber mats helps in the production of quality milk
14	Fodder crop	Production of DHN-6, crop for better yield and performance	Production of cob in the fodder is creating problem for animals.
15	Fodder enrichment	Enrichment of low quality feeding stuffs with NPN substances for better utilization among cattle	Non availability of grains at lower prices, Process is Tedious.
16	Sheep	Balanced feeding in sheep (Stall Feeding)	This method of feeding is convenient and less laborious.
17	Dairy cattle	Improved health, in turn enhanced milk production through use of cow mats	Easy to adopt and less incidence of mastitis's
18	Fisheries	Polyculture of carps and <i>Pangasius sp.</i> in inland pond	Fish fingerling size must be good (8-10 cm) for better production. Timely management of manuring, watering and adequate supplementary feed supply are critical to good production
19	Fisheries	Production of advanced fish fingerlings of Catla catla in earthen pond	Catla catla is good species for fingerling production. Survival percentage can be increased with good quality fry.

### Farmers' reactions on specific technologies

S. No	Crop / Enterprise	Name of the technology demonstrated	Feed Back
1	Bengalgram	Integrated crop management of pod borers and wilt in Bengalgram	Timely follow of integrated pest management practices reduces pod borers and wilt incidence.
2	Arecanut	Integrated management of hidimundige in arecanut	Loosening of hard soil, green manuring and proper drainage helps in reducing hidimundige incidence.
3	Arecanut	Integrated management of snail in arecanut	Poisoned food method is effective for managing snails.
4	Mango	Integrated management of leaf hopper and fruit fly in mango	Fruit fly trap effectively controls fruit fly in mango.
5	French bean	Popularization of HYV Arka Suvidha in French bean	Increased productivity better price in market, string less nature of the variety helps in easing cooking qualities.
6	Rice	Integrated crop management rice	Cost of cultivation reduced by proper nutrient management
7	Ragi	Integrated crop management in high yielding ragi variety	KMR-301 is early maturing variety with good fodder quality.
8	Redgram	Integrated crop management in redgram	Use of trichoderma and PSB was new to them
9	Sunflower	Integrated crop management in sunflower	
10	Tomato	Integrated crop management in Tomato	Reduced fruit splitting
11	Velvet beans	Assessment of velvet beans as intercropping in arecanut	Feels that velvet beans is better intercropping crop than existing one.
12	Dairy cattle	Production of clean and quality milk	Farmers are convinced about the use of saaf kit in avoiding mastitis
13	Fodder crop	Production of DHN-6, crop for better yield and performance	Animals are liking this fodder very much and this has increased the milk yield.
14	Fodder enrichment	Enrichment of low quality feeding stuffs with NPN substances for better utilization among cattle	Palatability in animals has increased, wastage of fodder is very less.

15	Sheep	Balanced feeding in sheep (Stall Feeding)	Body weight gain has improved over normal grazing.
16	Dairy cattle	Improved health, in turn enhanced milk production through use of cow mats	No incidence of mastitis, cleanliness of milk improved.
17	Fisheries	Polyculture of carps and <i>Pangasius sp.</i> in inland pond	Fish culture is not difficult except for the threat of poisoning by criminal minded people or poaching sometimes. Interesting and profitable subsidiary enterprise. Fish seed supply must be made economical through local production.
18	Fisheries	Production of advanced fish fingerlings of <i>Catla catla</i> in earthen pond	Easy to manage and beneficial enterprise. Birds, Frog, insects problem.

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

#### Rice

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Farmers training	03	69	Nutrient management in paddy nursery, integrated crop management in rice, cultivation practices in rice.
2	Method demonstration	01	12	Seedling treatment with azospirillum
3	Field day	01	27	-
4	Media Coverage – E-TV, Annadatha	-	-	Janathavani

## Maize

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Group discussion	02	55	Preliminary selection of farmer
2	Training	05	97	Fertilizer management, Integrated pest management
3	Field visit to FLD plots	06	-	<ul style="list-style-type: none"> <li>• <b>10-06-2011:</b> Attended the sowing of maize and redgram</li> <li>• <b>15-06-2011:</b> Field visit to FLD plots for observation of germination and effect of weedicides</li> <li>• <b>27-06-2011:</b> FLD plots stem borer incidence and suggested for application of carbofuron</li> <li>• <b>29-06-2011:</b> Followup visit to the stem borer affected plots of FLD</li> <li>• <b>01-08-2011:</b> No rainfall for last 15 days. Crop is wilting, suggested not to apply fertilizers and go for protective irrigation.</li> <li>• <b>04-08-2011:</b> Visited plots rainfall received and crop stand recovered</li> </ul>
4	Method demonstration	-	-	•
5.	Media Coverage – E-TV, Annadatha	05	-	<ul style="list-style-type: none"> <li>• <b>15-06-2011:</b> Integrated crop management practices in hybrid maize</li> <li>• <b>15-06-2011:</b> Weed and fertilizer management in hybrid maize</li> <li>• <b>02-08-2011:</b> Micro nutrient management (<math>ZnSO_4</math>) and stem borer management in maize.</li> <li>• <b>08-08-2011:</b> Top dressing with urea in maize</li> <li>• <b>27-09-2011:</b> Post harvest management in maize</li> </ul>

## Ragi

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Group discussion	01	38	Preliminary selection of farmers
2	Training	04	51	Use of Azosprillum, spacing, fertilizer management and nutrient management
3	Field visit to FLD plots	04	-	Diagnosis, post survey
4	Method demonstration	01	20	Spraying with $ZnSO_4$
5	Paper coverage	-	-	-
6	Field Day	01	30	Sharing experience of farmers

**Redgram**

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Training	1	10	12-07-11
2	Method demonstration	3	18	07-09-11
3	Field visit	4	-	04-07-11, 25-08-11, 07-09-11, 04-10-11

**Bengalgram**

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Group discussion	01	13	Preliminary selection of farmers
2	Training	02	22	Integrated management of wilt and pod borer in bengalgram
3	Field visit to FLD plots	03	38	Post survey, Diagnosis
4	Method demonstration	03	27	Spraying method and trichoderma soil application
5	Paper coverage	01	-	Kannadaprabha
6	Field Day	01	15	Sharing experience of farmer

**Tomato**

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Group discussion	03	38	--
2	Training	01	25	Tomato cultivation practices in redsoil, integrated nutrient management in tomato, role of micronutrient in tomato
3	Media coverage	03	-	Vijayakarnataka (13-07-11), Janathavani (15-07-11), Prajavani (15-07-11)

**Banana**

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Field days	1	16	To disseminate the worthiness of the technology
2	Farmers Training	4	52	To update the relevant production technologies in banana
3	Media coverage	02		E-tv Kannada, Annadata
4	a. News paper Clippings	02	--	Kannada prabha, Prajavani
	b. Field visit to FLD plots	05	--	Regular monitoring and guiding the farmer about the field problems arise during the treatment period.

**Arecanut hidimundige**

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Group discussion	02	18	Preliminary visit for selection of farmers
2	Training	01	12	Integrated management of hidimundige in arecanut
3	Field visit to FLD plots	03	24	Drainage system, Green manuring, Trichoderma application and diagnostic visit
4	Method demonstration	02	19	Fertilizer and trichoderma application
5.	Media Coverage – E-TV, Annadatha	01	-	Kannadapraba
6.	Field day	01	24	Sharing experience of farmer

**Arecanut snail**

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Group discussion	01	15	Preliminary visit for farmer selection
2	Training	01	13	Integrated management of snail in arecanut
3	Field visit to FLD plots	03	31	Poison food propagation Diagnostic visit
4	Method demonstration	02	21	Preparation of poisoned food
5	Paper coverage	01	-	Vijayakarnataka
6	Field Day	01	16	Sharing experience of farmer

**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	-	Diagnostic visit, trap installation spraying
4	Method demonstration	02	18	Mango fruit fly trap installation
5	Media Coverage – E-TV, Annadatha	01	-	Vijaya Karnataka
6	Field day	01	15	Sharing experience of farmers



## Mango

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Group discussion	01	10	For famers selection
2	Field visitis	03		For foliar application of mango special and for taking observations

## Fisheries

Sl.No.	Activity	No. of activities organized	Date	Remarks
1	Farmers Training	4	05-07-2011 22-07-2011 01-08-2011 19-09-2011	Site selection Pond preparation Stocking, feeding Fish feeding and feed preparation
2.	Special Days	4	14-09-2011 14-10-2011 11-07-2011 17-10-2011	National Fish Farmers Day World Food Day and Release of Fish Brochure ' Fish is every body 's food'

## Fisheries

Sl.No.	Activity	No. of activities organized	Date	Remarks
1	Farmers and site selection	-	06-04-2010 07-05-2010	
2	Training	2	28-06-2011 29-06-2011	Hands on training on aquaculture principles Field visit to practicing farmers
3	Guest lecture at District Agriculture Festival	-	23-06-2011	> 1000 people were told about fish culture in inland ponds and the importance of it in dry lands.
4	Radio talk on "How to practice profitable fish culture"	-	28-07-2011	AIR, Bhadravathi
5.	Attended National Workshop on "Augmenting outreach programmes in Animal husbandry and Fisheries sectors" and acted as rapporteur for panel discussion of the workshop.	-	6-7 August 2010	KVAFSU, Bidar
6.	<b>Training: (Sponsored):</b> Fish culture in water harvest structures	2	11-08-2010 25-08-2011	115 farmers from Davanagere, Channagiri and Honnali tq. 90 farmers from Jagalur and Harapanahalli tq. Sponsored by Department of watershed

7	<b>Exposure visit:</b> Took FLD farmers to Masaravalli, Bhadravathi tq. to see the production of fish fingerlings by a progressive farmers.		28-08-2010	On the occasion of Field day celebration organized by FFDA, Shimoga
8	<b>TV programme:</b> Integrated fish farming in inland ponds	2	16-09-2010 20-06-2011	E-TV Anndatha
9	<b>TV Programme:</b> Ornamental fish production in backyard	2	20-09-2010 14-04-2011	E-TV Anndatha
10	<b>Trainings (off campus):</b> - Fish seed selection and stocking - Feeding of fishes		29-09-2010 14-04-2011	To FLD farmers To FLD farmers
11	<b>Training: (on campus):</b> Polyculture of carps and <i>Pangasius</i> in inland ponds		11-10-2010	To FLD farmers
12	Field visits for FLD followup	5	28-10-2010 15-12-2010 18-01-2010 19-03-2011 02-06-2011	Fish Body weight sampling Fish Body weight sampling Fish Body weight sampling
13	District level workshop on “Fish culture in tanks and ponds”	-	13-04-2011	CBTMPCS – JSYS
14	<b>Dignitary visit:</b> DD of Fisheries in Watershed Department, Dr. Nagarajaiah, C.S. visited our FLD ponds		07-07-2011	Visited Nagarakatte and TKVK FLD ponds
15	<b>Field Day Celebration and National Fish Farmers Day Celebration:</b>		11-07-2011	At Nagarakatte in Marulasiddappa’s FLD pond with ADR, Dr. Vishwanatha Shetty, ZARS, Navile, Sri Jayanna SADF, Davangere, Dr. Manjappa, Inland fisheries unit, ZARS, Navile, Sri Annappaswamy, ADF, Sri Basappa, Kulambi were present as guests  Representative fishes were harvested for observation and sale.

**PART VI – DEMONSTRATIONS ON CROP HYBRIDS**

**Demonstration details on crop hybrids**

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
<b>Cereals</b>																	
Maize	Integrated crop management and intercropping in hybrid maize	NAH-2049	12	8.4	53.5	46.2	50.00	41.3	21.0	18500	63750	45250	3.44	18000	44604	26604	2.47
		NAH-1137	28	11.6	55.4	45.2	50.90	41.3	21.2	18350	64472	45972	3.48	18000	44604	26604	2.47

H-High L-Low, A-Average

**PART VII. TRAINING**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Crop Production</b>										
Weed Management	02	08	-	08	17	03	20	25	03	28
Cropping Systems	01	03	-	03	13	02	15	16	02	18
Seed production	01	54	-	54	02	-	02	56	-	56
Integrated Crop Management	03	19	-	19	33	03	36	52	03	55
Soil and Water Conservation	01	57	02	59	-	-	-	57	02	59
Integrated Nutrient Management	01	02	-	02	07	-	07	09	-	09
Orientation to NICRA Project	01	13	02	15	02	01	03	15	03	16
Seed treatment	01	08	-	08	-	-	-	08	-	08
Environment Management	02	95	08	103	21	09	30	116	17	133
Water Management	02	54	-	54	06	-	06	60	-	60
<b>Horticulture</b>										
<b>a) Vegetable Crops</b>										
Protective cultivation	01	07	-	07	-	-	-	07	-	07
<b>b) Fruits</b>										
Cultivation of Fruit	01	12	-	12	01	-	01	13	-	13
<b>Others (pl.specify:</b>										
Integrated Nutrient Management	01	12	01	13	03	-	03	15	01	16
Nutritive Value	01	02	08	10	-	-	-	02	08	10
<b>c) Ornamental Plants</b>										
<b>d) Plantation crops</b>										
Production and Management technology	02	78	28	106	13	19	22	81	47	128
<b>Others (pl.specify)</b>										
Disease forecasting	01	03	05	08	01	-	01	04	05	09

