

Annual Progress Report – 2010-11

1. Year of sanction: 2005

2.. Staff Position (as on 30th March 2011)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale (Rs.)	Present basic (Rs.)	Date of joining	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
1	Programme Coordinator	-	-	-	-	-	-	-	-
2	Subject Matter Specialist	Digrase S.S.	SMS & I/C PC	Horticulture	8000-13500	9100	13.10.06	Permanent	Others
3	Subject Matter Specialist	Bedre S.B.	SMS	Agril. Extension.	8000-13500	9100	11.07.06	Permanent	Others
4	Subject Matter Specialist	Mohite A.S.	SMS	Agronomy	8000-13500	9100	11.07.06	Permanent	Others
5	Subject Matter Specialist	Deshmukh S.B.	SMS	Entomology	8000-13500	9100	11.07.06	Permanent	Others
6	Subject Matter Specialist	Gunjal A.A.	SMS	Home Science	8000-13500	9100	13.10.06	Permanent	Others
7	Subject Matter Specialist	Kawade S.C.	SMS	Agril. Engineering	8000-13500	9100	09.10.06	Permanent	Others
8	Programme Assistant	Dr. Salunke S.B.	Prog.Asst.	Veterinary	5500-9000	6200	01.10.06	Permanent	Others
9	Programme Assistant	Suryawanshi V.M.	Prog.Asst.	Computer	5500-9000	5850	19.01.09	Permanent	Others
10	Farm Manager	Kokate S.L.	Farm Manager	-----	5500-9000	6200	16.10.06	Permanent	O.B.C.
11	Assistant	Deshmukh A.J.	Assistant	-----	5500-9000	6200	11.07.06	Permanent	Others
12	Steno	Adgaonkar M.M.	Steno	-----	4000-6000	4400	01.04.06	Permanent	Others
13	Driver	Jadhav R.R.	Driver	-----	3050-4590	3350	01.04.06	Permanent	Others
14	Driver	Pitale N.B.	Driver	-----	3050-4590	3350	01.04.06	Permanent	Others
15	Supporting staff	Sagar O.K.	Supporting staff	-----	2550-3200	2780	01.04.06	Permanent	O.B.C.
16	Supporting staff	Jadhav V.H.	Supporting staff	-----	2550-3200	2780	01.04.06	Permanent	Others

3.. Total land with KVK (in ha) :

S. No.	Item	Area (ha)
1	Under Buildings	02
2.	Under Demonstration Units	0.10
3.	Under Crops	04
4.	Orchard/Agro-forestry	01
5.	Others (specify)	12.9

4. Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	11.10.2010	550	55,00,000	---	--	---
2.	Farmers Hostel	ICAR	11.10.2010	305	29,99,500	--	--	--
3.	Staff Quarters (6)	ICAR	11.10.2010	400	40,00,000	--	--	--
4.	Demonstration Units (2)	ICAR	26.03.2009	80	5,00,000	---	--	---
5	Fencing	ICAR	31.03.2011	2800 Rgm	7,00,000	--	--	--
6	Rain Water harvesting system	--	--	--	--	--	--	--
7	Threshing floor	--	--	--	--	--	--	--
8	Farm godown	--	--	--	--	--	--	--
9	Road Formation	ICAR	23.03.10	--	2,98,151	--	--	--

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Tractor (MH-24-D-2876)	2006-2007	5,09,002	186 hrs	Under Working
Jeep (MH-24-H-3000)	2006-2007	5,52,738	80739	Under Working
Motor Cycle (MH-24-Q-1404)	2006-2007	50,714	44162	Under Working
Motor Cycle (MH-24-Q-1405)	2006-2007	50,714	34112	Under Working

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Tractor with two bar sari plough	2006-07	5,09,002.00	Under working
Double palti plough	2006-07	42,019.00	Under working
Computer with projector	2006-07	1,21,900.00	Under working
04 row CRIDA Bullock drawn seed cum ferti planter	2006-07	15,225.00	Under working
06 row CRIDA tractor drawn seed cum ferti planter	2006-07	44,000.00	Under working
Spring type cultivator	2006-07	26,434.00	Under working
Sugarcane harrow	2006-07	961.00	Under working

5. Details of target and achievements of mandatory activities by KVK during 2010-11

OFT (Technology Assessment and Refinement)				FLD (Oilseeds, Pulses, Cotton, Other Crops/Enterprises)			
1				2			
Number of OFTs		Number of Farmers		Number of FLDs		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
15	11	120	92	11	09	110	99

Training (including sponsored, vocational and other trainings carried under Rainwater Harvesting Unit)					Extension Activities			
3					4			
Number of Courses			Number of Participants		Number of activities		Number of participants	
Clientele	Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
Farmers	64	66	1520	1372	95	85	5890	5549
Rural youth	08	10	185	217	05	02	110	60
Extn. Functionarie	09	03	265	93	-	-	-	-

Photographs of KVK activities



Visit of Respected ZPD, Dr. N. Sudhakar to KVK Stall at MAU Agri. Exhibition- 2010



Exposure visit of CIG-Pomegranate Group dated on 25/09/2010



Women farmers rally on Entrepreneurship Development on 28/09/2010 at village Babhalgaon



Kharif rally on Pigeon pea & Maize Management dated on 04/06/2010 in presence of Agril. Commissioner, Shri. Prabhakar Deshmukh



Farmers rally in presence of State Agril. Minister (MS) Shri. Balashaheb Thorat addressing during Pomegranate Production Technology Rally dated on 30/09/2010

1.8. A). Details of SAC meeting conducted in the year 2010-11

Sl.No.	Date	Name and Designation of Participants	Salient Recommendations	Action taken
1.	04/08/10	1. Dr. S.D. More, Director, Directorate of Extension Education, Marathwada Agricultural University, Parbhani. 2. Shri. Mote T.S., DSAO, Latur 3. Shri. Bhargande, ADO, Zillha Parishad, Latur. 4. Shri. Dr. U.G. Kulkarni, Associate Dean, College of Agricultural, Marathwada Agricultural University, Parbhani. 5. Shri. M.N. Raiwad ,DGM,NABARD,Latur 6. Sanjay Deshmukh, Co-ordinator, M.C.T,Latur. 7. Shri. Syed Nazir M.Y. Syed, Trustee, Manjara Charitable Trust, Latur. 8. Shri. D.S. Bankar, Manager Dist.Industries Center, Latur. 9. Narayan Pawar, Programme .officer, AIR, Osmanabad. 10. Ankush Dynoba Lonkar, Progressive Farmer, Darjiborgaon, Latur. 11. Shinde Shrikrishna Sadashivrao, Progressive Farmer, Sugaon Tq. Chakur, Latur 12. Prof. B.D. Thakur , Extension Agronomist, Agricultural College , Latur 13. Deepratna P. Nilangekar, D.D. News Representative, Latur 14. E.R. Mule , Industrial Inspector, DIC,Latur. 15. J.M. Shaikh, Assistant Fishery Development Officer, Latur 16. Mrs. P.S. Ganacharya, Sericulture Officer, Latur 17. Mrs. Urmila Dhanraj Aharekar, Female Farmer Representative, Bhabalgaon, Latur 18. Mrs. Premala Pralhad Awate, Female Farmer Representative, Bhabalgaon, Latur	1. Extend the various schemes of NABARD for farmers through various activities. 2. Biogas plant scheme. 3. Formation of farmers club based on commodity. 4. Initiate free SMS services to farmers. 5. Compile database of CRIDA planter owner in the district. 6. Promote farmers to use improved technologies. 7. To overcome the problem of labour security during peak weeding season, promote farmers to and pre-emergence weedicides. 8. Consider age of plantation during testing of cultar on mango orchard. 9. Maintain quality of biofertilizer produced by KVK. 10. Conduct on farm testing on pre & post emergence weedicides. 11. If provided, the weekly advisory sheet for major crops will be broadcasted by AIR, Osmanabad. 12. Organize skill development based trainings for rural youth. 13. Packaging of biofertilizer produced by KVK may be as good as private companies. 14. Prepare a success story on 'Azolla Production Unit.' 15. Conduct demonstrations of 2-3 varieties in demonstrated shednet and also record lux-light database during crop production in shednet of KVK. 16. Establish advanced vegetable nursery and use, use & throw trays for seedling production. 17. Submit proposal for construction of polyhouse from ATMA Scheme. 18. Submit proposal on 'Farm Implement Museum' upto Rs.5.00 Lakh to be granted from Central Government Scheme. 19. Compile soil health map of Latur District. 20. Prepare micronutrient led recommendation based on soil fertility map for Latur District. 21. Transfer technologies related to conservation agriculture practices. 22. Promote and train farmers for adopting precision farming technologies. 23. Organize training on use, repair and maintenance of micro irrigation technologies. 24. Focus on diversification of agriculture. 25. Compile impact analysis of various activities conducted by KVK. 26. Involve all the line departments in various programmes of KVK. 27. Conduct demonstrations on Major dryland crops of the District.	1. Efforts are being made in this respect 2. Efforts are being made in this respect 3. farmers club are formed 4. initiated 5. data compiled 6. Efforts are being made in this respect 7. Efforts are being made in this respect 8. Efforts are being made in this respect 9. Efforts are being made in this respect 10. Action will be taken in future 11. Action will be taken in future 12. Efforts are being made in this respect 13. Action will be taken in future 14. Action will be taken in future 15. Action will be taken in future 16. Action will be taken in future 17. Action will be taken in future 18. Proposal submitted 19. Action will be taken in future 20. Action will be taken in future 21. Efforts are being made in this respect 22. Efforts are being made in this respect 23. A training on use, repair and maintenance of micro irrigation system was conducted 24. Action will be taken in future 25. Action will be taken in future 26. Efforts are being made in this respect 27. Efforts are being made in this respect

2. DETAILS OF DISTRICT (2010-11)

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

S. No	Farming system/enterprise
1.	Dry land A. Single cropping system Sorghum (K), Soybean, Pigeon pea, Sunflower B. Inter-cropping system Sorghum + Pigeon pea (4:2/3:3), Soybean + Pigeon pea (4:2) C. Double cropping system Sorghum (K) – Bengal gram, Green gram – sorghum (R), Soybean – Bengal gram/Sorghum (R)/Safflower
2.	Irrigated Soybean – Sorghum (R)/ Groundnut/ Sugarcane
3.	Multiple cropping system Sorghum (K)- wheat – Green gram Soybean – Bengal gram – summer groundnut

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

S N	Agro-climatic Zone	Characteristics
1.	Assured rainfall zone	The assured rainfall zone comprises part of Ahmedpur, Chakur and udgir taluka with assured rainfall and light to heavy soil, with hilly track comes under this zones. Annual precipitation varies from 881 to 903 mm
2.	Moderate rainfall zone	Some part of Latur, Renapur AUSA, Nilanga, Sirur Antantpal, Deoni, Taluka is under moderate rainfall zone receiving rainfall 700 to 800 mm.

S N	Agro ecological situation	Characteristics
1.	AES-I (western part of Latur and central part of AUSA)	Low rainfall, light to medium soils with flat area
2.	AES-II (Renapur, northern part of Shirur Antantpal and east of Latur)	Low rainfall medium to heavy Soil with flat area
3.	AES- III (Nilanga, western part of Udgir, Chakur and Deoni)	Moderate rainfall medium to heavy soil with hilly area
4.	AES-IV (Jalkot and western part of Ahmedpur north east of Chakur)	Moderate rainfall light to medium soil with area
5.	AES-V (Ahmedpur)	Moderate rainfall, light to medium soils with flat area
6.	AES-VI (Western part of Latur, central part of Sirur Antantpal)	Medium to heavy soils with command area

2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
01	Light	0.75-25 cm depth	145079
02	Medium	25-50 cm depth	60274
03	Black Cotton	Above 50 cm depth	137288

**2.4. Area, Production and Productivity of major crops cultivated in the district
Agricultural and allied census**

S. No	Crop	Area (ha)	Production (Tones)	Productivity (Qtl /ha)
1	Jowar	125700	183500	1460
2	Bajri	4900	2500	509
3	Maize	4900	3800	950
4	Rice	6700	4200	625
5	Other cereal crops	700	-	-
	Total cereal crops	142900	190200	1331
6	Pigeon pea	93000	113600	1221
7	Green gram	26900	17000	632
8	Black gram	60200	44100	732
9	Other pulses	700	-	-
	Total pulses	180800	174700	966
10	Ground nut	2200	1300	608
11	Sunflower	6300	4200	663
12	Soybean	191500	431100	2251
13	Other oil seed crops	7900	1700	420
	Total oil seed crops	207900	438300	2108
14	Cotton	4600	11100	411
15	Sugarcane	41000	3485000	85
	Total cash crops	45600	3496100	496

Horticulture Fruit Crops

S. No	Crop	Area (ha)	Production (Tones)	Productivity (Qtl /ha)
1	Banana	113.80	6981.00	61.34
2	Sapota	66.95	2837.00	42.37
3	Guava	60.80	1109.00	18.24
4	Grape	822.00	17064.00	20.76
5	Mango	1069.00	4188.00	3.92
6	Mandarin	5.00	54.00	10.80
7	Sweet orange	24.40	411.00	16.84
8	Tamarind	92.50	541.00	5.85
9	Papaya	8	201	25.12
10	Anola	10.00	167.00	16.70
11	Fig	51.00	427.50	8.38
12	Watermelon	43.7	7591	-
13	Muskmelon	14	1490	-
	Total Fruit Crops	2381.15	43061.5	230.32

Vegetable Crops

S. No	Crop	Area .00 hec	Production .00 Qtl	Productivity
1	Tomato	1105.69	177541.4	-
2	Brinjal	782.78	96932.35	-
3	Ladyfinger	28.3	3047.0	-
4	Chili	1461.38	97981.37	-
5	Potato	678.75	173192.3	
6	Capsicum	8.75	964	-
7	Onion	2564.45	208121.2	-
8	Garlic	758.7	49566.05	-
Total Vegetable Crops		9526.96	1241911.6	

Spices Crops

S. No	Crop	Area .00 hec	Production .00 Qtl	Productivity
1	Turmeric	145.55	16637	-
2	Ginger	345.2	54924.3	-
3	Coriander	761.34	111132	-
Total Spices Crops		1252.09	182693.3	

Floriculture Crops

S. No	Crop	Area .00 hec	Production .00 Qtl	Productivity
1	Marigold	19327	11812.64	-
2	Shevanti	29.87	1294.1	-
3	Mogara	2.2	133.5	-
4	Rose	25.14	4300.4	-
5	Gerbera	12.1	386.5	-
6	Lilli	4.25	1246	-
7	Nishigandh	10.25	434	-
8	Aster	19.25	568.1	-
9	Gyllardia	17.75	393	-
Total Floriculture Crops		314.08	20568.3	

2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)
		Minimum	Maximum	
May 2010	5.0	18.2	39.4	51
June 2010	25.5	16.2	32.0	73
July 2010	63.4	14.6	26.8	88
August 2010	176.5	15.3	27.5	91
Sept 2010	9.5	14.7	28.5	80
Oct 2010	18.5	13.3	30.5	72
Nov 2010	7.5	11.7	28.4	74
Dec 2010	2.0	12.3	27.8	60
Jan 2011	-	12.4	30.3	51
Feb 2011	0.5	16.7	30.4	57
March 2010	0.7	19.0	37.2	31

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

Category	Population	Production	Productivity
Cattle			

<i>Crossbred</i>	32700	344.76 Lack Kg.	5.5 Litre
<i>Indigenous</i>	352263	282.95 Lack Kg.	1.8 Litre
Buffalo	240381	956.40 Lack Kg.	2.5 Litre
Sheep			
<i>Crossbred</i>	783	-	-
<i>Indigenous</i>	45852	26.406 MT (Wool)	0.5 Kg
Goats	235962	57.88 Lack Kg. (Milk) 113.26 MT (Meat)	0.20-0.80 MI 12 Kg
Pigs			
<i>Crossbred</i>	1172	-	-
<i>Indigenous</i>	8159	-	-
Rabbits	520	-	-
Poultry			
Hens	128991	-	-
<i>Desi</i>	114626	124.85 Lack Kg (Eggs)	-
<i>Improved</i>	14365	46.11 Lack Kg (Eggs)	-
Ducks	104	-	-
Turkey and others	54	-	-

