ZONAL PROJECT DIRECTORATE – ZONE VIII BANGALORE

ACTION PLAN OF KVKS IN ZONE VIII FOR THE YEAR 2009-10

GENERAL INFORMATION ABOUT THE KRISHI VIGYAN KENDRA, DAVANAGERE

1.	Name and address of KVK with Phone, Fax and e-mail	:	Taralabalu Krishi Vigyan Kendra Kadalivana, LIC Colony Layout, B.I.E.T. College Road DAVANAGERE-577004 Karnataka Tele/Fax : 08192-260969 E-mail : dvgtkvk@yahoo.com. / tkvk@taralabalu.org
2.	Name and address of host organization with Phone, Fax and e-mail	:	Taralabalu Rural Development Foundation SIRIGERE-577541 Dist.: Chitradurga Phone: 08194 – 268829, 268842 Fax: 08194 – 268847 E – mail: trdf@taralabalu.org
3.	Name of the Programme Coordinator Residence Phone Number/ Mobile No.	:	Dr.T.N.Devaraja Mob.: 94498-56876
4.	Year of sanction	:	2004
5.	Year of start of activities	:	June 2005
6.	Major farming systems/enterprises	:	Maize, Jowar, Sugarcane, Rice, Ragi, Navane, Groundnut, Sunflower, Bengalgram, Cotton, Soybean, Vegetable crops, Banana, Mango, Arecanut, Coconut, Beetle Vine, Dairy, Poultry, and Fisheries
7.	Name of agro-climatic zone	:	Zone – III, IV, VII Harapanahalli – Zone- III Davanagere, Harihar and Jagalur - Zone- IV Channagiri and Honnali – Zone-VII
8.	Soil type	:	Medium to deep black soils and Red sandy loam soil
9.	Annual rainfall (mm)	:	646 mm

10. Staff Strength as on 01-03-2009:

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

11. Details of staff as on 01-03-2009:

Sl. No.	Sanctioned post	Name of the incumbent	Discipline	Pay scale	Date of joining	Permanent/ Temporary
1.	Programme Coordinator	Dr. Devaraja T.N.	Programme Coordinator	12000-420-18300	17-05-05	Per.
2.	Subject Matter Specialist	Mr.Basavanagowda M.G.	Horticulture	8000-275-13500	21-11-06	Per.
3.	Subject Matter Specialist	Mr. Mallikarjuna B.O.	Agronomy	8000-275-13500	09-01-08	Per.
4.	Subject Matter Specialist	Dr. Jayadevappa G.K.	Animal Science	8000-275-13500	29-01-08	Per.
5	Subject Matter Specialist	Mr. Raghuraja J.	Agriculture Extension	8000-275-13500	23-06-08	Per.
6	Subject Matter Specialist	Mr. Prasanna Kumara N.	Plant Protection	8000-275-13500	24-06-08	Per.
7	Subject Matter Specialist	Dr. Pradeep H.M.	Soil Science	8000-275-13500	25-06-08	Per.
8	Programme Assistant	Miss. Kavitha P.	Home Science	5500-175-9000	01-06-05	Per.
9	Computer Programmer	Mr. Santhosh B.	Computer	5500-175-9000	05-09-08	Per.
10	Farm Manager	Mr. Vijaya Kumar S.B.	Farm Manager	5500-175-9000	23-06-08	Per.
11	Accountant/Superintendent	Mr.Mallikarjuna S. Gudihindala	Office Superintendent -Cum-Accountant	5500-175-9000	01-06-05	Per.
12	Stenographer	Mrs.Mamatha H. .Melmalagi	Stenographer -Cum-Computer Operator	4000-100-6000	26-06-05	Per.
13	Driver	Mr.N.M.Marulasiddaiah	Driver-Cum-Mechanic	3050-75-3950-80-4950	01-06-05	Per.
14	Driver	Mr.S. Shivakumar	Driver-Cum-Mechanic	3050-75-3950-80-4950	01-06-05	Per.
15	Supporting staff	Mr.B. Shivakumar	Office Attendant	2550-55-2660-60-3200	01-06-05	Per.
16	Supporting staff	Mr.S.E. Shivakumar	Farm Attendant	2550-55-2660-60-3200	01-06-05	Per.

12. Plan of Human Resource Development of KVK personnel during 2009-10

S. No	Discipline	Area of training required	Institution where training is offered	Approximate duration (days)	Training fee (Rs.)
1	Horticulture	Post Harvest Technology	CIPHET, Ludhiana	8	--
2	Horticulture	Production of Quality Planting Materials in Horticulture Crops	IIHR, Bangalore	8	-
3	Home Science	Recent advances in post harvest technology of fruits and vegetables	IIHR, Bangalore	5	--
4	Agronomy	Hybrid Rice Seed production	DRR, Hyderabad	10	--
5	Agronomy	Recent advances in oil seed production	DOR, Hyderabad	10	--
6	Plant Protection	IPM in Oilseed and pulses	DOR, Hyderabad	07	--
7	Animal Science	Recent advances in Animal nutrition	NIANP, Bangalore	07	--
8	Fisheries	Value addition in fishery products	College of fisheries, Mangalore	07	--
9	Fisheries	Fish breeding	CIFA, Bangalore branch	08	--
10	Soil Science	Water conservation, Rain water harvesting and watershed development	Water literacy foundation, Bangalore	07	--
11	Soil Science	Micro nutrient and leaf analysis	NBSS and LUP, Bangalore	07	--
12	Agriculture Extension	Recent advances in training management	NAARM, Hyderabad	09	--
13	Computer programmer	Web designing, Database management	Computer technology, Davanagere	90 (1 hour/day)	--
14	Superintendent	Inventory (Store) System	Tally Academy	90 (1 hour/day)	--
15	Steno-Cum-Comp. Operator	Inventory (Store) System	Tally Academy	90 (1 hour/day)	--

13. Infrastructure:

i) Land

Total Area (ha)	Area Cultivated (ha)	Area occupied by buildings and roads (ha)	Area with demonstration units (ha)
15	13 (8 for crops + 5 for agro forestry/orchards)	1.75	0.25

ii) Buildings

Admn. Building			Trainees Hostel			Staff Quarters			Demonstration Unit		
Plinth area (m^2)	Cost (Rs. in lakhs)	Year	Plinth area (m^2)	Cost (Rs. in lakhs)	Year	Plinth area (m^2)	Cost (Rs. in lakhs)	Year	No.	Plinth area (m^2)	Cost (Rs. in lakhs)
550	47.55	2007-08	300	21.24	2007-08	392	28.61	2007-08	Dairy, Mushroom and other demonstrations unit	160	6.41

iii) Vehicles

Type of vehicle	Model	Actual cost (Rs.)	Total kms. Run	Present status
Tempo Cruiser	2005	4,99,250/-	65569	Good
Hero Honda CD Deluxe	2006	39,298/-	23000	Good
Yamaha Alba	2009	48,309/-	30	Good
Tractor & Trailer	2005	4,99,995/-	1160 hours	Good

Power tiller (Funded by cotton FLD)	2008	99,400/-	--	Good

iv) Equipments and AV aids

Sl. No.	Name of Equipments	Date of purchase	Cost (Rs.in lakhs)	Present status
1	Xerox Machine	2006	73,840/-	Good
2	Digital Camera	2006	19,900/-	Not in working condition
3	Over Head Projector	2006	19,935/-	Good
4	TV with DVD Player (Funded by: SHIMUL)	2006	11,350/-	Good
5	LCD projector system + Computer + Laser jet printer	2007	1,00103/-	Good
6	VRC system (Funded by UAS, Bangalore)	2008	--	Good
7	Fax (4 in one)	2009	15,000/-	Good

14. Details of SAC meeting conducted during 2008-09

Fifth SAC meeting was conducted on 22nd October 2008 and the following recommendations were made.

Major recommendations of SACs which are to be implemented during 2009-10	Proposed 2009-10

• To increase the number of FFS and training programmes as the fund is available for this under ATMA project. • To take up Freshwater Prawn Cultivation in farmers field – 15000 seeds are available in ZARS Shimoga. • To start plant health and disease diagnostic centre. • To document the horizontal spread of technologies demonstrated by KVK by conducting success story, case study and by conducting impact studies of effective FLDs and OFTs. • To increase the animal science activities. • To establish Commodity Interest Groups in various crops. • To convert agriculture into way of business rather than just way of life to bring qualitative improvement in the social status of farming community. • To improve the revolving fund status, produce more of technological products for sale not just grains. Produce some items which farmer cannot produce in their conditions and provide them at nominal cost namely – Seeds, bio-fertilizers, bio-pesticides, livestocks. • Suggested to adopt crop rotation in maize crop as growing maize every year is detrimental to soil health. • Suggested to educate farmers to use/operate machines/equipments provided under subsidy scheme properly. Otherwise, farmers start complaining about the machine saying that the items supplied is of substandard quality. • Suggested to use the waste water/used water rich in nitrate after treatment instead of letting it go to the ground water through infiltration. This will avoid water pollution to a larger extent.	**Sixth SAC meeting (Last week of May-2009)**

15. Plan of Work for 2009-10

TABLE 1: OPERATIONAL AREA DETAILS FOR 2009-10

Sl. No.	Taluk	Blocks/groups of villages	Major crops & enterprises being practiced	Major problems identified	Identified thrust areas
1	2	3	4	5	6

1	Davanagere	Kurki, Kandagal, Mallenahalli, Belavanur, Tholahunase, Anagodu, Alur, Thurchghatta, Bullapura, Duggammanapete	Rice	- Planting of aged seedlings - No seed treatment with bio-fertilizer - No Zinc application - Organic manure (2 Cart load) - Excess application of chemical fertilizers - No split/basal application of potash - Stem borer, BPH and blight	- Seed treatment - INM - IPM
			Maize (Rabi/Summer)	- Stem borer and downey mildew - Application of organic manure (3 t) - Improper nutrient management (3 bag urea, 1bag DAP, No potash) - No micronutrient application	- Integrated Nutrient Management (INM) - Zinc application - Resistant variety/ hybrid
			Groundnut	- Use of local varieties - No seed treatment - No gypsum application - Collar rot , Bud necrosis	- HYV and resistant variety - Seed treatment - Gypsum application - Groundnut stripper and decorticator
			Coconut Drumstick	- Heavy incidence of mites and Black headed caterpillar - Improper nutrient management - Less area in cultivation - Poor knowledge on use of Drumstick as intercrop in coconut garden	- ICM, Popularization of TNAU coconut tonic - Release of bio agents - Popularization of drumstick (Var. Dhanraj) as intercrop in coconut gardens.

1	2	3	4	5	6
			Drudgery reduction at farm and in home	- Hand weeding is drudgery prone, time & labour consuming - Higher cost of cultivation - Use of tradition equipment is drudgery prone - Smoky kitchen - Health problems - Drudgery in collecting firewood - Fuel & time consumption is more during cooking - Drudgery at home	- Use of weeders in vegetables - Use of Improved sickle Use of eco friendly smokeless stoves - Use of ARTI cooker
			- Grading and packing of vegetables - Zero Energy Cool Chamber (ZECC)	- No grading being practiced by farmers hence getting less returns - Improper packing - Improper handling during transit to market - Spoilage is faster under natural condition	- Post Harvest Technology
			Azolla	Deficiency of crude protein in milch animals. Supplementing crude protein from oil cakes increases the cost of production.	Feeding Lactating Animals
			Lactating cows	Deficiency of energy in Lactating cows (Energy is the most limiting nutrients in the diet of Dairy Cattle)	Feeding Lactating Animals
2	Harihara	K.N. halli, Yalavatti, Yerebudihal, Mallanayakanahalli, Nittur, Belludi, Karlahalli, Deetur, Sarathi	Rice	- Planting of aged seedlings - No seed treatment with bio-fertilizer - No Zinc application - Organic manure (2 Cart load) - Excess application of chemical fertilizers - No split/basal application of potash - Stem borer, BPH and blight	- Seed treatment - Balanced nutrition management - IPM
			Coconut	- Heavy incidence of mites and Black headed caterpillar - Improper nutrient management	- Integrated Crop Management in Coconut - Popularization of TNAU coconut tonic - Release of bio agents

1	2	3	4	5	6
			- Freshwater fishes and fruit and vegetable crops - Indian major carps & freshwater prawn *Macrobrachium rosenbergii* - Indian major carps and Indian catfish, *clarias, batrachus*	- Improper and unseasonal stocking - Irregular fertilization and feeding - Inadequate quality of seeds - Bad water quality management - Non availability of prawn seeds - No efforts are made for efficient utilization of pond dyke space and moisture content - Non availability of catfish seeds	Additional income generation through Fisheries Additional income generation through aquaculture Poly culture of fish in farm ponds through organic practices
			Cattle	- Energy minerals deficiency	Feeding dairy animals
			Nutritional Kitchen garden	- Malnutrition among rural families - Lack of knowledge on importance of nutrition garden	Nutritional Kitchen garden
3	Channagiri	Garaga, Bheemanere, Daginakatte, Marabanahalli, Shettihalli, Bommenahalli, Devarahalli	Ragi	- Local varieties - No bio-fertilizers - No micronutrient application - Sole cropping	Higher production in minor millets
			Maize	- Stem borer and downey mildew - Application of organic manure (3 t) - Improper nutrient management (3 bag urea, 1bag DAP, No potash) - No micronutrient application	- Integrated Nutrient Management (INM) - Zinc application - Resistant variety/ hybrid
			Sunflower	- No seed treatment - Bud necrosis & black headed caterpillar - Improper nutrient management	- IPM - Micronutrient spray - Proper spray

1	2	3	4	5	6
			Groundnut	- Use of local varieties - No seed treatment - No gypsum application - Collar rot , Bud necrosis	- HYV and resistant variety - Seed treatment - Gypsum application - Groundnut stripper and decorticator
			Arecanut Banana	- Dropping of immature nuts - Nut splitting - Improper Micro Nutrient Management - Lower bunch weight due to improper micronutrient management - Sigatoka leaf spot	- Integrated Nutrient Management - Promotion of green manure crops - Method of fertilizer application - Integrated nutrient management with Banana Special in Banana
			Chilli, Brinjal	- Muruda complex - Improper pest management practices - Higher incidence of shoot and fruit borer	- IPM
			Cattle/Sheep/Goat	- Deficiency of protein and minerals - Deficiency of minerals reduces body weight gain and reproduction	- Fodder scarcity - Nutrient deficiency
			Post harvest technology	- Traditional method of harvesting fruits causes damage of fruits - Energy & time consuming	- Mango Harvester
4	Honnali	Kengalahalli, Kundur, Kulambi, M. kumbalur, Arundi	Sunflower (Rabi)	- No seed treatment - Bud necrosis & black headed caterpillar - Improper nutrient management	- IPM - Micronutrient spray - Proper spray
			Bengalgram	- No seed treatment with bio fertilizers - Pod borer & wilt - Use of local varieties (A-1)	- Seed treatment - Trap installation - NPV spray
			Onion	- Lower Productivity due to use of local variety (Arundi local) - Purpal Blotch diseases	- Production Technology of purpal blotch diseases resistant variety Arka Kalyan in Onion
			Tomato	- Lower productivity due to improper nutrient management	- Use of vegetable special in Tomato
			Bhendi Avare	- Shoot and fruit borer - No intercropping, No crop rotation, Low soil nutrient status	- IPM - ICM