<b>e) Tuber crops</b>										
<b>f) Spices</b>										
<b>g) Medicinal and Aromatic Plants</b>										
<b>Soil Health and Fertility Management</b>										
Integrated nutrient management	01	-	-	-	16	02	18	16	02	18
<b>Livestock Production and Management</b>										
Dairy Management	17	57	398	455	27	370	397	84	768	852
<b>Home Science/Women empowerment</b>										
<b>Agril. Engineering</b>										
<b>Plant Protection</b>										
Integrated Pest Management	02	11	05	16	06	-	06	17	05	22
Integrated Disease Management	01	08	06	14	-	-	-	08	06	14
<b>Fisheries</b>										
Integrated fish farming	01	20	-	20	44	-	44	64	-	64
<b>Others (pl.specify):</b>										
Fish feed	01	18	31	49	03	02	05	21	34	55
<b>Production of Inputs at site</b>										
<b>Capacity Building and Group Dynamics</b>										
<b>Agro-forestry</b>										
<b>TOTAL</b>	<b>45</b>	<b>541</b>	<b>494</b>	<b>1035</b>	<b>215</b>	<b>411</b>	<b>626</b>	<b>756</b>	<b>905</b>	<b>1661</b>

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Crop Production</b>										
Weed Management	01	12	-	12	03	-	03	15	-	15
Integrated Crop Management	01	13	-	13	07	-	07	20	-	20
Integrated Nutrient Management	01	24	-	24	04	02	06	28	02	30
Production of organic inputs	01	42	08	50	01	01	02	43	09	52



<b>Capacity Building and Group Dynamics</b>										
<b>Others (pl.specify):</b>										
Economics of organic and inorganic rice production	01	08	-	08	-	-	-	08	-	08
Marketing of organic paddy	01	08	-	08	-	-	-	08	-	08
<b>Agro-forestry</b>										
<b>TOTAL</b>	<b>21</b>	<b>238</b>	<b>13</b>	<b>251</b>	<b>156</b>	<b>13</b>	<b>169</b>	<b>394</b>	<b>26</b>	<b>420</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
<b>Any other</b>										
1. Fresh and Marine water bio-diversity modules preparation for science exhibition	01	09	15	24	05	04	09	14	19	33
2. Flower arrangement	01	06	-	06	-	-	-	06	-	06
3. Foliar sprays in cotton	01	30	-	30	11	-	11	41	-	41
4. Attracting rural youth towards agriculture	01	33	20	53	03	-	03	36	20	56
<b>TOTAL</b>	<b>04</b>	<b>78</b>	<b>45</b>	<b>123</b>	<b>19</b>	<b>04</b>	<b>23</b>	<b>97</b>	<b>49</b>	<b>146</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
<b>Any other (pl.specify)</b>										
1. Organic Farming in Horticulture Crops	02	26	03	29	14	02	16	40	05	45
2. Kitchen Gardening	02	35	02	37	22	04	26	57	06	63
<b>Total</b>	<b>04</b>	<b>61</b>	<b>05</b>	<b>66</b>	<b>36</b>	<b>06</b>	<b>42</b>	<b>97</b>	<b>11</b>	<b>108</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
<b>Any other</b>										
1. Handling of Chemicals	01	43	-	43	-	-	-	43	-	43
<b>Total</b>	<b>01</b>	<b>43</b>	<b>-</b>	<b>43</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>43</b>	<b>-</b>	<b>43</b>



**7.G. Sponsored training programmes conducted**

S.No.	Area of training	No. of Courses	No. of Participants									
			General			SC/ST			Grand Total			
			Male	Female	Total	Male	Female	Total	Male	Female	Total	
<b>1</b>	<b>Crop production and management</b>											
<b>2</b>	<b>Production and value addition</b>											
<b>3.</b>	<b>Soil health and fertility management</b>											
<b>4</b>	<b>Production of Inputs at site</b>											
<b>5</b>	<b>Methods of protective cultivation</b>											
<b>6</b>	<b>Others (pl.specify)</b>											
<b>7</b>	<b>Post harvest technology and value addition</b>											
7a	<b>Others</b>											
	School Gardening	02	35	02	37	22	04	26	37	06	43	
	Organic farming in horticulture crop	02	26	03	29	14	02	16	30	05	35	
	Environment management plan	03	67	09	76	06	08	14	73	17	90	
	Water management	03	73	-	73	20	01	21	93	01	94	
	Coconut production practices	01	56	28	84	02	19	21	58	47	105	
	Nutrition Garden	01	15	01	16	03	-	03	18	01	19	
	Marketing of Agricultural produce	03	105	-	105	44	06	50	149	06	155	
<b>8</b>	<b>Farm machinery</b>											
<b>9.</b>	<b>Livestock and fisheries</b>											
<b>10</b>	<b>Livestock production and management</b>											
10.a.	Animal Nutrition Management	01	10	05	15	08	02	10	18	07	25	
10.c	Fisheries Nutrition	01	18	31	49	03	02	05	21	33	54	
10.d	Fisheries Management	01	20	-	20	44	-	44	64	-	64	
10.e.	Others : Dairy management	16	62	398	460	48	370	418	110	768	878	
<b>11.</b>	<b>Home Science</b>											
<b>12</b>	<b>Agricultural Extension</b>											
	<b>Total</b>	<b>34</b>	<b>487</b>	<b>477</b>	<b>964</b>	<b>214</b>	<b>414</b>	<b>628</b>	<b>701</b>	<b>891</b>	<b>1592</b>	

**Details of sponsoring agencies involved**

1. Department of Veterinary science and Animal Husbandry, Davanagere
2. DIET, Davanagere.
3. District Watershed Development Department, Davanagere
4. Department of Horticulture, Davanagere
5. CBTMPCS, UAS (Bengaluru).
6. CIFA, Bhuvaneshwara.
7. CDB, Bengaluru.
8. JSYS, Davanagere.
9. Bapuji Polytechnic, Davanagere.
10. Karnataka State Agricultural Marketing Board, Bengaluru
11. Zilla Panchayath, Davanagere

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

**PART VIII – EXTENSION ACTIVITIES****Extension Programmes (including extension activities undertaken in FLD programmes)**

Nature of Extension Programme	No. of Programmes	No. of Participants (General)			No. of Participants SC / ST			No. of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Field Day	11	165	37	202	104	12	116			
Exhibition	03	90	30	120	18	12	30			
Film Show	89	373	380	753	293	310	603	20	-	20
Method Demonstrations	04	32	13	45	08	05	13			
Workshop	02	78	29	107	02	19	21			
Group meetings	03	40	-	40	13	-	13			
Lectures delivered as resource persons	68	300	138	438	192	100	292	25	06	31
Newspaper coverage	55									
Radio talks	15									
TV talks	23									
Popular articles	07									
Extension Literature	81	327	390	717	242	409	651			
Scientific visit to farmers field	88									
Farmers visit to KVK	564	472	27	499	111	01	112	17	-	17
Diagnostic visits	37									
Exposure visits	06	26	-	26	20	9	29	20	-	20
Celebration of important days	01	75	30	105	25	20	45			
1. International Mother Earth Day										
2. World Environment Day	01	15	04	19	07	-	07			
3. National Fish Farmers Day	01	30	10	40	12	09	21	05	-	05
4. Parthenium Awareness Programme	01					44				
5. World Food Day	01	01	20	21	-	25	25	28	01	29
6. Women in Agri. Day	01	-	60	60	-	25	25	-	-	-
7. Kissan Samman Diwas	01	99	29	128	52	20	72	-	-	-
8. National Science Day	01	60	14	74	14	14	28			
9. International Women's Day	01	30	20	50	23	13	36			
10. World Forest Day, World Water Day, World Meteorological Day	01	-	20	20	-	28	28	-	-	-
<b>Any Other</b>										
1. Bimonthly	05							223	79	302
2. PRA	01	30	-	30	40	-	34			
3. Pest Survey	02									
4. Agri. Tech. Week	01	301	61	362	138	17	155			
5. Farmers- Scientist Interaction	01	41	10	51	2	7	9			
<b>Total</b>	<b>1076</b>	<b>2585</b>	<b>1322</b>	<b>3907</b>	<b>1316</b>	<b>1099</b>	<b>2365</b>	<b>338</b>	<b>86</b>	<b>424</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>Quantity of seed (qtl)</b>	<b>Value (Rs)</b>	<b>Number of farmers to whom provided</b>
Vegetables	Drumstick	PKM-1	0.01	190.00	02
Others (specify)	Velvet beans	Mucuna sp.	6.97	12084-00	81
	Sunhemp	-	0.58	2805-00	18
<b>Total</b>			<b>7.56</b>	<b>15,079-00</b>	<b>101</b>

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

<b>Crop category</b>	<b>Name of the crop</b>	<b>Variety</b>	<b>Number</b>	<b>Value (Rs.)</b>	<b>Number of farmers to whom provided</b>
Vegetable seedlings	Curryleaf	Local	570	3472-00	101
	Drumstick	PKM-1	1363	13630-00	300
Fruits	Mango	Alphanso	1079	31030-00	70
	Papaya	Red lady	06	60-00	01
	Jack fruit	Local	11	100-00	07
	Anola	Kanchan	01	20-00	01
	Sapota	Local	57	1820-00	03
	Lemon	Local	5446	27593-00	81
	Palms	-	24	960-00	08
Plantation	Arecanut	Local	3245	33100-00	10
Fodder crop saplings	Fodder Slips	DHN-6	128200	49000-00	25
	Azolla culture	Azolla Pinneta	58.5 kg	1170-00	54
<b>Total</b>			<b>140002-00</b>	<b>161955-00</b>	<b>606</b>

## 9.C. Production of Bio-Products

	Name of the bio-product	Quantity (Kg)	Value (Rs.)	Number of farmers to whom provided
<b>Bio Products</b>				
Bio Fertilizers	Trichoderma	240	12000-00	44
Others (specify)	Vermicompost	12000	60,000-00	30
	Earthworms	40	10,000-00	15
	Banana special	2600	3,57,000-00	250
<b>Total</b>		<b>14880</b>	<b>4,39,000-00</b>	<b>339</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>				
Others (Pl. specify)	Milk	6494 Lts	114467-00	35
<b>Poultry</b>				
Broilers	Giriraja	22	7200-00	10
Others (Pl. specify)	Hen local	06	670-00	06
<b>Piggery</b>				
Others - Sheep	Bellary Deccanix	14	72250-00	10
<b>Fisheries</b>				
Fingerlings (Advance)	Catla, Rohu, Common carps	500	500-00	03
Others (Pl. specify)	Ornamental Fishes: Guppies, Moulies, Sword tails	9489	31595-00	-
	Food fishes, <i>Rohu and Common Carps, Catla, pangus</i>	284	16788-00	-
<b>Total</b>			<b>243470-00</b>	<b>64</b>

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

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

**(A) KVK News Letter:**

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

**Periodicity:**

Sl.No.	Quarterly ( 2011-12)	Volume	Issue
1.	April – June	4	3
2.	July- September	4	4
3.	October- December	5	1
4.	January- March	5	2

**No. of copies:** 500/ issue

**(B) Literature developed/published**

Item	Title	Authors name	Number
News letters	Taralabalu Krishi Sinchana	Programme Coordinator	2000/ year
Popular articles	<b>Organic Farming:</b> Opportunities and challenges	Sri. Basavanagowda M.G.	Taluk Kannada Sahitya Parishath Booklet
	Role of Ambruthaballi in Health	Sri. Basavanagowda M.G.	Annadatha, April 2011
	Increased resistance in coconut by integrated nutrient management	Sri. Basavanagowda M.G. Sri. Ramakrishahari, Y.D.	Annadatha, April 2011
	Traditional seed exchange fair	Dr. Devaraja T.N.	Sahaja Saguvalli, May-June - 2011
	Pest management in paddy	Sri. Prasannakumara N. Sri. Mallikarjuna B.O. Dr. Pradeep H.M.	Annadatha, Sept.-2011
	Soil sampling procedure and explanation	Dr. Pradeep H.M. Sri. Mallikarjuna B.O. Dr. Devaraja T.N.	Janathavani, Nov. 2011
	Velvet beans- A beneficial intercrop in horticulture crops	Dr. Pradeep H.M. Dr. Devaraja T.N. Sri. Basavanagowda M.G.	Janathavani, July 03,2011

	Model Natural Farming Practicing Farmer-Prabhudeva	Sri. Basavanagowda M.G. Dr. Devaraja T.N.	Janathavani, Dec. 2011
	If earth starts burning	Dr. Devaraja T.N.	Sahaja Saguvalli, Nov.-Dec. 2011
		Dr. Gayathri Devaraja	
		Dr. Pradeep H.M.	
<b>Extension literature (Folders)</b>	Fish as food- everyone should eat	Dr. Devaraja T.N.	1000
	Why should we culture fish	Dr. Devaraja T.N.	1000
	Fertilizer management in tissue culture banana	Sri. Basavanagowda M.G.	1000
	Banana special: boon to banana cultivation	Dr. Pradeep H.M.	1000
	Soil Sampling procedure and explanation	Dr. Pradeep H.M. Dr. Devaraja T.N. Sri. Mallikarjuna B.O.	1000
	Organic fertilizers and medicines	Sri Vijayakumara S.B.	2000
	Role of green manure in horticultural crop	Sri. Basavanagowda M.G. Dr. Devaraja T.N. Dr. Pradeep H.M.	1000
	Integrated pest management in Bt. Cotton	Sri. Prasannakumara N. Dr. Devaraja T.N. Sri. Mallikarjuna B.O.	1000
	Mechanization in paddy	Sri. Mallikarjuna B.O. Dr. Devaraja T.N. Sri. Prasannakumara N.	1000
	Integrated management of pod borer in Bengalgram	Sri. Prasannakumara N. Dr. Devaraja T.N. Sri. Mallikarjuna B.O.	1000
	A glance on the growth of Taralabalu KVK ( 2005-10)	Dr. Devaraja T.N. Sri. Raghuraja J.	1000
	Dry land Horticulture	Sri. Basavanagowda M.G. Dr. Devaraja T.N.	1000
<b>Training Manual</b>	Kitchen Gardening in Schools	Sri. Basavanagowda M.G. Dr. Devaraja T.N. Dr. Pradeep H.M.	200
	Improved integrated animal rearing	Dr. Jayadevappa G.K.	500