Category	Area	Production	Productivity
Fish	13696 Hector	3440 MT	258.84 Kg/hect
<i>Marine</i>	-	-	-
<i>Inland</i>	13696 Hector	3440 MT	258.84 Kg/hect
Prawn	-	-	-
Scampi	-	-	-
Shrimp	-	-	-

2.6 Details of Operational area / Villages (2010-11)

Sl.No.	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1.	Latur	Latur	Babhalgaon, Shivni, Shirsi	Oilseed & Pulses	• Low yield • Heavy incidence of pests	Improved variety Integrated Nutrient Management IPM
2.	Latur	Latur	Babhalgaon, Shivni, Shirsi, Rui, Rameshwar Gumphawadi Bhosa	Dairy	• Less availability of green fodder and low yield of green fodder • Low milk yield • Reproductive disorders • High incidence of mastitis • Infertility and repeat breeding	• Fodder management • Nutritional management • Disease management
3.	Renapur	Renapur	Darji borgaon	Pomegranate	• Low yield in pomegranate • Incidence of Pest & Disease	Management of Orchards Management of pest & disease
4.	Chakur	Chakur	Gharola	Mango	• Alternate bearing in mango	Integrated nutrient management
5.	Ausa	Ausa	Ausa	Mango	• Alternate bearing in mango	Integrated nutrient management
6.	Ausa	Ausa	Karjgaon	Mango	• Fruit drop in mango	IPM INM
7.	Latur	Latur	Babhalgaon Shivani	Adolescent girls	• Low Hb % in Adolescent girls • Commonly observed deficiency symptoms	Measures for control and prevention of anemia Efficient nutrient diet
8.	Latur	Latur	Babhalgaon,	Soybean processing	• Protein energy malnutrition	Nutritional management
9.	Latur Renapur	Latur Renapur	Shirsi Mahapur Bhosa Pangaon	Improved farm machinery	• Low level of mechanization • Health hazards	Improved farm machinery & equipment
10.	Latur	Latur	Babhalgaon, Shivni, Shirsi	Rural youth	• Capacity building • Entrepreneurship development	Group promotion Income generating enterprise
11.	Latur	Latur	Babhalgaon, Shivni, Shirsi	Soybean	• Low yield • Heavy incidence of pests	Use of IPM techniques
12.	Latur	Latur	Babhalgaon, Shivni, Shirsi	Oilseed & Pulses	• Heavy infestation of pests & improper use of insecticides & fungicides	IPM & IDM
13.	Latur	Latur	Sirsi & Shivni	Smokeless Chullha	• Unavailability of fuel & smoke from traditional chullha	Improved smokeless Chullha
14.	Latur	Latur	Babhalgaon, Shivni, Shirsi	Improved cooking devices	• Maximum fuel & time requirement	Improved cooking device
15.	Nilanga	Aurad Shajani	Aurad Shajani	Vegetables	• Heavy infestation of pests & Diseases	IPM & IDM Techniques

2.7 Priority/thrust areas

Crop/Enterprise	Thrust area
• Soybean	• Integrated nutrient management & varietal demonstration, • IPM (Leaf eating caterpillars)& IDM
• Pigeon pea	• Integrated pest management & varietal demonstration
• Safflower	• varietal demonstration
• Bengal gram	• varietal demonstration • Pod borer & wilt management
• Rabi Jowar	• Early shoot fly management
• Sugarcane	• Insecticide formulation • Early top shoot borer management
• Mango	• Integrated nutrient management • Intercultural operations • Jassids & Powdery mildew management
• Pomegranate	• Use of proper intercultural operations • Preventive measures for diseases
• Crossbred cow, Buffalo,	• Feed and fodder management • Nutritional management • Disease management • Drought management
• Iron deficiency anemia	• Efficient nutritious diet
• Improved cooking devices	• Drudgery reduction
• Smokeless Chulha	• Drudgery reduction
• Improved farm machinery	• Low level of mechanization
• Improved farm machinery	• Drudgery reduction
• Rural youth	• Capacity building • Entrepreneurship development • Information and communication support
• Horticultural crops /Commercial crops	• Commodity wise Interest Group formation

3. TECHNICAL ACHIEVEMENTS

3. A. Details of target and achievements of mandatory activities by KVK during 2010-11

OFT (Technology Assessment and Refinement)				FLD (Oilseeds, Pulses, Cotton, Other Crops/Enterprises)			
1				2			
Number of OFTs		Number of Farmers		Number of FLDs		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
15	11	120	92	11	09	110	99

Training (including sponsored, vocational and other trainings carried under Rainwater Harvesting Unit)					Extension Activities			
3					4			
Number of Courses			Number of Participants		Number of activities		Number of participants	
Clientele	Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
Farmers	64	66	1520	1372	95	85	5890	5549
Rural youth	08	10	185	217	05	02	110	60
Extn. Functionarie	09	03	265	93	-	-	-	-

Seed Production (Qtl.)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement

3.B. Abstract of interventions undertaken

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions					
				Title of OFT if any	Title of FLD if any	Title of Training if any	Title of training for extension personnel if any	Extension activities	Supply of seeds, planting materials etc.
1	Varietal	Soybean	Low yield	-	Demonstration of MAUS-71	Soybean cultivation	-	-	Seed & BF
2	Varietal	Ground nut	Low yield	-	Demonstration of TAG-26	Ground nut Cultivation practices	-	-	Seed & BF
3	Production technology	Pigeon pea	Low yield	Production of pigeon pea by transplanting method	-	transplanting method of pigeon pea	-	-	pigeon pea saplings
4	Varietal	Bengal gram	Low yield	-	Demonstration of Vishal	Bengal gram Cultivation practices	-	-	Seed & BF
5	IPM	Pomegranate	Wilting	Management of Pomegranate Stem borer, Shot hole borer by different physical and chemical practices	-	Management of Pomegranate Stem borer, Shot hole borer by different physical and chemical practices	*-	Method demonstration	Chlorpyrifos 20 EC Neem oil Caw (geru) COC
6	IPM	Brinjal	Heavy use of pesticide	Management of brinjal fruit and shoot borer by integrated pest management techniques	-	Management of brinjal fruit and shoot borer by integrated pest management techniques	-	Method demonstration	Azadirachtin 1500 ppm 20 traps per Acre
7	IPM	Soybean	Heavy loss due to pest		IPM in Soybean	IPM in Soybean	-	-	Pheromone traps Neemmark 1500 ppm Nomuria rillyae

8	IPM	Bengal gram	Heavy due to pest/diseases	-	IPM and IDM in Bengal gram	IPM and IDM in Bengal gram	-	Method demonstration	1.Tricho derma viridae Pherom one trap + HeliLure
9	IPM	Mango			Management of Jassids & Powdery mildew in mango	Management of Jassids & Powdery mildew in mango	-	Method demonstration	1.Imidacloprid 2.Hexaconazole
10	Improved farm implements	CRIDA bullock drawn multi-crop planter-cum-ferti drill	Low output, uneven seed distribution	Refinement of CRIDA bullock drawn	-	Improved sowing/planting equipments	-	-	Planter
11	Improved farm implements	Sugarcane Bud Chipper	Low output	Assessment of Sugarcane Bud Chipper	-	SSI, Sugarcane Cultivation method	-	-	Bud chipper
12	Improved farm implements	Single row planters	Low output, high labour requirement	Assessment of Single row planters	-	Improved sowing/planting equipments	-	-	Planter
13	Feed management	Dairy	Low milk yield	Feeding of Azolla to CB cow	-	Importance of Azolla & its production technology	-	-	Azolla unit
	Disease management	Dairy	Mastitis	Assessment of method of application of disinfection of teats and udder of cow to reduce incidence of mastitis	-	Importance of use of disinfectant after milking to reduce incidence of mastitis in CB cow	-	-	Dip cup ,Spay pump,Disinfection solution
10	Fodder production	Fodder crop/ Phule Jaywant(RBN-13)	Low fodder availability	-	Introduction of new high yielding hybrid napier variety	Cultivation phule jay want fodder crop for green fodder throughout the year	Cultivation of green fodder	-	Stem cuttings
11	Nutrient management	Dairy	Repeat breeding Low milk yield	-	Mineral Mixture feeding to CB cow	Feeding of mineral mixture to dairy cows	-	-	Mineral mixture

12	Fodder product ion	Lucerne (RL-88)	No leguminous fodder production	-	Introduction of Lucerne (RL-88)	-	-	-	Seed
13	Value Addition	Soya Poha Laddu	Insufficient growth in preschool children	Use of soya poha laddu to prevent malnutrition among preschool children	-	Causes of malnutrition & its remedial diet	-	-	Soya poha laddu
14	Drudgery reducing technology	Long Handle Khurpee	Occupational wealth hazards	-	Demonstration of long handle khurpee	Use of Long Handle khurpee	-	-	Long handle khurpee
15	Drudgery reducing technology	Smokeless chullha	Health problems due to traditional chullha	-	Introduction of smokeless chullha	Use of smokeless chullha	-	-	Smokeless chullha
16	Integrated Nutrient management	Mango	Irregular bearing	Assessment of use of cultar for regular bearing in mango	Nutrient management in mango	Use of cultar in mango	-	-	Cultar

3.1 Achievements on technologies assessed and refined

A.1 Abstract of the number of technologies assessed* in respect of crops/enterprises
(Kharif 2010, Rabi & Summer 2010-11)

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Varietal Evaluation										
Seed / Plant production										
Weed Management										
Integrated Crop Management			02							02
Integrated Nutrient Management		02				02				04
Integrated Farming System										
Mushroom cultivation										
Drudgery reduction										
Farm machineries		01		01						02
Value addition		01								01
Integrated Pest Management				01	01					02
Integrated Disease Management										
Resource conservation technology										
Small Scale income generating enterprises										
TOTAL		04	02	02	01	02				11

A.2. Abstract of the number of technologies **refined*** in respect of crops/enterprises
(*Kharif 2010, Rabi & Summer 2010-11*)

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Varietal Evaluation										
Seed / Plant production										
Weed Management										
Integrated Crop Management										
Integrated Nutrient Management										
Integrated Farming System										
Mushroom cultivation										
Drudgery reduction										
Farm machineries		01								01
Post Harvest Technology										
Integrated Pest Management										
Integrated Disease Management										
Resource conservation technology										
Small Scale income generating enterprises										
TOTAL		01								01

A.3. Abstract of the number of technologies assessed in respect of livestock / enterprises

Thematic areas	Cattle	Poultry	Sheep	Goat	Piggery	Rabbitary	Fisheries	TOTAL
Evaluation of Breeds								
Nutrition Management								
Disease of Management	01							01
Value Addition								
Production and Management								
Feed and Fodder	01							01
Small Scale income generating enterprises								
TOTAL	02							02

A.4. Abstract on the number of technologies refined in respect of livestock /enterprises:

Thematic areas	Cattle	Poultry	Sheep	Goat	Piggery	Rabbitry	Fisherie s	TOTA L
Evaluation of Breeds								
Nutrition Management								
Disease of Management								
Value Addition								
Production and Management								
Feed and Fodder								
Small Scale income generating enterprises								
TOTAL								

OFT's conducted during 2010-11	
	
Transplanting method in Pigeonpea	Application of sulfur in soybean
	
Management of brinjal fruit and shoot borer by IPM techniques	Management of Pomegranate Stem borer, Shot hole borer
	
OFT on Azolla feeding to CB cow	Application of disinfectant on teats by spray method



OFT use of Soya poha laddu for prevention of mal nutrition in preschool children



Assessment of single row planter



Assessment of sugarcane bud chipper



Assessment on application of cultar in mango



Assessment of refined CRIDA planter

B. Details of each On Farm Trial to be furnished in the following format

Discipline: Agronomy

Trial 1:

- 1 Title : Application of Sulphur in Soybean
- 2 Problem : Low yield
diagnose/defined
- 3 Details of technologies selected for assessment : T1 - Farmers practice : DAP at 125 kg/ha
/refinement T2 – Application of DAP at 125 kg/ha + Sulphur at 30 kg /ha
- 4 Source of technology : MAU,Parbhani
- 5 Production system thematic area : NA
- 6 Thematic area : Integrated nutrient management
- 7 Performance of the Technology with performance indicators : Results showed that the recommended practice increases the yield by 14.3 % as compared to traditional practice.
- 8 Final recommendation for micro level situation : ---
- 9 Constraints identified and feedback for research : ----.
- 10 Process of farmers participation and their reaction : Group discussion, training & demonstration

Results of On Farm Trials:

Crop/Enterprise	Problem diagnosed	Title of OFT	No. of trials	Technology assessment	Parameters of assessment	Data on the parameter	Result of assessment	Feedback assessment
Integrated nutrient management	Low yield	Application of Sulphur in Soybean	10	Farmers practice: Farmers practice : DAP at 125 kg/ha	Yield, q/ha	22.5	Results showed that the recommended practice increases the yield by 14.3 % as compared to traditional practice	-
				Technology assessed: Application of DAP at 125 kg/ha + Sulphur at 30 kg /ha	Yield, q/ha	26.25		

Technology Assessed	*Production per unit q/ha.	Net Return (Profit) in Rs. / unit	CB Ratio
11	12	13	14
1. Farmers Practice: DAP at 125 kg/ha	22.5	31400	1:3.45

2. Application of DAP at 125 kg/ha + Sulphur at 30 kg /ha	26.25	38600	1:3.91
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Trial 2:

- 1 Title : Cultivation of pigeon pea by transplanting method
- 2 Problem : Low yield
diagnose/defined
- 3 Details of technologies : T1 - Farmers practice : sole crop or intercrop by drill method
selected for assessment T2 – Transplanting of pigeon pea (Spacing 5 x 3)
/refinement
- 4 Source of technology : Dharwad university
- 5 Production system : Crop production
thematic area
- 6 Thematic area : Crop production
- 7 Performance of the : Results showed that the recommended practice increases the yield by
Technology with 37.5 % as compared to traditional practice.
performance indicators
- 8 Final recommendation : ---
for micro level situation
- 9 Constraints identified : ----.
and feedback for
research
- 10 Process of farmers : Group discussion, training & demonstration
participation and
their reaction

Results of On Farm Trials:

Crop/Enterprise	Problem diagnosed	Title of OFT	No. of trials	Technology assessment	Parameters of assessment	Data on the parameter	Result of assessment	Feedback assessment
Crop production	Low yield	Cultivation of pigeon pea by transplanting method	05	Farmres practice: sole crop or intercrop by drill metod	Yield, q/ha	12.5	Results showed that the recommended practice increases the yield by 37.5 % as compared to traditional practice	-
				Technology assessed: Transplanting of pigeon pea (Spacing 5 x 3)	Yield, q/ha	20.0		

Technology Assessed	*Production per unit q/ha.	Net Return (Profit) in Rs. / unit	CB Ratio
11	12	13	14
1. Farmers Practice: sole crop or intercrop by drill metod	12.5	29000	1:2.38

2. Transplanting of pigeon pea (Spacing 5 x 3)	20.0	49750	1:2.64
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Discipline: Horticulture**Trial: 1**

- 1) Title : Assessment of use of cultar for regular bearing in mango
- 2) Problem diagnose/defined : Irregular bearing in mango
- 3) Details of technologies selected for assessment
/refinement :
 - i Farmers practice-10:26:26 @ 500 gm/tree
 - ii Technology Assessment- 50 Kg compost+3Kg urea +3Kg ssp+2 Kg SOP + Cultar 20 ml/plant
- 4) Source of technology : BSKKV, Dapoli
Production system
- 5) Production system
thematic area : -
- 6) Thematic area : Management of orchards
Performance of the
- 7) Technology with
Performance indicators : Results showed that trees in which cultar was Applied gives 43% more yield and 16 days early Flowering as compaired to other trees.
- 8) Final recommendation for
micro level situation : Assessment is being continued for next year observations.
- 9) Constraints identified and
feedback for research : -
- 10) Process of farmers
Participation and
their reaction : Group discussion, training, demonstration.
the farmers were satisfied with the results of cultar.