			Poultry	Use of local breeds	Nutrition breeding
1	**2**	**3**	**4**	**5**	**6**
5	Harapanahalli	Anajigere, Budihal, Madihalli, Nandibevuru,Arasikere, Kallahalli, Haluvagalu, Hulikatte, Kannayakanahalli, Channalli thanda	Navane	- Local varieties - No bio-fertilizers - No micronutrient application - Sole cropping	Higher production in minor millets
			Cotton	- Use of desi/DCH-32 - Indiscriminate use of pesticides (12 times) - Improper nutrient management (75:50:50 NPK kg/ha) - Improper spacing (90x60) - Square drying - Non availability of Bt seeds - Leaf reddening - Boll worms and sucking pest	- Higher production with good staple length - Bt Cotton - Seed treatment - Growth regulators - Micronutrient and RDF Integrated Pest Management (IPM)
			Dryland horticulture	- Lower water table - More area in Rainfed condition	Promotion of fruit crops which require less water
			Redgram	No seed treatment with bio fertilizers Pod borer & wilt Use of local varieties (Chennagiri local)	IPM
			- Sterile common carps, Amur common carp and ordinary common carp	- Improper and unseasonal stocking - Irregular fertilization and feeding - Inadequate quality of seeds - Bad water quality management	- Aquaculture production in inland pond
			- Freshwater fishes and fruit and vegetable crops - Indian major carps and Indian catfish, *Clarias, batrachus*	- Improper and unseasonal stocking - Irregular fertilization and feeding - Inadequate quality of seeds - Bad water quality management - No efforts are made for efficient utilization of pond dyke space and moisture content - Non availability of catfish seeds	- Additional income generation through Fisheries - Additional income generation through aquaculture - Poly culture of fish in farm ponds through organic practices

1	2	3	4	5	6
6	Jagalur	Bilichodu, Medikeranahalli, Mallapura, Devikere,	Same	- Local varieties - No bio-fertilizers - No micronutrient application - Sole cropping	Higher production in minor millets
			Dryland horticulture	- Lower water table - More area in Rainfed condition	Promotion of fruit crops which require less water
			Onion,	- Lower Productivity due to use of local variety (Mallapura local) - Purpal Blotch diseases	- Production Technology of purpal blotch diseases resistant variety Arka Kalyan in Onion
			Post Harvest Technology	Hand shelling is drudgery prone, time & labour consuming	- Use of medium type groundnut decorticator
			Mushroom cultivation	- Low production potentiality - Non availability of quality seeds	Mushroom cultivation

LIST OF THRUST AREAS FOR THE KVK FOR 2009-10

- Integrated nutrient management in Maize, Minor millets, Rice, Sunflower and Groundnut
- Recycling of crop waste for composting and vermicomposting
- Integrated pests management in Maize, Rice, Groundnut, Sunflower, Cotton, Bengalgram, Redgram, Brinjal, Tomato and Chilli
- Popularization of high yielding variety/ hybrids in cereals and oil seeds
- Livestock nutrition
- Breeding problems in cattle
- Quality clean milk production
- Disease control in livestock
- Sustainable integrated fish farming with prawn and horticulture crops
- Enrichment and value addition to cereals, pulses, fruits and vegetables for nutritional security and income generating activities
- Drudgery reduction in farm and house hold level for farm women
- Family nutrition management
- Value addition to field and horticulture crops
- Technology support and income generating activities for women SHG members
- Integrated Nutrient Management in Coconut, Arecanut, Banana, Mango and vegetable crops
- Black headed caterpillar and mites management in Coconut

TABLE.2 Abstract of Interventions Proposed Based On the Identified Problems during 2009-10

S.No	Crop/ Enterprise	Identified Problem	Interventions				
			Title of OFT	Title of FLD	Title of Training	Title of Training for extension personnel	Others
1	2	3	4	5	6	7	8
1	Aquaculture production seasonal water bodies	- Ordinary common carp does not attain marketable size in seasonal farm ponds and fetches low price	Assessment of body weight gain among Amur common carp, Sterile common carp and Common carp in farm ponds	--	– Fish pond preparation – Fish seed selection and stocking – Feeding and fertilization – Integration of agriculture practices	--	Group discussion, Method demonstrations Field visits
2	Indian major carps & freshwater prawn *Macrobrachium rosenbergii*	- Improper and unseasonal stocking - Irregular fertilization and feeding - Inadequate quality of seeds - Bad water quality management - Non availability of prawn seeds	--	Integrated Fish-cum-prawn culture in freshwater pond		--	Group discussion, Method demonstrations Field visits
3	Freshwater fishes & fruit & vegetable crops	In addition to the above, no efforts are made for efficient utilization of pond dyke space and moisture	--	Integrated Horti-Fish Farming in inland ponds		Pond management	Group discussion, Method demonstrations Field visits
4	Poly culture of fish in farm ponds	- Improper and unseasonal stocking - Irregular fertilization and feeding - Inadequate quality of seeds - Bad water quality management - - Non	--	Poly culture of major carps and cat fish *Clarias batrachus* in farm ponds		Integrated fish farming	Group discussion, Method demonstrations Field visits

		availability of catfish seeds					
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
5	Maize (Kharif + Rabi)	- Stem borer and downey mildew - Application of organic manure (3 t) - Improper nutrient management (3 bag urea, 1bag DAP, No potash) - No micronutrient application	--	Improved cultivation practices in Maize (NAH-2049)	– Sowing technique – Identification of nutrient deficiency symptoms – Method of application of fertilizers – Value added products in maize	Production technology in Maize	Group discussion, Method demonstrations Field visits Field day
6	Rice	- Planting of aged seedlings - No seed treatment with bio-fertilizer - No zinc application - Organic manure (2 cart load) - Excess application of chemical fertilizers - No split/basal application of potash - Stem borer, BPH and blight	--	- Integrated nutrient management - IPM on stem borer in Rice	– Nursery management – Use of bio-fertilizers – Pheromone trap installation – Micronutrient application – Neem coated urea – Release of parasitoids	Production technology in Rice	Group discussion, Method demonstrations Field visits Field day FFS
7	Jowar	- Use of local varieties - Improper nutrient management (50kg DAP) No FYM - No seed treatment with chemicals and bio fertilizers	--	-Integrated Crop Management	– Improved high yielding variety (M-35-1) – Integrated nutrient management – Seed treatment with the bio fertilizers – Seed treatment with the sulphur powder against smut.	Production technology in Jowar	Group discussion, Method demonstrations Field visits Field day
8	Ragi, Navane, Same	- Local varieties - No bio-fertilizers - No micronutrient application	--	Improved production technology of high yielding Ragi, Navane and Same	- Seed treatment with bio fertilizers - Importance of potash - Value addition in Ragi,	Value added products preparation	Group discussion, Method demonstrations

		- Sole cropping			Navane and Same		Field visits Field day
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
9	Sunflower (Kharif + Rabi)	- No seed treatment - Bud necrosis & black headed caterpillar - Improper nutrient management	- Assessment of different management practices of Powdery mildew in Sunflower	ICM in Sunflower	- Seed treatment - Use of micronutrient spray - Role of honey bees in getting higher yield	IPM in Sunflower	Group discussion, Method demonstrations Field visits Field day
10	Groundnut	- Use of local varieties - No seed treatment - No gypsum application - Collar rot , Bud necrosis	--	ICM in Groundnut	- Seed treatment with fungicides and bio-fertilizers - Importance and timely application of gypsum - Identification of color rot and leaf minor - Use of drudgery reducing equipments	ICM in Groundnut	Group discussion, Method demonstrations Field visits Field day
11	Redgram	- No seed treatment with bio fertilizers - Pod borer & wilt - Use of local varieties (Chennagiri local)	--	Integrated pest management in Redgram	– Seed treatment with trichoderma – Role of pheromone traps in management of pod borer – Use of bio-fertilizers for improving soil health	IPM in Redgram	Group discussion, Method demonstrations Field visits Field day
12	Bengalgram	- No seed treatment with bio fertilizers - Pod borer & wilt - Use of local varieties (A-1)	--	Integrated management of pod borer in Bengalgram	– Seed treatment with trichoderma – Role of pheromone traps in management of pod borer – Use of trap crop coriander – Method of neem product spraying	IPM in Bengalgram	Group discussion, Method demonstrations Field visits Field day

1	2	3	4	5	6	7	8
13	Cotton	- Use of desi/DCH-32 - Indiscriminate use of pesticides (12 times) - Improper nutrient management (75:50:50 NPK kg/ha) - Improper spacing (90x60) - Square drying - Non availability of Bt seeds - Leaf reddening - Boll worms and sucking pest	- Assessment on wider row spacing in cotton	- ICM in cotton	– Sowing and seed treatment – Importance of trap crops – Management of pest through pheromone traps – Timely spray of chemicals - Application of growth regulators	- Recent advances in Bt cotton production technology	Group discussion, Method demonstrations Field visits Field day
14	Coconut	- Heavy incidence of mites and Black headed caterpillar - Improper nutrient management	- Use of TNAU Coconut tonic to strengthen Coconut palms (Continued assessment)	Integrated management of coconut black headed caterpillar	- Integrated pest and disease management in Coconut. - Integrated Nutrient management in Coconut.	Integrated Pest and Disease Management in Coconut	Method demonstration Field visit Seminar Workshop
15	Banana	- Lower bunch weight due to improper micronutrient management - Sigatoka leaf spot	--	Use of Micronutrient mixture (Banana Special) in Banana	– Importance of sucker selection in Banana – Nutrient and water management in Banana – Management of pest and diseases in Banana	INM in Banana	Group discussion, Method demonstrations Field visits Seminar Workshop
16	Arecanut	- Dropping of immature nuts - Nut splitting and Hidimundige roga - Improper Micro Nutrient Management	--	– Integrated management of Hidimundige roga in Arecanut – Integrated Nutrient Management in Arecanut	– Importance of mother palm selection in arecanut – Integrated nutrient management in arecanut	Integrated Pest and Disease Management in Arecanut	Group discussion, Method demonstrations Field visits Seminar Workshop

1	2	3	4	5	6	7	8
17	Onion	- Lower Productivity due to use of local variety (Arundi local) - Purpal Blotch diseases	--	Production Technology of Purple blach resistant variety	– Importance of seed treatment with bio-fertilizer in Onion – Production technology of Onion – Management of purple blotch disease in Onion	Production Technology of Onion	Group discussion, Method demonstrations Field visits Field day
18	Chilli	- Muruda complex - Improper pest management practices	--	IPM in chilli	– Identification of disease sample based on vector – Method of Neem cake application	--	Group discussion, Method demonstrations Field visits Field day
19	Brinjal	- Higher incidence of shoot and fruit borer	--	Integrated management of shoot and fruit borer	– Use of wota traps – Timely application of neem cake		Group discussion, Method demonstrations Field visits Field day
20	Tomato	- Lower productivity due to improper nutrient management	- Use of vegetable special in Tomato with reduced recommended dose of fertilizer (Continued assessment) - Assessment of various management strategies for early blight in Tomato	--	– Methods of raising quality planting materials in tomato – Nutrient and water management in tomato – Post harvest technology in tomato	INM in Tomato	Group discussion, Method demonstrations Field visits Field day
21	Drumstick	- Less area in cultivation - Poor knowledge on use of Drumstick as intercrop in coconut garden	--	Production Technology of Dhanraj variety of Drumstick as intercrop in coconut	- Recent trends in production Technology of drumstick	Production Technology of Drumstick	Group discussion, Method demonstrations Field visits Field day

1	2	3	4	5	6	7	8
22	Bhendi	- Shoot and fruit borer	- Assessment on Integrated management practices for shoot and fruit borer in Bhendi	--	- Integrated management of fruit borer	--	Group discussion, Method demonstrations Field visits Field day
23	Lactating cows	- Deficiency of energy in Lactating cows (Energy is the most limiting nutrient in the diet of Dairy Cattle)	- Supplementation of Ragi grain as a locally available economical energy source for Lactating cows	Production and feeding Azolla to milch animals for improving milk production and health	– Balanced nutrition in dairy animals	--	Group discussion, Method demonstrations Field visits
24	Livestock	- Fodder scarcity	--	Production and feeding Co-4 fodder for reducing the feeding cost in dairy animals	- Nutritive value of Co-4 fodder crops for ruminants	--	Group discussion, Method demonstrations Field visits
25	Poultry	- Lower body weight gain	--	Rearing high yielding birds in backyard	- Rearing of Swarnadhara poultry birds in backyard	--	Group discussion, Method demonstrations Field visits
26	Sheep and goat	- Deficiency of protein and minerals - Deficiency of minerals reduces body weight gain and reproduction		Feeding area specific mineral mixture in small ruminants	- Prevention and control of food and mouth disease in small ruminants	--	Group discussion, Method demonstrations Field visits
27	Case study on Cotton production FLD	--	--	--	--	--	Impact analysis of Cotton FLD in Budihal village from past 5 years

1	2	3	4	5	6	7	8
28	Case study on Onion seed production FLD	--	--	--	--	--	Impact analysis of Onion seed production (Arka kalyan) FLD in and around Arundi village from past 5 years
29	Child Development	Delayed cognitive development among preschoolers	Assessment of cognitive kits for enhancing the cognitive development among preschoolers	--	Enhancing cognitive development of preschoolers using two different cognitive kits	--	Group discussion, Method demonstrations Field visits
30	Post harvesting technology	- Spoilage is faster under natural condition	--	Zero Energy Cool Chamber (ZECC)	Enhancing the shelf life of vegetable at household level using ZECC	--	Group discussion, Method demonstrations Field visits
31	ARTI cooker	- Fuel consumption is more - Drudgery at home	--	Popularization of ARTI cooker	Promotion of ARTI cookder	--	Group discussion, Method demonstrations Field visits

1	2	3	4	5	6	7	8
32	Urja stove	- Smoky kitchen - Health problems - Drudgery in collecting firewood	Use of Eco-friendly smokeless stoves	--	Promotion of Urja stove	--	Group discussion, Method demonstrations Field visits
33	Drudgery reduction	- Hand weeding is drudgery prone, time & labour consuming - Higher cost of cultivation	Use of weeders as drudgery reducing implements in vegetables (Tomato, Brinjal & Chilli)	--	Demonstration of Cycle weeder	--	Group discussion, Method demonstrations Field visits
34	Groundnut decorticator	- Hand shelling is drudgery prone, time & labour consuming	--	Popularization of Hand operated medium type GND	Hand operated medium type GND	--	Group discussion, Method demonstrations Field visits
35	Mango harvester	- Traditional method of harvesting fruits causes damage of fruits - Energy & time consuming	--	Demonstration of Mango harvester	Demonstration of Mango harvester	--	Group discussion, Method demonstrations Field visits