<b>Booklet</b>	Vermicompost: Energy food for crops	Dr. Pradeep H.M. Dr. Devaraja T.N. Sri. Mallikarjuna B.O. Sri. Raghuraja J.	1000
	Advanced production technology of arecanut	Sri. Basavanagowda M.G. Sri. Prasannakumara N. Dr. Devaraja T.N. Sri. Raghuraja J.	1000
<b>Others</b>			
<b>Radio Talk</b>	Advanced production practices in Maize	Sri. Mallikarjuna B.O.	
	Integrated nutrient management in Paddy	Dr. Pradeep H.M.	
	Integrated nutrient management in Arecanut	Sri. Basavanagowda M.G.	
	Integrated pest management in Maize	Sri. Prasannakumara N.	
	Integrated fish farming for Small Farmers	Dr. Devaraja T.N.	
	Integrated crop management in Cotton	Sri. Mallikarjuna B.O.	
	Soil sampling and soil test	Dr. Pradeep H.M.	
	Banana special: A profitable micro nutrient	Dr. Pradeep H.M.	
	Velvet beans as intercrop in arecanut	Dr. Pradeep H.M.	
	Nursery management in paddy	Sri. Mallikarjuna B.O.	
	Production practices in groundnut	Sri. Mallikarjuna B.O.	
	Mechanized transplanting in paddy	Sri. Mallikarjuna B.O.	
	Ornamental fish farming	Dr. Devaraja T.N.	
	Fish cum paddy farming	Dr. Devaraja T.N.	
Fish Polyculture in agricultural ponds	Dr. Devaraja T.N.		
<b>T.V. Programmes</b>	Intercultivation of velvet beans in arecanut	Sri. Basavanagowda M.G.	
	Integrated management of pest and disease in redgram	Sri. Prasannakumara N.	
	Post harvest technology in maize	Sri. Mallikarjuna B.O.	
	Integrated crop management in sunflower	Sri. Mallikarjuna B.O.	
	Fertilizer management in paddy	Sri. Mallikarjuna B.O.	
	Advanced production practices in Bt. Cotton.	Sri. Mallikarjuna B.O.	
	Integrated crop management in maize		
	Planofix and micro nutrient management in Bt. Cotton	Sri. Mallikarjuna B.O.	
	Profits of fish farming in inland agricultural ponds	Dr. Devaraja T.N.	
Water management in arecanut	Sri. Basavanagowda M.G.		

	Harvester used to harvest arecanut: Farmers innovation	Sri. Basavanagowda M.G.	
	Use of micro nutrients and management of stem borer in maize	Sri. Mallikarjuna B.O.	
	Production technology of French bean	Sri. Basavanagowda M.G.	
	Use of micro nutrients in cotton	Sri. Mallikarjuna B.O.	
	Top dressing and stem borer management in maize	Sri. Mallikarjuna B.O.	
	Stem borer management in sugarcane	Sri. Prasannakumara N.	
	Mechanized transplanting in maize	Sri. Mallikarjuna B.O.	
	Fertilizer management in paddy	Sri. Mallikarjuna B.O.	
	Mulching of sugarcane waste in horticultural crops	Sri. Mallikarjuna B.O.	
	Management of brown plant hopper and blast in paddy	Sri. Prasannakumara N.	
	Management of powdery mildew and wilt in tomato	Sri. Prasannakumara N.	
	Management of leaf eater in banana	Sri. Prasannakumara N.	
	Balanced dieting in mulching animals	Sri. Prasannakumara N.	
	Balanced feeding milch animals	Dr. Jayadevappa G.K.	
<b>TOTAL</b>			

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

S. No.	Type of media (CD / VCD / DVD/ Audio-Cassette)	Title of the programme	Number
1.	CD	NICRA works in Siddanur village Activities carried out in Siddanur under NICRA- Mr. Mallikarjuna B.O. and Dr. Devaraja T.N.	01
2	CD	A Day at KVK	01



## 10.C. Success Stories / Case studies:

### 1. Success Story (Secondary Agriculture)

## Production of Vermicelli for Self Employment

- Dr. Devaraja T.N., Programme Coordinator
- Mr. Raghuraja J., SMS (AE), Taralabalu KVK, Davanagere

(a) **Name of the enterprise :** Vermicelli Production Unit, Halebisleri, Davanagere (tq & dist.)

(b) **Name and complete address of entrepreneur:** Smt. Mangamma  
 Halebisleri  
 Mudhahadadi –post  
 Davanagere – tq & dist.

### (c) Interventions of KVK with quantitative data support

- **Training and Demonstrations:** Krishi Vigyan Kendra conducted training on 28-10-2009 on ‘Empowerment of women through agro based enterprises’ to the entrepreneur. In this training, raw materials required for vermicelli production, ingredients and method demonstration on preparation of vermicelli were shown. Subsequently specialists from KVK visited the enterprise site for regular monitoring and guidance.
- **Publicity and marketing:** Specialist of KVK have used every opportunity to promote marketing of vermicelli produced by Smt. Mangamma of Halebisleri village in the group meetings, trainings in and around the village. Opportunity has been provided in KVK organized exhibitions for the sale of vermicelli like during Agriculture Technology Week, Krishi Utsava, Organic Krishi Mela. Efforts have been made to link students hostels, hotels, small retail shops in Davanagere city. Presently vermicelli has been sold in Halebisleri and nearby village for house hold consumption.

### (d) Time line of entrepreneurship development of entrepreneur

During 2009, with financial assistance by department of Bio technology, Government of India, Vermicelli production instrument was installed with a cost of Rs. 34,000/- (Thirty Four Thousand Rupees only). Production started immediately in small scale and sold to neighbours. In 2010, as the information reached the entire village, many house holds in the village started purchasing vermicelli from Smt. Mangamma. Towards end of 2010 and in 2011 all the villagers and also neighbouring village started purchasing vermicelli owing to the efforts of KVK specialists in spreading the information.

**(e) Technical components in the enterprise**

- **Raw materials :** Raw material for production of vermicelli is Rava, which is readily available in Davanagere city.
- **Process (methodology):** For production of vermicelli, process involved in simply mixing rava with water in appropriate proportion and the mixture is put into machine and so produced vermicelli is dried and packed in carton boxes for sale.
- **Manpower involvement:** Smt. Mangamma along with her brother and mother takes up production of vermicelli on a regular basis. It is observed that no outside labour is involved in this process.
- **Package and handling:** Presently 1 kg carton boxes are used to pack the vermicelli. This package is used because majority of purchasers are household people and it is easy to carry. Since the production is continuous and available in the village itself, people like to buy in small quantities.
- **Cost benefit ratio:** The cost of raw material for preparation of vermicelli, packaging, transportation, electricity and labour cost comes to Rs. 25 / kg while the selling rate is Rs. 38 / kg for small quantities and Rs. 35 / kg for bulk purchases.

**(f) Status of entrepreneur before and after the enterprise**

Smt. Mangamma, a widow from Halebislari village of Davanagere district settled in this village with brothers after the death of her husband. She inherited 1 acre land from her husband's family. The women is struggling to earn basic livelihood security with almost no resources with her. KVK with the financial assistance of Department of Biotechnology, GoI provided her the vermicelli production machine. This is because great opportunity for this women to engage in work which has given the status of self employed women in the village. Her brother and mother also help her in this works. Now the villagers are of the opinion that Smt. Mangamma is employed women with an improved social status and a motivational spirit for other women in the village.

**(g) Present working condition of enterprise in terms of raw material availability, labour availability, consumers preference, marketing of the produce etc. parameters (i.e economic viability of the enterprise)**

This small unit of vermicelli production started towards end of 2009 in continuously running till today except for stoppage of few days in rainy season for drying problem of vermicelli. Raw materials for production of vermicelli are readily available in Davanagere city which is 12 KM away from the village. For the process of production Smt. Mangamma along with her mother and on few occasion her brother join hands. Transportation in local and neighbour villages were made by her brother. Vermicelli produced by Smt. Mangamma of Halebislari village has been used by villagers for nearly two year now and quality of the produced is well accepted by the neighbourhood people. Presently almost all the villagers are used the vermicelli and few from neighbouring villagers. Now the KVK do some efforts to sell the produced to retail shops in Davanagere city and to get sale licence for the produce. Till date 1000 kg of vermicelli has been produced and gained gross income of Rs. 38,000/- and net income of Rs. 13,000/- in two years.

**(h) Horizontal spread of enterprise**

The unit of vermicelli production started by Smt. Mangamma with the help of KVK slowly started spreading throughout the village and also neighbouring villages. KVK has provided opportunity to sell vermicelli in Krishi mela's, exhibitions with special stall naming 'KVK sponsored SHG's. The enterprise of less than 2 years old and has got all the opportunity to grow bigger.

**(i) License, advertisements etc on product**

KVK specialists are taking every opportunity to spread the message on the availability of vermicelli through extension methods, provided opportunity to participate in exhibitions.

Taking sale licence for the enterprises in our priority in coming days.

**(j) Recognitions/awards received by the entrepreneur**

Nil

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

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

**Background:**

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 (Horticulture) was telecasted in Annadata programme of E-TV Kannada.

**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.
2. The Yashogathe of technology was published in Janathavani, Davanagere local news paper.

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.

### 3. 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 cultivates 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* parasitoids 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 (Programme 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 (Enclosure-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.

### **4. 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 in turn leading to inflorescence 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 maintenance. 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 maintenance or care. This will spread all over the plot within 45-50 days of sowing. This will reduce the weeds, reduce moisture loss and fallen foliage or green mulching will improve the soil fertility.

### **KVK Intervention**

Our KVK has done an on farm trial "Assessment of velvet beans as intercropping in arecanut". Technology options viz, sole arecanut, arecanut + cowpea and arecanut+ velvet beans intercropping were carried out in four farmers field. The production system was rainfed. Some of the performance indicators for technology were number of pods per plant and yield. Technology option arecanut+ velvet beans 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). Assessment requirement such as weed control and moisture conservation was very well happened in arecanut+velvet beans option. Foliage fallen by velvet beans was very large and it was added biomass and in turn improved the fertility of soil. Farmers were very happy with the results and also monetary benefit from it.

After the success of on farm trial, we started popularization of velvet beans in arecanut and coconut gardens. Krishi Vigyan Kendra provided nearly 12 quintals of velvet beans seeds to 80 farmers.

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

KVK provided velvet beans seeds at minimum cost to farmers and gave all necessary technical crop production information. In one season the crop was spread to more than 200 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 velvet beans.

**Effect of the technology/ Process / Results / Impact:**

**A. Production:**

Arecanut+cowpea

Number of pods per plant: 14.80

Yield (q/ha) : 4.50

Arecanut+velvet beans

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+ Velvet beans	7850	36300	28450	4.6

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

Velvet beans 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 velvet beans 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 80 farmers with in a area of 200 acres.

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

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

**-Sri. MallikarjunaB.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 in turn 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 there 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.

## 6. 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 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.

#### **10.D. Give details of innovative methodology or innovative technology of Transfer of Technology developed and used during the year**

**Farmers Field School:** Maize is the most important crop of the district especially in rainfed situation and spread over 1.86 lack ha. (2009-10). Farmers are facing problems in weed management, nutrient management and pest and disease management. So farmers field school is an important tool gather farmers together from sowing to harvest for providing information regarding above mentioned problems. Last year FFS was conducted in Siddanuru Tanda, 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.

**Sales Counter in TKVK:** A Sale counter in KVK has established, where in seeds, planting materials, other inputs and publications produced by KVK are sold to farmers at nominal cost.

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

**Indigenous technology practiced by the farmers:**

S. No.	Crop	ITK Practiced	Purpose of ITK
1	Coconut	PAIRED AND PENTAGONAL PLANTING OF COCONUT TO INCREASE NUMBER OF PALMS PER UNIT AREA	For dissemination of information on increased coconut palms per unit area.

**Part I : Personal Details of the farmer**

1. **Full Name :** Sri. Renukarya M.K.

2. **Date of Birth** Age 73 Yrs.

3. **Correspondence Address :** Mr. Renukarya M.K.  
Durga Darshini Farm  
U. Kallahalli  
Chetnahalli (P)  
Harapanahalli tq., Davanagere-dist.

:

4. **Contact Details:** Landline - 08192-221947 /Mobile - +91 9900110947

5. **Education :** B.Sc (Agri.)

6. **Trainings :** i) work experience as Farm Manager at Agriculture Research Station, UAS, Kathallagere .

ii) Participated in many workshops and seminars and as resource person in many farmers trainings in Taralabalu Krishi Vigyan Kendra, Davanagere.

7. **Exposure Visits:** Attended several Krishi Melas organized by UAS. Bangalore and Dharwad.

8. **Association:**

1. Member of Scientific Advisory Committee, Taralabalu KVK

2. Member of Savayava Krishi Mission, Davanagere.

9. **Family Background :** Total Members : 4, Male : 2 Female : 2

10. **Other Source of Income:** Pension

**11. Social Status :**

1. Member Governing Council of TRDF, Sirigere
2. Member local advantage committee, RuDSETI, Canara bank, Davanagere.
3. President of Zilla Pragathipara Raithara Vedike, Davanagere.
4. Vice President of IAT, Davanagere
5. Honorary President, Taluk Savayava Krishikara Balaga, Harapanahalli.

**12. References / Mentor:**

- i) Dr. G. Eshwarappa, Programme Coordinator, CBTMPCS, UAS-B.
- ii) Dr. Devaraja T.N., Programme Coordinator, Taralabalu KVK, Davanagere.
- iii) Dr. R.G. Gollar, Joint Director of Agriculture, Davanagere dist.