Results of On Farm Trials:

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Mango	Rainfed	Irregular bearing in mango Low yield	Assessment of use of cultar for regular bearing in mango	05	1. Farmers Practice- 10:26:26 @ 500 gm/tree	Yield kg/ha	4500	Results showed that by using cultar increasing yield is 43% and early flowering.	yield increased
					2 Technology Assessment- 50 Kg compost+3Kg urea +3Kg ssp+2 Kg SOP + Cultar 20 ml/plant	Yield kg/ha	7950		

Technology Assessed	*Production per unit q/ha.	Net Return (Profit) in Rs. / unit	CB Ratio
11	12	13	14
1. Farmers Practice: 10:26:26 @ 500 gm/plant	4500 kg/ha	73,000/-	1:5.21

2. use of cultar: 50 kg compost + 3 kg urea + 3 kg SSP + 2 kg SOP + Cultar 20 ml/plant	7950 kg/ha	1,69,750/-	1:6.8
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Discipline : Plant protection
Trial : 1

- 1 Title : **Management of brinjal fruit and shoot borer by integrated pest management techniques**
- 2 Problem diagnose/defined :
 - 1.The main problem to reduce damage caused by the caterpillar stage of the brinjal shoot and fruit borer
 - 2.Many farmers try to deal with the problem by applying toxic insecticides to kill the caterpillars
 - 3.This solution is not very effective, partly because the borer has developed resistance to a range of insecticides.
 - 4.The practice is also harmful for farmers who apply the insecticides and for consumers who eat the contaminated vegetables
- 3 Details of technologies selected for assessment /refinement :

T1 : Farmers practice : Practice Spraying of insecticides like Cypermethrin @2.5 ml/lit

T 2 : Technology Assessed :

 1. Mechanical removal of affected shoots & fruits,
 2. Spraying of Azadaractin 1500 ppm @1500 ml/ha
 3. Installation of 20 traps per Acre Starting from flower bud initiation (45 days old crop) for mass trapping of fruit and shoot borer adults
- 4 Source of technology : MPKV, Rahuri
- 5 Production system thematic area : Irrigated, IPM
- 6 Thematic area : Integrated Pest Management
- 7 Performance of the Technology with performance indicators :
 1. % shoot damage
 2. % fruit damage
 3. % protection over farmer's practice
 4. C:B Ratio
- 8 Final recommendation for micro level situation : The integrated pest management techniques for management of shoot and fruit borer shows significant results it can be adopted fr pest management in bringal
- 9 Constraints identified and feedback for research : The availability of water traps at critical stage is very inconvenient.
- 10 Process of farmers participation and their reaction : Farmers are participated through Group discussion, training, demonstration

Results of On Farm Trials:

Crop/Enterprise	Farming situation	Problem diagnosed	Title of OFT	No. of trials	Technology assessment	Parameters of assessment	Data on the parameter
1	2	3	4	5	6	7	8
Brinjal	Irrigated	1. The main problem to reduce damage caused by the caterpillar stage of the brinjal shoot and fruit borer. 2. Many farmers try to deal with the problem by applying toxic insecticides to kill the caterpillars of 3. This solution is not very effective, partly because the borer has developed resistance to a range of insecticides 4. The practice is also harmful for farmers who apply the insecticides and for consumers who eat the contaminated vegetables	Management of brinjal fruit and shoot borer by integrated pest management techniques	10	Farmers practice:	1. % shoot damage	4.12%
						2. % fruit damage	24.24%
						3. Yield	16.46 Tons/ha.
					Technology assessed:	1. % shoot damage	4.08%
						2. % fruit damage	76.59%
						3. Yield	18.24 Ton/ha.

Result of assessment	Feedback from the farmers	Production per unit	Net returns(profit) in Rs/unit	CB ratio
9	10	11	12	13
Farmers practice:		16.46 Tons/ha.	60800	1:3.83
Technology assessed:		18.24 Tons/ha.	68100	1:3.95

Trial : 2

1	Title	: Management of Pomegranate Stem borer, Shot hole borer by different physical and chemical practices
2	Problem diagnose/defined	: 1. Farmers are not using specific practices for management of Pomegranate Stem borer, shot hole borer 2. Farmers are Examine branch for holes/excreta. If detected, inject with Kerosene/ Petrol in holes and seal the hole with mud 3. Up to 10-15 percent Yield Losses Cause by these pests
3	Details of technologies selected for assessment /refinement	: T1 : Farmers practice : Application of Bordo paste T 2 : 1. Soil drenching with chlorpyrifos 20EC 5 ml/litre or lindane 20 EC 5 ml/litre near the collar region of the stem. 2. Examine branch for holes/excreta/ gummosis. If detected, inject with dichlorvos @ 10 ml/lit. in holes and seal the hole with mud 3. Paste application of Chlorpyrifos 20 EC @ 5 ml + Neem oil 1 ml + Caw (geru) @ 400 g + COC 2.5 g in one litre of water. application in a year, preferably in June-July.
	Source of technology	: MPKV, Rahuri
5	Production system thematic area	: Irrigated
6	Thematic area	: Integrated Pest Management
7	Performance of the Technology with performance indicators	: Paste application of Chlorpyrifos 20 EC @ 5 ml + Neem oil 1 ml + Caw (geru) @ 400 g + COC 2.5 g in one litre of water gives good performance to Stem borer, Shot hole borer
8	Final recommendation for micro level situation	: For better management the practices to be assessed should taken at proper time
9	Constraints identified and feedback for research	: The farmers are confused that as per recommendations if paste application is done at June - July, due to rain it can be effective throughout season. So, there is need to apply this paste at two times in season.
10	Process of farmers participation and their reaction	: Farmers are participated through Group discussion, training, demonstration

Results of On Farm Trials:

Crop/ Enterprise	Farming situation	Problem diagnosed	Title of OFT	No. of trials	Technology assessment	Parameters of assessment	Data on the parameter
1	2	3	4	5	6	7	8
Pomegranate	Irrigated	1. Farmers are not using specific practices for management of Pomegranate Stem borer, shot hole borer 2. Farmers are Examine branch for holes/excreta. If detected, inject with Kerosene/ Petrol in holes and seal the hole with mud 3. Up to 10-15 percent Yield Losses Cause by these pests	Management of Pomegranate Stem borer, Shot hole borer by different physical and chemical practices	10	Farmers practice:	1. No. plants infected by stem borer	02
						2. No. of plants infected by shoot hole borer	01
						3. No. of plants wilted	02
						4. Yield ton/ha	7 tons/ha
					Technology assessed:	1. No. plants infected by stem borer	01
						2. No. of plants infected by shoot hole borer	-
						3. No. of plants wilted	-
						4. Yield ton/ha	8 tons/ha

Result of assessment	Feedback from the farmers	Production per unit	Net returns(profit) in Rs/unit	CB ratio
9	10	11	12	13
Farmers practice:	Our old practice of preparation paste is not managing problem of gummosis, stem borer, shoot hole borer as new practice.	315000	196000	1:2.6
Technology assessed:	By application paste to trunk reduces problem of gummosis, stem borer, shoot hole borer	360000	236000	1:2.9

Discipline: Veterinary Science
Trial:1

1	Title	: Assessment of Azolla feeding to increase milk production in Crossbred cow
2	Problem diagnose/defined	: 1. Low milk yield 2. Underfeeding or imbalanced feeding due to high cost of concentrates
3	Details of technologies selected for assessment /refinement	: T1 – Farmers practice – Roughages + 3-4 Kg Concentrate T2 – Technology Assessed- T1 + 2 kg Azolla / Cow / Day
4	Source of technology	: Vivekananda Kendra- Natural Resources Development Project (VK-NARDEP), Kanniyakumari district, Tamilnadu (P.K. Pillai, S. Premalatha and S. rajamony Leisa India, March 2002, p 15-17.)
5	Production system thematic area	: Irrigated, feed management
6	Thematic area	: Feed management
7	Performance of the Technology with performance indicators	: By feeding azolla along with the regular feeding of the farmer Milk yield is increased 10% , Fat content increased by 4.5 And gross income is increased by 12 % along with that there is improvement in the health of the animal
8	Final recommendation for micro level situation	: We want to assess this technology in the next year that's why final recommendation is not given
9	Constraints identified and feedback for research	: Cold season: Growth of the Azolla was very much retarded(Below 10 degree C) and colour changes green to red, or brick colour Summer: in the hot weather also the growth of the azolla is slow and colour changes to red or brown Nutrient deficiency: If fertilizers and minerals were not given timely the colour of the azolla changes to yellow at the border of the azolla plant
10	Process of farmers participation and their reaction	: Farmers are participated through Group discussion, training, demonstration

Results of On Farm Trials:

Crop/Enterprise	Farming situation	Problem diagnosed	Title of OFT	No. of trials	Technology assessment	Parameters of assessment	Data on the parameter
1	2	3	4	5	6	7	8
CB Cow	Irrigated	Low milk yield, Imbalanced feeding Underfeeding due to high rate of concentrates	Assessment of Azolla feeding to increase milk production in Crossbred cow	05	Farmers practice: Roughages + 3-4 Kg Concentrate	Milk production lit/day/cow	7.45
						Fat %	3.8
						SNF	8.57
						Cost on concentrate feeding Rs/day/cow	44.71
						Gross income Rs/cow/day	124.41
						Cost of azolla production	Nil
						Cost on azolla feeding Rs/cow	Nil
					Technology assessed: T1 + 2 kg Azolla / Cow / Day	Milk production lit/day/cow	8.20
						Fat %	3.97
						SNF	8.7
						Cost on concentrate Rs/day/cow	46.17
						Gross income Rs/cow/day	139.4
						Cost of azolla production Rs/kg	0.73
						Cost on azolla feeding Rs/cow	1.46

Discipline: Vet.Science

Result of assessment	Feedback from the farmers	Production per unit	Net returns(profit) in Rs/unit	CB ratio
9	10	11	12	13
Farmers practice: 1. Milk production per cow per day is 7.45 lit. 2.gross income per cow per day is Rs 124.41	-	1639 lit/lact/cow	6587	1:1.31
Technology assessed: 1. Milk production per cow per day is 8.20 lit. 2.gross income per cow per day is Rs 139.40 3.Milk yield is increased 10% and Fat content increased by 4.5% 4. gross income is increased by 12 %	By feeding azolla milk production is increased and there is improvement in the health of the animals In the cold days azolla production is lowered and there is change in the natural colour of the azolla	1804 lit/lact/cow	9726	1:1.46

Discipline: Vet. Science
Trial :2

- 1 Title : Assessment of method of application of disinfectant on teats to reduce incidence of mastitis in CB cow
- 2 Problem : 1) High incidence of of clinical mastitis in CB cow
diagnose/defined 2) high cost for treatment of mastitis
- 3 Details of technologies : i. No dipping of teats in disinfection solution after milking
selected for assessment (Farmers Practice)
/refinement II Dipping of teats in dip cup containing disinfection solution after milking
II Spraying disinfection solution on teats and udder by hand spray after milking
(Medicine used in T1 & T2 is Same (Depal) only method of application is different. It contains 0.71 % w/v iodine, glycerine and sorbitol)
- 4 Source of technology : NDRI, Karnal
- 5 Production system : Irrigated livestock based production system, Disease management
thematic area
- 6 Thematic area : Disease management
- 7 Performance of the : Incidence of mastitis is reduced by 82 %
Technology with Incidence of subclinical mastitis is reduced by 60 %
performance indicators Incidence of septic pustules, wounds, cracks on teat is reduced by 67 %
Cost on prevention of mastitis is reduced by 53 %
Losses due to mastitis is reduced by 82 %
- 8 Final recommendation : By Spraying disinfection solution on teats and udder by hand spray
for micro level situation after milking is effective against dip cup method and reduces incidence of clinical and subclinical mastitis. Also reduces cracks, wound, and pustules on the teat.
- 9 Constraints identified : -
and feedback for research
- 10 Process of farmers : Farmers are participated through Group discussion, training,
participation and demonstration
their reaction

Results of On Farm Trials:

Crop/Enterprise	Farming situation	Problem diagnosed	Title of OFT	No. of trials	Technology assessment	Parameters of assessment	Data on the parameter
1	2	3	4	5	6	7	8
Dairy/CB cow	Irrigated	High Incidence of clinical, sub clinical mastitis, High cost on treatment of mastitis	Assessment of method of application of disinfectant on teats to reduce incidence of mastitis in CB cow	15	Farmers practice: No dipping of teats in disinfection solution after milking	1) Incidence of clinical mastitis 2) Incidence of sub clinical mastitis 3) Incidence of cracks, wounds and septic pustules on teats 4) Cost on prevention of incidence of mastitis 5) Losses due to mastitis	1. 40% 2. 33% 3. 40 % 4. Nil 5. 1100 Rs/cow/lact
					Technology assessed: T1: Dipping of teats in dip cup containing disinfection solution after milking		1. 20% 2. 13% 3. 20 % 4. 162 Rs/cow/lact 5. 550 Rs/cow/lact
					Technology assessed: T2: Spraying disinfection solution on teats and udder by hand spray after milking		1. 7 % 2. 13% 3. 13 % 4. 76 Rs/cow/lact 5. 192 Rs/cow/lact

Result of assessment	Feedback from the farmers	Production per unit	Net returns(profit) in Rs/unit	CB ratio
9	10	11	12	13
Farmres practice: Incidence of mastitis is 40 % Incidence of subclinical mastitis is 33 % Incidence of septic pustules, wounds, cracks on teat is 40 % Losses due to mastitis is 1100 Rs/cow/lact	High incidence of mastitis, septic pustules, cracks on teat and high cost on treatment of mastitis	2320 lit/lact/cow	6032 Rs/lact/cow	1:1.27
Technology assessed:T1 Incidence of mastitis is reduced by 50 % Incidence of subclinical mastitis is reduced by 60 % Incidence of septic pustules, wounds, cracks on teat is reduced by 50 % Losses due to mastitis is reduced by 50 %	Incidence of mastitis is reduced Pustules and wound on teats are reduced Soiling of solution in dip cup after successive use More solution is required	2608 Lit/lact/cow	8345 Rs/lact/cow	1:1.36
Technology assessed:T2 Incidence of mastitis is reduced by 82 % Incidence of subclinical mastitis is reduced by 60 % Incidence of septic pustules, wounds, cracks on teat is reduced by 67 % Cost on prevention of mastitis is reduced by 53 % Losses due to mastitis is reduced by 82 %	Incidence of mastitis is reduced Pustules and wound on teats are reduced Spaying of solution on teat is easy Less solution require than dip cup and no soiling of solution after successive use as in the dip cup	2660 lit/lact/cow	8698 Rs/lact/cow	1:1.37

Discipline: Home Science
Trial: 1

- 1 Title : Use of soya poha laddu to prevent malnutrition among preschool children.
- 2 Problem : Insufficient growth in preschool children
diagnose/defined
- 3 Details of technologies : T1 : Farmers practice : Daily diet
selected for assessment
/refinement
T 2 : Technology Assessed :
1. Soya poha laddu
- 4 Source of technology : MAU,Parbhani
- 5 Production system : NA
thematic area
- 6 Thematic area : Designing and development for high nutrient efficiency diet
- 7 Performance of the : Results showed that the recommended practice increases the weight
Technology with by 12.78% and reduces 60% clinical sign and symptoms as compared
performance indicators to traditional practice.
- 8 Final recommendation : ---
for micro level situation
- 9 Constraints identified : ----.
and feedback for
research
- 10 Process of farmers : Identification of malnourished children with the help of Aaganwadi
participation and worker.
their reaction Group discussion, trainin on symptoms and causes of malnutrition
Demonstration on preparation of supplementary food for malnourished
child

Results of On Farm Trials:

Crop/Enterprise	Problem diagnosed	Title of OFT	No. of trials	Technology assessment	Parameters of assessment		Data on the parameter	Result of assessment	Feed back assessment
Preschool children	Insufficient growth in preschool children.	Use of soya poha laddu to prevent malnutrition among preschool children	10	Farmers practice: Daily diet	Change in weight	Initial stage	11.2	For prevention and control of malnutrition supply of supplementary food is essential	For better health of preschool children supplementary food is effective
						After 1 month	11.24		
						After 2 month	11.29		
						After 3 month	11.4		
					% Change in weight	Initial stage	-		
						After 1 month	0.35		
						After 2 month	0.40		
						After 3 month	0.96		
					Percentage reduction in clinical signs & symptoms	-	20		
				Technology assessed: Soya Poha Laddu	Change in weight	Initial stage	11.53		
						After 1 month	11.85		
						After 2 month	12.30		
						After 3 month	12.64		
					% Change in weight	Initial stage	-		
						After 1 month	10.40		
						After 2 month	12.21		
						After 3 month	12.78		
					Percentage reduction in clinical signs & symptoms	-	60		

Discipline: Agricultural Engineering**Trial 1:**

- | | | | |
|----|---|---|---|
| 1 | Title | : | Assessment of Single Row Planter/Seed Drill for small/marginal farmers/demonstration plots |
| 2 | Problem diagnose/defined | : | <ul style="list-style-type: none">• Unavailability of labour during critical sowing period• Low output• Uneven seed distribution/ spacing |
| 3 | Details of technologies selected for assessment /refinement | : | T1 –traditional method – sowing by hand
T2 –Manually operated planters/seed drills |
| 4 | Source of technology | : | 1. CIAE, Bhopal
2. M/s Mausam Agro Equipments Industries |
| 5 | Production system thematic area | : | Improved farm Implements |
| 6 | Thematic area | : | Improved farm Implements |
| 7 | Performance of the Technology with performance indicators | : | <ul style="list-style-type: none">1. Field capacity, plots/h2. Operating speed, kmph3. Labour requirement, man-h/plot4. Cost of operation, Rs/plot |
| 8 | Final recommendation for micro level situation | : | Line sowing with single row planter promotes the use of mechanical weeder and reduce the cost and drudgery as compared to traditional method |
| 9 | Constraints identified and feedback for research | : | Requires two persons to operate the planter. Needs refinement to operate it by a person |
| 10 | Process of farmers | : | Group discussion, training, demonstration participation and their reaction |

Results of On Farm Trials:

Crop/Enterprise	Farming situation	Problem diagnosed	Title of OFT	No. of trials	Technology assessment	Parameters of assessment	Data on the parameter
1	2	3	4	5	6	7	8
Farm machinery	Rainfed	- Unavailability of labour during critical sowing period - Low output - Uneven seed distribution/ spacing	Assessment of Single Row Planter/Seed Drill for small/marginal farmers/demostration plots	05	Farmres practice:	Field capacity, plots/h (10x10 m)	0.4
						Operating speed, kmph	-
						Labour requirement, man-h/plot	2.5
						Cost of operation, Rs/plot	31.25
					Technology assessed:	Field capacity, plots/h	3.0
						Operating speed, kmph	2
						Labour requirement, man-h/plot	0.67
						Cost of operation, Rs/plot	25

Result of assessment	Feedback from the farmers	Production per unit	Net returns(profit) in Rs/unit	CB ratio
9	10	11	12	13
Farmres practice:	Labourious operation, bending posture adopted for working cause drudgery	0.4 plots/h (10x10 m)	-	-
Technology assessed:	By the use of single row drill, bending posture, adopted in traditional method is avoided	3.0 plots/h (10x10 m)	-	-

Trial 2:

1	Title	: Assessment Sugarcane Bud Chippers for raising nursery using single budded chips under SSI method of sugarcane cultivation
2	Problem diagnose/defined	: • Bud chipping is a labourious operation • Low output ie 100-150 bud/h
3	Details of technologies selected for assessment /refinement	: T1 –traditional method – Bud chipping by using local chippers T2 –Improved Bud Chipper
4	Source of technology	: ICRISAT, Hyderabad
5	Production system thematic area	: Improved farm Implements / Drudgery reducing technology
6	Thematic area	: Improved farm Implements / Drudgery reducing technology
7	Performance of the Technology with performance indicators	: Capacity, buds/h Damaged/ split buds, %
8	Final recommendation for micro level situation	: The existing bud chippers needs refinement to make it user friendly and sturdy. There is needed to make the bud chippers locally available.
9	Constraints identified and feedback for research	: The capacity of the handle operated bud chipper needs to be increased by making simple changes. Also there is demand from the farmers/nursery owners for a automized/motor operated bud chipper to start the sugarcane sapling nursery to increase output/day and reduce labour demand.
10	Process of farmers participation and their reaction	: Group discussion, training, demonstration

Results of On Farm Trials:

Crop/Enterprise	Farming situation	Problem diagnosed	Title of OFT	No. of trials	Technology assessment	Parameters of assessment	Data on the parameter
1	2	3	4	5	6	7	8
Improved farm Implements / Drudgery reducing technology	Irrigated	- Bud chipping is a labourious operation - Low output ie 100-150 bud/h	Assessment Sugarcane Bud Chippers for raising nursery using single budded chips under SSI method of sugarcane cultivation	05	Farmers practice:	Capacity, buds/h	138
						Damaged/ split buds, %	7
					Technology assessed:	Capacity, buds/h	223
						Damaged/ split buds, %	3

Result of assessment	Feedback from the farmers	Production per unit	Net returns(profit) in Rs/unit	CB ratio
9	10	11	12	13
Farmers practice:	Labourious operation, requires two labour to operate the machine	138 buds/h	-	-
Technology assessed:	By the use of improved bud chipper, labour requirement is reduced. But needs more output, as well as sturdy construction to use the machine for long period.	223 buds/h	-	-

B. Technology Refinement

Trial: 1

- | | | | |
|----|---|---|--|
| 1 | Title | : | Refinement of CRIDA bullock drawn planter |
| 2 | Problem diagnose/defined | : | <ul style="list-style-type: none">• Clogging of seed tubes especially during kharif• Sticking of soil on ground wheel causes uneven depth of placement• Soil build up between furrow opener and ground wheel |
| 3 | Details of technologies selected for assessment /refinement | : | T1 – CRIDA planter
T2 – Refined CRIDA planter |
| 4 | Source of technology | : | CRIDA, Hyderabad |
| 5 | Production system thematic area | : | Rainfed crop production system |
| 6 | Thematic area | : | Improved farm Implements |
| 7 | Performance of the Technology with performance indicators | : | Field capacity, ha/day,
Labour requirement man-h/ha,
Plant spacing uniformity,
Field efficiency, % |
| 8 | Final recommendation for micro level situation | : | The refined CRIDA planter enables the sowing of various crops cultivated in the district. Hence suitable for sowing in the Latur district with the incorporated refinements. |
| 9 | Constraints identified and feedback for research | : | The refined CRIDA planter performed well in all seasons. |
| 10 | Process of farmers participation and their reaction | : | Group discussion, training, demonstration and personal interview. |

Results of OFT :

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology refined	Parameters	Data on the parameter	Results of refinement	Feedback from the farmer	Justifi- cation for refinement
1	2	3	4	5	6	7	8	9	10	11
Soybean, Soybean + pigeon pea	Rainfed	1. Clogging of seed & fertilizer tubes especially during kharif 2. Sticking of wet soil on ground wheel causes uneven depth of placement 3. Soil build up between furrow opener and ground wheel 4. Requires seed covering operation by blade harrow	Refinement of CRIDA bullock drawn planter	12	1. Tifan (Traditional seed-cum- ferti drill) (Farmers Practice)	Field capacity, ha/h	1.45	Refined CRIDA bullock drawn planter gaves more output as compared to CRIDA planter and traditional practice. Increases the efficiency of worker- machine system.	CRIDA planter saves seed & labour with more output Suitable for precise sowing of most of the crops	The efficiency of the sowing operation increased due to refinement Time losses due to cleaning of delivery tube & ground wheel reduced considerably alongwith increased precision in fertilizer drilling.
						field efficiency, %	61.3			
						labour requirement, man-h/ha	11.0			
						Operating cost, Rs/ha	412			
					2. CRIDA 03 row bullock drawn multi-crop planter	Field capacity, ha/h	1.85			
						field efficiency, %	70.0			
						labour requirement, man-h/ha	4.3			
						Operating cost, Rs/ha	242			
					3. Refined CRIDA 3 row bullock drawn multi-crop planter	Field capacity, ha/h	2.1			
						field efficiency, %	74.0			
						labour requirement, man-h/ha	3.8			
						Operating cost, Rs/ha	214			

Results of refinement	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
12	13	14	15
-	-	-	-
CRIDA planter over traditional method Increased field capacity by 21.6 % Increased field efficiency by 12.4 % Saves labour by 61 % Saves cost of operation by 41.2 %	-	-	-
Refined CRIDA planter over traditional method Increased field capacity by 21.6 to 31% Increased field efficiency by 12.4 to 17% Saves labour by 61 to 65.5 % Saves cost of operation by 41.2 to 48 %	-	-	-

FLD's conducted during 2010-11



Feeding of mineral mixture- FLD



FLD on Lucerne (RL-88)



FLD on Phule Jaywant (RBN-13)



FLD on soybean



IPM and IDM in Bengal gram



Management of Jassids & Powdery mildew in mango

3.2 Achievements of Frontline Demonstrations (Kharif 2010, Rabi & Summer 2010-11)

a. Follow-up for results of FLDs implemented during previous years

List of technologies demonstrated during previous year and popularized during 2009-10 and recommended for large scale adoption in the district

S. No	Crop/Enterprise	Thematic Area*	Technology demonstrated	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
					No. of villages	No. of farmers	Area in ha
1	Soybean	Integrated crop management	MAUS-71, Biofertilizer	Group discussion, Field Day	03	12	05
2	Bengal gram	Integrated crop management	Vishal, Biofertilizer	Group discussion, Field Day	03	24	10
3	Groundnut	Integrated crop management	TG-26, Biofertilizer	Group discussion, Field Day	02	07	02
4	Mango	Production technology	Use of NAA to avoid fruit drop in Mango	Group discussion	03	12	10
5	Soybean	Integrated Pest Management	IPM	Group discussion	04	21	8.4
6	Bengal gram	Integrated Pest Management	IPM	Group discussion	04	24	9.6
7	Rabi Jowar	Integrated Pest Management	Seed treatment	Group discussion	03	45	18
8	Mango	Pest Management	Spraying of Imidacloprid & Hexaconazole for control of jassids and powdery mildew	Training, Group discussion, News paper Coverage	06	13	5.2

b. **Details of FLDs implemented during 2010-11 (Information is to be furnished in the following three tables for each category i.e. cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops.)**

Sl. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Soybean	Varietal Evaluation	Varietal Demonstration on MAUS-71	Kharif	05	05	-	12	12	-
2	Bengal Gram	Varietal Evaluation	Varietal Demonstration on Vishal	Rabi	10	10	-	24	24	-
3	Ground Nut	Varietal Evaluation	Varietal Demonstration on Variety TG-37	Summer	02	02	-	07	07	-
4	Soybean	IPM	IPM in Soybean	Kharif	05	05	01	11	12	Late

	an									availability of Pheromone traps
5	Bengal Gram	Diseases of Management	IPM and IDM in Bengal gram	Rabi	05	05	-	12	12	-
6	Mango	IPM and IDM	Management of Jassids & Powdery mildew in mango	Rabi	04	04	-	10	10	-
7	Fodder crop	Fodder production	Varietal demonstration of Phule Jaywant (RBN-13)	Kharif 2010-11	1	1	2	8	10	-
8	Fodder crop	Fodder production	Varietal demonstration of Lucerne (RL-88)	Rabi 2010-11	1	0.8	2	5	7	Unavailability of seed
9.	Mango	Production Technology	Use of NAA for fruit drop	Kharif 2010	02	02	-	05	05	-

Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P	K					
Soybean	Kharif 2010	RF, IR	Medium black	Medium	Low	High	B. gram	II-III week June	1 st wk Oct.	946.55	103
Bengal Gram	Rabi 2010	RF, IR	Medium black	Medium	Low	High	Soybean	III wk oct	IV wk Feb - I wk March	63.85	12
Ground Nut	Summer 2010	IR	Medium black	Medium	Low	Medium	B. Gram	II-III wk June	-	-	-
Soybean	Kharif 2010	RF,	Medium black	Medium	Low	Medium	B. Gram	II-III week June	1 st wk Oct.	946.55	103
Bengal Gram	Rabi 2010	RF, IR	Medium black	Medium	Low	High	Soybean	III wk oct	IV wk Feb - I wk March	63.85	12
Mango	Rabi 2010	IR	Medium black	Low	Low	High	-	-	-	63.85	12
Fodder crop	Kharif 2010 -11	Irrigated	Medium black	Medium	Low	High	Bengal gram	August 2010	August 2011	946.55	103
Fodder crop	Rabi 2010 -11	Irrigated	Medium black	Medium	Low	High	wheat	Nov 2010	Nov 2011	63.85	12
Mango	Rabi 2010	IR	Medium black	Low	Low	High	-	-	-	63.85	12

Performance of FLD

Sl.No.	Crop	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield Qtl/ha			Yield of local Check Qtl./ha	Increase in yield (%)	Data on parameter in relation to technology demonstrated	
						H	L	A			Demo	Local
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Soybean	Varietal Demonstration on MAUS-71	MAUS-71	12	05	30	20	25	22.5	11.11	Yield- 25 Qtls/ha	Yield- 22.5 Qtls/ha
2	Bengal Gram	Varietal Demonstration on Vishal	Vishal	24	10	20	14	17	15	15.38	Yield- 17 Qtls/ha	Yield- 15 Qtls/ha
3	Ground Nut	Varietal Demonstration on Variety TG-37	TG-37	07	02	-	-	-	-	-	-	-
4	Soybean	IPM in Soybean	JS-335	12	05	28.75	21.25	25	22.75	10.13	25 Qtls/ha	22.75 Qtls/ha
5	Bengal Gram	IPM and IDM in Bengal gram	Vijay	12	12	21.25	16.25	18.75	17.5	7.15	18.75 Qtls/ha	17.5 Qtls/ha
6	Mango	Management of Jassids & Powdery mildew in mango	Keshar	10	04	64	52	59	53	11.3	23600 fruits/ha	21200 fruits/ha
7	Hybrid Napier fodder crop	Varietal demonstration of Phule Jaywant	RBN-13	10	01	-	-	-	-	-	Demonstration is started in August 2010	Result will be obtained in

												August 2011
8	Leguminous fodder crop	Varietal demonstration of Lucerne	RL-88	07	0.80	-	-	-			Demonstration is started in Nov 2010	Result will be obtained in Nov 2011
9	Mango	Use of NAA to avoid fruit drop	Keshar	05	10	65	54	62	55	12.73	24800 fruits/ha	22000 fruits/ha

Economic Impact (continuation of previous table)

Sl.No.	Average Cost of cultivation (Rs./ha)		Average Gross Return (Rs./ha)		Average Net Return (Profit) (Rs./ha)		Benefit -Cost Ratio (Gross Return / Gross Cost)
	Demonstration	Local Check	Demonstration	Local Check	Demonstration	Local Check	
	14	15	16	17	18	19	20
1	9500	9100	50000	45000	40500	35900	5.2:1
2	17500	16250	37400	33000	19900	16750	2.2:1
3	-	-	-	-	-	-	-
4	9700	9100	50000	45500	40300	36400	5.15:1
5	18100	16250	41250	38500	23150	22250	1:2.28
6	29800	28500	118000	106000	88200	77500	5.8:1
7	-	-	-	-	-	Demonstration is started in August 2010	Result will be obtained in August 2011
8	-	-	-	-	-	Demonstration is started in Nov 2010	Result will be obtained in Nov 2011
9.	23000	22000	124000	110000	10100	88000	4.2:1

Analytical Review of component demonstrations (details of each component for rainfed / irrigated Situations to be given separately for each season).