TABLE 2A. Number of interventions to be implemented during 2009-10

S. No	Particulars of intervention	Target number / Quantity
1	2	3
01	**On Farm Trial**	11
02	**Front Line Demonstration (other than oil seeds, pulses and cotton)**	25
	Front Line Demonstration (Oilseeds)	03
	Front Line Demonstration (Pulses)	02
	Front Line Demonstration (Cotton)	01
03	**Training Programmes**	
	Farmers and farm women	93
	Rural Youth (Vocational)	06
	Extension personnel	18
	Sponsored programmes	36
04	**Extension Programmes**	
	Field Day	25
	Kisan Mela	01
	Kisan Ghosthi	01
	Exhibition	01
	Film Show	20
	Method Demonstrations	30
	Farmers Seminar on Azolla cultivation	02
	Workshop	01
	Group meetings	50

	Lectures delivered	30
1	**2**	**3**
	Newspaper coverage	50
	Radio coverage	02
	TV coverage	02
	Radio Programmes	20
	TV Programmes	10
	Publications (Manuals/booklets/handouts/folders)	15
	Popular articles	02
	Extension Literature	15
	Advisory Services	500
	Scientific visit to farmers field	250
	Farmers visit to KVK	600
	Diagnostic visits	30
	Field visits	300
	Exposure visits	04
	Ex-trainees Sammelan	03
	Agriculture Camps	06
	Soil health Camp	05
	Animal Health Camp	03
	Agri mobile clinic	01
	Soil test campaigns	01
	Self Help Group Conveners meetings	06
	Mahila Mandals Conveners meetings	04

	Celebration of Nutrition week	01
1	**2**	**3**
	PRA exercise conducted	06
	Survey on socio economic improvement through Animal Science to SHG women	01
	Insect trap awareness campaign	02
	AIDS awareness campaign	01
05	**Production and supply of seed materials**	
	i) Cereals	400 kg – Ragi : GPU-28
	ii) Pulses – Redgram	20q
	Production and supply of Planting materials	
	Fruits (Mango and Sapota)	500 each
	Vegetables - Drumstick, Curry leaves	1000, 200
	Ornamental crops – Palm	200
	Plantation crops – Arecanut, Coconut	3000, 500
	Others	5000 (Fodder cuttings) 25 kg stylozanthus

1	2	3
	Production and supply of livestock material	
	Fisheries	500 Ornamental fishes 50kg food fishes
	World Environmental Day National Fish Farmers Day World Kitchen Garden Day World Food Day Women in Agriculture Day Kissan Samman Diwas National Science Day	01 each
06	**Number of soil samples to be analyzed**	125
07	**Number of water samples to be analyzed**	100

TABLE. 3

FISH BODY WEIGHT GAIN AMONG THREE TYPES OF COMMON CARPS

1. Title of the On Farm Trial **:** Assessment of body weight gain among Amur Common carp, sterile common carp and common carp in farm ponds.

2.Agro-Ecological Zone **:** Zone III (Harapanahalli Tq.)

3. Production System **:** Rainfed

4. Problem identified **:** Ordinary common carp does not attain marketable size but dedicate more energy towards reproduction in seasonal water bodies. Hence fetches low market price.

5. Number of farmers and area affected in the operational villages : NA

6. Thrust areas **:** Aquaculture production in seasonal water bodies.

7. Rationale for proposing the OFT **:** Ordinary common carp attains early maturity and spends more energy towards reproductive activities. Hence, its gain in body weight/ unit time is generally low. In addition, smaller sized fish do not fetch good market prize. However, Amur Common carp, an improved strain, is known to gain higher body weight (at least 10% extra) in a given time and fetch better market prize. And sterile common carps (all male) will attain higher body weight as there is no reproductive energy loss in a given time.

8. Technology Option 1 **:** Farmer's practice - Stocking common carp fingerlings along with Indian major carps in irregular ratio.

9. Technology Option 2 **:** Recommended practice –Stocking common carp fingerlings along with Indian major carps (3:4:1:2 Catla, Rohu, Mrigal and Common carp respectively)

10. Technology Option 3 **:** Assessment strategy - Stocking Amur common carp fingerlings with Catla, Rohu and Mrigal in ratio 3:4:1:2 (Catla, Rohu and Mrigal and Amur common carp respectively). Source of Technology - UAS, Bangalore

11. Technology Option 4 **:** Assessment strategy - Stocking Sterile common carp fingerlings with catla, Rohu and Mrigal in ratio (3:4:1:2 Catla, Rohu and Mrigal and Sterile Common carp respectively).

12. Budget proposed for OFT :

S. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other Technology Option 3			
	Name	**Qty. (Kg)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**	**Name**	**Qty.**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**
1	Lime	100 kg	10-00 / kg	1000-00	Lime	100 kg	10-00 / kg	1000-00
2	Fish fingerlings	5000 No.	500-00/1000 No.	2500-00	Fish fingerlings	4000 No.	500-00/1000 No.	2000-00
3	Check trays	5 No.	300-00/ unit	1500-00	Amur common carp	1000 No.	1-00/ unit	1000-00
4	Cast net	5 No.	1500-00 / unit	7500-00	Check trays	5 No.	300-00 / unit	1500-00
5.	Vitamin mineral mixture	5 kg	100-00 / kg	500-00	Vitamin mineral mixture	5 kg	100-00 / kg	500-00
6.	Rice bran	25 kg	10-00 / kg	250-00	Rice bran	25 kg	10-00 / kg	250-00
7.	Groundnut oil cake	25 kg	25-00 / kg	625-00	Groundnut oil cake	25 kg	25-00 / kg	625-00
			Total	**13875-00**			**Total**	**6875-00**

S. No	Critical Inputs for Technology Option 4 (Recommended Practice)			
	Name	**Qty. (Kg)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**
1	Lime	100 kg	10-00 / kg	1000-00
2	Fish fingerlings	4000 No.	500-00/1000 No.	2000-00
3	Sterile common carp	1000 No.	1-00/ unit	1000-00
4	Check trays	5 No.	300-00 / unit	1500-00
5.	Vitamin mineral mixture	5 kg	100-00 / kg	500-00
6.	Rice bran	25 kg	10-00 / kg	250-00
7.	Groundnut oil cake	25 kg	25-00 / kg	625-00

12. Area (ha.) : 5 farmers with 4 ponds each. Each farmer will perform all 4 technological options in his ponds separately.

13. Grand Total Cost proposed per OFT : Rs. 27,625-00

Total	**6875-00**

WIDER ROW SPACING IN COTTON PRODUCTION

1. Title of the On Farm Trial (Assessment) **:** Assessment on wider row spacing in cotton

2. Agro-Ecological Zone **:** Zone VI

3. Production System **:** Rainfed/ Borewell/ Irrigated

4. Problem identified **:** Closed spacing (between plants). Yield will be reduced, picking will be difficult, intra weeding is problem in turn affect the crop growth

5. Number of farmers and area affected in the operational villages : 500 farmers and 200 ha.

6. Thrust areas **:** Higher productivities and good quality of cotton fiber

7. Rationale for proposing the OFT **:** Wider spacing (120 X 90 cm) will provide good sunlight, intra weeding and inter cultivation will be easy by power weeder. In turn harvesting /picking of cotton will be easy. Bt will grow robust. Farmers will use Bt seeds at rate of 1750 g/ ha against 1125 g/ha . Cost of production can be reduced with higher production.

8. Technology Option 1 **:** Farmer's practice - 90 X 60 cm

9. Technology Option 2 **:** Recommended practice – 90 X 60 cm, 120 X 60 cm, UAS(B)

10. Technology Option 3 **:** Assessment planned - 120 X 90 cm (Private company)

Row to row is 120 cm spacing will create easy for inter cultivation, easy weeding irrigation

Plant to plant is 90 cm will fetch easy aeration and picking will be easy.

Bt will grow robust and more number of bolls will be formed.

11. Budget proposed for OFT :

S. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Option 3			
	Name	**Qty. (Kg)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**	**Name**	**Qty. (kg)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**
1	Seed	1.25	100-00	125-00	Seed	560g	400-00	400-00
2	Urea	162	5-00	810-00	Urea	162	5-00	810-00
3	SSP	234	4-00	936-00	SSP	234	4-00	936-00
4	MOP	63	5-00	315-00	MOP	63	5-00	315-00
5	Micro nutrient /growth regulator	500 g/ 50 ml	75-00	150-00	Micro nutrient /growth regulator	500 g/ 50 ml	75-00	150-00
			Total	**2336-00**			**Total**	**2611-00**

12. Area (ha.) : 1.5 ha

i) **Technology Option 1 (Farmer's Practice)** **:** 0.1 ha x 5 farmers = 0.5 ha

ii) **Technology Option 2 (Recommended Practice)** **:** 0.1 ha x 5 farmers = 0.5 ha

iii) **Technology option 3** **:** 0.1 ha x 5 farmers = 0.5 ha

13. Grand Total Cost proposed per OFT : 4,947-00

USE OF TNAU COCONUT TONIC IN COCONUT PALMS

1.Title of the On Farm Trial : Use of TNAU Coconut tonic to strengthen Coconut palms (Continued Assessment)

2. Agro-Ecological Zone : Zone IV (Davanagere and Harihar Tq.)

3. Production System : Irrigated

4. Problem identified : Severe incidence of mites and BHC.

5. Number of farmers and area affected in the operational villages : 500 farmers and 500 ha.

6. Thrust areas : Popularization of Coconut tonic to impart resistance to palms

7. Rationale for proposing the OFT : To make palms healthier by proper nutrition.

8. Technology Option 1 : Farmer's practice - Application of complex fertilizer (17:17:17 @ 150 g/plant) and extent of yield loss is up to 40%

9. Technology Option 2 : Recommended practice – 50 kg. FYM / plant
500 : 20 : 1200 g NPK / Palm / year
5 kg Neem cake/ Palm / year
50 g. Borax / Palm / year
Econeem plus 1 % (10 ml. / palm, 3 times / year)
$MgS0_4$ – 500g. / palm
Extent of its adoption - 20 %
Source of Technology – UAS, Bangalore
Reasons for no/low adoption – Lack of awareness about soil sampling and method of application

10. Technology Option 3 : Assessment planned - 50 kg. FYM / plant
500 : 20 : 1200 g NPK / Palm / year
5 kg Neem cake/ Palm / year
Nutritional tonic (200 ml./plant- twice a year at 6 months interval)
Source of Technology - TNAU, Coimbatore

Rationale involved - Feeding Coconut tonic which contain Micronutrients and growth regulators impart resistance to palms against attack by pest and diseases

11. Budget proposed for OFT :

S. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Option 3			
	Name	**Qty. (Kg)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**	**Name**	**Qty.(kg)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**
1	Urea	55	5-00	275.00	Urea	55	5-00	275.00
2	SSP	100	4-00	400.00	SSP	100	4-00	400.00
3	MOP	100	5-00	500.00	MOP	100	5-00	500.00
4	Neem Cake	250	10-00	2500.00	Neem Cake	250	10-00	2500.00
5	Borax	2.5	300-00	750.00	Coconut tonic	2 L.	250-00	500.00
6	$MgSO_4$	25	50-00	1250.00				
7	Econeem plus	1.5 lt.	700-00	1050.00				
			Total	**6725.00**			**Total**	**4175.00**

12. Area (ha.) : 1.2 ha (120 trees) **No. of farmers :** 5

i) **Technology Option 1 (Farmer's Practice) :** 50 Palms

ii) **Technology Option 2 (Recommended Practice) :** 50 Palms

iii) **Technology option 3 :** 50 Palms

13. Grand Total Cost proposed per OFT : Rs. 10,900-00

USE OF VEGETABLE SPECIAL MIXTURE IN TOMATO PRODUCTION

1.Title of the On Farm Trial (Continued Assessment) : Use of Vegetable Special in Tomato with reduced recommended dose of fertilizer

2. Agro-Ecological Zone **:** Zone IV (Davanagere Tq.)

3. Production System **:** Irrigated

4. Problem identified **:** Lower productivity due to imbalanced nutrition

5. Number of farmers and area affected in the operational villages : 600 farmers and 300 ha.

6. Thrust areas **:** Popularization of Vegetable Special to tackle Micronutrient deficiency

7. Rationale for proposing the OFT **:** Vegetable Special spray helps in supplying Micronutrients at the time of flowering and fruiting thus helps in increasing yield.

8. Technology Option 1 **:** Farmer's practice- Application of complex fertilizer (17:17:17 @ 150 kg / ha.) extent of yield loss- 50 % less yield

9. Technology Option 2 **:** Recommended practice- FYM 18 tones / ha.
RDF- 150: 100: 60 kg. NPK/ ha.
Extent of its adoption - 30 %
Source of Technology - UAS, Bangalore
Reasons for no/low adoption – Lack of awareness about soil sampling and use of Micronutrients

10. Technology Option 3 **:** Assessment planned - FYM 18 tones / ha.
RDF- 80: 75: 60 kg. NPK/ ha.
Application of 1 kg VAM + 1 kg. PSB
Vegetable Special (5 g / lt. – Three sprays- 30 days after planting, 15 days after flowering, 15 days after second spray
Source of Technology - IIHR, Bangalore
Rationale involved - Providing Micronutrients during critical stage of plant growth helps in increasing the yield.

11. Budget proposed for OFT

S. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Option 3			
	Name	**Qty. (Kg.)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**	**Name**	**Qty. (Kg.)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**
1	Urea	326	5	1628-00	Urea	174	5	870-00
2	SSP	625	4	2500-00	SSP	469	4	1876-00
3	MOP	100	5	500-00	MOP	100	5	500-00
4					VAM	1	50	50-00
5					PSB	1	80	80-00
6					Vegetable Special	10.5	150	1575-00
			Total	**4628-00**			**Total**	**4951-00**

12. Area (ha.) : 5 ha **No. of farmers :** 10

i) Technology Option 1 (Farmer's Practice) : 1.66 ha.

ii) Technology Option 2 (Recommended Practice) : 1.66 ha.

iii) Technology option 3 : 1.66 ha.

13. Grand Total Cost proposed per OFT : Rs. 9,579-00

EARLY BLIGHT MANAGEMENT IN TOMATO

1.Title of the On Farm Trial **:** Assessment of various management strategies for early blight in tomato

2.Agro-Ecological Zone : Zone-IV (Harapanahally tq)

3.Production System : Irrigated.

4.Problem identified : Severe incidence of early blight results in reduced yield and poor quality product.

5.Number of farmers and area affected in the operational villages: 100 Farmers, 40ha

6. Thrust areas : Disease management for quality tomato production

7.Rationale for proposing the OFT : Occurrence of early blight results in reduced yield (25-30%). Integrated management by alternate spray with different chemicals eradicate the disease pathogen effectively.