- 13. Assets :** Land Owned : 13 acres,                          Land Leased : 0  
   Total Land : 13 acres,                          Irrigated Land : 0  
   Source of Irrigation : Borewell

**14. Crops grown :**

Field crops : Maize, Ragi, Cowpea, Beans,  
 Horticultural Crops : Arecanut, Coconut, Sapota, Banana, Lemon, Jackfruit, Pomegranate,  
 Next Time: Fodder / Other Crops : Guinea Grass, Co-3, Lucern, Glyricidya, Teak, Pongamia pinneta, Silver oak, Survey, Raintree.

**15. Special Interests :**

Multi-storied cropping system in Horticulture crops. Innovative method of planting system in Horticulture crops which accounts for 50 acres plant population in 13 acres of land.

**Part II : Innovation Details****1. Name of Innovation :**

**PAIRED AND PENTAGONAL PLANTING OF COCONUT TO INCREASE NUMBER OF PALMES PER UNIT AREA.**

**2. Background behind innovation :**

In recent years coconut is gaining less importance, because of its uneconomical crop output and also problems like eriophid mite and BHC. In view of this no new plantation is coming up and on the contrary existing crop is removed for introducing other crops. Hence, by planting system manipulation it is thought to make the coconut plantation not a burden to farmer in its occupation of space, interference with inter crops etc.



**3. Objective :**

To increase number of coconut palms per unit area in order to get maximum income.

**4. Inspiration behind the activity :**

Dr. Renukarya M.K. who worked as Farm Manager at Agriculture Research Station, UAS, Kathallagere for 30 years wanted to put his experience in his own land which is drought prone and unfertile land to demonstrate cropping pattern in dryland Horticulture.

**5. Critical steps in innovation :**

Normally coconut plantation is done in three methods namely rectangular, square or quintex system. Further, if it is chosen for border planting single planting at closer or wider distance. In some situation double hedge method of planting is also practiced. In this case in order to better utilize the available land, border planting of coconut is thought of, but with an innovative idea of paired and pentagonal planting (cluster planting).

In paired system, the interspace within pair is very much compressed to 6 feet and between two pairs to 33 feet. In pentagonal type of planting 4 plants are placed, one plant is planted in centre and four plants at 8 feet distance are placed in all four directions. A single basin comprising of all 5 plants is prepared for application of inputs like water, manure etc. Four trenches are dug in between two plants with measurement of 4 feet length, 2 feet width and 1 ½ feet depth. These will act as micro catchment for collecting rain water. Organic wastes are dumped in these pits and they act as vermicomposting sites. The whole basin is covered with fallen coconut fronds and other organic wastes there by rendering zero cultivation practices.

In paired planting, two plants are planted in the pits of 3 cubic feet pits (Filled with coconut husk, compost, red earth tank silt etc) dug at 6 feet distance. A common basin is prepared for this pair. Two trenches across the slope are dug 8 feet away from the base of plant with trench size of 8 feet length, 2 feet width and 1 ½ feet depth. These trenches act as microcatchment for arresting rain runoff and also sink for dumping organic wastes, to build required biological and chemical activity in the site. The entire basin is covered with fallen coconut fronds and other available organic wastes of farm. In between two pairs, 7 arecanut plants are planted in cluster. Fodder grass and legumes are planted on basin bunds both for consolidating the basin bunds and also generate valuable fodder to cattle maintained as one of components of IFS.

**6. Technical Feasibility:**

The system has got very good adoptability, sustainability, gender friendliness, economical viability and adoptable by single man, as it requires least post planting management. The B: C ratio is significantly high because the cost of cultivation is reduced to insignificant level in comparison with conventional method. Paired and pentagonal planting of coconut has almost doubled the palm population when compared to conventional method of coconut planting (25'x 25').

**7. Economic Benefits of the innovation :**

Since Paired and pentagonal planting of coconut has increased palm population when compared to conventional coconut planting, yields are increased to maximum extent (50% more) and also Paired and pentagonal planting reduces difficulties in management practices to considerable extent.

**8. Cost of the innovation :**

When compared to conventional method, Paired and pentagonal planting of coconut requires more numbers of coconut palms initial cost of coconut planting is little more but the management practices almost remains same but the yields are one and half time more compared to conventional method (Income: Rs.30,000/ in conventional method. Rs.40,000/ in Paired and pentagonal planting).

### **9. Support / External Assistance :**

Basically it is learned experience throughout working period as Farm Manager was put in to practice after his retirement. However, Sri. Renukarya has studied the coconut planting system adopted in CPCRI, Kasaragod.

### **10. Validation of innovation :**

**a ) Field Demonstrations :** Inspired by Sri. M.K. Renukarya's Paired and pentagonal planting of coconut, 10 farmers adopted this technology till now. This technology gaining popularity as thousands of farmers of near by villages and exposure visit by Horticulture, Agriculture, CADA, KVK and other Departments arranged to his farm.

**b) Testing :** Yet be done. Demonstration on pentagonal planting method is taken in Taralabalu KVK, Davanagere.

### **11. Social Acceptability / Adoptability :**

Paired row of planting has already been taken to farmers field and feed back of these farmers is giving sufficient hopes to other co farmers. The officials of Horticulture, Agriculture, KVK and UAS visited the farm including voluntary agencies and have appreciated the system and spreading the innovative idea to other farmers.

### **12. Constraints:**

As such no direct constraints are encountered by the farmer. However, the idea thought by deep situational studies made the farmer go for paired planting in coconut garden and worked well. Next, further steps were taken to cluster planting for better utilization of resources and reduce cultivation expenses.

### **13. Publicity :**

Bangalore Dooradarshan has telecasted the system in Chandana TV programme. It is still required to be presented in Newspapers and Radio talk. The Taralabalu KVK, Davanagere. has documented and proposed to the UAS, Bangalore for "District best farmer award". The UAS, Bangalore has awarded the honour in the Krishimela organized in 2006.

### **14. Any other information :**

Multi-storied cropping system in Horticulture crops in accommodated plant population required for 50 acres in only 13 acres. The farmer has digged 5 farm ponds and fisheries component by Taralabalu KVK in the form of FLD. These farm ponds help in groundwater recharge there by enough water lifted through borwells not only in his farm and also nearby farmers fields. The farmer also introduced dairy and Vermicompost units and planned to introduce poultry and sheep rearing units in future days.

### **15. Suggestions:**

Sri. Renukarya M.K. has suggested to utilize and manage water resources in efficient way in critical areas. Multi-storied cropping system in Horticulture crops for better utilization of aerial space and for better yields. Suggested to rearing of few cats in the farm where rodents and snakes problems is persisted. Meticulous farm planning is the basic tool to maximize farm income.

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S. No.	Crop	ITK Practiced	Purpose of ITK
2	Arecanut	ZERO CULTIVATION IN ARECANUT PLANTATION	Problems weed menace, indiscriminate use of weedicides fertilizers and labour problem faced by the arecanut growers

### Part I : Personal Details of the farmer

1. **Full Name** : Sri K.S. Prabhudeva

2. **Date of Birth** : 05 / 06 / 1975 Age 36 Yrs.

3. **Correspondence Address** : Sri K.S. Prabhudeva, Kathalagere,  
Kathalagere-post,  
Channagiri-tq., Davanagere-dist.  
PIN :

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4. **Contact Details** : Mobile - +91 9480767064

5. **Education** : B.Sc

6. **Trainings** : Attended the following trainings:

i) "Organic Farming in Horticulture Crops" Organized by KVK, Davanagere.

ii) "Organic Farming in Spices" Organized by Spice Board, Shimoga.

7. **Exposure Visits**: Visited the following progressive farmers fields:

Farmers Name	Place	Crops
Sri A.P. Chandrashekar	Kalalawadi, Mysore	Arecanut, Coconut, Banana, Cocoa, Paddy
Sri Ramesh Raju	Mandya –Dist.	Organic Farming in Sugarcane, Cowpea and Banana
Sri Hegde	Sagar, Shimoga-Dist.	Arecanut, Horticulture Nursery, Drip Irrigation Implements Industry
Dr. Devangi Prafullachandra	Shimoga	Arecanut and its harvesting implements, paddy
Krishimela	UAS, Bangalore and Dharwad	

8. **Association** : i) Taralabalu Krishi Vigyan Kendra, Davanagere for trainings and information.  
ii) Department of Agriculture and Horticulture for Training and Information

9. **Family Background** : Total Members : 7            Male : 4            Female : 3

10. **Other Source of Income:** Nil

11. **Social Status** : Associated with following organizations:

- i) Secretary, District Organic Farmers Association, Davanagere.
- ii) Member, Karnataka Pradesh Krishik Samaja, Davanagere-Dist.
- iii) Bharathiya Krishik Samaja, New Delhi. Davanagere-Dist. Forum
- iv) Member, All India Paddy Growers forum, Davanagere
- v) Secretary, Centre for Bharthiya Rural Development, Davanagere (NGO)
- vi) Secretary, NGO's Association, Davanagere-Dist.

12. **References / Mentor** :

- i) Dr. Devaraja T.N., Programme Coordinator, Taralabalu KVK, Davanagere.
- ii) Prof. Chandrappa, Agriculture Research Station, Kathalagere, Channagiri-tq., Davanagere-dist.
- iii) Sri Kamalanaik, Assistant Director of Agriculture, Channagiri tq., Davanagere-dist.
- iv) Dr. R.G. Gollar, Joint Director of Agriculture, Davanagere dist.

13. **Assets** : Land Owned :11 acres,    Land Leased : 0  
Total Land : 11 acres,    Irrigated Land : 11 acres  
Source of Irrigation : Canal

14. **Crops grown** :

**Field crops** : Paddy

**Horticultural Crops** : Arecanut, Coconut, Cocoa, Banana, Lemon, Jackfruit, Jamboo, Pomegranate, Custard Apple.

**Fodder / Other Crops** : Guinea Grass, Co-1, Co-2, Velvet beans, Mulberry, Glyricidia, Teak.

15. **Special Interests** :

**Organic Farming:** Practicing ‘organic farming’ in 2 acres arecanut plantation other than ‘zero cultivation’.

## Part II : Innovation Details

### 1. Name of Innovation : ZERO CULTIVATION IN ARECANUT PLANTATION

**2. Background behind innovation :** High cost of maintenance, Scarcity of labour, Indiscriminate use of fertilizers in arecanut leads to diseases and reduced yields in longer period etc. these are all some of the problems faced by arecanut growers in the district. To overcome these problems and to minimize the maintenance cost of arecanut plantation Sri. K.S. Prabhudeva adopted Zero Cultivation in arecanut plantation

**3. Objective:** Improvement of soil fertility, To increase moisture holding capacity of soil and to use weeds as source of nutrients.

**4. Inspiration behind the activity :** Inspired by reading book “ Ondu hullina Kranthi” and visit to Sri Pushothama Rao’s farm with Arecanut, coconut, vanilla in zero cultivation and organic practice. Visit to ‘Vasundara farm’, B.G. Kere, Molakalmuru tq. of Sri. Veerabhadrappa who is growing coconut, mulberry, sandal wood plantation, tamarind garden in “Zero Cultivation Technology”.

### 5. Critical steps in innovation :

**Weeds Management:** Erratic weeds in the initial stages became problematic by absorbing nutrients and posed difficulties in Arecanut harvesting. Therefore he has started growing velvet beans and Glyricidia in the garden. These selective plants suppress the other weeds through their vigorous growth

**Management of Rodents:** Earlier Rodents affected Arecanut yields by feeding on tender nuts. For this zero cultivation produced answer in the way increased number of predators and availability of other fruits for feeding.

**Use of Lantana juice for inflorescence Koleroga of arecanut:** For inflorescence Koleroga Sri. K.S. Prabhudeva through his earlier knowledge developed indigenously prepared ‘Lantana juice’ for the management of the disease. **Preparation of Lantana Juice:** 1 kg Lantana leaf boiled in 2 ltr. of water to get 1 ltr. solution and mixed with 10 % cow urine and 10 % traditional cows milk. This prepared lantana juice is sprayed to arecanut against inflorescence Koleroga. With in a year Sri. K.S. Prabhudeva controlled inflorescence Koleroga in his arecanut plantation.

**Sustainable yield of arecanut with less cost :** It is observed in case of Sri K.S. Prabhudeva that near equal yields of arecanuts harvested compared to other conventional arecanut growers who are spending considerable amount for inputs like Farm Yard Manure, Chemical Fertilizers and Pesticides, Herbicides. Sri K.S. Prabhudeva in his arecanut farm by practicing zero cultivation saved expenditures on above said inputs, and getting sustained yield for the last 15 years.

### 6, Technical Feasibility :

- i) Low cost of production because of Zero Cultivation. No chemical fertilizer or pesticides application.
- ii) Soil Health: Soil fertility increased due to growth of green manuring crops like Glyricidia, Mimosa pudica, Drumstick, Honge, Velvet beans, Shanka pusha, and other leguminous crops, Hybrid pudina is grown for insites green manuring. All these green manuring crops incorporated into soil and increased the moisture holding capacity of soils.

iii) Increased microbial activity results in good aeration in soil.

iv) It is observed in case of Sri K.S. Prabhudeva that near equal yields of arecanut compared to other conventional arecanut growers who are spending considerable amount for inputs like Farm Yard Manure, Chemical Fertilizers and Pesticides. Sri K.S. Prabhudeva in his arecanut farm by practicing zero cultivation saved expenditures on above said inputs.

#### **7. Economic Benefits of the innovation :**

Average expenses to maintained 1 acre arecanut garden is around Rs. 20,000/- where as Sri. K.S. Prabhudeva by practicing zero cultivation incurring Rs. 3000/ per acre. This is achieved because expensive inputs like fertilizer, organic manure are not used.