Crop	Season	Component	Farming situation	Average yield (q/ha)	Local check (q/ha)	Percentage increase in productivity over local check
Soybean	Kharif 2010	Seed/Variety	Rain fed	25	22.5	11.11
Bengal Gram	Rabi 2010	Seed/Variety	Rain fed/Irrigated	17	15	15.38
Ground Nut	Summer 2010	Seed/Variety	Irrigated	-	-	-
Soybean	Kharif 2010	Plant Protection	Rain fed	25	22.75	10.13
Bengal Gram	Rabi 2010	Plant Protection	Rain fed/Irrigated	18.75	17.5	7.15
Mango	Kharif 2010	Plant Protection	Rain fed/Irrigated	59	53	11.3
Mango	Kharif 2010	Fertilizer management	Rain fed/Irrigated	62	55	12.73

Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	
2	

Farmers' reactions on specific technologies

S. No	Feed Back
1	
2	

Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	01	18.12.2010	40	Field day on mango
2	Farmers Training	03	July 2010	87	-
3	Media coverage	03	-	-	-
4	Training for extension functionaries	-	-	-	-

c. **Details of FLD on Enterprises**

(i) Farm Implements

Name of the implement	crop	No. of farmers	Area (ha)	Performance parameters / indicators	* Data on parameter in relation to technology demonstrated		% change in the parameter	Remarks
					Demon.	Local check		
Long handle khurpee	-	10	01	Labour requirement for weeding	08	14	42.8	Long handle khurpee saves 42.8% labour than traditional khurpee for weeding operation and reduces the health hazards
				Health hazards	Minimizes Health hazards	Hazardous to health	-	

(ii) Livestock Enterprises

Enterprise	Breed	No. of farmers	No. of animals, poultry birds etc.	Performance parameters / indicators	* Data on parameter in relation to technology demonstrated		% change in the parameter	Remarks
					Demon.	Local check		
Dairy (Mineral mixture feeding)	CB cow	10	10	Milk yield lit/day/ animal	9.56	8.97	6.17	Feeding of mineral mixture increases the milk production and fat % by 6.17 % & 1.82 % respectively and improves the health condition of the animal and reduces the incidence of repeat breeding problem by 50 %
				Fat %	3.8	3.7	1.82	
				Incidence of repeat breeding	1	2	50	

(iii) Other Enterprises

Enterprise	Variety/ breed/Species/others	No. of farmers	No. of Units	Performance parameters / indicators	Data on parameter in relation to technology demonstrated		% change in the parameter	Remarks
					Demon.	Local check		
Improved chullha	Smokeless chullha	10	10	Fuel requirement for traditional chullha gms/kg food preparation	488	949	48.5	Smokeless chullha saves 48.5 fuel and it is safe for eyes and also no need to plaster frequently
				Visual analogue discomfort scale	Light discomfort	Extreme discomfort	-	

3.3 Achievements on Training (Including the sponsored, vocational, FLD and trainings under Rainwater Harvesting Unit) :

A) ON Campus

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
(A) Farmers & Farm Women										
I Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Water management	01	12	-	12	04	-	04	16	-	16
Seed production										
Nursery management										
Integrated Crop Management	01	31	-	31	07	-	07	38	-	38
Fodder production										
Production of organic inputs	01	19	-	19	03	-	03	12	-	12
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops										
Off-season vegetables										
Nursery raising										
Exotic vegetables like Broccoli										
Export potential vegetables										
Grading and standardization										
Protective cultivation (Green Houses, Shade Net etc.)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential										

fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
d) Plantation crops										
Production and Management technology	01	51	-	51	07	-	07	58	-	58
Processing and value addition										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
f) Spices										
Production and Management technology										
Processing and value addition										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
III Soil Health and Fertility Management										
Soil fertility management										
Soil and Water Conservation										
Integrated Nutrient Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										

Soil and Water Testing	01	15	-	15	04	-	04	19	-	19
IV Livestock Production and Management										
Dairy Management	01	23	-	23	06	-	06	29	-	29
Poultry Management										
Piggery Management										
Rabbit Management										
Disease Management										
Feed management										
Production of quality animal products										
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	01	-	20	20	-	02	02	-	22	22
Income generation activities for empowerment of rural Women										
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care										
VI Agril. Engineering										
Installation and maintenance of micro irrigation systems										

Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements	03	44	-	44	06	-	06	50	-	50
Small scale processing and value addition										
Post Harvest Technology										
VII Plant Protection										
Integrated Pest Management	01	51	-	51	07	-	07	58	-	58
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
IX Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										

Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
X Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital	01	18	-	18	01	-	01	19	-	19
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
TOTAL	09	264	20	284	45	02	47	309	22	331
(B) RURAL YOUTH										
Mushroom Production										
Bee-keeping										
Integrated farming										
Seed production										
Production of organic inputs	01	14	02	16	01	01	02	15	03	18
Integrated Farming										
Planting material production										
Vermi-culture										
Sericulture										
Protected cultivation of vegetable crops	01	26	-	26	04	-	04	30	-	30

Commercial fruit production	01	15	-	15	02	-	02	17	-	17
Repair and maintenance of farm machinery and implements	01	17	-	17	01	-	01	18	-	18
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Value addition	01	-	11	11	-	-	-	-	11	11
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Para vets										
Para extension workers	02	66	-	66	15	-	15	81	-	81
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts	01	-	09	09	-	01	01	-	10	10
TOTAL	08	138	22	160	23	02	25	161	24	185
(C) Extension Personnel										
Productivity enhancement in field crops										
Integrated Pest Management	01	-	26	26	-	07	07	-	33	33
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation										

technology										
Formation and Management of SHGs										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Care and maintenance of farm machinery and implements	01	-	22	22	-	09	09	-	31	31
WTO and IPR issues										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Women and Child care										
Low cost and nutrient efficient diet designing	01	-	21	21	-	08	08	-	29	29
Production and use of organic inputs										
Gender mainstreaming through SHGs										
TOTAL	03	-	69	69	-	24	24	-	93	93

B) OFF Campus

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
(A) Farmers & Farm Women										
I Crop Production										
Weed Management	01	15	-	15	02	-	02	17	-	17
Resource Conservation Technologies										
Cropping Systems	01	15	-	15	02	-	02	17	-	17
Crop Diversification										
Integrated Farming										
Water management										
Seed production	02	37	-	37	04	-	04	41	-	41
Nursery management										
Integrated Crop Management	03	59	-	59	08	-	08	67	-	67
Fodder production										
Production of organic inputs	02	33	-	33	05	-	05	38	-	38
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops										
Off-season vegetables										
Nursery raising										
Exotic vegetables like Broccoli										
Export potential vegetables										
Grading and standardization										
Protective cultivation (Green Houses, Shade Net etc.)	01	19	-	19	04	-	04	23	-	23
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										

Plant propagation techniques										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
d) Plantation crops										
Production and Management technology	03	51	03	54	09	-	09	60	03	63
Processing and value addition										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
f) Spices										
Production and Management technology										
Processing and value addition										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
III Soil Health and Fertility Management										
Soil fertility management	01	15	03	18	03	01	04	18	04	22
Soil and Water Conservation										
Integrated Nutrient Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Soil and Water Testing										
IV Livestock										

Production and Management										
Dairy Management	01	-	16	16	-	02	02	-	18	18
Poultry Management	01	-	18	18	-	04	04	-	22	22
Piggery Management										
Rabbit Management										
Disease Management	02	28	-	28	06	-	06	34	-	34
Feed management	05	82	-	82	12	-	12	94	-	94
Production of quality animal products										
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	01	-	15	15	-	02	02	-	17	17
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet	04	-	56	56	-	20	20	-	76	76
Minimization of nutrient loss in processing										
Gender mainstreaming through SHGs										
Storage loss minimization techniques	01	-	14	14	-	08	08	-	22	22
Value addition										
Income generation activities for empowerment of rural Women	01	-	14	14	-	03	03	-	17	17
Location specific drudgery reduction technologies	03	-	41	41	-	08	08	-	49	49
Rural Crafts										
Women and child care										
VI Agril. Engineering										
Installation and maintenance of micro irrigation systems	01	13	01	14	03	-	03	16	01	17
Use of Plastics in farming practices										
Production of small										

tools and implements										
Repair and maintenance of farm machinery and implements	04	36	24	60	09	05	14	45	29	74
Small scale processing and value addition										
Post Harvest Technology	01	-	15	15	-	03	03	-	18	18
VII Plant Protection										
Integrated Pest Management	07	121	02	123	20	01	21	141	03	144
Integrated Disease Management	01	13	02	15	01	01	02	14	03	17
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
IX Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer										

production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
X Capacity Building and Group Dynamics										
Leadership development	02	37	-	37	05	-	05	42	-	42
Group dynamics	01	14	-	14	03	-	03	17	-	17
Formation and Management of SHGs	01	13	-	13	03	-	03	16	-	16
Mobilization of social capital	01	17	-	17	01	-	01	18	-	18
Entrepreneurial development of farmers/youths	01	14	-	14	02	-	02	16	-	16
WTO and IPR issues										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
TOTAL	53	632	224	856	102	58	160	734	283	1017
(B) RURAL YOUTH										
Mushroom Production										
Bee-keeping										
Integrated farming										
Seed production										
Production of organic inputs										
Integrated Farming										
Planting material production										
Vermi-culture										
Sericulture										
Protected cultivation of vegetable crops										
Commercial fruit production										
Repair and										

maintenance of farm machinery and implements										
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Value addition	01	-	12	12	-	03	03	-	15	15
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Para vets										
Para extension workers	01	16	-	16	02	-	02	18	-	18
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
TOTAL	02	16	12	28	02	03	05	18	15	33
(C) Extension Personnel										
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Formation and Management of										

SHGs										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Care and maintenance of farm machinery and implements										
WTO and IPR issues										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Women and Child care										
Low cost and nutrient efficient diet designing										
Production and use of organic inputs										
Gender mainstreaming through SHGs										
TOTAL										

C) Consolidated table (ON and OFF Campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
(A) Farmers & Farm Women										
I Crop Production										
Weed Management	01	15	-	15	02	-	02	17	-	17
Resource Conservation Technologies										
Cropping Systems	01	15	-	15	02	-	02	17	-	17
Crop Diversification										
Integrated Farming										
Water management	01	12	-	12	04	-	04	16	-	16
Seed production	02	37	-	37	04	-	04	41	-	41
Nursery management										
Integrated Crop Management	04	90	-	90	15	-	15	105	-	105
Fodder production										
Production of organic inputs	03	52	-	52	08	-	08	60	-	60
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops										
Off-season vegetables										
Nursery raising										
Exotic vegetables like Broccoli										
Export potential vegetables										
Grading and standardization										
Protective cultivation (Green Houses, Shade Net etc.)	01	19	-	19	04	-	04	23	-	23
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										

Micro irrigation systems of orchards										
Plant propagation techniques										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
d) Plantation crops										
Production and Management technology	04	102	03	105	16	-	16	118	03	121
Processing and value addition										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
f) Spices										
Production and Management technology										
Processing and value addition										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
III Soil Health and Fertility Management										
Soil fertility management	01	15	03	18	03	01	04	18	04	22
Soil and Water Conservation										
Integrated Nutrient Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Soil and Water	01	15	-	15	04	-	04	19	-	19

Testing										
IV Livestock Production and Management										
Dairy Management	02	23	16	39	06	02	08	29	18	47
Poultry Management	01	-	18	18	-	04	04	-	22	22
Piggery Management										
Rabbit Management										
Disease Management	03	28	20	48	06	05	11	34	25	69
Feed management	05	82	-	82	12	-	12	94	-	94
Production of quality animal products										
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	01	-	15	15	-	02	02	-	17	17
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet	04	-	56	56	-	20	20	-	76	76
Minimization of nutrient loss in processing										
Gender mainstreaming through SHGs										
Storage loss minimization techniques	01	-	14	14	-	08	08	-	22	22
Value addition	01	-	14	14	-	03	03	-	17	17
Income generation activities for empowerment of rural Women	03	-	41	41	-	08	08	-	49	49
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care										
VI Agril. Engineering										
Installation and maintenance of micro irrigation systems	01	13	01	14	03	-	03	16	01	17
Use of Plastics in										

farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements	07	80	24	104	15	05	20	95	29	124
Small scale processing and value addition										
Post Harvest Technology	01	-	15	15	-	03	03	-	18	18
VII Plant Protection										
Integrated Pest Management	08	172	02	174	27	01	28	199	03	202
Integrated Disease Management	01	13	02	15	01	01	02	14	03	17
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
IX Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides										

production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
X Capacity Building and Group Dynamics										
Leadership development	02	37	-	37	05	-	05	42	-	42
Group dynamics	01	14	-	14	03	-	03	17	-	17
Formation and Management of SHGs	01	13	-	13	03	-	03	16	-	16
Mobilization of social capital	02	35	-	35	02	-	02	37	-	37
Entrepreneurial development of farmers/youths	01	14	-	14	02	-	02	16	-	16
WTO and IPR issues										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
TOTAL	66	896	264	1060	147	65	212	1043	329	1372
(B) RURAL YOUTH										
Mushroom Production										
Bee-keeping										
Integrated farming										
Seed production										
Production of organic inputs	01	14	02	16	01	01	02	15	03	08
Integrated Farming										
Planting material production										
Vermi-culture										
Sericulture										
Protected cultivation of vegetable crops	01	26	-	26	04	-	04	30	-	30
Commercial fruit	01	15	-	15	02	-	02	17	-	17

production										
Repair and maintenance of farm machinery and implements	01	17	-	17	01	-	01	18	-	18
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Value addition	02	-	23	23	-	02	02	-	25	25
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Para vets										
Para extension workers	03	82	-	82	17	-	17	99	-	99
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts	01	-	09	09	-	01	01	-	10	10
TOTAL	10	154	34	188	25	04	30	179	38	217
(C) Extension Personnel										
Productivity enhancement in field crops										
Integrated Pest Management	01	-	26	26	-	07	07	-	33	33
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										

Formation and Management of SHGs										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Care and maintenance of farm machinery and implements	01	-	22	22	-	09	09	-	31	31
WTO and IPR issues										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Women and Child care										
Low cost and nutrient efficient diet designing	01	-	21	21	-	08	08	-	29	29
Production and use of organic inputs										
Gender mainstreaming through SHGs										
TOTAL	03	-	69	69	-	24	24	-	93	93

Note: Please furnish the details of above training programmes as Annexure in the proforma given below

Date	Client ele	Title of the training programme	Discipline	Thematic area	Duration in days	Venue (Off / On Campus)	Number of other participants			Number of SC/ST			Total number of participants		
							Male	Female	Total	Male	Female	Total	Male	Female	Total
12.4.2010	PF	Importance of soil and water testing in fruit crops	Horticulture	Soil fertility management	01	Off	15	03	18	03	01	04	18	04	22
13.04.2010	PF	Techniques of low cost pest and disease management	Plant protection	-	01	Off	18	-	18	03	-	03	21	-	21
13.04.10	PF	Maintenance of drip and sprinkler irrigation system	Agril Engg.	Installation and maintenance of micro irrigation system	01	Off	13	01	14	03	-	03	16	01	17
19.04.2010	PF	Entrepreneurship development for the farmers	Agril Exten.	Entrepreneurship development	01	Off	14	-	14	02	-	02	16	-	16
20.04.2010	PF	Urea treatment on wheat straw	Ani. SCi.	Feed Management	01	Off	18	-	18	01	-	01	19	-	19
05.05.2010	PF	Enrichment of soil by using Dhancha and Sunhemp	Crop. Prod.	Production of organic inputs	01	Off	15	-	15	03	-	03	18	-	18
07.05.2010	PF	Methods of soil sample collection	Crop. Prod.	Production of organic inputs	01	Off	18	-	18	02	-	02	20	-	20
11.05.2010	PFW	Value addition in mango	Horti.	Post harvest technology	01	On	-	20	20	-	02	02	-	22	22
12.05.2010	RY	Commercial vermi compost production technology	Plant.Pr ot.	Production of organic inputs	01	On	14	02	16	01	01	02	15	03	18
13.05.20	PF	Operation and	Agril Engg.	Repair and	01	On	13	-	13	02	-	02	15	-	15