8.Technology Option 1 : Mancozeb (3gm/L), 50-60%

9.Technology Option 2 : Use of healthy seeds, clean cultivation, spray with mancozeb (3gm/L), Source - UAS (B),

Extent of adoption - 20%

Reasons for no/low adoption -Farmers are not getting fruitful result, because of severe incidence of early blight disease (age old disease) even though they are following university packages.

10.Technology Option 3 : Use of healthy seeds, clean cultivation, first spray with mancozeb (2gm/L) after 15 days of transplanting

Next spray with difenaconazole (0.5ml/L) (35 days after planting)

Need based spray with mancozeb (2gm/L) to avoid post harvest losses

Rationale : Initially disease control by economically viable chemical mancozeb followed by systemic fungicide difenaconazole to eradicate the pathogen. At final stage, need based spray with mancozeb to avoid post harvest losses. Source – UAS (B)

11.Budget proposed for OFT:

S. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Option 3			
	Name	**Qty. (kg)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**	**Name**	**Qty. (kg)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**
1	Mancozeb	0.75	350-00	262-00	Mancozeb	1.5	350-00	525-00
2					Difenaconazole	125 ml	2200-00	275-00
			Total	**262-00**			**Total**	**800-00**

12. Area (ha.) : 1.5 ha

i) Technology Option 1 (Farmer's Practice) : 0.1 ha X 5 Farmers = 0.5 ha

ii) Technology Option 2 (Recommended Practice) : 0.1 ha X 5 Farmers = 0.5 ha

iii) **Technology option 3 (Assessment) :** 0.1 ha X 5 Farmers = 0.5 ha

13. Grand Total Cost proposed per OFT : (Rs.) : 1062-00

MANAGEMENT OF POWDERY MILDEW IN SUNFLOWER

1. **Title of the On Farm Trial** **:** Assessment of different management practices of powdery mildew in sunflower

2. **Agro-Ecological Zone** : Zone-IV (Harapanahally tq)

3. **Production System** : Irrigated.

4. **Problem identified** : Higher incidence of powdery mildew results in reduced yield.

5. **Number of farmers and area affected in the operational villages**: 200 Farmers, 75ha

6. **Thrust areas** : Disease management for higher production

7. **Rationale for proposing the OFT** : 30-40%, yield reduced due to severe incidence of powdery mildew. Disease management by spray with systemic fungicide reduces both powdery mildew and rust effectively. Resistance developed by pathogen & latent inoculum present in the plant debris / fallen infected leaves are controlled by hexaconazole spray.

8. **Technology Option 1** : No spraying Wettable sulphur (5g/L), Extent of yield loss – 25- 40%

9. **Technology Option 2** : Bavistin (1g/L) Spraying at 3 weeks after sowing at head formation stage, UAS (B), Extent of adoption -15%

   Reason for no/low adoption : Disease incidence not reduced due to severity & epidemics of disease.

10. **Technology Option 3** : Spray with hexaconazole (1ml/L) Spraying at 3 weeks after sowing at head formation stage.

    Disease management by spray with systemic fungicide reduces both powdery mildew and rust effectively. Resistance developed by pathogen & latent inoculum present in the plant debris / fallen infected leaves are controlled by hexaconazole spray. – UAS (B)

11. Budget proposed for OFT

S. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Option 3			
	Name	**Qty. (kg)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**	**Name**	**Qty. (kg)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**
1	Bavistin	0.5	350-00	175-00	Hexaconazole	0.5	450-00	225-00
			Total	**175-00**				**225-00**

12. Area (ha.) : 1.5 **No. of farmers :** 05

i) Technology Option 1 (Farmer's Practice) : 0.1 ha X 5 Farmers = 0.5 ha

ii) Technology Option 2 (Recommended Practice) : 0.1 ha X 5 Farmers = 0.5 ha

iii) Technology option 3 (Assessment) : 0.1 ha X 5 Farmers = 0.5 ha

13. Grand Total Cost proposed per OFT : (Rs.) : 400-00

INTEGRATED MANAGEMENT OF FRUIT BORER IN BHENDI

1.Title of the On Farm Trial **:** Assessment on integrated management practices of fruit borer in Bhendi

2.Agro-Ecological Zone **:** Zone-IV (Davanagere tq)

3.Production System **:** Irrigated.

4.Problem identified **:** Higher incidence of shoot & fruit borer

5.Number of farmers and area affected in the operational villages: 75 Farmers, 25ha

6.Thrust areas **:** Integrated pest management

7.Rationale for proposing the OFT **:** Occurrence of shoot and fruit borer results in poor quality product. Integrated pest management approaches reduce the pest incidence significantly.

8.Technology Option 1 : **:** Endosulfon (3ml/L), 40-45%

9.Technology Option 2 with Source **:** Carbaryl (4gm/L), UAS (B), 10-15%, Fruit borer incidence not reduced due to higher incidence.

10. Technology Option 3 being assessed **:** Collection & destruction of affected fruits & stem

Application of neem cake 250kg/ha after germination

Spray with neem soap 1% (10gm/L) at 10 days interval.

Spray with indaxicarb 14.5 SC (0.5ml/L)

IIHR, Hesaraghatta

Integrated pest management approaches drastically decreases pest population to lower level there by resulting in good product.

11. Budget proposed for OFT

S. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Option 3			
	Name	**Qty. (kg)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**	**Name**	**Qty. (kg)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**
1	Carbaryl	1	400-00	400-00	Neem cake	125	10-00	1250-00
2	--	--	--	--	Neem soap	2.5	100-00	250-00
3	--	--	--	--	Indaxicarb	125 ml	2000-00	250-00
			Total	**400-00**			**Total**	**1750-00**

12. Area (ha.) : 1.5 **No. of farmers :** 5

i) Technology Option 1 (Farmer's Practice) : 0.1 ha X 5 Farmers = 0.5 ha

ii) Technology Option 2 (Recommended Practice) : 0.1 ha X 5 Farmers = 0.5 ha

iii) Technology option 3 (Assessment) : 0.1 ha X 5 Farmers = 0.5 ha

13. Grand Total Cost proposed per OFT : (Rs.) : 2,150-00

SUPPLEMENTATION OF RAGI GRAIN AS A LOCALLY AVAILABLE ENERGY SOURCE FOR LACTATING COWS.

1. Title of the On Farm Trial : Supplementation of Ragi grain as a locally available energy source for Lactating cows.

2. Agro-Ecological Zone : Rain-fed Agro climatic zone of Karnataka

3. Production System : Individual Animal rearing system by village farmers.

4. Problem identified : Deficiency of energy in Lactating cows (Energy is the most limiting nutrients in the diet of Dairy Cattle)

5. Number of farmers and area affected in the operational village : 90 % of the Dairy Farmers operational villages

6. Thrust areas : Feeding Lactating Animals

7. Rationale for proposing the OFT : Dairying is a major activity in the village. The cows are mostly fed on wheat bran and groundnut cake mixed diet along with kitchen wastes. For these animals Dry matter and energy are most limiting followed by crude protein. Here an effort has been made to introduce locally available Ragi grain as energy source.

8.Technology Option 1 : To-1 (Farmers practice) – Feeding wheat bran and Groundnut cake mix along with kitchen waste and dry roughages.

9.Technology Option 2 : To-2 (Recommended) - Feeding balanced cattle feeds available in the market along with roughages as per NRC standards.

10.Technology Option 3 : To-3: - Feeding balanced Cattle feed along with Azolla (2 kgs per day)

- Dry roughages supplemented with 1 kg of Ragi grain
- 30-40 grams of area specific mineral mixture. (Source – NIANP, Bangalore)

Justification:

i) Ragi grain – Rich in carbohydrates (energy) and Calcium is locally available for animal feeding.

ii) Cheap energy source for farmers.

iii) Azolla is a cheap source of crude protein for animals.

iv) Easy to adopt.

11. Budget proposed for OFT

S. No	Critical Inputs for Technology Option 2 (Recommended Practice)				Critical inputs for other technology Option 3			
	Name	**Qty. (kg)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**	**Name**	**Qty. (kg)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**
1	Cattle feed	500	10.00	5000.00	Cattle feed	500	10-00	5000-00
2	--	--	--	--	Ragi	300	7-00	2100-00
3	--	--	--	--	Mineral Mixture	5	60-00	300-00
4	--	--	--	--	Dewormer	5 tablets	40-00	200-00
5	Dewormer	5 tablets	40.00	200.00	Azolla unit	5 units	1500-00	7500-00
			Total	**5200.00**			**Total**	**15100-00**

12. Area (ha.) for implementing

i) Technology Option 1 (Farmer's Practice) : 5 Farmers

ii) Technology Option 2 (Recommended Practice) : 5 Farmers

iii) Technology option 3 (Assessment) : 5 Farmers

13. Grand Total Cost proposed per OFT(Rs.): : 20,300-00

DRUDGERY REDUCING IMPLEMENTS

1.Title of the On Farm Trial **:** Use of Weeders as drudgery reducing implements in vegetables (tomato, brinjal and chilli)

2. Agro-Ecological Zone **:** Zone IV (Davanagere Tq.)

3. Production System **:** Irrigated

4. Problem identified **:** Hand weeding in vegetable crops is energy, time and labour consuming in turn increase cost of cultivation

5. Number of farmers and area affected in the operational villages: 125 farmers and two villages.

6. Thrust areas **:** Drudgery reduction in farm

7.Rationale for proposing the OFT **:** Use of weeders reduces the drudgery, time and labour consumption in turn reduces the cost of cultivation.

8. Technology Option 1 **:** Farmer's practice- Hand weeding with Kurpi

9. Technology Option 2 **:** Rotary weeder [DLAP, UAS (B)]

10. Technology Option 3 **:** Cycle weeder [DLAP, UAS (B)]

11. Technology Option 4 **:** Twin wheel hoe weeder [DLAP, UAS (B)]

12. Budget proposed for OFT :

S. No	Critical Inputs for Technology Option 2,3 & 4			
	Name	Qty. (No.)	Unit Cost (Rs.)	Total Cost (Rs.)
1	Rotary weeder	2	850-00	1700-00
2	Twin wheel hoe weeder	2	850-00	1700-00
3	Cycle weeder	2	1500-00	3000-00
			Total	**6400-00**

13. Area (ha.) : 2

i) Technology Option 1 (Farmer's Practice) **:** 0.1 acre X 5 farm women

ii) Technology Option 2 (Rotary weeder) **:** 0.1 acre X 5 farm women

iii) Technology Option 3 (Twin wheel hoe weeder)**:** 0.1 acre X 5 farm women

iv) Technology Option 4 (Cycle weeder) **:** 0.1 acre X 5 farm women

14. Grand Total Cost proposed per OFT : 6400-00

SMOKELESS STOVES FOR BETTER HEALTH AMONG RURAL WOMEN

- **Title of the On Farm Trial** **:** Use of Eco-friendly smokeless stoves
- **Agro-Ecological Zone** **:** Zone IV (Davanagere Tq.)
- **Production System** **:** --
- **Problem identified** **:** Use of conventional stoves for cooking causes burning of eyes, breathing problem and other health problems.
- **Number of farmers and area affected in the operational villages:** 225 farm families and two villages.
- **Thrust areas** **:** Drudgery reduction at home
- **Rationale for proposing the OFT** **:** More than 60% of farm families are suffering from health problems due to use of conventional stoves. Manufactures of below mentioned non conventional stoves claim that they reduce 80- 85% of smoke hence three types of non conventional stoves are taken for assessment.
- **Technology Option 1** **:** Farmer's practice - Use of conventional stoves
- **Technology Option 2** **:** Sarala stove (UAS, D)
- **Technology Option 3** **:** Mangala stove (Envifit (India) Private Ltd., Bangalore.)
- **Technology Option 4** **:** Urja stove (Urja Private Ltd.)
- **Budget proposed for OFT**

S. No	Critical Inputs for Technology Option 2,3 & 4			
	Name	**Qty. (No.)**	**Unit Cost (Rs.)**	**Total Cost (Rs.)**
1	Sarala stove	5	850-00	4250-00
2	Mangala stove	5	1200-00	6000-00
3	Urja stove	5	900-00	4500-00
			Total	**14750-00**

- **Area : 20 No.** **No. of farmers :** 05

i) **Technology Option 1 (Farmer's Practice)** **:** 5 No.

ii) **Technology Option 2 (Sarala stove)** **:** 5 No.

iii) **Technology Option 2 (Mangala stove)** **:** 5 No.

iv) Technology Option 3 (Urja Stove) **:** 5 No. **14. Grand Total Cost proposed per OFT :** 14750-00

IMPROVED CHILD REARING PRACTICES

1.Title of the On Farm Trial **:** Assessment of cognitive kits for enhancing the cognitive development among preschoolers

2. Agro-Ecological Zone **:** Zone IV (Davanagere Tq.)

3. Production System **:** Child rearing practices

4. Problem identified **:** Lack of knowledge on indigenous toys and play material and delayed cognitive development

5. Number of farmers and area affected in the operational villages: 45 % of the children in the age group of 3-5 years of age

6. Thrust areas **:** Overall development of the children

7. Rationale for proposing the OFT **:** Modified and economical version of Hema Pandy's cognitive kit with cognitive kit developed using indigenous material facilitates cognitive development of preschoolers

8. Technology Option 1 **:** Farmer's practice – Use of plastic play materials which are readymade and battery operated toys which lack educational value. Results in delayed cognitive development by two years

9. Technology Option 2 (Recommended) **:** Hema Pandy's cognitive kit [NRCWA, Bhuvaneshwar]
Reasons for low adoption - Lack of awareness and costly

10. Technology Option 3 **:** Modified and economical version of Hema Pandy's cognitive kit [Dept. of Human Development, College of RHSc., UAS,D]

Justification: Its low cost kit which measures the similar areas of cognition as compared with Hema Pandy's cognitive kit. This can be multiplied by training local persons with little skill. Mobile and easy to use.