**8. Cost of the innovation :** Initial cost of purchase of seeds like velvet beans etc. which is very minimum and operational and maintenance cost like summer irrigation, trimming which accounts for Rs. 3000/ per annum/ acre of arecanut which is less when compared to other farmers.

#### **9. Support / External Assistance :**

After getting first hand information by visiting Mr. Purushothama Rao's farm on zero cultivation, Mr. Prabhudeva's family supported zero cultivation practices in his arecanut garden whole heartedly. Mr. Prabhudeva remembers the support he has got from educated friends in the village and relatives for this new venture "Zero Cultivation in Arecanut".

#### **10. Validation of innovation:**

a ) Field Demonstrations : Inspired by Mr. Prabhudeva's Zero Cultivation Technology in arecanut, Mr. Sridhara and Mr. Manjunatha of Kathalagere village adopted this technology in their 4 acre and 2 acre arecanut gardens respectively.

b) Testing : yet to be done

#### **11. Social Acceptability / Adoptability :**

Fellow farmers who adopted zero cultivation technology in arecanut gardens are of the opinion that expenses incurred for maintenance of arecanut gardens are reduced considerably. Weight of arecanut increased by 10 % and premature dropage of nuts reduced and generally arecanut palms are free from diseases by practicing this technology.

**12. Constraints :**

- i) Since green vegetation is maintained throughout the year, stray animals is a problem and labourers are hesitant to work in the garden because of snakes.
- ii) Requires more labour for harvesting: Normally requires 4 labours to harvest 1 acre of a arecanut but in case of zero cultivation gardens, 6 labours are required because of green vegetation in the garden.

**13. Publicity : Nil****14. Any other information :**

For squirrel and rodent problem which feeds on tender arecanut, to manage this problem Mr. Prabhudeva has grown Guava, Cocoa fruits without harvesting as a trap crop. Mulberry is planted in the border to invite birds which feeds on insects in the garden.

**15. Suggestions :**

Mr. Prabhudeva has suggested to his fellow farmers that environmental friendly agriculture should be practiced without doing much damage to nature and also advised to reduce the cost of production of agricultural produce as it is important way of maximizing the income.

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S. No.	Crop	ITK Practiced	Purpose of ITK
3	Coconut	'Simplifying the farming system by Natural Farming'	Farmers in the district are cutting coconut trees due to incidence of mites and black headed caterpillar headed. The cost of cultivation of coconut in general are high when compare to market prices.

**Part I: Personal Details**

1. **Full Name:** RAGHAVA

**Father's Name:** V. RAMAKRISHNA

2. **Date of Birth** 10 /11 /1975 Age 36 Yrs.

3. **Correspondence Address:** Aikanthika, #2815/392, G 3rd Main, 1st Cross, SS Layout,  
B Block, Davanagere

PIN : 

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4. **Contact Details:** **Mobile** - +91 9448923773  
**Email** - aikanthika@gmail.com

**5. Education : MBA**

**6. Trainings :**

- Seminar on ‘Vanilla and Natural Farming’, by Sri Purushothama Rayaru and Sri Balekai Shivanjaiah, at Davanagere, July 1996.
- Training on ‘Modern Cattle and Poultry management’, Animal Husbandry and Veterinary Science Department, Davanagere, 17-22 February, 2003.
- Training on ‘Sustainable Integrated Inland Fish Farming’ by Dr. Devaraj T.N., at Taralabalu KVK, Davanagere, 11-13 February 2008.
- Working on ‘Agriculture technique and training technique’, by Sri Ardhendu Chatterjee, organized by ICRA, Bengaluru, 2-6 November, 2004.
- Working on ‘Samapathali Besaya’ by Subash Sharma, Maharashtra. ‘Bio-dynamic farming’ by Peter Procter, New Zealand. ‘Zero-budget Farming’, by Subash Palekar, Maharashtra. ‘Organic Farming’, organized by ICRA, Bangalore, 2005.
- Workshop on ‘Natural Farming’ by Sri Raju Titus, organized by OFAI-K & ICRA, at Taralabalu KVK, Davanagere, 29-31 July, 2010.
- Workshop on ‘Permaculture’ OFAI-K & ICRA, Bengaluru, 22-26 June, 2011
- Workshop on ‘Participatory Guarantee system (PGS) Organic certification’ by Sri Miguel Briganza, organized by OFAI-K, Kottur, Bellary district, 2011.
- ‘Farm Inspectors’ training, OFAI, Goa, November, 2005.
- As a resource person on topic ‘Way to Sustainable Agriculture’ in ‘Raitha Siri Habba’ at Sirigere, Chitradurga district organized by Taralabalu Krishi Vigyan Kendra, Davangere,  
Savayava Krishi Parivara and Agricultural Department, Chitradurga and Davanagere, 26 March 2011.
- As a resource person on topic ‘Permaculture’, for Assistant Horticulture Officers, NGO’s and Farmers at TKVK, Davanagere, 13 August 2011.

**7. Exposure Visits:**

- a) Kisan Mela, Bangalore, 1997
- b) Dr. Devangi Prafulla Chandra farm, Shimoga
- c) Sri A.P. Chandrashekhar, Indraprastha farm, Kalalavadi, Mysore
- d) Smt. Julie kariappa, Down a Krock Farm, H.D. Kote, Mysore district.
- e) Sri. Purushothama Rayaru farm, Thirthahalli, Shimoga district.
- f) Sri. Nandish Farm, Churchigundi, Shikaripura taluk. Shimoga district, December 2004.
- g) Sri. Kailashmurthy, Academy of Natural Farming, Doddinwadi, Kollegala, Chamrajanagara district, May 2011.
- h) Krishi Mela, ARS, Kathalagere, 1999.



- i) Organic Farming Association of India Meet, Mysore, 2004. (This Meeting laid Foundation for Karnataka Government's 'Organic Farming Policy').
- j) 2<sup>nd</sup> Beeja Jaathre, by Green Foundation, at KVK, Hulkote, Gadag, 2003.
- k) 3<sup>rd</sup> Beeja Jaathre, by Green Foundation, at Kannada University, Hampi, Hospet, Bellary District., 2004
- l) Karnataka State Steering Committee Meetings, Organic Farming Association of India (OFAI), 2004 – 2011.
- m) National Steering Committee Meetings, Organic Farming Association of India (OFAI), 2010 – 2011.
- n) 'Konkan Fruit Festival', Panaji, Goa, 2011.
- o) 3<sup>rd</sup> Biennial convention of Organic Farming Association of India. Anand, Gujarat & farm visits. Bhai Kaka Krishi Kendra, Anand and Dinesh patil's 'Sardar Farm' near Ahmadabad, December 2010.
8. **Association:** National Steering Committee Member – Organic Farming Association of India (OFAI), Mapusa, Goa.
9. **Family Background :** Total Members: 06, Male : 03, Female : 03
10. **Other Source of Income (Other than Agriculture):** Nil
11. **Social Status:**
12. **References / Mentor:**
1. Sri. Babu P., Institute for Cultural Research & Anion (ICRA), Bengaluru.
  2. Dr. Devaraja T.N., Programme Coordinator, Taralabalu KVK, Davanagere
13. **Assets :** Land Owned: 20 acre, Land Leased : Nil,  
Total Land: 20 acre, Irrigated Land: 20 acre  
Source of Irrigation: Canal Water from Bhadra Dam
14. **Crops grown :**
- **Field crops:** Rice (*Oryza sativa*)
  - **Spices & aromatic crops:** Vanilla (*Vanilla palnigohia*), Curry leaf, Nutmeg (*Myaristica fragrans*), Cinnamon (*Cinnamon zeylanicum*), **Masala ele**, Allspice (*Pimenta dioeca*), Clove (*Syzygium aromaticum*), Black Pepper (*Piper nigrum*).
  - **Medicinal crops:** Tulasi, **Amruthballi**, **Nela nelli**, Aloe vira, Lemon grass
  - **Ornamental crops:** **Kakada mallige**, **Mandare**, **Kanakambara**, Hibiscus, Expecia bicolour, **Thomsonpe red**, **Pundisoppu**, **Balli basale**, **Dundumallige**, Bouganvilia, Eliquernia.

- **Fruits:** Mango (*Mangifera indica*), Guava (*Psidium guajava*), Papaya (*Carica papaya*), Jackfruit (*Artocarpus heterophyllus*), Amla, Sapota (*Manilkara achras*), Mosambi, Orange (*Citrus sinensis*), Lemon (*Citrus limon*), Lime (*Citrus aurantifolia*), Banana (*Musa paradisiacal*), Indian Goosberry, Ber (*Zizyphus spp.*), Starfruit, Custard Apple (*Annona squamosa*), Jamun (*Syzgium jambos*), **Dwarahunase, Pannerale, Durian (Ramphala), Laxmanphala, Hanumanphala, Ramsitaphala, Anjura, Kanchikayi**, Cashew nut, Rose apple, Pummelo (*Citrus grandis*), Egg fruit, Pomegranate (*Punica granatum*), Cherry, Surinam cherry, Plum, Kino, Mangosteen, Malaya apple, Loquat, Butter fruit (*Persea Americana*), Bread fruit, Pear, Peach (*Prunus persica*), Rambutan, Litchi (*Litchi chinensis*), Kiwi, Dates, Fumaria, Water apple, Black pepper, Wood apple, Pineapple, Singapur cherry
- **Vegetables:** Drumstick (*Moringa oleifera*), **Ceylon basale, Bacilus, Sambekayi, Katthi avare, Chapparada avare**, Pumpkin, Bitter gourd, Snake gourd, Ridge gourd, Sponge gourd, Bottle gourd, Ladies finger, Redgram, Tomato, Amaranthus, Beans, Cowpea, Pundisoppu.
- **Tubers:** **Kesavugedde**, Ginger (*Zingiber officinale*), Turmeric (*Curcuma longa*), Elephant yam, Sweet potato (*Ipomoe batatus*).
- **Trees:** Coconut (*Cocos nucifera*), Cocoa (*Theobroma cacao*), Lawsania alba, Neem tree, Pupile tree, **(Hippe mara) , Kadu challe**, Honge (*Pongamia pinneta*), Glyricedia (*Glyricedia sepium*), Honne (*Pterocarpus marsupium*), **Attihannu**, Sesbania grandiflora, Erythrina spp., Rain tree, Subabul, Teak (*Tectona grandis*), Rosewood (*Dalbergia latifolia*), Sandal wood, Acacia, Silver oak, Neem (*Azadiracta indica*), Bage (*Albizia lebeck*), Acasia nilotica, Silk cotton (*Bombax malabarica*) and Tamarind (*Tamarindus indica*).
- **Fodder / Other Crops:** Velvet beans [*Mucuna utilis* (white seeded), *Mucuna pruriens* (Black seeded)], Soap nut, **Gulaganji, Shanka pushpa, Pilli pesaru**, Sunhemp

## 15. Special Interests :

- Natural farming.
- Water conservation: Live mulching with velvet beans, pueriria etc for conservation of moisture. Live mulching makes greenish floor in the field which reduces water requirement during summer.
- Value addition: Oil extraction from coconut, processing of cocoa and vanilla.
- Simplifying Farming.
- Permaculture.
- Simplifying life.

## Part II: Innovation Details

### 1. Name of Innovation:

#### ‘Simplifying the farming system by Natural Farming’

- Velvet beans – The magic creeper
- Nature’s Coconut garden
- Water conservation – Row trench system,  
– water ways cleaning
- Planting saplings – Circular trench,  
– Tri – Sticks around the seedling to give support in the initial stages
- Vegetable creepers - live plants support for climbers.

### 2. Background Behind Innovation:

By the time Mr. Raghava started farming, the existing crop coconut, performed averagely. The farm was under chemical fertilizer application like in conventional farming and maize, groundnut or banana as intercrops. The irrigation source was canal water and method of irrigation was flooding.

In 1996, the year Mr. Raghava started farming, he also attended ‘Natural Farming’ seminar and was inspired by it. Understood the ill effect of chemical fertilizers and pesticides and attracted towards alternative farming methods.

### 3. Objective :

‘Simplifying the way of farming’.

### 4. Inspiration behind the activity:

Inspired by attending seminar on natural farming at Davanagere by Sri Balekai Shivananjaiiah and understood ill effects of chemical fertilizers and pesticides and attracted towards alternative farming system. Foreseen the reduction in expenses for inputs to agriculture and influenced to go for natural farming.

Natural farming method was founded by Masanobu Fukouka, Japan. The 4 principles of natural farming are

- a) No cultivation
- b) No fertilizers
- c) No pesticides
- d) No weeding

Natural farming system is nearer to nature system and it is the easiest way of farming.

**Critical steps in innovation :**

- a) Stopped cultivation
- b) Tried to increase plant diversity in the initial stages but failed due to poor management practices.
- c) Acquiring knowledge through training, attending workshops, visiting farms and reading books, magazines and news papers.
- d) After gaining knowledge, opened trenches, introduced nitrogen fixing crops, started increasing plant diversity.

**5. Technical Feasibility :**

- The system presents a sustainable land use model in which coconut and other crops exist in perfect harmony with each other yielding more output from the same operational unit and to which the contribution of labour is minimum. Increased biological diversity leads to more production stability and reduced risk of failure. Generating multiple sources of food and income with the integration of variety of useful plants in the coconut holding, the availability of nutritious foods, fodder, fire wood, timber and medicines and net income per unit area and time get increased.
- Due to non usage of chemical fertilizers and pesticides and increase in soil biomass, soil is conditioned and soil microbes are increased. By growing cover crops, increasing plant diversity and trench irrigation, soil erosion is reduced. The population of diverse plant species of different stature which support climate change mitigation and adoption through carbon sequestration is present in this farm.
- Velvet beans can be sown / broadcasted in the existing weeds cover without cultivation.
- Velvet beans can be used for fodder, fertilizer, weed control, pest control, temperature minimizing, wasteland, fallow, saline and barren lands rejuvenation, drought tolerance, soil conservator, bio-mass, live mulching, soil conditioning, water conservation (makes the soil absorb water and retain moisture) and prevents sun scorching in Arecanut.