10		maintenance of CRIDA Planter		maintenance of farm machinery and implements											
17.0 5.20 10	PF	Seed treatment drum: use and operation	Agril Engg.	Repair and maintenance of farm machinery and implements	01	On	13	-	13	02	-	02	15	-	15
19.0 5.20 10	PF	Group promotion for the farmers	Agril Exten.	Group dynamics	01	Off	14	-	14	03	-	03	17	-	17
28.0 5.20 10	PFW	Importance of food nutrients and their deficiency diseases	Hom. Sci	Designing and development for high nutrient efficiency diet	01	Off	-	13	13	-	02	02	-	15	15
29.0 5.20 10	PFW	Management practices for dairy animals	Ani. Sci.	Diary management	01	Off	-	16	16	-	02	02	-	18	18
02.0 6.20 10	PF	Integrated pest and nutrient management in soybean	Crop. Prod.	Integrated crop management	01	Off	18	-	18	02	-	02	20	-	20
03.0 6.20 10	PF	Seed treatment in various kharif crops	Crop. Prod	Seed production	01	Off	16	-	16	03	-	03	19	-	19
04.0 6.20 10	PF	Soybean seed production	Crop. Prod	Seed production	01	Off	21	-	21	01	-	01	22	-	22
05.0 6.20 10	PF	Different planting methods and INM in sugarcane	Crop. Prod	Integrated crop management	01	Off	26	-	26	03	-	03	29	-	29
08.0 6.20 10	PF	Use of pre and post emergence weedicides for weed control	Crop. Prod	Weed management	01	Off	15	-	15	02	-	02	17	-	17
09.0	PF	Role of	Plant	Seed	01	Off	13	02	15	01	01	02	14	03	17

6.20 10		seed treatment in healthy growth of crop plants	prot.	treatme nt											
15.0 6.20 10	PF	Improved single row sowing / planting equipment s	Agril. Engg	Repair and maintan ce of farm machine ry and implem ents	01	Off	14	-	14	01	-	01	15	-	15
17.0 6.20 10	PF	Measures to over come drought situation	Agril. .Exten.	Mobiliz ation of social group	01	Off	17	-	17	01	-	01	18	-	18
22.0 6.20 10	PFW	Establish ment of nutritional garden to improve health and economic status of family	Home. Sci.	Househ old food security by kitchen gardeni ng of nutritio nal garden	01	Off	-	15	15	-	02	02	-	17	17
23.0 6.20 10	PF	Importanc e of use of disinfecta nt after milking to reduce incidence of mastitis in CB cow	Ani. Sci.	Disease manage ment	01	Off	12	-	12	02	-	02	14	-	14
02.0 7.20 10	PF	Productio n technolog y in onion	Horti.	Producti on technol ogy	01	Off	11	03	14	04	-	04	15	03	18
05.0 7.20 10	PF	Identificat ion, managem ent of pest and disease in kharif crops	Plant. Prot.	Pest manage ment	01	Off	09	-	09	03	-	03	12	-	12
08.0 7.20 10	PF	Managem ent of SHG's within the village	Agril. Exten.	Formati on and manage ment of SHG's	01	Off	13	-	13	03	-	03	16	-	16
09.0 7.20 10	PF	Cultivat ion phule jay want fodder crop for	Ani. Sci.	Fodder manage ment	01	Off	12	-	12	02	-	02	14	-	14

		green fodder throughout the year													
13.0 7.20 10	PFW	Mechanical weeders for inter-cultural operation	Agril. Engg.	Location specific drudgery reduction technologies	01	Off	-	10	10	-	02	02	-	12	12
17.0 7.20 10	RY	Nutritive and medicinal value of fruits and vegetables	Home Sci.	Value Addition	01	Off	-	12	12	-	03	03	-	15	15
02.0 8.20 10	PF	Conversion of unfelt needs into felt needs	Agril. Exten.	Leadership development	01	Off	18	-	18	03	-	03	21	-	21
05.0 8.20 10	PF	Use of IPM techniques for control of soybean pests	Plant. Prot.	Integrated pest management	01	Off	21	-	21	06	-	06	27	-	27
07.0 8.20 10	PF	How to control animal parasites	Ani. Sci.	Diseases management	01	Off	16	-	16	04	-	04	20	-	20
30.0 8.20 10	PFW	Food grain storage	Home Sci.	Storage loss minimization techniques	01	Off	-	14	14	-	08	08	-	22	22
30.0 8.20 10	RY	Use of cultar for regular bearing in mango	Horti.	Commercial fruit production	01	On	15	-	15	02	-	02	17	-	17
06.0 9.20 10	PFW	Nutritional requirement of pre school children and tips for developing good food habits	Home Sci.	Designing and development for high nutrient efficiency diet	01	Off	-	14	14	-	04	04	-	18	18
06.0 9.20 10	PFW	Important management tips for goat	Ani. Sci.	Diseases management	01	Off	-	20	20	-	05	05	-	25	25

		rearing													
02.0 9.20 10	PF	Disease management in chilly	Plant . Prot.	Integrated pest management	01	Off	18	-	18	03	-	03	21	-	21
13.0 9.20 10	PF	Cultivation of vegetables under shed net	Horti.	Protective cultivation	01	Off	19	-	19	04	-	04	23	-	23
24.0 9.20 10	PF	Repair and maintenance of CRIDA bullock drawn planter	Agril. Engg.	Repair and maintenance of farm machinery and implements	01	Off	11	-	11	04	-	04	15	-	15
18.0 9.20 10	PF	Leadership development for effective TOT	Agril .Exten.	Leadership development	01	Off	19	-	19	02	-	02	21	-	21
03.1 0.20 10	PF	Use operation and demonstration of grain cleaner cum grader	Agril .Engg	Repair and maintenance of farm machinery and implements	01	Off	11	06	17	04	02	06	15	08	23
03.1 0.20 10	PF	Redgram – Integrated nutrient management	Crop. Prod.	Integrated crop management	01	Off	15	-	15	03	-	03	18	-	18
04.1 0.20 10	PF	Water management with micro irrigation system	Crop. Prod.	Water management	01	On	12	-	12	04	-	04	16	-	16
08.1 0.20 10	PF	Introduction of new variety and production technology for Bengal gram	Crop. Prod.	Cropping system	01	Off	15	-	15	02	-	02	17	-	17
08.1 0.20 10	PF	Feeding of soybean straw to the animals	Ani. Sci.	Feed management	01	Off	14	-	14	04	-	04	18	-	18

13.1 0.20 10	PFW	Preparation of different protein energy rich receipies	Home. Sci.	Designing and development for high nutrient efficiency diet	01	Off	-	12	12	-	09	09	-	21	21
19.1 0.20 10	RY	Agricultural equipments for custom hiring	Agril. Engg.	Repair and maintenance of farm machinery and implements	01	On	17	-	17	01	-	01	18	-	18
20.1 0.20 10	PF	Integrated pest and diseases management in rabbi crop	Plant. Prot.	Integrated pest management t	01	Off	14	02	16	02	01	03	16	03	19
25.1 0.20 10	PF	Different sources to access the information on agri	Agril. Exten.	Mobilization of social group	01	On	18	-	18	01	-	01	19	-	19
03.1 1 2010	PF	Azolla feeding to dairy animals	Ani. Sci.	Feed management	01	Off	18	-	18	02	-	02	20	-	20
12.1 1.20 10	PF	Production technology of rabbi Sorghum	Crop. Prod	Production of organic inputs	01	ON	19	-	19	03	-	03	22	-	22
16.1 1.20 10	PF	IPM in field crops	Plant. Prot.	Integrated pest management	01	Off	20	-	20	01	-	01	21	-	21
19.1 1.20 10	PF	Management of bahar in pomegranate	Horti.	Production technology	01	Off	22	-	22	03	-	03	25	-	25
23.1 1.20 10	PFW	Use of improved farm implements for drudgery reduction of farm women	Home Sci	Drudgery reduction technology	01	OFF	-	21	21	-	03	03	-	24	24
27.1 1.20 10	RY	Entrepreneurship development in rural youth	Agril Ext	Para extension worker	01	OFF	16	-	16	02	-	02	22	-	22
7.12.	PF	Plant	Plant	Integrat	01	Off	20	-	20	02	-	02	22	-	22

2010		protection measures for healthy flowering	prot	ed pest management											
9.12.2010	PF	Importance of feeding mineral mixture to dairy animals	Ani. Sci.	Feed management	01	Off	20	-	20	03	-	03	23	-	23
14.12.2010	PFW	Women friendly tools and equipments	Agril. Engg.	Repair and maintenance of farm machinery and implements	01	OFF	-	18	18	-	03	03	-	21	21
08.12.2010	RY	Protective cultivation of vegetables	Horti.	Off season vegetable production	01	ON	26	-	26	04	-	04	30	-	30
28.12.2010	RY	Development of rural youth as para extension worker	Agril Ext	Para extension worker	01	ON	26	-	26	04	-	04	30	-	30
29.12.2010	RY	Importance of Azolla & its production technology	Ani. Sci.	Feed management	01	Off	20	-	20	03	-	03	23	-	23
30.12.2010	RY	Income generating activities for rural youth	Home Sci	Income generating activities for empowerment of rural women	01	ON	-	09	09	-	01	01	-	10	10
4.01.2011	PF	Use of micro nutrients in mango and fig crop	Horti	Production technology	01	Off	18	-	18	02	-	02	20	-	20
7.1.2011	PF	Drudgery & cost reduction	Argil Engg	Post harvest technol	01	OFF	-	15	15	-	03	03	-	18	18

		in household groundnut shelling by using groundnut decorticator or through SHG		ogy											
11.1. 2011	PFW	Improved birds for backyard poultry	Ani Sci	Poultry Management	01	Off	-	18	18	-	4	4	-	22	22
12.1. 2011	RY	Preservation of fruits and vegetables	Home Sci	Value Addition	01	ON	-	11	11	--	-	-	-	11	11
13.1. 2011	RY	Sugercane SI method	Argil Engg		01	ON	08	03	11	-	-	-	08	03	11
18.1. 2011	RY	Improved Azolla production technology	Ani. Sci.	Feed management	01	ON	08	03	11	-	-	-	08	03	11
21.1. 2011	EF	Soybean processing unit	Home. Sci.	Designing and development for high nutrient efficiency diet	01	ON	-	21	21	-	08	08	-	29	29
25.1. 2011	EF	Women friendly tools and equipments	Agril. Engg.	Repair and maintenance of farm machinery and implements	01	ON	-	22	22	-	09	09	-	31	31
27.1. 2011	EF	IPM techniques in field crops	Plant prot	Integrated pest management	01	ON	-	26	26	-	07	07	-	33	33
5.2.2 011	PF	Improved bullockdrawn tropicultural operation, adjustment, & use	Agril. Engg.	Repair and maintenance of farm machinery and implements	01	ON	18	-	18	02	-	02	20	-	20
8.2.2 011	PF	Management of early top shoot borer in sugercane	Plant prot	Integrated pest management	01	OFF	19	-	19	03	-	03	22	-	22
21.1.	PF	Protected	Horti	Producti	01	ON	51	-	51	07	-	07	58	-	58

2011		cultivation of vegetables		on technology											
21.1.2011	PF	Pest & disease management of capsicum in shed net	Piant prot	IPM	01	ON	51	-	51	07	-	07	58	-	58
11.2.2011	PFW	Importance of soybean in the diet & its different products	Home. Sci.	Designing and development for high nutrient efficiency diet	01	OFF	17	-	17		05	05	-	22	22
15.2.2011	PF	Dairy Farming	Ani Sci	Dairy Management	01	ON	23	-	23	06	-	06	29	-	29
22.2.2011	PF	Summer groundnut cultivation techniques	Crop prod	Integrated crop production	01	ON	31	-	31	07	-	07	38	-	38
26.2.2011	RY	Orientation programme on KVK activities	Agril Ext	Para extension worker	01	ON	40	-	40	11	-	11	51	-	51
8.3.2011	PF	Importance of soil testing	Horti	Soil & water testing	01	ON	15	-	15	04	-	04	19	-	19
14-17-03.2011	PFW	Vermicompost production	Home Sci	Income generating activities for empowerment of rural women	04	Off	-	14	14	-	03	03	-	17	17
26.03.2011	EF	Orientation programme on integrated watershed management	Agril.E ngg	Water management	05	ON	19	-	19	07	-	07	26	-	26

(D) Vocational training programmes for Rural Youth

Crop / Enterprise	Date	Training title	Identified Thrust Area	Duration (days)	No. of Participants			Self employed after training			Number of persons employed else where
					Male	Female	Total	Type of units	Number of units	Number of persons employed	
Vermicompost	14.03.2010 to 17.03.2010	Vermicompost production	Income generating activities for empowerment of rural women	04	-	17	17	-	-	-	-

(E) Sponsored Training Programmes

Sl. No	Date	Title	Discipline	The matric area	Duration (days)	Client (PF/R Y/EF)	No. of courses	No. of Participants									Sponsoring Agency	Amount of fund received (Rs.)
								Others			SC/ST			Total				
								Male	Female	Total	Male	Female	Total	Male	Female	Total		
1.	26.03.2011	Orientati on programme on IWM P	Agril Eng g	Water Man age ment	05	EF	03	19	-	19	07	-	07	26	-	26	YASHA DA,Pune	1,45,500/-

Training programmes conducted during 2010-11



On Campus Training for Extension Functionaries



On Campus Training for Rural Youths



On Campus Training for Practicing Farmers

3.4. Extension Activities (including activities of FLD programmes)

Sl. No.	Nature of Extension Activity	Purpose/ topic and Date	No. of activities	Participants											
				Farmers (Others) (I)			SC/ST (Farmers) (II)			Extension Officials (III)			Grand Total (I+II+III)		
				Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
	Field Day	Mango at karajgaon on 08/12/2010	01	35	-	35	05	-	05	02	-	02	40	-	40
		Total	01	35	-	35	05	-	05	02	-	02	40	-	40
	Kisan Mela	1.Womens participation in kharif crop production on 20/05/2010	01	-	163	163	-	10	10	01	01	02	01	174	175
		2.Kharif rally on pigron pea & maize management 04/06/2010	01	170	06	176	21	-	21	05	-	05	196	06	202
		3.Women farmers rally on entrepreneurship development on 28/09/2010	01	-	123	123	-	05	05	02	-	02	02	128	130
		4.Farmers rally on pomegranate production technology on 30/09/2010	01	141	-	141	29	-	29	05	-	05	175	-	175
		Womens rally on use of improved drudgery reducing implements on 29/10/2010	01	-	67	67	-	05	05	-	03	03	-	75	75
		Total	07	381	359	740	60	20	80	17	04	21	454	383	837
	Kisan Ghosthi	On pigeon pea transplanting technique 01/07/2010	01	40	-	40	05	-	05	-	-	-	45	-	45
	Exhibition	Participation in Agril.Exhi,MAU, Parbhani . 08-12 Oct 2010	01	1914	60	1974	131	19	150	21	05	26	2066	84	2110
	Film Show	1.Post harvesting technology of horticulture crops on 30/12/2010	01	24	-	24	05	-	05	01	-	01	30	-	30
		2.Agri business management for farm women 18/01/2011	01	-	31	31	-	03	03	-	-	-	-	34	34
		3.Dairy management 19/01/2011	01	-	28	28	-	02	02	-	-	-	-	30	30
		4.Use of improved agri tools and equipments for farm women 20/01/2011	01	-	21	21	-	04	04	-	-	-	-	25	25
		5.Vegetable cultivation under green shednet on 21/01/2011	01	31	-	31	04	-	04	02	-	02	37	-	37