11. Budget proposed for OFT :

S. No	Critical Inputs for Technology Option 2 & 3			
	Name	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)
1	Hema Pandy's cognitive kit	1 set	3500-00	3500-00
2	Cognitive kit with indigenous play material	2 set	1500-00	3000-00
			Total	**6500-00**

12. Area : 60 preschooler of similar Socio Economic Status

i) Technology Option 1 : 20 preschoolers

ii) Technology Option 2 : 20 preschoolers

iii) Technology Option 3 : 20 preschoolers

13. Grand Total Cost proposed per OFT : 6500-00

Table 4. Season-wise plan of Front Line Demonstrations (FLD) for 2009-10

I. OTHER THAN OIL SEEDS PULSES AND COTTON

KHARIF

Thrust area	Crop / livestock / enterprises	Yield gap (q/ unit ha / number) or (number/unit)			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Cost	Area (ha) / Number	No. of farmers
		District average yield (q/ha)	Potential yield (q/ha)	Farmers yield (q/ha)			Name & Quantity (kg/ha) or number/unit	Cost (Rs./ha) or Rs./unit			
1	2	3	4	5	6	7	8	9	10	11	12
Additional income generation through Fisheries	Freshwater fishes and fruit and vegetable crops (Integrated Horti-fish farming in inland ponds)	5	20-30	8-10	- Improper and unseasonal stocking - Irregular fertilization and feeding - Inadequate quality of seeds - Bad water quality management - No efforts are made for efficient utilization of pond dyke space and moisture content	- Soil & water testing - Pond preparation - Fish seed stocking - Pond health management - Fruit & vegetable varieties selection & cultivation - Regular sampling & growth monitoring - Harvesting & marketing - Economics of integrated pond aquaculture	• Lime – 200 kg • Fish fingerlings 8000 No. • Check trays – 10 No. • Hand Pelletizer -10 • GOC- 100 kg • Rice bran – 100 kg • Drag net – 10 • Vitamin mineral mixture – 20 kg • Vegetable + fruits seeds/planting material	•10-00/kg •300-00 /1000no. •300-00 /unit •2500-00 •30-00/kg •12-00/kg •1000-00 /unit •100-00 /kg • 100-00 / pond	2000-00 2400-00 3000-00 25000-00 3000-00 1200-00 10000-00 2000-00 1000-00	10 ponds	10
								Total	**49600-00**	10 ponds	10

1	2	3	4	5	6	7	8	9	10	11	12
Additional income generation through aquaculture	Indian major carps & freshwater prawn *Macrobrachium rosenbergii* (Integrated fish-cum-prawn culture in freshwater pond)	5	20-30	8-10 (Prawn is new introduction) and production data is not available	- Improper and unseasonal stocking - Irregular fertilization and feeding - Inadequate quality of seeds - Bad water quality management - Non availability of prawn seeds	- Soil and water testing and pH correction if necessary - Pond preparation – fertilization, insect & predator management, liming - Quality seed selection & stocking - Farm made feed preparation and feeding - Proper water exchange & quality - Growth management monitoring through regular sampling - Pond & fish health monitoring - Crop protection from birds, snakes, frogs, human - Stocking prawn seed (2 no./$m^{2)}$ - Special preparation of pond for prawn production - Tidy harvesting and Guaranteed marketing	• Lime – 100 kg • Prawn seed – 500 no. • Fish fingerlings – 2000 no. • Pond preparation items (For prawn hides) – 2 sets • GOC – 50 kg • Rice bran – 50 kg • Vitamin mineral mixture – 10 kg • Cast net – 2 no. • Check trays – 2 no.	• 10-00 /kg • 1-00 /unit • 300-00 /1000 no • 200-00 /unit • 30-00 /kg • 12-00 /kg • 100-00 /kg • 1500-00 /unit • 300-00 / unit	1000-00 500-00 600-00 400-00 1500-00 600-00 1000-00 3000-00 600-00	2 ponds	02
								Total	**9200-00**	**02**	**02**

1	2	3	4	5	6	7	8	9	10	11	12
Poly culture of fish in farm ponds through organic practices	Indian major carps and Indian catfish, *Clarias batrachus* (Poly culture of major carps and cat fish *Clarias batrachus* in farm ponds)	5	20-30	8-10	- Improper and unseasonal stocking - Irregular fertilization and feeding - Inadequate quality of seeds - Bad water quality management - Non availability of catfish seeds	- Soil and water testing and pH correction if necessary - Pond preparation – fertilization, insect & predator management, liming - Stocking density determination - Quality seed selection & stocking - Regular fertilization using organic manure - Farm made feed preparation and feeding - Proper water exchange & quality - Growth management monitoring through regular sampling - Pond & fish health monitoring - Crop protection from birds, snakes, frogs, human - Proper harvesting - Tidy & timely marketing	• Lime – 100 kg • Fish fingerlings (IMC) – 10000 no. • Catfish fingerlings – 1000 no. • Vitamin mineral mixture – 20 kg • Drag net – 10 units	• 10-00 /kg • 300-00 / 1000 no. • 2-00 / unit • 100-00 /kg • 1000-00 /kg	1000-00 3000-00 2000-00 2000-00 10000-00	10 No.	10

								Total	**18000-00**	**10 No.**	**10**
Thrust area	**Crop / livestock / enterprises**	**Yield gap (q/ unit ha / number) or (number/unit)**			**Reasons for yield gap**	• **Technology to be demonstrated**	**Critical inputs to be provided**		**Area (ha) / Number**	**No. of farmers**
		District average yield q/ha)	**Potential yield (q/ha)**	**Farmers yield (q/ha)**			• **Name & Quantity (kg/ha) or number/unit**	**Cost (Rs./ha) or Rs./unit**		
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Integrated nutrient management	Rice	25	40-45	22	- No seed treatment with bio-fertilizer - No Zinc application - Organic manure (2 Cart load)	• Seed treatment with azospirilum (1kg) • Application of 50% NPK • Application of Zinc sulphate (10 Kg) • Vermicompost (5q)	• Azospirilum – 1 kg • Vermicompost – 5 q • 50% RDF • N – 50 kg • P – 25kg • K – 25 kg • $ZnSO_4$ – 10 kg	200-00 1500-00 250-00 150-00 100-00 150-00	05	10
							Total	**2850-00**	**14250-00**	**10**
Integrated pest management	Rice	25	40-45	22	Higher incidence of stem borer, Chaffy ear heads	• Deep ploughing • Clipping of seedling during transplanting • Spraying with neem oil in nursery (3ml/L) • Installation of funnel trap (8/ha) to monitor stem borer (*Scirfophaga incertullus*) • Release of parasitoid *Trichograma japanicum* (50000/ha) one month after transplanting (6 releases with 8 to 10 days interval) • Spraying with endosulfan (2ml/L) • Removal of affected plants	• Neem oil - 0.5L • Funnel trap -8 • Parasitoid – *Trichograma japanicum* : 50000/ha) • Endosufan -2L	125-00 360-00 1080-00 500-00	05	10

							Total	**2035-00**	**10175-00**	**10**

1	2	3	4	5	6	7	8	9	10	11
Integrated nutrient management and improved hybrids	Maize	20-22	24-25	16-22	- Application of organic manure (3 t) - Improper nutrient management (3 bag urea, 1bag DAP, No potash) - No micronutrient application - No intercropping	•Improved hybrid NAH-2049 •Nutrient management (100% potash) •Zinc sulphate (10 kg) •Application of vermicompost (5q) •Intercropping of maize with avare (2:2)	• Seeds – 15 kg • MOP – 50kg • $ZnSO_4$ – 10 kg • Vermicompost – 5q • Avare – 12.5 kg	525-00 250-00 300-00 1500-00 500-00	05	10
							Total	**3075-00**	**15375-00**	**10**
Higher production and productivity	Ragi	15-20	30	12-15	- Local varieties - No bio-fertilizers - No micronutrient application - Sole cropping	•Suited for late sowing upto August •GPU-28 •Application of potash (25kg) •Intercropping with Avare	• GPU-28- 12kg • K – 25kg • Azospirillum – 400g • Avare – 10kg	180-00 200-00 100-00 200-00	10	25
							Total	**680-00**	**6800-00**	**25**
Higher production in minor millets	Navane	--	--	4.0	- Use of local varieties - No fertilizer application - No bio-fertilizers - Poor management of crop	•Seed treatment with azospirillum •100% application of nutrients along with vermicompost •Improved HYV (RS-118)	• RS-118 – 10 kg • P – 40 kg • Vermicompost – 3q • Azospirillum – 400g	200-00 200-00 900-00 70-00	05	10

							Total	**1370-00**	**6850-00**	**10**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Higher production and productivity	Same	--	--	02	- Use of local varieties - No fertilizer application - No bio-fertilizers - Poor management of crop	• Seed treatment with azospirillum • 100% application of nutrients along with vermicompost • Improved HYV	• CO-2 – 10 kg • P – 40 kg • Vermicompost – 3q • Azospirillum – 400g	200-00 200-00 900-00 70-00	05	10
							Total	**1370-00**	**6850-00**	**10**
Production Technology	Drumstick	110-125	250-300	80-85	- Use of local variety (Mallapura local) - Lower potential yield (50-65 pods / ha.) - Lack of awareness about intercropping in Coconut	Popularization / Production Technology of Dhanraj variety of Drumstick as intercrop in young Coconut garden.	• Dhanraj seeds-250 g.	2000-00	05	20
							Total	**2000-00**	**10000-00**	**20**
Production Technology	Onion	12-14	15-20	10-12	- Use of local variety (Davanagere local) - No seed treatment Purple blotch disease incidence	- Production Technology of purple blotch Onion variety Arka Kalyan	• Seeds-Arka Kalyan-700 kg. • Trichoderma-0.25 kg	5250.00 100.00	5	10
							Total	**5350-00**	**26750-00**	**10**

1	2	3	4	5	6	7	8	9	10	11
IDM	Arecanut	3	10	2-4	• Incidence of Hidimundige roga (5-25% reduced yield) • Improper nutrient management	• For every two rows one row of 2.5 -3 feet drainage • Loosen the soil around the base of the plant (If hard layer) • Avoid fllod irrigation. Adopt sprinkler/ drip irrigation • Avoid repeated cultivation • Application of recommended dose of fertilizer based on soil test result (100:40:140 g NPK/Plant/yr) • $CuSO_4$ (100g) and lime (100g)/affected plant for better root growth • Micronutrient application based on soil test result. Borax 20g/plant (affected plant) • Spray with blitox (3g/L) & Dimethoate (2 ml/L)	• Urea-300kg • SSP-342kgt • MOP320kg • $CuSO_4$ .7 kg • Lime -7 kg • Borax -1.5 kg • Blitox -1.5 L • Dimethoate-1.5L	1500-00 1368-00 1600-00 1400-00 210-00 120-00 675-00 450-00	01	05

							Total	**7323-00**	**01**	**05**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
IPM	Chilli	6t	8-10t	5t	Higher incidence of murda complex and damping off	• Drenching seed bed with blitox (3g/L) • In nursery spray with imidacloprid (0.3 ml/L) • Dip roots in imidacloprid (0.3 ml/L) and *Trichodema harzianum* (10g/500 ml) for 5 minute before transplanting • Neem cake application (250kg/ha) • Spray with acephate (1g/L) • Spray with dicofol (2.5g/L)	• Blitox -0.25kg • Imidacloprid-50ml • *Trichodema harzianum*-0.25kg • Acephate-0.5kg • Dicofol-1.25L	100-00 75-00 50-00 350-00 450-00	5	10
							Total	**1025-00**	**5125-00**	**10**
IPM	Coconut	50 nuts/plant	80 nuts/plant	20 nuts/plant	Incidence of Coconut Black headed catterpiller (Continued FLD)	- Root feeding with Azadiractin (15 ml/ plant-3 times –Jan – Feb, Apr-May, Sept-Oct) - Release of parasite *Goniozus nephentidis* (50/plant, 4 times supplied by KSDH, Davanagere) - Mechanical control	• Azadiractin - 1.5L	975-00	5	10
							Total	**975-00**	**4875-00**	**10**

1	2	3	4	5	6	7	8	9	10	11
Drudgery reduction at household level	ARTI cooker	--	--	--	Use of conventional method of cooking	Popularization of ARTI cooker	ARTI cooker – 1	1000-00	05	25
							Total	**1000-00**	**5000-00**	**25**
Feeding dairy animals	Cattle	5-6 L/day	16-18 L/day	3-4 L/day	Energy and minerals deficiency	Feeding balance cattle feed along and area specific mineral mix	• Cattle feed 50kg x 10 @ 600/bag • Mineral mix 1kg x 10 @ 80/kg	1200-00 100-00	10 Cows	10
							Total	**1300-00**	**13000-00**	**10**
Nutrition and breeding	Poultry	--	--	--	Use of local breeds	Rearing of high yielding varieties of birds	• Swarnadhara birds 20 No. @ 15/bird	300-00	200 birds	10
							Total	**300-00**	**3000-00**	**10**
Fodder shortage	Cattle	--	--	--	Decreased dry matter intake by the dairy animals	Production and feeding Co-4 fodder for reducing the feeding cost in dairy animals	• Co-4 fodder cutting (5000 cuttings x 5) • Fertilizers (2bag urea x 5)	1000-00 500-00	02	10
							Total	**1500-00**	**15000-00**	**10**
Fodder scarcity	Cattle/Sheep/Goat	--	--	--	Deficiency of protein and minerals	Production and feeding of Azolla to milch animals for improving milk production and health	• Azolla unit establishment	1500-00	10 units	10
							Total	**1500-00**	**15000-00**	**10**
Nutrient deficiency	Sheep/Goat	--	--	--	Deficiency of minerals reduces body weight gain and reproduction	Feeding area specific mineral mixture to sheep	• Mineral mix 20 kg @ 80/-	1600-00	10 sheeps x 10	10
							Total	**1600-00**	**16000-00**	**10**

RABI

Thrust area	Crop / livestock / enterprises	Yield gap (q/ unit ha / number) or (number/unit)			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha) / Number	No. of farmers
		District average yield	Potential yield	Farmers yield			Name & Quantity (kg/ha) or number/unit	Cost (Rs./ha) or Rs./unit		
1	2	3	4	5	6	7	8	9	10	11
Integrated nutrient management and improved hybrids	Maize	20-22	24-25	16-22	- Application of organic manure (3 t) - Improper nutrient management (3 bag urea, 1bag DAP, No potash) - No micronutrient appalication	• Improved hybrid NAH-2049 • Nutrient management (100% potash) • Zinc sulphate (10 kg) • Application of vermicompost (5q)	• Seeds – 15 kg • MOP – 50kg • $ZnSO_4$ – 10 kg • Vermicompost – 5q	525-00 250-00 300-00 1500-00	05	10
							Total	**2575-00**	**12875-00**	**10**
Higher production and higher net income	Jowar	6-7	10-14	5-6	Use of local varieties Improper nutrient management (50kg DAP) No FYM No seed treatment with chemicals and bio fertilizers	• Improved high yielding variety (M-35-1) • Integrated nutrient management • Seed treatment with the bio fertilizers • Seed treatment with the sulphur powder against smut.	• M-35-1/7.5 kg • Seed treatment PSB / 1kg • Sulphur 15 g • 50 percent of RDF N-25 kg P -16 kg • Endosulfan 1L	240-00 100-00 100-00 200-00 250-00 500-00 300-00	05	12
								1590-00	**7950-00**	**12**

1	2	3	4	5	6	7	8	9	10	11
INM in Arecanut	Arecanut	15-16	20-22	10-12	- Poor knowledge on use of Micronutrients and Potash. - Less use of organic manures (20-25 kg / plant/ 2-3 year. - Use only tank silt+ complex fertilizers	INM in Arecanut	MOP- 345 kg Borax-37.5 kg	1725 2625	4	20
							Total	**4350.00**	**17400.00**	**20**
Integrated management	Brinjal	18t	35-40t	20t	•Incidence of shoot and fruit borer •Mono cropping of solonacious vegetable	• Neem cake application (250 kg) at flowering • Use of woto traps (12) • Release of parasitoid *Trichograma chilonis* (250000) at weekly interval from flowering 50000/release 5 times) • Spraying with Hostothion (1.5ml/L) with neem soap (7.5g/L)	• Woto traps – 12 No. • Parasitoid – *Trichograma chilonis* – 250000 • Hostothion – 0.75 L • Neem soap – 4 kg	660-00 1500-00 350-00 400-00	5	10
							Total	**2910-00**	**14550-00**	**10**