**6. Economic Benefits of the innovation:**

- Reduction in total Cost of production. (No cultivation, No Fertilizer and No pesticides).
- Reduction on labour.
- Increase in the yield

**7. Cost of the innovation :**

Adoption of natural farming components incurred minimum cost. Cost incurring operations such as purchase of seeds and saplings, trench opening, labour for maintenance of farm throughout the year, trimming/harvesting, tractor rent for transportation comes to around 1 lakh rupees per annum.

## 8. Support / External Assistance :

Gained knowledge by reading the book titled ‘The Natural Way of Farming’ by Masanobu Fukuoka.

## 9. Validation of innovation:

- a) **Field Demonstrations:** Farmers from more than 22 districts and other states have visited Sri Raghava’s Aikanthika farm. This farm was selected for the field visit of farmers in the (first of its kind) state level workshop held at Taralabalu KVK during 28-30 July 2010 in collaboration with OFAI and ICRA.
  - Mr. Kumaraswamy, Kadakolla, Kudligi taluk, Bellary district visited this farm and got inspiration to take up natural farming in 12 acres with crops such as, pomegranate, guava, banana, mango, lime, sapota and other crops.
  - Velvet beans was distributed to farmers of Davanagere, Belgaum, Dharwad, Tumkur and Haveri districts
    - Mr. Ramakrishna N., Mallanayakanahalli, Harihara taluk
    - Smt. Saroja Patil, Nittur, Harihara taluk
    - Mr. Mallesh, Pavagada, Tumkur district
    - Taralabalu Krishi Vigyan Kendra (TKVK) farm, Davanagere and inturn TKVK distributed seeds to various farmers

## b) Testing:

Velvet beans seeds produced by Sri Raghava were demonstrated in KVK Davanagere instructional farm and in the fields of KVK contact farmers.

## 10. Social Acceptability / Adoptability :

Velvet bean seeds growing farmers are of the opinion that expenses on fertilizers are reduced due to biomass produced and incorporated into soil. In general soil health condition improved resulting in increased yields especially in Coconut and Arecanut gardens.

Velvet bean grows well in almost all soils. Best suited for cover crop in Coconut, Arecanut, Banana, Mango and Sapota. It is good fodder for cattle and other domestic animals, since velvet beans is rich in proteins.

The farmers and persons from various institutions / organizations who have visited the Aikanthika farm have responded their opinions orally and by filling the ‘visitor’s feedback forms’.

## 11. Constraints :

Labourers and other farmers are having constraints in accepting Natural Farming due to fear of snakes and other small creatures possibly present under the ground cover of vegetation. The villagers and outside visitors mindset is not yet prepared for this. They are not able to appreciate the ground cover of vegetation (green culture), as they are used to ‘clean culture’.

Although the farmers appreciate the benefits of Natural Farming System, there are gaps in their knowledge which impede the practice of the system on a wider scale. Information on appropriate Natural Farming models under diverse crop, soil and climatic conditions is presently scanty.

## 12. Publicity :

Radio – AIR, Bhadravathi, Date: 05-09-2010 radio documentary

AIR, Bhadravathi, Date:28-06-2011 radio documentary and repeat telecast on 24-07-2011

## Magazine:

Date	Magazine	Title
March-April, 2010	Sahaja Saguvali	Nisargika Krishige Ekasutravilla
May-June, 2010	Sahaja Saguvali	Nisargika Krishige Ekasutravilla
July-August, 2010	Sahaja Saguvali	Fukuokara Sahaja Krishi – Thathva mathu prayoga
September-October, 2010	Sahaja Saguvali	Fukuokara Sahaja Krishi – Thathva mathu prayoga
May-June,2011	Sahaja Saguvali	Naati Beeja Vinimaya Jaathre

Book: Velvet beans – Thengina jothe balliya sarasa

## 13. Any other information :

- Conservation and distribution of local variety seeds of various crops is another passion of this farmer.
- The recent incidences of intruding wild animals into domesticated areas are an appalling development. Elephants, leopards, tigers etc are facing challenges to survive as the intrusion of humans into their domain of forests is increasing. These disturbing responses of wild animals may be a signal of what worst is to come in future. Therefore, efforts of Natural farming must be heartwarming developments and provide a ray of hope at the other end of the tunnel. Balanced ecosystem with economy is the key feature in Natural Farming. There should not be any further delay in promoting natural farming from all the citizens of the world. Particularly, the policy makers, scientists, thinkers and the farmers must give priority to natural farming and its practices. It is needless to say that the danger of climate change can be handled to a greater extent through natural farming. Living close to nature will always reduce the friction and burden of life as evident in case of fishes and trees. So, let's all say in voice – NATURAL FARMING JAI HO.

- Lakhs of hectares of coconut farms are under monocropping resulting in increased pest and disease problems, reduced production and productivity. Unlike this, Raghava has left his coconut farm to nature since ten years and the results are in the offing. This farm may be called ‘nature’s coconut farm’ as there is absolutely no intervention by the farmer (even watering through trenches in summer is stopped now).
  - Maintenance cost of this farm is ZERO.
  - Crop diversity in this farm is no less to any good forest.
  - All that the farmer does is to harvest healthy, big nuts on a regular basis with minimum disturbance to the forest features.
  - No pest and disease problems and big and healthy nuts in good number are the main features of this nature’s coconut farm.
- Lakhs of hectares of horticultural gardens in our country can be made economically highly viable through velvet beans. This magic bean creeper has rejuvenated Raghava’s ill prone coconut garden. Besides fixing nitrogen, this creeper is a good fodder and provides seeds at the end which find a commercial application in pharmaceuticals and cattle feed industries. Creeping nature of this plant protects from trees from scorching sun light during summer months, besides suppressing the weeds.

#### 14. Suggestions :

Natural Farming is the easiest way of farming. Natural Farming can be a solution to the present day problems of agriculture sector like labour shortage, fertilizers supply and ill effects of chemical fertilizers and pesticides. Natural Farming will certainly benefit poor and marginal farmers.

Natural Farming should be promoted globally. Research and development efforts are to be strengthened to evolve appropriate technologies for the farmers to adopt Natural Farming system models, including the existing models at few of the farmers, in the operational holdings.

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

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

#### 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 :

Sl. No	Name of the Equipment	Qty.	Cost
1	Digital conductivity meter	1	12,860-00
2	Digital P <sup>H</sup> 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**

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

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	392	380	260	39,200-00
Water Samples	187	175	160	9,350-00
Total	579	555	420	48550-00



**Details of samples analyzed during the 2011-12 :**

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	392	380	260	39,200-00
Water Samples	187	175	160	9,350-00
<b>Total</b>	<b>579</b>	<b>555</b>	<b>420</b>	<b>48550-00</b>

**10.I. Technology Week celebration during 2011-12: Yes**

Period of observing Technology Week: From: 16-08-2011 to 20-08-2011

Total number of farmers visited : 517

Total number of agencies involved : 04

Number of demonstrations visited by the farmers within KVK campus : 27

**Other Details**

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Lectures organized	05	517	Paddy, Sugarcane, Cotton, Maize, Ragi, Vegetables
Exhibition	01	150	Implements, Seeds, Charts, Posters
Film show	05	517	Soil and Water conservation mechanization
Farm Visit	05	517	Cotton, Paddy, Maize, Ragi, Redgram
Supply of Literature (No.)	05	517	Literature on Cotton, Paddy
Supply of Seed (q)	-	20	Velvet beans, Sunhemp
Total number of farmers visited the technology week	05	517	

**10. J. Interventions on drought mitigation**

A. Introduction of alternate crops/varieties: Nil

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: Nil

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	-	-
Use of <i>Goniozus nephentidis</i> for management of black headed caterpillar in coconut	01	100	72000-00	252000-00
Integrated crop management in Cotton (FLD)	150	-	Area ( 2002-03): 4667 ha	Area (2008-09) 12640 ha

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

#### “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 progreamme
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	Intraction 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.)
Establishment of Rural Bio Resource Complex for Sustainable Rural Livelihood Security through Bio-technological Approaches in and around central Karnataka	1 <sup>st</sup> April, 2009 (On going)	DBT, New Delhi	-
NICRA	Feb. – 2011 (On going)	ICAR	34520-00
Bio Fuel Training and Demonstration Centre	April- 2011 (On going)	Dept. of Bio-Fuel, GoK, Bengaluru	200000-00
SGSY (Trainings)	Aug.-2011 to March-2012	Zilla Panchayath	1063200-00
CBTMPCS, (Trainings)	Aug.-2011 to Jan.-2012	UAS, Bengaluru	66200-00
<b>Total</b>			<b>1363920-00</b>

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

a) Is ATMA implemented in your district      Yes

**Role of KVK in preparation of SREP of the district?**

Visited villages and collected basic data for preparation of SREP.

**Coordination activities between KVK and ATMA during 2011-12**

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	Meetings	Employees selection committee meeting	01		
		Taluk level implementing committee meeting	06		
		Annual Progress 2011-12 and Action Plan- 2012-13	01		
02	Research projects				
03	Training programmes				
04	Demonstrations				

<b>05</b>	<b>Extension Programmes</b>				
	Technology Week			01	Celebrated in collaboration with department of agriculture with financial assistance under ATMA
<b>06</b>	<b>Publications</b>				
<b>07</b>	<b>Other Activities</b>				

**12.D. Give details of 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**

Month	No. of SMS sent	No. of farmers to which SMS was sent	No. of feedback / query on SMS sent
<b>April 2010</b>	03	1400	
<b>May</b>	04	1750	
<b>June</b>	07	5990	
<b>July</b>	08	6580	
<b>August</b>	04	3800	
<b>September</b>	05	5754	
<b>October</b>	-	-	
<b>November</b>	-	-	
<b>December</b>	-	-	
<b>January 2011</b>	-	-	
<b>February</b>	-	-	
<b>March</b>	-	-	



Cowpea	01-06-2011	28-08-2011	0.5	C-152	Seeds	32 kg	3000	2500	Poor growth of the crop
Sugarcane	04-11-2011	Nov. -2012	02	Co 86032 COVC- 2003/165	Vegetative part	-	-	-	-
Redgram	19-05-2011	30-01-2012	01	BRG-1, BRG-2	Green pods Table purpose	1287	18000	23506	-
Cotton	06-04-2011	10-11-2011	0.2	MRC-7918	Lint	499	12800	18500	-
<b>Spices &amp; Plantation crops</b>									
Banana	30-07-2011		01	Yallaki G-9	Fruits				
Floriculture									
Rose cultivation	29-07-2011		0.25	Commercial	Flower	3271 No.s	45,800-00	2581-00	Poor in plant population due to transplanting shock and pig mence
Vegetables									
Chilli, Brinjal, Tomato	06-07-2011	30-10-2011	01	Commercial	Vegetables		10720-00	16310-00	
Bhendi	05-09-2011	15-01-2012	01	Commercial	Seed	166	8000-00	10000-00	

### 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	240 kg		12,000-00	



**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	Crossbred Cow Dairy	HF X	Milk	8061 L	1,90,266-00	1,61,226-00	35 customers
2	Varietal Fodder plots demo unit	DHN-6 Guninea (BG-9) CO-3 Napier	Root slips	1,13,180 no.s	11,402-00	56,590-00	Planting material is being distributed to more than 40 farmers.
3	Azolla Demo Unit	Azolla pinnata	Azolla plant	58.5 kg	Nil	1,170-00	Distributed to 50 farmers
4	Vermiculture and vermicompost demo unit	-	Compost and Earthworms	23.35 tonnes 40 kg.	36588-00	1,26,773-00	
5	Sheep demo unit	Bellary X	Sheep	20 no.	62,163-00	54,950-00	
6	Poultry demo unit	Giriraja	Brids	40 no.s	3374-00	6,290-00	
7	Hatchery	Indian major carps, Grass carps	Fish fingerlings	-	2.25 lakhs (Unit establishment expenses)		Production will start this season
8	Ornamental Fish Production Unit	Guppies, Mollies, Sword tails, Platy, Gambusia, Sucker eat fish	Ornamental fishes	9489 no.s	9,420-00	31,595-00	
9	Fish poly culture unit	<i>Catla, Rohu, Common carps, Pangasius</i>	Food fishes	284 kg	14,085-00	16,788-00	
		<i>Catla, Rohu, Common carp</i>	Advanced fingerling	500 no.	-	5000-00	Used for FLDs as critical inputs

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

Accommodation available (No. of beds)

Months	No. of trainees stayed	Trainee days (days stayed)
April- 2011	134	02
May- 2011	285	08
June- 2011	75	05
July- 2011	131	14
August- 2011	398	24
September- 2011	1193	24
October- 2011	863	13
November-2011	106	03
December-2011	100	04
January-2012	311	11
February-2012	69	02
March- 2012	389	27
<b>Total</b>	<b>4054</b>	<b>137</b>

**13.F. Database management**

S. No	Database target	Database created
1.	Village database	Created data base of villages where in KVK has conducted its activities in the district.
2.	Farmers database	Data base on number of farmers visited KVK has been created with information of name, address, contact number, mode of contact, problem and solution.