		6.Improved summer ground nut cultivation 07/02/2011	01	22	-	22	03	-	03	02	-	02	27	-	27
		7. Importance of soil testing 29/03/2011	01	13	-	13	04	-	04	03	-	03	21	-	21
		Total	09	2044	140	2184	152	28	180	29	05	34	2226	173	2359
	Method Demonstrations	1.Seed treatment in bengalgram on 28/10/2010	01	12	-	12	-	-	-	-	-	-	12	-	12
		2.Sugarcane bud chipper by SSI method 10/11/2010	02	18	-	18	02	-	02	-	-	-	20	-	20
		3. Sugarcane bud chipper by SSI method 31/03/2011	01	19	-	19	04	-	04	03	-	03	26	-	26
		Total	04	49	-	49	06	-	06	03	-	03	58	-	58
	Farmers Seminar	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Workshop	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Group meetings	1.Use of cultar in mango 13/07/2010	01	07	-	07	01	-	01	-	-	-	08	-	08
		2.Vegetable cultivation under green shed net 09/07/2010	01	09	-	09	02	-	02	-	-	-	11	-	11
		3.Importance of Azolla in milking animal	01	07	-	07	02	-	02	-	-	-	09	-	09
		4.Importance of CIG group formation 01/09/2010	01	20	-	20	02	-	02	-	-	-	22	-	22
		5.Improved cultivation practices in rabi crops 25/10/2010	01	13	-	13	02	-	02	-	-	-	15	-	15
		6.Use of small improved agri equipments for farm women 29/10/2010	01	-	25	25	-	07	07	-	-	-	-	32	32
		7.Importance formation of farmers club 30/12/2010	01	12	-	12	02	-	02	-	-	-	14	-	14
		Total	07	68	25	93	11	07	18	-	-	-	79	32	111
	Lectures delivered as resource persons	1. On CRIDA bullock drawn planter at pune 24/08/2010	01	30	-	30	01	-	01	-	-	-	31	-	31
		2. Pest and disease management in sugarcane 20/10/2010	01	78	-	78	09	-	09	03	-	03	90	-	90
		3.Improved cultivation practices in bengalgram and safflower 21/10/2010	01	71	-	71	10	-	10	04	-	04	85	-	85
		4.Improved cultivation in	01	22	-	22	03	-	03	-	-	-	25	-	25

		lucern and berseem on 29/10/2010													
		5.Management of export quality mango 18/11/2010	01	79	-	79	10	-	10	03	-	03	92	-	92
		6.Controlling measures in sugarcane 02/12/2010	01	173	-	173	24	-	24	03	-	03	200	-	200
		7.Bengal gram production technology 18/12/2010	01	178	-	178	14	-	14	04	-	04	196	-	196
		8. Improved Sugarcane cultivation practices 21/01/2011	01	55	-	55	07	-	07	03	-	03	65	-	65
		9. Cultivation & management of Sugarcane & onion 29/01/2011	01	57	-	57	08	-	08	05	-	05	70	-	70
		10.Wheat production technology 22/02/2011	01	74	-	74	13	-	13	04	-	04	91	-	91
		11.Role of KVK in agriculture development and importance of farmers club 15/03/2011	01	37	-	37	06	-	06	02	-	02	45	-	45
		Total	11	854	-	854	105	-	105	31	-	31	990	-	990
	Newspaper coverage		14												
		1.Need of farm ponds for irrigation (Daily Sakaal) 22.04.10													
		2.Organization of farm womens rally by KVK(Daily Ekmat) 25.05.10													
		3.Increase productivity per acre of pulses (Daily Ekmat)05.06.10													
		4.Vaccination of Crops(Daily Lokamt) 05.07.10													
		5.Promote farmers for more production with less inputs(Daily Lokamt) 09.08.10													
		6.Cultivation of pomegranate by improved technology (Daily Sakaal) 01.10.10													

		7.Response for farm womens rally(Daily Ekmat) 01.10.10													
		8.Pomegranate farming for development of farmers (Daily Loksatta) 04.10.10													
		9.Guidance on pomegranate from exposure visit (Daily Ekmat) 07.10.010													
		10.Good response for Manjara Stall (Daily Ekmat)15.10.10													
		11.Discussion on sugarcane managament by Agrowon (Daily Sakaal) 21.10.10													
		12.Good response for sugarcane,Onion and soil testing programme (Daily Sakaal)31.01.11													
		13.Technical guidance of capsicum (Daily Ekmat) 01.02.11													
		14.Good response for PRA training programme(Daily Ekmat)08.03.11													
	Radio talks		-												
	TV talks		-												
	Popular articles		14												
		1.Improved sugarcane bud chipper 23/04/2010													
		2.Information of bullock drawn seed planter 14/06/2010													
		3.More Production with low cost from CRIDA seed planter 11/06/2010													
		4.More income by biofertilizer seed treatment 01/07/2010													
		5.Improved soybean production technology													

		01/07/2010													
		6.Farmers group organization – Todays need 01/07/2010													
		7.Successful demonstration of CRIDA seed planter by KVK,Latur 01/07/2010													
		8.Salient features of maize production 01/07/2010													
		9.Cultivation of green fodder crop-1 06/07/2010													
		10.Cultivation of green fodder crop-2 13/07/2010													
		11.Milk production and animal management in rainy season 21/09/2010													
		12.Use of Azolla as animal feed -1 26/10/2010													
		13.Controlling measures for sugarcane whitefly 26/10/2010													
		14.Use of Azolla as animal feed -2 02/11/2010													
	Extension Literature		02												
		Folder- 1.Azolla – a sustainable animal feed													
		Pamphlets - 1.Plant protection schedule for pomegranate crop													
	Advisory Services	SMS services	18	-	-	-	-	-	-	-	-	-	-	-	964
	Scientific visit to farmers field														43
	Farmers visit to KVK														116
	Diagnostic visits		03												
	Exposure visits	NRC, Solapur 25/09/2010	01	05	-	05	-	-	-	-	-	-	05	-	05
	Ex-trainees Sammelan														
	Soil health Camp														
	Animal Health Camp														
	Agri mobile clinic														

	Soil test campaigns														
	Farm Science Club Conveners meet														
	Self Help Group Conveners meetings		10	-	70	70	-	15	15	-	-	-	-	85	85
	Mahila Mandals Conveners meetings														
	Celebration of important days (specify)	KVK foundation day at chinholiraowadi on role of KVK in agriculture development 20/05/2010	01	28	03	31	07	01	08	02	-	02	37	04	41
	Total		49	33	73	106	07	16	23	02	-	02	42	89	1254
	Grand Total		87	3429	597	4026	341	71	412	82	9	91	3849	677	5609

Photographs of Extension Activities



Visit of Respected ZPD, Dr. N. Sudhakar to KVK Stall at MAU Agri.Exhibition- 2010



Exposure visit of CIG-Pomegranate Group dated on 25/09/2010

Women farmers rally on Entrepreneurship Development on 28/09/2010 at village Babhalgaon



Kharif rally on Pigeon pea & Maize Management dated on 04/06/2010 in presence of Agril.Commissioner, Shri. Prabhakar Deshmukh

Farmers rally in presence of State Agril.Minister (MS) Shri. Balashaeb Thorat addressing during Pomegranate Production Technology Rally dated on 30/09/2010



3.5 Production and supply of Technological products

SEED MATERIALS

Major group/class	Crop	Variety	Quantity (qtl.)	Value (Rs.)	Provided to No. of Farmers
CEREALS					
OILSEEDS					
PULSES					
VEGETABLES					
FLOWER CROPS					
OTHERS (Specify)					

SUMMARY

Sl. No.	Major group/class	Quantity (qtl.)	Value (Rs.)	Provided to No. of Farmers
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1	CEREALS			
2	OILSEEDS			
3	PULSES			
4	VEGETABLES			
5	FLOWER CROPS			
6	OTHERS			
TOTAL				

PLANTING MATERIALS

Major group/class	Crop	Variety	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
FRUITS					
SPICES					
VEGETABLES					
FOREST SPECIES					
ORNAMENTAL CROPS					
PLANTATION CROPS					
Others (specify)					

SUMMARY

Sl. No.	Major group/class	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
1	FRUITS			
2	VEGETABLES			
3	SPICES			
4	FOREST SPECIES			
5	ORNAMENTAL CROPS			
6	PLANTATION CROPS			
7	OTHERS			
	TOTAL			

BIO PRODUCTS

Major group/class	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			No	(kg)		
BIOAGENTS	Trichoderma	Trichoderma viridae	400	400	40000/-	70
BIOFERTILIZERS						
1						
2						
3						
4						
BIO PESTICIDES						
1						
2						

3						
4						

SUMMARY

Sl. No.	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			Nos	(kg)		
1	BIOAGENTS					
2	BIO FERTILIZERS					
3	BIO PESTICIDE					
	TOTAL					

LIVESTOCK

Sl. No.	Type	Breed	Quantity		Value (Rs.)	Provided to No. of Farmers
			(Nos)	Kgs		
Cattle						
SHEEP AND GOAT						
POULTRY						
FISHERIES						
Others (Specify)						

SUMMARY

Sl. No.	Type	Breed	Quantity		Value (Rs.)	Provided to No. of Farmers
			Nos	Kgs		
1	CATTLE					
2	SHEEP & GOAT					
3	POULTRY					
4	FISHERIES					
5	OTHERS					
	TOTAL					

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

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

Sr.No.	Date of start	Periodicity	number of copies
1	2007	Yearly	100
2	2008	Yearly	100
3	2009	Yearly	100
4	2010	Yearly	100

(B) Literature developed/published

Item	Title	Authors name	Number of copies
Research papers	-	-	-
Total	-	-	-
Technical reports	Annual Progress Report	KVK ,Latur	10
	Monthly Progress Report	KVK ,Latur	12
	ZREAC Report	KVK, Latur	04
	Quarterly Report	KVK, Latur	04
	Extension Education Council Report	KVK,Latur	10
Popular articles	1.Improved sugarcane bud chipper 23/04/2010	Kawade S.C SMS(Agril. Engg)	-
	2.Information of bullock drawn seed planter 14/06/2010	Kawade S.C SMS(Agril. Engg)	
	3.More Production with low cost from CRIDA seed planter 11/06/2010	Kawade S.C SMS(Agril. Engg)	
	4.More income by biofertilizer seed treatment 01/07/2010	Deshmukh S.B SMS(Pt.Protn.)	
	5.Improved soybean production technology 01/07/2010	Kokate S.L. Farm manager Mohite A.S. SMS(Agronomy)	
	6.Farmers group organization –Todays need 01/07/2010	Bedre S.B. SMS(Agril .Extn.)	
	7.Successful demonstration of CRIDA seed planter by KVK,Latur 01/07/2010	Kawade S.C SMS(Agril. Engg)	
	8.Salient features of maize production 01/07/2010	Kokate S.L. Farm manager	

	9.Cultivation of green fodder crop-1 06/07/2010	Dr. Salunke S.B. Pro..Assit. (Vet Sci.)	
	10.Cultivation of green fodder crop-2 13/07/2010	Dr. Salunke S.B. Pro..Assit. (Vet Sci.)	
	11.Milk production and animal management in rainy season 21/09/2010	Dr. Salunke S.B. Pro..Assit. (Vet Sci.)	
	12.Use of Azolla as animal feed -1 26/10/2010	Dr. Salunke S.B. Pro..Assit. (Vet Sci.)	
	13.Controlling measures for sugarcane whitefly 26/10/2010	Deshmukh S.B. SMS(Pt. Prot.)	
	14.Use of Azolla as animal feed -2 02/11/2010	Dr. Salunke S.B. Pro..Assit. (Vet Sci.)	
Leaflets/folders/Pamphlets	Folder		
	1.Azolla – a sustainable animal feed	Dr. Salunke S.B. Pro..Assit. (Vet Sci.)	500
	Pamphlets		
	1.Plant protection schedule for pomegranate crop	Deshmukh S.B SMS(Pt.Protn.)	500
Total			1000
Grand TOTAL			1040

(C) Details of Electronic Media Produced

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

3.7. Success stories/Case studies, if any (two or three pages write-up on each case with suitable action photographs)

**Success Story
on
LARGE SCALE ADOPTION OF CRIDA THREE ROW BULLOCK DRAWN PLANTER IN
LATUR DISTRICT**

I Background about case or problem (Reasons, problems leading to its development as a success story/case, existing farming system and agro-ecological situation)

Background about case or problem: Crop sowing is a critical operation for successful crop production. Proper establishment of crop stand in the field is important in any crop production system to obtain optimum yield. In order to achieve a uniform plant stand at desired population, correct seed metering and placement is essential. In Latur District of Maharashtra State, the important crops are like soybean, pigeon pea, black gram, green gram, sorghum, bengal gram, wheat. These dryland crops are generally sown by traditional method, using a hand metering wooden or plastic bowl called "*dufan*" or "*tifan*". In this method, farmers normally use higher seed than desired to achieve required plant stand. This results in inadequate and non-uniform plant stand. This practice not only results in higher seed cost but also results in lower crop yield. The traditional system also has the limitations of uneven depth of seed placement, slow ground coverage and high labour requirement.

Existing farming system and agro-ecological situation: Animal power is the predominant source of power in dryland as well irrigated area of Latur district. Hence all the conventional methods of sowing are primarily linked with animal power. Common practices of sowing followed in Latur District are discussed below:

Farmers are using 2 or 3 row drills with single bowl for drilling seeds. Another bowl having 2 or 3 rows is toed to the main frame with the help of rope for drilling fertilizer. In this method one skilled person operate the bullocks and simultaneously drill the seeds by hand. Another person drills the fertilizer by hand. Thus, this method requires two persons for sowing a crop. If intercrops are to be sown, e.g. Soybean and pigeon pea, a single row bowl is toed to the main frame for drilling intercrop. This method requires three persons, two for drilling seeds and a person for drilling fertilizer. More advanced traditional system using 2 or three row drills with two bowls fitted on the main frame for drilling seed and fertilizer. These traditional sowing methods have following limitations:

- In manual seeding, it is not possible to achieve uniformity in distribution of seeds. A farmer may sow at desired seed rate but inter-row and intra row distribution of seeds likely to be uneven resulting in bunching and gaps in field
- Poor control over depth of placement
- During kharif sowing, placement of seeds at uneven depth may results in poor emergence because subsequent rains bring additional soil cover over the seed and affect the plant emergence
- Poor area coverage, which leads to prolonged and delayed sowing operation
- Labour requirement is high, since two or three persons are required for drilling seed and fertilizer
- Acute shortage of skilled labour for drilling seeds occurred during the peak sowing period

Reasons, problems leading to its development as a success story:

Looking to the problems in traditional sowing methods, The availability of easy to use mechanical planter for small scale farmers could alleviate these problems substantially, and could also help to maintain timely seeding and reduce the farmers' drudgery. Hence, bullock drawn mechanical planter ie CRIDA bullock

drawn planter developed by Central Research Institute for Dryland Agriculture, Hyderabad was identified and tested on the farmers field by Manjara Krishi Vigyan Kendra, Latur in Latur District. Initially, CRIDA 04 row bullock drawn planter was tested. But the width of planter 1 m, enabled to use only 03 furrow openers at 45 cm row to row distance. Since the farmers sow most of the crops at 40 to 45 cm row to row spacing. Hence, CRIDA 03 row bullock drawn planter having 1 m width was preferred instead of 04 row planter and tested. The functional performance of different systems of planter was found well during laboratory and field trials. Planter was successfully tested for planting major crops in Latur district like Soybean, Pigeon Pea, Green gram, Black gram, Sorghum, Bengal Gram, Wheat, Maize, Groundnut. One trained person easily operates the machine. There was no damage to seeds during operation. On an average a farmer can sow 2 ha/day. Looking to the benefits of CRIDA 03 row bullock drawn planter over conventional sowing, 20 farmers in the district adopted and purchased CRIDA 03 row bullock drawn planter and using successfully.

II Technology/process which was intervened for its success

CRIDA bullock drawn row planter which is more critical intervention for timely sowing, On Farm Testing on 'CRIDA bullock drawn 03 row planter', training on operation and maintenance of CRIDA planter, follow up guidance and popular articles on CRIDA planter in local language (marathi) published in magazines, news paper etc.

III Effect of the technology/process on

• Production

The farmers are using CRIDA 03 row bullock drawn planter for sowing dryland crops like Soybean, Pigeon Pea, kharif jowar, Green gram, Black gram, Sorghum, Bengal Gram, Wheat, Maize, Groundnut etc. successfully. It saves 6 to 25 % seeds, 5-15 % fertilizer, 63 to 75 % labour and 40 to 50 % cost of operation. Also farmers reported 5 to 15 % increase in yield as compared to conventional sowing.

• Productivity

On an average the farmer sown 2 ha/day depending upon the working hours available during the day.