1	2	3	4	5	6	7	8	9	10	11
Micronutrient Management	Banana	250	400	175	- Poor knowledge on use of Micronutrients. - Application at only complex fertilizers (17 all & DAP thrice). - Lower use of Potash fertilizer	- Use of Banana Special to increase buch weight & yield in Banana	Banana Special-30 kg MOP-675 kg	4500-00 3375-00	4	20
							Total	**7875.00**	**31500-00**	**20**
Post harvest technology	Zero Energy Cool Chamber (ZECC)	--	--	--	Lack of knowledge on improved technologies	Enhancing the shelf life of vegetable at household level using ZECC	ZECC – 1	2000-00	10	10
							Total	**2000-00**	**20000-00**	**10**
Drudgery reduction at farm	Groundnut decorticator	--	--	--	Hand shelling and use of small size groundnut decorticator is in practice which is energy labour and time consuming	Hand operated medium type GND	GND – 2 No.	16000-00	02	20
							Total	**16000-00**	**32000-00**	**20**
Drudgery reduction at farm	Mango harvester	--	--	--	- Shaking trees to harvest mango is in practice causing damage to fruits - Lack of awareness about improved equipments	Mango harvester	Mango harvester	150-00	10	20
							Total	**150-00**	**1500-00**	**20**

B. Oil seeds

KHARIF

Thrust area	Crop	Yield gap (q/ ha)			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha)	No. of farmers
		District average yield	Potential yield	Farmers yield			Name & Quantity (kg/ha)	Cost (Rs./ha)		
Integrated crop management	Sunflower	5-6	10-12	4-8	-No seed treatment - Bud necrosis & black headed caterpillar - Improper nutrient management	-Seeds(Popular private hybrid) - Seed treatment with gauch -Spraying with confidor & neem oil -Application of MOP & ZnSO4 - Spraying of borax	Private/University hybrid-5kg Gauch-25gm Confidor-150ml Neem oil-1L MOP-100kg ZnSO4 -10kg Borax-1.25kg	1500-00 200-00 210-00 540-00 500-00 300-00 250-00	5	10
							Total	**3500-00**	**17500-00**	**10**
ICM	Groundnut	12-15	18-20	8-12	- Use of local varieties - No seed treatment - No gypsum application - Collar rot , Bud necrosis	GPBD-4 Seeds Trichoderma Gypsum	Seeds – 110kg Trichoderma – 0.5kg Gypsum-500kg Confidor-200ml	2200-00 100-00 900-00 300-0	05	10
								3500-00	**17500-00**	**10**

- 50% cost of seeds will be borne by farmers – Rs. 2200-00

RABI/ SUMMER

Thrust area	Crop	Yield gap (q/ ha)			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha)	No. of farmers District average yield
		District average yield	Potential yield	Farmers yield			Name & Quantity (kg/ha)	Cost (Rs./ha) or Rs./unit		
Integrated crop management	Sunflower	5-6	10-12	4-8	-No seed treatment - Bud necrosis & black headed caterpillar - Improper nutrient management	-Seeds(Popular private hybrid) - Seed treatment with gauch -Spraying with confidor & neem oil -Application of MOP & ZnSO4 - Spraying of borax	Private/University hybrid-5kg Gauch-25gm Confidor-150ml Neem oil-1L MOP-100kg $ZnSO_4$ -10kg Borax-1.25kg	1500-00 200-00 210-00 540-00 500-00 300-00 250-00	5	10
							Total	**3500-00**	**17500-00**	**10**

C. Pulses
KHARIF

Thrust area	Crop	Yield gap (q/ ha)			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha)	No. of farmers District average yield
		District average yield	Potential yield	Farmers yield			Name & Quantity (kg/ha)	Cost (Rs./ha) or Rs./unit		
Integrated pest management	Redgram	2	10-12	4	- No seed treatment with bio fertilizers - Pod borer & wilt - Use of local varieties (Chennagiri local)	-Use of HYV -Seed treatment with biofertilizers -Installation of Pheremone traps -Use of NPV & neem oil -Spraying with recommended chemicals with correct dosage & timely	Seeds (JS-1)-15kg PSB-2kg Rhyzobium-2kg Trichoderma-1kg Traps-5 nos. NPV-250LE Neem oil-1.5L Profenophos-1L Quinolphos-1.5L	750-00 150-00 150-00 200-00 210-00 450-00 500-00 440-00 375-00	5	10
							Total	**3225-00**	**16125-00**	**10**

C. Pulses

RABI

Thrust area	Crop	Yield gap (q/ ha)			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha)	No. of farmers District average yield
		District average yield	Potential yield	Farmers yield			Name & Quantity (kg/ha)	Cost (Rs./ha) or Rs./unit		
ICM	Bengalgram	5.5	8-10	4.8	- No seed treatment with bio fertilizers - Pod borer & wilt - Use of local varieties (A-1)	-Use of HYV (JG-11) -Seed treatment with biofertilizers -Installation of Pheromone traps -Use of NPV & neem oil -Spraying with recommended chemicals with correct dosage & timely	Seeds (JG-11)-62.5 kg Traps-5 nos. Coriander – 1kg NPV-250LE Profenophos – 0.5L Quinolphos-1.25L	2250-00 200-00 200-00 425-00 215-00 310-00	5	10
							Total	**3500-00**	**17500-00**	**10**

D. Cotton

KHARIF

Thrust area	Crop	Yield gap (q/ ha)			Reasons for yield gap	Technology to be demonstrated	Critical inputs to be provided		Area (ha)	No. of farmers District average yield
		District average yield	Potential yield	Farmers yield			Name & Quantity (kg/ha)	Cost (Rs./ha) or Rs./unit		
Higher production with good staple length	Cotton	28-35	40-42	10-12	- Use of desi/DCH-32 - Indiscriminate use of pesticides (12 times) - Improper nutrient management (75:50:50 NPK kg/ha) - Improper spacing (90x60) - Square drying - Non availability of Bt seeds - Leaf reddening - Boll worms and sucking pest	• Bt seeds MRC - 6918 • Imidacloprid • Trap crop (Bhendi seeds and marigold • Micronutrient mixture • With Zn and Mg • Plano fix • Pheromone traps with Ha lure • Confidor and thiodicarb • Pheramone trap • Nimbicidin	• Seeds – 1125g • Imidacloprid – 10 g/kg • Bhendi seeds – 0.5 kg • Micronutrient – 500 g • Growth regulator – 100 ml • Chemical (Confidor) – 0.25 L • Thiodicarb – 0.5 kg • Pheramone trap – 5 No. • Nimbicidin – 1L	750-00 100-00 400-00 75-00 75-00 600-00 700-00 500-00 300-00	20	50
								Total	**3500-00**	**70000-00**	**50**

TABLE 5 Plan For Training Programmes For Extension Functionaries During 2009-10

Crop / Enterprise	Identified Thrust Area	Organization	Training Course Title	No. of Courses	Skill to be transferred
1	2	3	4	5	6
Cotton	Integrated Crop Management	Dept. of Agriculture	Recent advances in Bt cotton production technology	02	• Seed treatment • Sowing technique • Use of Pheramone traps • Micro nutrient and growth regulator spray • Mechanization for weeding
Maize	Higher production and IPDM	Dept. of Agriculture / Pragati grameena Bank	Production technology in Maize	03	• Dibbling • Method of spraying • Application of Zinc sulphate • Timely top dressing and intercultivation
Coconut and Arecanut	Integrated pest and disease management	Department of Horticulture	Integrated Pest and Disease Management in Coconut	05	• Root feeding of Coconut tonic • Release of bio-agents
Kitchen Gardening	Balanced Nutrition	Department of Horticulture	Nutritional Gardening	02	Plan and layout of fruits, vegetables, flower crops in kitchen garden
Nutrition Education	Value addition	Dept. of Women & Child Welfare	Enrichment & popularization of potential food grains for neutracetical benefits	02	Preparation of different weaning foods from food grains

1	2	3	4	5	6
Fisheries	Integrated fish farming Pond management Fish health management	Dept. of Fisheries Dept. of Watershed Dept. of Agriculture Dept. of Horticulture	Sustainable integrated fish farming	02	• Seed selection • Stocking density • Feed, feeding rate and frequency • Fertilizers and application • Pond maintenance • Growth monitoring • Integration of other agricultural practices
Cattle	Fodder scarcity	SHIMUL	Production and Feeding methods of Azolla for milch animals to improve the milk production and health	02	• Production technologies • Feeding methods

Table 6: Plan of vocational training programmes for Young Farmers (Rural Youth) during 2009-10

Crop / Enterprise	Identified Thrust Area	Training title*	No. of programmes and Duration (days)	Skill to be transferred
Mushroom cultivation	Quality mushroom production	Improved practices in Mushroom cultivation	1 x 3 days	• Stuffing of Rice straw • Sowing of mushroom seeds • Water spraying
Composting and Vermicomposting	Alternative measures for inorganic fertilizers	Different composting and vermicomposting methods	1 x 7 days	• Method of filling the waste • Sieving • Enrichment with bio-fertilizers
Quality planting materials in Horticulture crops	Supply of Genuine quality planting materials in Horticulture crops	Recent trends in production of quality planting in Horticulture crops	2 x 10 days	• Poretray nursery • Grafting, budding and layering techniques • Tissue culture
Cattle	Feeding	Improved integrated dairy farming	1 x 5 days	• Selection of milch animal • Preparation o f concentrates • Feeding methods • Preparation of concentrates • Computation of ration
Fish aquaculture	Integrated fish farming	Advances in freshwater fish culture practices	1 x 8 days	• Seed selection • Stocking • Pond construction, preparation • Integration of available resources and practices • Feeding, fertilization • Pond and fish health management • Harvesting and marketing

Table 7: Plan of training programmes for farmers/farm women during 2009-10

Crop / Enterprise	Major problem	Identified Thrust Area	Training Course Title*	No. of Courses	Skill to be transferred
1	2	3	4	5	6
Maize	– No micronutrient application – No potash application – Stem borer – No value addition	Higher production can be achieved through integrated nutrient management and use of high yielding hybrid	– Sowing technique – Identification of nutrient deficiency symptoms – Method of application of fertilizers – Value added products in maize	08	- Dibbling - Fertilizer mixing - Top dressing
Rice	– Improper nutrient management – Stem borer	Integrated Nutrient Management and IPM	– Nursery management – Use of bio-fertilizers – Pheromone traps installation – Micronutrient application – Neem coated urea – Release of parasitoids	05	- Seed treatment - Clipping - Seedling treatment with bio-fertilizers - Lure installation - Timely release
Minor millets (Ragi and Navane)	– Low yield – Local varieties – No seed treatment with bio-fertilizer – No micro nutrient application – No recommended dose of fertilizer	Higher production for sustainable income	- Seed treatment with bio fertilizers - Importance of potash - Value addition in ragi and navane	03	- Seed treatment - Basal application of potash - Enriched malt and biscuits
Groundnut (Kharif/rabi)	– No gypsum application – Collar rot, root rot and wilting – `More energy, labour and time consumption for stripping and shelling	ICM	- Seed treatment with fungicides and bio-fertilizers - Importance and timely application of gypsum - Identification of color rot and leaf minor - Use of drudgery reducing equipment	04	- Seed treatment with Trichoderma - Dosage and time of gypsum application - Use of mechanization in shelling and stripper
Sunflower (Kharif/Rabi)	– Genuine seeds – Bud necrosis and BHC – No Micronutrients (Zinc and Boron) – Close Spacing	IPM and INM	- Seed treatment - Use of micronutrient spray - Role of honey bees in getting higher yield	03	- Seed treatment with goutch - Method of Zinc sulphate and Borox application - Timely spray of

					chemicals
1	**2**	**3**	**4**	**5**	**6**
Bengalgram	– Poor knowledge on seed treatment – Wilt and pod borer – Shriveled seeds	ICM	– Seed treatment with trichoderma – Role of pheromone traps in management of pod borer – Method of neem product spraying	03	- Seed treatment - Traps installation - Spray solution preparation
Redgram	– Pod borer – Less use of bio fertilizers – Low yield	IPM	– Seed treatment with trichoderma – Role of pheromone traps in management of pod borer – Use of bio-fertilizers for improving soil health	02	- Seed treatment with chemicals - Traps installation - Method of bio-fertilizer usage
Cotton	– No RDF – Sucking pest – Boll worms – Leaf reddening and square drying	ICM	– Importance of trap crops – Management of pest through pheromone traps – Timely spray of chemicals – Application of growth regulators	05	- Trap cropping of Bhendi/70ermicom - Timely application of growth regulators
Avare	– Low yield – Lack of knowledge on high yielding varieties – Pod borer and aphid	High production	- Production technology in Avare	04	- Seed treatment with bio fertilizers - Method and timely application of manures/fertilizers - Method of spray solution preparation
Coconut	- Heavy incidence of mites and BHC - Poor nutrition resulting in lower productivity	Integrated disease , pest and nutrient management	Integrated pest and disease management in Coconut. Integrated Nutrient management in Coconut.	02	- Root feeding of chemical and nutritional tonic - Release of Bio agents - Basin method of fertilizer application

1	2	3	4	5	6
Banana	- Lower bunch weight due to micronutrient deficiency - Incidence of Sigatoka leaf spot	Management of micronutrient deficiency	– Importance of sucker selection in Banana – Nutrient and water management in Banana – Management of pest and diseases in Banana	05	- Preparation of banana special mixture - Selection of sword suckers for planting - sucker treatments with systemic fungicides
Tomato	- Low yield - Poor quality - Higher flower drop	Integrated Crop Management	– Methods of raising quality planting materials in tomato – Nutrient and water management in tomato – Post harvest technology in tomato	03	- Foliar application of Micronutrients - Seed treatment - Stacking - Post harvest handling
Arecanut	- Button shedding - Micronutrients Deficiency - Nut splitting - Hidimundige	Integrated Crop Management	– Importance of mother palm selection in arecanut – Integrated nutrient management in arecanut	05	-Method of fertilizer application -Method of chemical application
Onion	- Purple blotch diseases - Incidence of Thrips	Integrated Pest and Disease Management	– Importance of seed treatment with bio-fertilizer in Onion – Production technology of Onion – Management of purple blotch disease in Onion	03	- Seed treatment with bio-fertilizers - Profilelactic plant protection measures
Chilli	- Murda complex	Integrated Pest Management	– Identification of disease sample based on vector – Method of Neem cake application	02	- Identification of the disease sample - Timely spray of chemicals
Brinjal	- Shoot and fruit borer	Integrated management of shoot and fruit borer	– Use of wota traps – Timely application of neem cake	02	- Wota traps installation (Lure) - Timely spray of chemicals