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

## Farmer Field School in Maize

**KVK has conducted FFS on Integrated crop management in Maize**

**Technology:** Integrated crop management in Maize

**Area:** 01 ha

**Collaborator:** Mr. Shivamurthi Naik

**Participants :** 21 No.

**Facilitator :** Agri. Extension, Agronomist, Soil Scientist and Plant protection

**Place:** Siddanur Thanda, Davanagere tq.

**Number and details of activities**

Sl.No.	DATE	Activities	No. of Participants
1.	03-05-2011 05-05-2011	<ul style="list-style-type: none"> <li>• Group meeting</li> <li>• PRA</li> <li>• Farmers selection</li> <li>• FFS meaning concept and selection of collaborator</li> </ul>	21
2.	15-06-2011	<ul style="list-style-type: none"> <li>• Land preparation and fertilizer management</li> <li>• Soil sampling techniques, Ballet box test, Critical inputs</li> </ul>	21
3.	27-06-2011	<ul style="list-style-type: none"> <li>• Micro nutrient and water management</li> <li>• Intercropping with redgram (BRG-1)</li> <li>• Group dynamics</li> </ul>	21
4.	04-07-2011	<ul style="list-style-type: none"> <li>• Taken observation on plant highest</li> <li>• Management of pest and disease in maize</li> <li>• Weed management</li> <li>• Group dynamics</li> </ul>	21
5.	04-08-2011	<ul style="list-style-type: none"> <li>• 15 days dry spell, intercultivation</li> <li>• IPM practices</li> </ul>	21
6.	20-08-2011	<ul style="list-style-type: none"> <li>• Farmers scientist interaction during agriculture technology week celebration</li> </ul>	21
7	03-10-2011	<ul style="list-style-type: none"> <li>• Field Day</li> </ul>	21

### Results

Sl.No.	Technology	Hybrid	Yield (q/ha.)	Gross cost	Gross returns	Net Returns	B:C
1.	Integrated crop management	NAH-2049	51.6	18500-00	52880-00	34390-00	2:85
			44.8	18200-00	45920-00	27720-00	2.77

Price of Maize : Rs. 1025/-

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	18131010101143	0577015007	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)	1813101010144	0577015007	CNRB 0001813
		Canara Bank	Vidyanagar, DAVANAGERE-577004	1813	Taralabalu Krishi Vigyan Kendra (Activities)	1813101010145	0577015007	CNRB 0001813

<b>14. B. Utilization of KVK Funds During the Year 2011-12 (Rs. In Lakhs)</b>				
<b>Sl. No.</b>	<b>Particulars</b>	<b>Sanctioned</b>	<b>Released</b>	<b>Expenditure</b>
1	2	3	4	5
<b>A.</b>	<b>RECURRING ITEMS :</b>	<b>Rs.</b>	<b>Rs.</b>	<b>Rs.</b>
1	Pay & Allowance	66.000	65.537	66.000
2	Travelling Allowance	1.000	1.000	0.999
3	Other Contingencies :	8.000	8.000	7.223
a)	Office Stationery, Telephone, etc.	1.600	1.600	1.591
b)	POL & Repairs	1.400	1.400	1.400
c)	Stipend / Meals for Trainees	0.750	0.750	0.746
d)	Demon. & Teaching Materials	0.250	0.250	0.250
e)	FLD On Cereals & Hort.Crops	2.500	2.500	2.499
f)	On Farm Testing	0.750	0.750	0.741
g)	Training to Extn. Functionaries	0.100	0.100	0.089
h)	Maintenance of Building	0.150	0.150	0.149
i)	Extension Activities	0.200	0.200	0.199
j)	Farmers Field School	0.250	0.250	0.250
k)	Maintenance of Library	0.050	0.050	0.049
l)	Quarters License Fee			-0.156
m)	Bank Interest			-0.584
	<b>Total - 'A'</b>	<b>75.000</b>	<b>74.537</b>	<b>74.222</b>

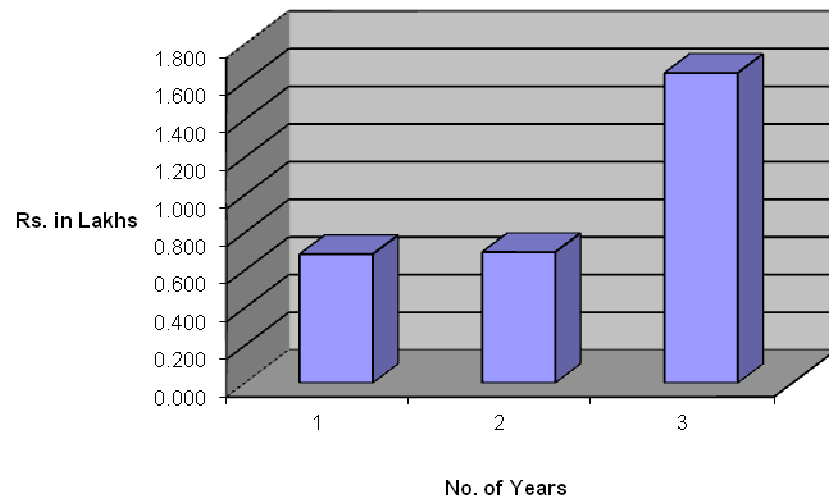
<b>B.</b>	<b>NON RECURRING ITEMS :</b>			
1	Works			
2	Equipments & Furniture			
	(a) Plant Health Diognostic Facility	10.000	<b>10.000</b>	<b>10.000</b>
3	Establishment of Library			
	<b>Total - 'B'</b>	<b>10.000</b>	<b>10.000</b>	<b>10.000</b>
<b>C.</b>	<b>REVOLVING FUND</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
	<b>Total ( A + B + C)</b>	<b>85.000</b>	<b>84.537</b>	<b>84.222</b>

### 14.C. Status of Revolving Fund (Rs. In Lakh) for the three Years

(Sanctioned : Rs.1 Lakh During 2004-05, Seed Money Returned : Rs.0.60 Lakhs)

Year	Opening Balance	Income	Expenditure	Closing Balance
Rs. In Lakhs				
Upto Mar-10	0.650	10.072	10.038	0.684
Upto Mar-11	0.684	18.969	18.958	0.695
Upto Mar-12	0.695	41.291	40.339	1.647

**Growth Rate of Rev.Fund**



## 15. Details of HRD activities attended by KVK staff during 2011-12

Sl.No.	Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
1	Sri. Prasannakumara N.	SMS (Plant Protection)	Strategic pesticide use to enhance agriculture production and food security	NASC, New Delhi	01-06-2011
2	Sri. Raghuraja J.	SMS (Agri. Extension)	Enhancing skills in ICT based DSS for agriculture marketing and agri.-business orientation of research and extension functionaries.	MANAGE, Hyderabad	05-09-2011 to 09-09-2011
3	Sri. Prasannakumara N.	SMS (Plant Protection)	IDM strategies in relation to climate change in south India	UAS, Dharwad	14-10-2011 to 15-10-2011
4	Sri. Basavanagowda M.G.	SMS (Horticulture)	Dissemination of horticultural technologies through KVK personal	IIHR, Bengaluru	18-01-2012 to 19-01-2012
5	Sri. Prasannakumara N.	SMS (Plant Protection)	Bio-fuel production	Hassan	20-01-2012 to 21-01-2012
6	Sri. Mallikarjuna B.O.	SMS (Agronomy)	Use of Automatic weather station and its maintenance	CRIDA, Hyderabad	03-06-2011



**16. Please include any other important and relevant information which has not been reflected above.**

- a) KVK Inauguration: Taralabalu KVK inauguration function was held on 21-02-2012. In divine presence of Sri. Taralabalu Jagadguru Brihanmatt, Dr. Shivamurthy Shivacharya Mahaswamiji, inaugurated by Dr. Ayyappan, Secretary, DARE and Director General, ICAR, New Delhi, Chief guests on the occasion includes Sri. G.M. Siddeshwara, Member of Parliament, Davanagere, Sri. S.A. Ravindranath, Minister of Horticulture and Sugar, GoK, Dr. K. Narayanagowda, Vice Chancellor, UAS, Bengaluru, Dr. S. Prabhukumar, ZPD, Zone-VIII, ICAR, Bengaluru.
- b.) Common Service Centre: First of its kind in India, Taralabalu KVK is conducting internet based interactive classes between specialist and farmers at Gram Panchayath. At present 5 Gram Panchayath in Gubbi taluk, Tumkur district are covered.
- c) Conducted 6 days training on 'Improved Integrated Dairying and Vermicompost Preparation' sponsored by Zilla Panchayath, Davanagere under SGSY programmes. In all 15 training programmes were conducted and 781 women SHG members were trained.
- d) Conducted 6 training programmes sponsored by CBTMPCS, UAS, Bengaluru for 184 farmers and farmwomen of Shimoga and Davanagere district.
- e) Conducted workshop on 'Production Technology of Coconut' in collaboration with CDB, Bengaluru and workshop on 'Production of betelvine and introduction gall wasp resistant *erythrina* standards.
- f) Farmer- Farmer interactive programme arranged in KVK where traditional organically grown seeds of agriculture crops, horticulture crops were exchanged at free of cost.
- g) 'Save traditional paddy' programme was conducted in KVK to save traditional paddy varieties in collaboration with 'Sharana Mudanna Savayava Krishikara Balaga', Kumbaluru, Hariahra taluk, Traditional paddy seeds were distributed free of cost.
- h) To give importance of 'Pest harvest technology and marketing' 3 training programmes for 155 farmers was conducted in collaboration with Karnataka state, Agricultural marketing Board, Bengaluru.
- i) Annual report of Taralabalu Rural Development Foundation (Host institution) – 2010-11 was prepared and presented before general body meeting of TRDF.
- j) Portable fish hatchery was inaugurated by Dr. S. Ayyappan, Director General and Secretary, DARE, New Delhi on 21-02-2012.
- k) Two day training ( 2 No's) was conducted for Primary School Teachers on 'School Gardening' in collaboration with Educational Department.
- l) KVK has provided opportunity for 4 students of M.S.W. and 3 students B.S.W. from Davanagere University, Davanagere for their Dissertation work.
- m) Special days celebrated:
  1. International Mother Earth Day
  2. World Environment Day
  3. National Fish Farmers Day.
  4. World Food Day
  5. Women in agriculture day.
  6. Kissan Summan Diwas
  7. National Science Day.
  8. International Women's Day.
  9. World Forest Day.
  10. Parthenium Awareness Week.
11. Conducted PRA at Siddanuru, Davanagere – tq. as part of NICRA project implementation and for FFS.
- n) Taralabalu Bio Fuel Training and Demonstration Centre with the financial assistance from Biofuel Board, Bengaluru was inaugurated by Sri. M. Basavarajanaik, Member of legislative Assembly, in divine presence of Sri. Taralabalu Jagadguru Brihanmatt. Dr. Shivamurthy Shivacharya Mahaswamiji on 12-02-2012.
- o) KVK has established AITC in KVK premises.
- p) KVK activities from 2005 to 2010 were presented before quinquennial Review Team held at UAS, Dharwad. A small exhibition of our KVK technology was arranged on the occasion.

## q) NICRA Activities

The Siddanur, village was selected for NICRA activities with collaboration of the line department officials. During the year 2011-12, the following activities were carried out.

Name of the activity	Works
Natural Resource Management	Trench cum bunds- 40 farmers, Area- 30 ha
	Farm ponds- 06 no.s
	Land leveling- 25 farmers, Area: 1.6 ha
	Balapanamatti channel, Kodisara, Rajagaluve., Length: 4741 mts.
Crop production	Conducted demonstrations on crops like- Maize, Redgram, Tomato, Ragi and Cotton
Live stock and fisheries	Conducted regular animal health check up. Azolla unit were established and farmers are very happy with this technology. Nari suvarna (Ram) sheep introduced to the village.
Institutional interventions	Conducted regular trainings on the specific technology whenever required. Farm Advisory Services to farmers based on weather data available at Simple Weather Station. As a part of exposure visit taken farmers to BAIF, Tiptur, National Krishi Mela, UAS, Bengaluru, also visited KVK Tumkur, Hassan, Mysore and Chamrajanagara.
Dignitaries Visited	Zonal Project Director, Bengaluru visited the NICRA village and observed work carried out and suitable instructions were given. Dr. Sreenatha Dixith, Principal Scientist, CRIDA, Hyderabad and Dr. Sreenivas Reddy, Senior Scientist, ZPD, Bengaluru visited NICRA village and suggested scientific/ NRM works to be carried out. Dr. Ayyappan S. Director General, ICAR, New Delhi, Dr. K. Narayana Gowda, Vice Chancellor, UAS, Bengaluru and other scientist from the university visited the NICRA village.