Haluvana (Supporting plant for bettle vine)	- Gallmidge	Integrated gallmidge management in Haluvana	– Neem cake application – Timely spray of chemicals	02	- Method of neem cake application - Preparation of spray solution
1	**2**	**3**	**4**	**5**	**6**
Drumstick	- Lower pod yield	Popularization of HYV	– Recent trends in production Technology of drumstick	03	- Raising quality planting materials
Dry Land Horticulture	- Erratic rainfall - Lower water table	Dry Land Horticulture	– Dry Land Horticulture	05	- Soil and water conservation techniques - Layout of fruit orchards
Live stock (Ruminants)	– Foot and mouth disease	Use of Area specific vaccine	– Prevention and control of foot and mouth disease in livestock	02	- Disease identification - Vaccination
Cattle	– Lower body weight gain calves	Under nutrition of calves especially milk	– Calf rearing methods	02	- Preparation of milk replacers - Deworming
Sheep and Goat	– Lower body weight gain	Deficiency of nutrients	– Feeding concentrates for better body weight gain	02	- Preparation of concentrates - Deworming
Livestock	– Feeding shortage and low quality feeding stuffs	Enrichment	– Enrichment of low quality feeding stuffs with NPN substances	02	- Enrichment of feeding stuffs - Preparation of solutions for spray etc.
Cattle	– Mastitis	Unhygienic milking method	– Prevention and control of mastitis in high yielding milch animals	02	- Use of saaf kit and $KmnO_4$ solution - Milking methods
Nutrition	- Malnutrition - Less knowledge and adoptability	Value addition	- Importance of early childhood nutrition to achieve nutritional security - Production, utilization and marketing aspects of weaning	04	- Preparation of ragi based nutritionally enriched weaning mixes - Preparation of value added products from minor millets

1	2	3	4	5	6
Drudgery reducing equipments	- Energy, time and labour consumption	Drudgery reduction	- Awareness on improved drudgery reducing equipments	03	- Demonstration of cycle weeder, groundnut decorticator and Improved sickle
Mushroom cultivation	- Low production due to non availability of quality seeds and unscientific methods in cultivation	Subsidiary occupation	- Production, utilization and marketing of Oyster mushroom	01	- Utilization of quality spawns for cultivation and cultivation techniques
Kitchen Gardening	– Negligible consumption of vegetables in daily diet	Nutrition education	– Nutritional Garden for better family health	02	- Plan and layout of fruits, vegetables, flower crops in kitchen garden
Fisheries	– No quality seeds – No information on integration – No knowledge on pond management	Integration of available resources and practices to fish farming	– Fish pond preparation – Fish seed selection and stocking – Feeding and fertilization – Integration of agriculture practices	04	- Seed selection - Stocking density determination - Feed preparation - Pond preparation - Feeding rate & frequency - Fertilization - Water quality maintenance - harvesting

Table 8. Plan for sponsored training programme during 2009-10

Crop/ Enterprise	Identified Thrust Area	Organization	Training course title	No. of Courses	Sponsored Agency	Skill to be transferred
Entrepreneurship development	Establishment of Rural Bio Resource Complex for Sustainable Rural Livelihood Security through Bio-technological Approaches in Davanagere District of Central Karnataka	DBT, New Delhi	Various entrepreneurship development programmes	3 years project under Biotechnology for rural development	DBT, New Delhi	• Group farming • Common commodity interest group approach • Sustainable and profitable marketing
Coconut and Arecanut	Integrated disease , pest and nutrient management	KSDH, Davanagere	Integrated crop management in Coconut.	02	KSDH, Davanagere	• Root feeding of chemical and nutritional tonic • Release of Bio agents • Basin method of fertilizer application
Vermicompost	Alternative measures for inorganic fertilizers	Zilla Panchayath, Davanagere	Methods of Vermicompostin g	05	Zilla Panchayath, Davanagere (SGSY scheme)	• Method of filling the waste • Sieving • Enrichment with bio-fertilizers
Soil testing	Reclamation of problematic soils	Zilla Panchayath, Davanagere	Use of mobile soil kit for testing	02	Zilla Panchayath, Davanagere	• Soil sampling • Use of mobile soil kit • Reclamation methods
Cattle	Clean milk production	SHIMUL	Clean milk production in dairy animals	20	SHIMUL (RSVY scheme)	• Use of saaf kit • Use of ASMM • Milking methods
Cattle	Feeding and disease management	Dept. of animal husbandry and veterinary sciences	Improved integrated dairy farming	05	RSVY Scheme	• Selection of milch cow • Feeds preparation • Deworming
Entrepreneurship development	Rural development	NABARD, Davanagere	Various entrepreneurship development programmes	02	NABARD, Davanagere	• Vermicomposting • Bio fertilizer production

Table 9: Details of Extension programmes planned for 2009-10

Month	Block & village	Extension activity*	Its relation to KVK activities (Tables 2 to 6)**	Expected category of participants	Remarks
1	2	3	4	5	6
April	Kurki, Mallenahalli, Anagodu, Alur, Thurchghatta, Bullapura, Duggammanapete, Garaga, Bommenahalli, Anajigere, Budihal	– Field visit – Group meeting – Identification and selection of farmers – Preliminary training and discussion	FLDs and OFTs	SF/MF	--
May	K.N. halli, Yalavatti, Yerebudihal, Mallanayakanahalli, Nittur, Belludi, Karlahalli, Deetur, Sarathi, Kandagal, Belavanur, Tholahunase, Arundi	– Field visit – Method demonstrations – Trainings – Seminar – Agri camp – SHG meetings	FLDs and OFTs	SF/MF	--
June	Anajigere, Budihal, Bheemanere, Daginakatte, Marabanahalli, Shettihalli, Devarahalli	– Field visit – Method demonstrations – Training – Seminar – Animal health camp – Soil campaign – Workshop	FLD/OFT	SF/MF	--
		– Pond preparation – Seed stocking – Sowing of vegetable seeds on pond dykes – Erection of poultry cages	FLD- Popularization of pond integrated aquaculture with fish polyculture OFT- Growth assessment of common carp varieties	SF/MF	--
		– Training – Method demonstration of preparation of Ragi malt and composite energy mix	OFT- Impact of Ragi malt on physical and mental status of preschoolers OFT- Impact of composite flour on nutritional status of adolescent girls	SF/MF	--

1	2	3	4	5	6
July	Kengalahalli, Kundur, Kulambi, M. kumbalur, Belludi, Karlahalli, Deetur, Sarathi	– Vocational training – Fertilization and feeding regime standardization, release of poultry birds – **Fish Farmers' Day**	FLD- Integrated fish-cum-prawn culture in fresh water pond FLD/OFT	SF/MF	--
		– Field visit – Method demonstrations – Training – Seminar	FLDs and OFTs	SF/MF	--
		– Field visit – Training – Method demonstration	OFT- Assessment of weeders as drudgery reducing equipments	SF/MF	--
August	Madihalli, Nandibevuru,Arasikere, Kallahalli, Haluvagalu, Hulikatte, Kannayakanahalli, Channalli thanda	– Training – Monitoring of FLD ponds – **World Kitchen garden day**	FLDs and OFTs	SF/MF	--
		Training Monitoring of FLD ponds	FLD- Polyculture of major carps and cat fish *Clarias batrachus* in farm ponds	SF/MF	--
September	Bilichodu, Medikeranahalli, Mallapura, Devikere, Bullapura, Duggammanapete, Garaga	Sampling fish for weight, Feeding regime changed	FLD- Popularization of pond integrated aquaculture with fish polyculture	SF/MF	--
		– Method demonstrations – Training – Seminar	FLD/OFT	SF/MF	--

1	2	3	4	5	6
October	Kurki, Mallenahalli, Anagodu, Alur, Thurchghatta, Bullapura, Duggammanapete, Garaga, Bommenahalli, Anajigere, Budihal,	- Health management	FLD- Popularization of pond integrated aquaculture with fish polyculture	SF/MF	--
		– Field visit – Method demonstrations – Training – Seminar – Health campaign – **World Food Day**	FLD/OFT	SF/MF	--
November	Madihalli, Nandibevuru,Arasikere, Kallahalli, Haluvagalu, Hulikatte, Kannayakanahalli, Channalli thanda	- Feeding regime changed - Growth monitoring - Workshop	FLD- Popularization of pond integrated aquaculture with fish polyculture	SF/MF	--
		– Field visit – Method demonstrations – Training – Seminar	FLD/OFT	SF/MF	--
		– Training – Method demonstration – Field visit	FLD- Safe storage of pulses	SF/MF	--
December	K.N. halli, Yalavatti, Yerebudihal, Mallanayakanahalli, Nittur, Belludi, Bilichodu, Medikeranahalli, Mallapura, Devikere,	– Scientific field visit – Sampling fish for weight	FLD- Popularization of pond integrated aquaculture with fish polyculture	SF/MF	--
		– Field visit – Method demonstrations – Training – Seminar – **Women in Agriculture Day** – **Kissan Samman Diwas**	FLD/OFT	SF/MF	--

1	2	3	4	5	6
January	Bilichodu, Medikeranahalli, Mallapura, Devikere, Karlahalli, Deetur, Sarathi, Kandagal, Belavanur, Tholahunase, Arundi	– Vocational training for rural youth – Field day – Extension functionaries training	FLD- Popularization of pond integrated aquaculture with fish polyculture	SF/MF	--
		– Field day – Field visit – Method demonstrations – Training – Seminar – Animal health camp	Other FLDs/OFTs	SF/MF	--
February	Arasikere, Kallahalli, Haluvagalu, Yalavatti, Yerebudihal, Deetur	– Weight sampling	Other FLDs/OFTs	SF/MF	--
		– Field visit – Method demonstrations – Training – Seminar – **National Science Day**	Other FLDs/OFTs	SF/MF	--
March	Bommenahalli, Anajigere, Budihal, Kannayakanahalli, Channalli thanda, Madihalli, Nandibevuru	– Filed days, field visit	Other FLDs/OFTs	SF/MF	--

Table 10: Details of print & electronic media coverage planned for 2009-10

Sl. No.	Nature of literature/publications and no. of copies	Proposed title of the publication
1	Leaflet/folder (1000 copies)	- IPM in Brinjal - Groundnut - Small agro enterprises for rural folk - Processing and preservation of fruits and vegetables - Value added products from maize - IPM in Tomato - INM in Arecanut, Coconut and Banana - Dryland horticulture - Purple Management in Onion - Production technology of important medicinal plants - Enrichment of low quality feeding stuffs - INM in Rice, Maize - Methods of vermicomposting production - Foot and mouth disease in livestock – Prevention and control - Azolla production and its nutritive value in animal feeding - Production technology in fodder crop - Advances in aquaculture technologies - Integrated fish cum prawn farming in inland ponds - Fish seed rearing, a profitable venture for small farmers - Ornamental fishes for control of mosquito menace.
2	Paper articles (daily news paper)	- Use of Banana Special to tackle Micronutrient Deficiency in Banana

		- Use of Vegetable Special to tackle Micronutrient Deficiency in Vegetable crops
Sl. No.	**Nature of media coverage**	**Proposed title of the programme to be telecasted/ broadcast**
1	Radio talk	- Dry Land Horticulture - INM in Arecanut, Coconut and Banana - Integrated Pest and Disease Management in Maize - IPM in Arecanut - IPM in Brinjal - IPM in Rice - Soil and water management in agriculture - Agro enterprises for farm women - Weaning mixes for nutritional security and income generation - Advances in fish culture practices - Calf rearing methods - Enrichment of low quality feeding stuffs
2	TV- Programme	- Use of Coconut tonic in Coconut - Application of Vegetable Special in Tomato - INM in Coconut and Arecanut - Integrated fish farming in inland ponds

Table 11: Nature of collaborative activities planned for 2009-10

Thrust area	Collaborative Organizations	Nature of activities*	No. of Activities
Rural Development	MSW, PG Center, Kuvempu University	Trainings, Seminars, Workshops	03
Analysis of Agriculture crop production (Maize) C:B	Dept. of Economics, Kuvempu University	Trainings, Seminars, Workshops	01 each
"Establishment of Rural Bio Resource Complex for Sustainable Rural Livelihood Security through Bio-technological Approaches in Davanagere District of Central Karnataka"	Dept. of Bio Technology, New Delhi	Training, Demonstration, Workshops, Seminar, Exposure trips, Production and marketing	For 3 years
BHC in Coconut	KSDH, Davanagere	Seminar Demonstration	02 04
INM in Banana, Arecanut and Coconut	KSDH, Davanagere	Training Workshop	02 02
Mites in Coconut	TNAU, Coimbatore	Demonstration	10
Micronutrients Deficiency in Banana	IIHR, Bangalore	Demonstration	10
General health	PHC and Dept. of women and child welfare	Campaign and seminar	01
Health education	PHC and Dept. of women and child welfare	Exhibition	01
English education	Brilliant Brain Academy, ABACUS, Davanagere	Workshop	02
Alternate farming	ICRA, Bangalore	Seminar	02
Environmental awareness	KRVP, Bangalore	Campaign and workshop	01

Table 12: Financial status of revolving fund and plan for its utilization

Particulars of Items	Opening Balance as on 1.4.08	Expenditure incurred during 2008-09	Receipts during 2008-09	Closing Balance as on 31.03.09	Proposed Expenditure during 2009-10	Proposed Receipts during 2009-10
Agricultural Extension Activities :						
(a) Publication Sales		17000.00	7330.00		20000	30000
(b) Taralabalu Hunnime Krishi Mela		3140.00	57500.00		35000	60000
(c) Taralabalu Santhe		1370.00			1000	
		21510.00	64830.00		56000	90000
	41896.32					
Animal Unit		18977.34	8000.00		20000	20000
Fish-Aquaculture		2214.00	6690.00		5000	10000
Home Science Demon. Activities		834.00	50.00		1000	1500
Horticulture Demon. Activities		23510.00	4050.00		10000	15000
Kadalivana : Agronomy Activities		200.00				
Kadalivana : Crops Cultivation A/c		175055.41	198339.00		200000	232200
Kadalivana : Fodder Cultivation		3223.00	1800.00		3000	6000
Kadalivana : Fruit Orchard Cultivation		4935.00			10000	20000
Kadalivana : Kitchen Garden		2140.00	552.00		2000	2500
Kadalivana : Medicinal Garden		2858.00			2000	
Kadalivana : Sugar Cane Cultivation		57467.00	243882.00			
Kadalivana : Vegetable Production		1230.00	15413.50		30700	79000
Kesarivana : Arecanut Garden		5482.25	470.00		6000	4000
Kesarivana : Crops Cultivation		52730.00	1200.00		20000	25000
Kesarivana : Mango Orchard Unit		160.00	500.00		1500	5000

Contd….