## SUMMARY FOR 2011-12

### I. TECHNOLOGY ASSESSMENT

**Summary of technologies assessed under various crops**

Thematic areas	Crop	Name of the technology assessed	No. of trials
Weed Management	Maize	Weed management in Maize	10
Others : Weed management	Velvet beans	Assessment of velvet beans as intercropping in arecanut	10
<b>Total</b>			<b>20</b>

Summary of technologies assessed under livestock: Nil

Summary of technologies assessed under various enterprises: Nil

Summary of technologies assessed under home science: Nil

### II. TECHNOLOGY REFINEMENT

Summary of technologies refined under various crops: Nil

Summary of technologies assessed under refinement of various livestock: Nil

Summary of technologies refined under various enterprises : Nil

Summary of technologies refined under home science: Nil



Crop	Thematic area	Name of the technology demonstrated	No. of KVK's	No. of Farmers	Area (ha)	Yield (q/ha)		% Increase	Other parameters		*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
						Demo	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	**BCR	Gross Cost	Gross Return	Net Return	**BCR
<b>Plantation crop</b>																		
Arecanut	Disease management	Integrated management of hidimundige in arecanut		10	02	18.3	11.7	56.41	% hidimundige 15	40	75500	237900	162400	3.15	65200	152100	86900	2.33
	Pest management	Integrated management of snail in arecanut		10	05	17.1	14.2	20.42	% snail 08	45	75000	222300	147300	2.96	69500	184600	115100	2.65
<b>Vegetables</b>																		
Tomato	Crop management	Integrated crop management in Tomato		10	02	31.8	28.9	9.9	Plant height (cm) 74.7 No. of fruits / plant 34.6	64.5 30.0	66700	190800	124100	2.86	60300	165000	104700	2.73
French bean	Popularization of HYV	Popularization of HYV Arka Suvidha in French bean		15	02	844.3	614	37.5	Plant height (cm) 46.95 No. of branches / plant 4.66 Pod length (cm) 16.2	38.7 3.2 12.8	38715	84430	45715	2.18	32953	49120	16167	1.49
<b>Fruit</b>																		
Mango	Pest management	Integrated management of leaf hopper and fruit fly in mango		05	02	16.2 t/ha	12.9 t/ha	25.55	% leaf hopper 6 % fruit fly 5	20 15	40800	291600	250800	-	45300	154800	109500	-





**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	Polyculture of common carps	Polyculture of common carps and <i>Pangasius sp</i>	-	07	07	54.15 q/ha	20 q/ha	170.75	Body weight gain in g: 1000 g/ 10 months	600 g/ 10 months	75863	208312	132449	2.75	-	-	-	-
Others	Scarcity of fingerlings	Production of advanced fish fingerlings of <i>catla catla</i> in earthen ponds		02	02	368750 no.s	-	-	-	-	220937	368750	147812	1.67	-	-	-	-
<b>Total</b>				<b>09</b>	<b>09</b>													

**Other enterprises : Nil**

**Women empowerment: Nil**

**Farm implements and machinery: Nil**

**Other enterprises**

**Demonstration details on crop hybrids**

Crop	Name of the Hybrid	No. of farmers	Area (ha)	Yield (kg/ha)			Economics (Rs./ha)				
				Demonstration	Local check	% change	Gross Cost	Gross Return	Net Return	BCR	
Cereals											
Maize	NAH-2049	12	8.4	50.0	41.3	21	18500	63750	45250	3.44	
	NAH-1137	28	12.6	50.90	41.3	21.2	18350	64472	45972	3.48	
<b>Total</b>		<b>40</b>	<b>21</b>								



## IV. Training Programme

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Crop Production</b>										
Weed Management	02	08	-	08	17	03	20	25	03	28
Cropping Systems	01	03	-	03	13	02	15	16	02	18
Seed production	01	54	-	54	02	-	02	56	-	56
Integrated Crop Management	03	19	-	19	33	03	36	52	03	55
Soil and Water Conservation	01	57	02	59	-	-	-	57	02	59
Integrated Nutrient Management	01	02	-	02	07	-	07	09	-	09
Orientation to NICRA Project	01	13	02	15	02	01	03	15	03	16
Seed treatment	01	08	-	08	-	-	-	08	-	08
Environment Management	02	95	08	103	21	09	30	116	17	133
Water Management	02	54	-	54	06	-	06	60	-	60
<b>Horticulture</b>										
<b>a) Vegetable Crops</b>										
Protective cultivation	01	07	-	07	-	-	-	07	-	07
<b>b) Fruits</b>										
Cultivation of Fruit	01	12	-	12	01	-	01	13	-	13
<b>Others</b>										
Integrated Nutrient Management	01	12	01	13	03	-	03	15	01	16
Nutritive Value	01	02	08	10	-	-	-	02	08	10
<b>c) Ornamental Plants</b>										
<b>d) Plantation crops</b>										
Production and Management technology	02	78	28	106	13	19	22	81	47	128
<b>Others</b>										
Disease forecasting	01	03	05	08	01	-	01	04	05	09

<b>e) Tuber crops</b>										
<b>f) Spices</b>										
<b>g) Medicinal and Aromatic Plants</b>										
<b>Soil Health and Fertility Management</b>										
Integrated nutrient management	01	-	-	-	16	02	18	16	02	18
<b>Livestock Production and Management</b>										
Dairy Management	17	57	398	455	27	370	397	84	768	852
<b>Home Science/Women empowerment</b>										
<b>Agril. Engineering</b>										
<b>Plant Protection</b>										
Integrated Pest Management	02	11	05	16	06	-	06	17	05	22
Integrated Disease Management	01	08	06	14	-	-	-	08	06	14
<b>Fisheries</b>										
Integrated fish farming	01	20	-	20	44	-	44	64	-	64
<b>Others</b>										
Fish feed	01	18	31	49	03	02	05	21	34	55
<b>Production of Inputs at site</b>										
<b>Capacity Building and Group Dynamics</b>										
<b>Agro-forestry</b>										
<b>TOTAL</b>	<b>45</b>	<b>541</b>	<b>494</b>	<b>1035</b>	<b>215</b>	<b>411</b>	<b>626</b>	<b>756</b>	<b>905</b>	<b>1661</b>

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Crop Production</b>										
Weed Management	01	12	-	12	03	-	03	15	-	15
Integrated Crop Management	01	13	-	13	07	-	07	20	-	20
Integrated Nutrient Management	01	24	-	24	04	02	06	28	02	30
Production of organic inputs	01	42	08	50	01	01	02	43	09	52



<b>Capacity Building and Group Dynamics</b>										
<b>Others</b>										
Economics of organic and inorganic rice production	01	08	-	08	-	-	-	08	-	08
Marketing of organic paddy	01	08	-	08	-	-	-	08	-	08
<b>Agro-forestry</b>										
<b>TOTAL</b>	<b>21</b>	<b>238</b>	<b>13</b>	<b>251</b>	<b>156</b>	<b>13</b>	<b>169</b>	<b>394</b>	<b>26</b>	<b>420</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
<b>Any other</b>										
1. Fresh and Marine water bio-diversity modules preparation for science exhibition	01	09	15	24	05	04	09	14	19	33
2. Flower arrangement	01	06	-	06	-	-	-	06	-	06
3. Foliar sprays in cotton	01	30	-	30	11	-	11	41	-	41
4. Attracting rural youth towards agriculture	01	33	20	53	03	-	03	36	20	56
<b>TOTAL</b>	<b>04</b>	<b>78</b>	<b>45</b>	<b>123</b>	<b>19</b>	<b>04</b>	<b>23</b>	<b>97</b>	<b>49</b>	<b>146</b>

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

**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
<b>Any other (pl.specify)</b>										
1. Organic Farming in Horticulture Crops	02	26	03	29	14	02	16	40	05	45
2. Kitchen Gardening	02	35	02	37	22	04	26	57	06	63
<b>Total</b>	<b>04</b>	<b>61</b>	<b>05</b>	<b>66</b>	<b>36</b>	<b>06</b>	<b>42</b>	<b>97</b>	<b>11</b>	<b>108</b>

**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
<b>Any other</b>										
1. Handling of Chemicals	01	43	-	43	-	-	-	43	-	43
<b>Total</b>	<b>01</b>	<b>43</b>	<b>-</b>	<b>43</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>43</b>	<b>-</b>	<b>43</b>

**Sponsored training programmes conducted**

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>1</b>	<b>Crop production and management</b>										
<b>2</b>	<b>Production and value addition</b>										
<b>3.</b>	<b>Soil health and fertility management</b>										
<b>4</b>	<b>Production of Inputs at site</b>										
<b>5</b>	<b>Methods of protective cultivation</b>										
<b>6</b>	<b>Others (pl.specify)</b>										
<b>7</b>	<b>Post harvest technology and value addition</b>										
7.a	<b>Others</b>										
	School Gardening	02	35	02	37	22	04	26	37	06	43
	Organic farming in horticulture crop	02	26	03	29	14	02	16	30	05	35
	Environment management plan	03	67	09	76	06	08	14	73	17	90
	Water management	03	73	-	73	20	01	21	93	01	94
	Coconut production practices	01	56	28	84	02	19	21	58	47	105
	Nutrition Garden	01	15	01	16	03	-	03	18	01	19
	Marketing of Agricultural produce	03	105	-	105	44	06	50	149	06	155
<b>8</b>	<b>Farm machinery</b>										
<b>9.</b>	<b>Livestock and fisheries</b>										
<b>10</b>	<b>Livestock production and management</b>										
10.a.	Animal Nutrition Management	01	10	05	15	08	02	10	18	07	25
10.b.	Animal Disease Management										
10.c	Fisheries Nutrition	01	18	31	49	03	02	05	21	33	54
10.d	Fisheries Management	01	20	-	20	44	-	44	64	-	64
10.e.	Others : Dairy management	16	62	398	460	48	370	418	110	768	878
<b>11.</b>	<b>Home Science</b>										
<b>12</b>	<b>Agricultural Extension</b>										
	<b>Total</b>	<b>34</b>	<b>487</b>	<b>477</b>	<b>964</b>	<b>214</b>	<b>414</b>	<b>628</b>	<b>701</b>	<b>891</b>	<b>1592</b>

### Details of sponsoring agencies involved

1. Department of Veterinary science and Animal Husbandry, Davanagere
2. DIET, Davanagere.
3. District Watershed Development Department, Davanagere
4. Department of Horticulture, Davanagere
5. CBTMPCS, UAS (Bengaluru).
6. CIFA, Bhuvaneshwara.
7. CDB, Bengaluru.
8. JSYS, Davanagere.
9. Bapuji Polytechnic, Davanagere.
10. Karnataka State Agricultural Marketing Board, Bengaluru
11. Zilla Panchayath, Davanagere

Details of Vocational Training Programmes carried out for rural youth: Nil

### V. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	564	611	17	628
Diagnostic visits	37	-	-	-
Field Day	11	318	-	318
Group discussions	03	53	-	53
Film Show	89	1356	20	1376
Exhibition	03	150	-	150
Scientists' visit to farmers field	88	-	-	-
Farmers' seminar/workshop	02	128	-	128
Method Demonstrations	04	58	-	58
Celebration of important days	02	-	-	-
Special day celebration	10	702	33	735
Exposure visits	06	55	20	75
Others : Lecture delivered as resource person	68	730	31	761
News paper coverage	55			
Radio talk	15			
TV talk	33			
Popular Article	07			
Extension literature	81	1367	-	1367

Film shows	89	1356	20	1376
Bi-mothly			302	302
PRA	01	74		
Pest survey	02	-	-	-
Agri. Technology Week	01	517	-	517
Farmers – Scientist interaction	01	--	-	-
<b>Total</b>	<b>1076</b>	<b>6110</b>	<b>424</b>	<b>6534</b>

#### Details of other extension programmes

Particulars	Number
Electronic Media	-
Extension Literature	81
News Letter	04
News paper coverage	55
Technical Articles	-
Technical Bulletins	-
Technical Reports	-
Radio Talks	15
TV Talks	23
Animal health amps (Number of animals treated)	01
Others	
<b>Total</b>	<b>179</b>

## 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
Vegetables	Drumstick	PKM-1	0.01	190-00	02
Others:	Velvet beans	Mucuna sp	6.97	12084-00	81
	Sunhemp	-	0.58	2805-00	18
<b>Total</b>			<b>7.65</b>	<b>15079-00</b>	<b>101</b>

### Production of planting materials by the KVKs

Crop category	Name of the crop	Name of the variety (if hybrid pl. specify)	Number	Value (Rs.)	Number of farmers
Vegetable seedlings	Curry leaf	Local	570	3472-00	101
	Drumstick	PKM-1	1363	13630-00	300
Fruits	Mango	Alphanso	1079	31030-00	70
	Papaya	Red lady	06	60-00	01
	Jack fruit	Local	11	100-00	07
	Anola	Kanchana	01	20-00	01
	Sapota	Local	57	1820-00	03
	Lemon	Local	5446	27593-00	81
Ornamental plants	Palms	-	24	960-00	08
Plantation	Arecanut	Thirthahalli local	3245	33100-00	10
Fodder crop saplings	Fodder	DHN-6	128200 slips	49000-00	25
Others	Azolla	Azolla pinneta	58.5 kg	1170-00	54
<b>Total</b>				<b>161955-00</b>	<b>606</b>

### Production of Bio-Products

Bio Products	Name of the bio-product	Quantity	Value (Rs.)	No. of Farmers
		Kg		
Bio Fertilizers	Trichoderma	240	12000-00	44
Others	Vermicompost	12000	60000-00	30
	Earthworms	40	10000-00	15
	Banana Special	2600	357000-00	250
<b>Total</b>		<b>14880-00</b>	<b>439000-00</b>	<b>339</b>



**Production of livestock and related enterprise materials**

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers
<b>Dairy animals</b>				
Others	Milk	6494 ltrs	114467-00	35
<b>Poultry</b>				
Broilers	Giriraja	22	7200-00	10
Others	Hen local	06	670-00	06
<b>Piggery</b>				
Others	Sheeps- Bellary Deccani X	14	72250-00	10
<b>Fisheries</b>				
Fingerlings (Advanced)	Catla, Rohu, Common carps	500	500-00	03
Others: Ornamental fishes	Guppies, Moulies, Sword tails	9489	31595-00	-
Food fishes	Rohu, Common carps, Catla, Pangus	284 kg	16788-00	-
<b>Total</b>			<b>243470-00</b>	<b>64</b>

**VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS 2011-12**

Samples	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
Soil	392	380	260	39200-00
Water	187	175	160	9350-00
<b>Total</b>	<b>579</b>	<b>555</b>	<b>420</b>	<b>48550-00</b>

**VIII. SCIENTIFIC ADVISORY COMMITTEE**

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

**IX. NEWS LETTER**

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

**X. RESEARCH PAPER PUBLISHED: NIL**

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

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