Particulars of Items	Opening Balance as on 1.4.08	Expenditure incurred during 2008-09	Receipts during 2008-09	Closing Balance as on 31.03.09	Proposed Expenditure during 2009-10	Proposed Receipts during 2009-10
Mushroom Production Unit		954.00			300	800
Seeds Centre		19654.00	13598.00		20000	25000
Soil Science Unit Activities		24323.00	27675.00			
Soil Testing Lab.		691.00	6510.00		17500	5400
Tamarind / Jamum Fruit Sales			2600.00		1000	4000
Vermi-Compost Demon. Unit		25293.00	33620.00		20000	35000
Wood / Straw Sales			2600.00			5000
Xerox Unit			120.00			
Interest on SB A/c Balance			1376.00			2000
Other Receipts			350.00			2500
Agricultural Implements Mtc.		333.00				5000
Advance for Activities		155499.38				
Total	**41896.32**	**611023.38**	**634225.50**	**65098.44**	**426000**	**594900**

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

Opening stock position of materials as on 01.04.2008	Quantity produced during 2008-09	Quantity sold during 2008-09	Closing stock position as on 31.03.2009	Expected production during 2009-10	Expected number of beneficiaries
Cattle	02	--	01	02	--
Co-4 fodder crop	40 tons	10000 cuttings	Standing crop	50 ton	05
Ornamental fish	1000 No.	116 No.	884 No.	3000 No.	--
Vermicompost manure	12t	9t	3t	15t	--
Vermicompost warm	6 kg	4.5 kg	1.5 kg	8kg	--
Drumstick	23 kg	23 kg	--	30 kg	--
Ragi (GPU-28)	200 kg	200 kg	--	400 kg	80
Stylozanthus	5 kg	5 kg	--	20 kg	20
Banana	250 kg	250 kg	--		

Table 14. Plan for utilization of Revolving Fund (2009-10)

Amount to be invested (Rs.)	Purpose	Expected production	Approximate value of the produce
70,000-00	Maize cultivation	180 q	1,44,000-00
36,500-00	Redgram cultivation	20 q	40,000-00
11,900-00	Rice cultivation	38 q	45,600-00
9,900-00	Cotton cultivation	8 q	20,000-00
9,900-00	Brinjal cultivation	50 q	15,000-00
10,200-00	Tomato cultivation	60 q	24,000-00
9,200-00	Chilli cultivation	40 q	20,000-00

Table 15: Status of KVK farm and Demonstration units

No. of blocks	Area (acre)	Source of irrigation	Season	Crop/enterprise/demonstration units	Size (no. of units/area)	Expected output	
						Quantity	Value
1	6	Borewell	Kharif	Maize	--	180 q	1,44,000-00
2	1	Borewell	Kharif	Rice	--	19 q	22,800-00
3	1	Borewell	Kharif	Cotton	--	8 q	20,000-00
4	1	Rainfed	Kharif	Ragi	--	8 q	8,000-00
5	5	Rainfed	Kharif	Redgram	--	20 q	40,000-00
6	1	Borewell	Kharif	Brinjal	--	50 q	15,000-00
7	1	Borewell	Kharif	Tomato	--	60 q	12,000-00

Planned establishment of different demonstration units in the farm:

Units
Fruit orchards - Mango, Banana, Mixed fruit orchard, Sapota, Papaya
Vegetable orchard - Drumstick (100 No.)
Arecanut orchard
Pomegranates plants (100 plants)
Floriculture shade home
Ornamental plants
Organic rice
Medicinal plants - Tulasi plants (50 No.)
Lemon plants (50 No.)
Curry leaf (50 No.)
Tamarind (50 No.)
Neem plants (50 No.)
Compost units
Vermicompost units – Japan method and Bangalore method
Fish - Integrated fish pond, Ornamental fish, Organic fish pond
Seed production of field and vegetable crops, Floriculture cultivation
Sales unit
Azolla, Poultry, Sheep and Goat units
Structures - Solar electrification, Meteorological unit,
Information broacher
Precision farming

Table 16 . Activities planned for production and supply of seeds/ planting material/Bio-agents.

Sl. No	Seeds/Planting material /Bio-agent	Name of the public-private partnership arranged	Quantity of output expected (Qtl)
1	Co-4 Fodder crop cuttings	5 Farmers	09
2	Sugarcane : CO-VC-2003-165	5 Farmers	120
3	Vermicompost	20 Farmers	120

17. The extent of cultivable wasteland in the district. Details of activities planned to implement in wastelands by the KVK during 2009-10

9108 hectare is cultivable waste land

Sl. No	Name of activity	Extent of coverage's	
		No. of farmers	Area (ha)
1	Dry land Horticulture	50	50
2	Agro forestry	100	50

18. National Horticulture Mission (NHM) is being implemented through out the country. You are requested plan for implementing some of the activities envisaged in NHM in your district in collaboration with district head of department of horticulture. – Davanagere is Non NHM district

19. YES - ATMA is functioning in our district.

Type of coordination and collaboration proposed to have during 2009-10 – Training programmes for farmers

Strategic Research and Extension Planning (SREP) has been prepared? - Yes

20. Type of scientist-Farmer linkages proposed by our KVK for 2009-10

- **Farmers Field School:** Through this concept of FFS, our KVK is intending to **rekindle** the spirit of farmers in farming especially the Rice growers. Improper fertilizer application and chemical usage is leading to increased cost of production. Our aim will be to reduce the same, inturn increase the yield and income. And not to forget the indirect benefits towards environmental protection.
- **Diagnostic Survey in farmers fields:** Conducting volunteer diagnostic survey for fertilizer and disease among the farmers fields, particularly in major crops like maize, Rice, horticultural crops and allow farmers to develop a cordial relationship with farm science centre.
- **Providing critical inputs :** Such as seeds of high yielding variety of Ragi, Redgram, Wooly aphid resistant sugarcane setts, nursery grown vegetable seedlings, Trichoderma, special earthworms, fodder slips to our farmers of the district.
- **Indigenous seed conservation and processing:** Joining hands with farmers groups involved in indigenous crop seed conservation and local processing.

21. Activities of soil, water and plant testing laboratory – To be established this year (2009-10)

22. Details of budget utilization (2008-09)

S.No.	Name of the Head	Sanction	Release	Expenditure
	Opening Balance as on 1.4.2008		704545	
A] RECURRING ITEMS :				
1	Pay & Allowances	2800000	2095455	2905387.00
2	Travelling Allowances	100000	100000	99999.80
3	Contingencies	*700000*	*700000*	*626625.02*
	[01] Office Contingency	210000	*210000*	209990.51
	[02] POL, Hiring, Maintenance of Vehicles	110000	*110000*	109999.61
	[03] Stipend / Meals for Trainees	90000	*90000*	57197.00
	[04] Teaching Materials for Training	80000	*80000*	80000.00
	[05] FLD (Other than Oilseeds & Pulses)	100000	*100000*	87452.65
	[06] OFT - On Farm Testing	60000	*60000*	50641.00
	[07] Training to Extension Personnel	20000	*20000*	5440.00
	[08] Maintenance of Library	10000	*10000*	8982.00
	[09] Farmers Field School	20000	20000	16922.25
	Total - A	**3600000**	**3600000**	***3632011.82***
B] NON-RECURRING ITEMS :				
1	Works :	0		
2	Vehicle - Two Wheeler	50000	50000	48309.00
3	Farm Development			
4	Agricultural Equipments			
5	Office Equipments - Fax	15000	15000	15000.00
6	A.V.Aids			
7	Fixture / Fittings			
8	Library Establishment			
	Total - B	***65000***	***65000***	***63309.00***

	GRAND TOTAL (A + B)	**3665000**	**3665000**	**3695320.82**

23. Details of Budget Estimate (2009-10)

Sl. No.	Name of the Head	Amount	TOTAL BUDGET ESTIMATE FOR 2009-10	Remarks
A] RECURRING ITEMS :				
1	Pay & Allowances	3615332	3615332	
2	Travelling Allowances	200000	200000	
3	Contingencies	*2093000*	*2093000*	
	[01] Office Contingency	300000	300000	
	[02] POL, Hiring, Maintenance of Vehicles	200000	200000	
	[03] Stipend / Meals for Trainees	150000	150000	
	[04] Teaching Materials for Training	150000	150000	
	[05] FLD (Other than Oilseeds & Pulses)	200000	200000	
	[06] OFT - On Farm Testing	100000	100000	
	[07] Training to Extension Personnel	20000	20000	
	[08] Maintenance of Library	15000	15000	
	[09] Farmers Field School	50000	50000	
	[10] Maintenance of Demonstration Units :	908000	908000	
	[a] InlandAquaculture "Integrated Fish Farming & Ornamental Fish Farming"	*160000*		
	[b] Portable Fish Hatchary	*10200*		
	[c] Soil, Water & Plant Testing Laboratory	*266000*		
	[d] Green House & Micro Irrigation System	*37800*		
	[e] Bio Control Lab.	*34000*		
	[f] Bio Fertilizer Unit	*400000*		
	Total - A		***5908332***	

Sl. No.	Name of the Head	Amount	TOTAL BUDGET ESTIMATE FOR 2009-10	Remarks
B] NON-RECURRING ITEMS :				
1	Works :		7435000	
	[01] Over Head Tank	*1790000*		*Proposal vide letter # TKVK-OS-101/435 dt. 27.01.09*
	[02] Chain Link Fencing for Kesarivana	*1105000*		*Proposal vide letter # TKVK-OS-101/383 dt. 18.12.08*
	[03] Compound Wall for Kadalivana (Campus) + Chain Link Mesh	*2230000*		*Proposal vide letter # TKVK-OS-101/379 dt. 11.12.08*
	[04] Construction of Road at Kadalivana	*1590000*		*Proposal vide letter # TKVK-OS-101/382 dt. 18.12.08*
	[05] Solar Lighting and Water System for the Campus	*720000*		
2	Vehicle	300000	300000	
3	Farm Development Including Nala Modification at Kesarivana	3700000	3700000	Proposal will be sent separately
4	Agricultural Equipments	2042000	2042000	
5	Office Equipments	1032000	1032000	
6	A.V.Aids	612500	612500	
7	Fixture / Fittings	838320	838320	
8	Library Establishment	100000	100000	
9	Establishment of Demon. Units :		5183640	
	[01] Dairy Animals	*132000*	*132000*	
	[02] InlandAquaculture "Integrated Fish Farming & Ornamental Fish Farming"	*500000*	*500000*	
	[03] Portable Fish Hatchary	*250000*	*250000*	
	[04] Soil, Water & Plant Testing Laboratory	*1398000*	*1398000*	
	[05] Green House & Micro Irrigation System	*114005*	*114005*	
	[06] Bio Control Lab.	*1650000*	*1650000*	
	[07] Bio Fertilizer Unit	*1099500*	*1099500*	
	[08] Demon. Materials for Home Science Wing	*40135*	*40135*	
	Total - B		***21243460***	
	GRAND TOTAL (A + B)		**27151792**	

Contd….

24. Targets for E-linkage activities - e-connectivity is being sanctioned by ICAR this year (2009-10)

S. No	Nature of activities	Likely period of completion (please set the time frame)	Remarks if any
01	Final installation of E-Linkage facility	Allotted during 2009-10	--
02	Creation of web-site	August 2009	--
03	Development of Technological Models with modules in major disciplines		--
04	Creation and maintenance of relevant database system for KVK	July 2009	--
	Extension literature		Database preparation is under progress
	Farmer advisory services		
	Training programmes conducted		
	Scientific field visits		
	Exposure visits for farmers		
	Trainer's training (HRD)		
	Meeting attended		
	Method demonstrations		
	Workshop conducted		
	Lecture delivered		
	Scientific popular articles		
	Radio and TV programmes		
	On Farm Trials (Assessment & Refinement)		Initiated
	Front Line Demonstrations		
	Camps (Agri, Animal health, Soil health)		
	Soil and water analysis		
	Field days		
	National celebration days		
	Production of quality planting materials		
	Production of seed materials		
	Production of live stock		
	Production bio products		
	Farmer Field School		
	Self Help Groups		
	Commodity Interest Groups		

25. Activities planned under Rainwater Harvesting Scheme during 2009-10

S. No	Activities planned during 2009-10
1	Our KVK has not been given any rainwater harvesting scheme as of now. However, we have prepared a project proposal on Nala bund creation and borewell recharge system in Kesarivan, the horticulture and agro forestry division of our KVK and the same has been submitted to ICAR with plan and estimate for approval.

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

(i) Farmers Field School (FFS) –

1. **Title of FFS**: Integrated Crop Management (ICM) in Rice
2. **Problem Definition**: Rice is an important major crop of the district. The reduction in the yield of crop is due to improper nutrient management of pest incidence (BPH, Stem borer) etc.
3. **Main objective of FFS**:
   - ICM reduce the cost of production
   - Increase the yield and net returns
4. **Scientific rationale of FFS**: Rice is the major crop in the district from decades. But, now a days it has been replacing by arecanut. The incidence of BPH and stem borer drastically reduced the Rice yield. The incidence of BPH is mainly due to application of higher dosage of urea. The district average yield 25 q/ha. So, the ICM appearance will enhance the yield.
5. **The learning process involved in FFS**:
   - Rice growers/ farmers will be learnt about ICM approaches by actively involving from the problem identification to harvest of crop.
   - The participants will be divided into 4-5 subgroups. Each group will take ICM practices, conduct AESA, take up measurement/ observation of plant height, Number of tillers/plant, Incidence of pest and diseases in ICM plots and farmers practice plots.

   If I listen, I may forget

   If I see, I may believe

   If I do, I may remember

   If I discover, I may own it

   If I practice, I may perfect

   Therefore, FFS one can see, do, discover and practice.

6. **Priorities of FFS**:

   ICM practice-
   - High yielding varieties
   - Seed and seedling treatments
   - Alley cropping
   - Nutrient management.
   - IPM practice.
   - Mechanization practices

Lay out

ICM	Farmers practice
0.4 ha	0.4 ha

7. Budget:

Sl.No.	Particulars	Amount (Rs.)
1.	**Inputs:** Seeds	750-00
	Bio-fertilizers	150-00
2.	**NPK 60:30:30**	
	Urea	1000-00
	SSP	1000-00
	MOP	1500-00
	Zinc sulphate	480-00
	Pesticide	1500-00
	Pheramone traps	500-00
	FFS kit	2500-00
	Stationaries	2400-00
	Caps and Bags	2000-00
	Refreshment	4000-00
	Field day	2000-00
	Publication	2500-00
	POL	2000-00
	Miscellaneous	720-00
	Total	**25,000.00**

(ii) Coconut tree climbing equipment:- Facilitating R-Tech team of Coimbatore with the equipment for coconut tree climbing to meet farmers of our district. Already, 10 equipments have been sold and more orders are awaited this year too

(iii) Water literacy foundation: - An NGO based in Hubli and Bangalore, is being supported by our KVK in spreading awareness on water use efficiency, conservation and consumption. It will be promoted through workshops, seminars and demonstrations at our KVK.

(iv) Precision Farming:- Encouraged by the success of farmers of Tamilnadu state, We are trying precision farming in Banana at our KVK.

(v) Institute for Cultural Research and Action (ICRA) :- We join hands with another NGO that promotes natural farming as an alternate farming at this juncture of agricultural crisis. We are in the process of studying, understanding and observing the concepts in fields.