• Economic gains (per unit expenditure, gross income, net income, C:B ratio)

Cost of CRIDA 03 row bullock drawn planter, Purchase price: Rs. 13,000/-

Economics of sowing by CRIDA 03 row bullock drawn planter

SN	Parameter	Sowing Equipment		% Change in parameter
		CRIDA 03 row bullock drawn planter	Traditional sowing equipment	
1.	Field capacity, ha/day	2.00	1.45	27.5
2.	Field efficiency, %	70.0	60.0	14.3
3.	Labour requirement, man-h/ha			
	Mono crop	4.0	11.0	63.6
	Intercrop	4.0	16.5	75.7
4.	Cost of operation, Rs./ha			
	Mono crop	200	344	41.9
	Intercrop	200	413	51.8

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

Traditional sowing has become cumbersome with less availability / shortage of skilled labour for seed dropping. This leads to prolonged and delayed sowing operation. Also, manual dropping of seed does not ensure proper plant stand leading to poor yields. Hence, there is need for multi-crop sowing equipment. The CRIDA 03 row bullock drawn multi-crop planter was found to be a suitable sowing equipment under on farm testing trials. Since, it saves seeds, fertilizer & labour with uniform distribution of inputs over unit area and overcomes the problem of skilled labour shortage and delayed sowing. Also the yield of crops has shown considerable increase of 5-20 % by using CRIDA 03 row bullock drawn planter as compared to conventional sowing.

- **Acceptance of technology/process in terms of views of the farmers**

- ✓ The CRIDA 03 row bullock drawn multicrop planter can be used successfully for planting soybean, pigeon pea, black gram, green gram, bengal gram, wheat, sorghum, Maize, Groundnut etc dryland crops.
- ✓ Separate seed plates are used for each crop, which are easy to change.
- ✓ Separate furrow openers for each row enable the planter to place seed and fertilizer in the desired manner and to sow the intercrops. The row spacing is adjustable and can achieve any spacing from 22.5 to 45 cm as per the recommended crop spacing.
- ✓ Only one person/labour is required to operate the machine.
- ✓ The planter is simple in design and robust in construction. It reduces operating cost considerably through its multifunctional operation.
- ✓ The planter saves seed, fertilizer, labour and operational time considerably as compared to traditional sowing method.

- **Horizontal spread: 20**

Looking to the need and benefits of CRIDA 03 row bullock drawn planter over conventional sowing, 20 farmers purchased this planter.

- **Substitution or replacement of commodities:**

Due to adoption of CRIDA 03 row bullock drawn planter for sowing by the farmers, the area sown by conventional method was decreased. Accordingly, demand for skilled labour, which are in demand for seed dropping in the conventional system of sowing decreased.

- Social impact (formation of clubs, groups, federations, etc.): NA

- **Marketing channels**

The CRIDA 03 row bullock drawn planter is marketed commercially in Maharashtra by Rohit Steel Works, Pune – Licensed manufacturer of CRIDA. Looking to the demand for CRIDA bullock drawn planter in Latur District, a manufacturer M/s Kale Industries, Latur was identified for its production. He has signed MoU with CRIDA and sold 10 units of bullock drawn planter as Licensed manufacturer of CRIDA.

- **Establishment of process/units:**

- **Linkage with technology/development organizations**

Linkage with Central Research Institute for Dryland Agriculture, Hyderabad & Manufacturer of CRIDA equipments in Maharashtra:

- ✓ M/s Rohit Steel Works, Pune
- ✓ M/s Kale Industries, Latur

- **Models/CDs developed, if any:**

01 visual CD on Operation of CRIDA Bullock Drawn Planter

• **Places and addresses of concerned farmers or persons who could be contacted**

SN	Name of farmer	Address	Contact No.
1.	Shri. Rohit Vithal Patil	A/p Gaur, Tq. Nilanga, Dist. Latur	9421575753
2.	Shri. Sachin Gurunath Solanke	A/p Mhalangi, Tq. Chakur, Dist. Latur	9423735908
3.	Shri. Sopan Vithal Jadhav	A/p Gharola, Tq. Chakur, Dist. Latur	9421483804
4.	Shri. Ashok Dhondiram Chinte	A/p Gharola, Tq. Chakur, Dist. Latur	9923296452
5.	Shri. Pandharinath Madhavrao Pichare	A/p Valsangi, Tq. Ahmedpur, Dist. Latur	9421378454
6.	Shri. Bhagwat Jagtap	A/p Ambegaon, Tq. Ahmedpur, Dist. Latur	-
7.	Shri. Govind Patil	A/p Chobli, Tq. Ahmedpur, Dist. Latur	-
8.	Shri. Jagannath Kisanrao Rachure	A/p Pangaon, Tq. Renapur, Dist. Latur	9422610373
9.	Shri. Bhanudas Aradwad	A/p Pangaon, Tq. Renapur, Dist. Latur	9921776755
10.	Shri. Dhondiram Hanma Bhandare	A/p Pangaon, Tq. Renapur, Dist. Latur	9422611625
11.	Shri. Sudhakar Vyenkat Aname	A/p Pangaon, Tq. Renapur, Dist. Latur	-
12.	Shri. Rambhau Gangaram Bhandare	A/p Pangaon, Tq. Renapur, Dist. Latur	-
13.	Shri Vikram Dhondiram Patil	A/p Panchincholi, Tq. Nilanga, Dist. Latur	-
14.	Shri Dayanand Vithal Patil	A/p Shelgi, Tq. Nilanga, Dist. Latur	9421484515
15.	Shri Makarand Deshmukh	A/p Katpur, Tq & Dist Latur	-
16.	Shri Kailas Shivaji Shinde	A/p Kasarkheda, Tq & Dist. Latur	9423347123
17.	Shri Vyenkat Vishwanathrao Jadhav	A/p Shirsi, Tq & Dist Latur	9881174201
18.	Shri Sheshrao Gopalrao Deshpande	A/p Gaur, Tq. Nilanga, Dist. Latur	9766654231
19.	Shri Jante Vinayak Vishwanath	A/p hadolti, Tq. Chakur, Dist. Latur	9226272399
20.	Shri Shankarrao Rangrao Patil	A/p Shelgi, Tq. Nilanga, Dist. Latur	9403249714

• **Publications/papers printed: NIL**



On campus training of farmers



Off campus training of farmers at village:
Pangaon, Tq. Renapur



Training – cum – demonstration of CRIDA
planter at village Lodga, Tq. Ausa



On farm testing of planter for sowing
soybean + pigeon pea intercrop at village
Shirsi, Tq. Latur



Sowing by CRIDA 03 row planter on
farmers field
Farmer: Shri. Jagannath Kisanrao Rachure
Village Pangaon, Tq. Renapur



Sowing by CRIDA 03 row planter on
farmers field
Farmer: Shri. Rambhau Gangaram
Bhandare Village Pangaon, Tq. Renapur



Crop sown by CRIDA 03 row planter on
farmers field
Farmer: Shri Dayanand Vithal Patil,
A/p-Shelgi, Tq. Nilanga



Soybean sown by CRIDA 03 row planter
on farmers field
Farmer: Shri Ashok Dhondiram Chinte,
A/p- Gharola, Tq. Chakur

- 3.8 Give details of innovative methodology/technology developed and used for Transfer of Technology during the year**
- 3.9 Give details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photographs)**

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK

3.10 Indicate the specific training need analysis tools/methodology followed for

Identification of courses for farmers/farm women:

PRA survey: Conducted PRA survey in adopted villages and identified specific training needs of the farmers and according to that training were conducted to overcome the needs.

Group Discussion: Group discussions were arranged with the farmers of adopted villages and other farmers belonging to villages like Darji Borgaon, Gharola, AUSA, Wakdi, Gondegaon etc. Through these discussions training needs were identified and accordingly trainings were conducted.

Diagnostic visit: Through the diagnostic visits given at the farmers field in the villages in Latur Districts various pests and diseases were identified on the crops i.e. Soybean, Pigeon pea, Sugarcane and various other horticultural crops. Trainings were organized for the farmers to overcome the problems related to pests and diseases.

Farmers visit to KVK: Several farmers visited to the KVK for seeking information regarding improved agricultural equipments, technology related to transplanting technique in Pigeon pea. Accordingly trainings and demonstrations were organized for the farmers.

Identification of courses for Rural Youth

Group Discussions: By organizing group discussions the needs related to entrepreneurship development were identified. Various training programmes regarding entrepreneurship development were arranged by creating awareness among the rural youth using different training aids.

In service personnel: Functional linkage with SAU's, State Agricultural Department, AHD etc.

3.11 Field activities

- i. Number of villages adopted : 04
- ii. No. of farm families selected : 175
- iii. No. of survey/PRA conducted : 02

3.12. Activities of Soil and Water Testing Laboratory

- Status of establishment of Lab :
- 1. Year of establishment :
- 2. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost
1			
2			
3			
Total			

3. Details of samples analyzed so far :

Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized
Soil Samples				
Water Samples				
Plant Samples				
Petiole Samples				
Total				

4.0 IMPACT

4.1. Impact of KVK activities (Not to be restricted for reporting period).

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

4.2. Cases of large scale adoption (Please furnish detailed information for each case)

4.3 Details of impact analysis of KVK activities carried out during the reporting period

5.0 LINKAGES

3.1 Functional linkage with different organizations

Name of organization	Nature of linkage
State Department of Agriculture, Latur	Conducting training programs, Joint meeting ,Diagnostic team visit, Training Programmes,Monthly district workshop, Field Visit
MAU, Parbhani, College of Agri., Latur.	Joint diagnostic team visit, Supply of seed material
Agricultural Development Office. Zilla Parishad, Latur	Participation in meeting
Dept. of Animal husbandry , Latur	Joint Implementation of vaccination camp, Conducting training programmes and source for data regarding animals
State Agricultural Department TAO, Shirur Anantpal	Joint Diagnostic Survey
MPKV, Rahuri	Source for seeds and root cuttings of Phule Jaywant fodder crop for OFT
News paper	Publicity of KVK activities and publication of popular articles
Mahabeej	Supply of seed material for FLD
CRIDA, Hyderabad	Source for improved technology in farm implements and machinery's
Rohit Steel Industry, Pune	Manufacturing farm implements
Oilseeds Research Station, Latur	Weather data collection
State Agricultural Department TAO, AUSA	Conducting training programmes
State Agricultural Department TAO, Chakur	Conducting training programmes
CRIBHCO - Latur	conducting demonstration and training programme
BAIF, Pune	Source of fodder seeds
ZREAC , Aurangabad	Participation in meetings
YASHDA,Pune	IWMP training programme & participation in meeting
ATMA	Participation in meeting & extension programmes
NABARD	Training programme,Farmers club formation

5.2 List special programmes undertaken by the KVK, which have been financed by State Govt./Other Agencies

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Training programme on turmeric & ginger	March 11	ATMA,Beed	86,000.00
IWMP training programme	Jan 11	YASHDA,Pune	1,45,500.00

5.3 Details of linkage with ATMA

a) Is ATMA implemented in your district Yes/No

S. No.	Programme	Nature of linkage	Remarks
1	Training programme on ginger & turmeric cultivation	• Training • Exposure Visit • Workshop	

5.4 Give details of programmes implemented under National Horticultural Mission

S. No.	Programme	Nature of linkage	Constraints if any

5.5 Nature of linkage with National Fisheries Development Board

S. No.	Programme	Nature of linkage	Remarks

6. PERFORMANCE OF INFRASTRUCTURE IN KVK

6.1 Performance of demonstration units (other than instructional farm)

Sl. No.	Demo Unit	Year of estt.	Area	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	

KVK Instructional Farm



SUGARCANE Variety - Co 86032
Paired Row 1 X 1.8 m



NURSERY- MANGO PRODUCTION



Mango
Variety – Keshar, Nilam
R-R 5 X 5 m

Custard Apple
Variety – Dinkar, Dianna, Pune Fig,
R-R 3X4.5 m



Marigold Cultivation



Capsicum in Shade net

6.2 Performance of instructional farm (Crops) including seed production:

Name Of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.	Cost of inputs	Gross income	
Cereals									
Rice									
Pulses									
Pigeonpea	01.07.10	15.12.10	0.80	BSMR-736 BDN-708 ICPH-2740 ICPH-3762	Bulck	3.6	4080	11880	0.30 are water logged
Oilseeds									
Soybean	29.06.10	25.10.10	0.40	MAUS-71	Seed	1.5	1960	3300	Water logged
Cash Crop									
Sugarcane	05.12.10 02.02.11	-	0.80 0.20	CO-86032 COC-671 CO-91010	Seed	-	22300	-	-
Spices & Plantation crops									
Floriculture									
Marigold	05.07.10	05.10.10	0.20	Innova	Bulck	9.75	3675	9700	
Fruits									
Anola	05.08.10	-	0.40	NA7 Kanchan Krishna Chakaya	-	-	6500	-	-
Custard Apple	07.08.10	-	0.40	Purandar Balanagar H. Selection	-	-	5500	-	-
Guva	10.08.10	-	0.40	L-49	-	-	9750	-	-
Fig	03.09.10	-	0.40	Dinkar Dianna Pune Fig	-	-	4900	-	-
Mango	07.10.10	-	0.40	Keshar Nilam Beneshan	-	-	5260	-	-
Vegetables									
Capsicum	06.01.10	-	0.10	Indira	-	-	10500	-	-
Others (specify)									

6.3 Performance of production Units (bio-agents / bio pesticides/ bio fertilizers etc.,)

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1	Tricoderma	300	13000	13000	100 kg trichoderma in balance

6.4 Performance of instructional farm (livestock and fisheries production)

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	

6.5 Rainwater Harvesting

Training programmes conducted by using Rainwater Harvesting Demonstration Unit

Date	Title of the training course	Client (PF/RV/EF)	No. of Courses	No. of Participants including SC/ST			No. of SC/ST Participants		
				Male	Female	Total	Male	Female	Total

6.5 Utilization of hostel facilities

Accommodation available (No. of beds) :

Months	Title of the training course/Purpose of stay	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
April, 2010				
Total				
May, 2010				
Total				
June, 2010				
Total				
July, 2010				
Total				
August, 2010				

Total				
September, 2010				
Total				
October, 2010				
Total				
November, 2010				
Total				
December, 2010				
Total				
January, 2011	IWMP	25	02	-
Total				
February, 2011				
Total				
March, 2011	IWMP	44	05	-
Total				
Grand total		69	07	

7. FINANCIAL PERFORMANCE

7.1 Details of KVK Bank accounts

Bank account	Name of the bank	Location	Account Number
With Host Institute	LDCC Bank	Tilak Nagar, Latur	00232
With KVK	SBI Bank	Adarsh Colony, Latur	30029035891

7.2 Utilization of funds under FLD on Oilseed

Item	Released by ICAR		Expenditure		Unspent balance as on 1st April 2011
	Kharif 2010	Rabi 2010-11	Kharif 2010	Rabi 2010-11	
Inputs	NA	NA	NA	NA	NA
Extension activities					
TA/DA/POL etc.					
TOTAL					

7.3 Utilization of funds under FLD on Pulses

Item	Released by ICAR		Expenditure		Unspent balance as on 1st April 2011
	Kharif 2010	Rabi 2010-11	Kharif 2010	Rabi 2010-11	
Inputs	NA	NA	NA	NA	NA
Extension activities					
TA/DA/POL etc.					
TOTAL					

7.4 Utilization of funds under FLD on Cotton

17.4 Utilization of funds under TED on Cotton			
Item	Released by ICAR	Expenditure	Unspent balance as on 1 st April 2011
	Kharif 2010	Kharif 2010	
Inputs	NA	NA	NA
Extension activities			
TA/DA/POL etc.			
TOTAL			

7.5 Utilization of KVK funds during the year 2009 -10

Sr. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	31,90,000	31,90,000	31,47,142
2	Traveling allowances	60,000	60,000	40,220
3	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running	4,00,000	4,00,000	2,75,209
B	POL, repair of vehicles, tractor and equipments			1,17,783
C	Meals/refreshment for trainees (ceiling up to Rs.40/day/trainee be maintained) @ 75 Rs/day/trainee for residential nature	8,00,000	8,00,000	67,554
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)			4,86,592
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)			34,271
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)			82,286
G	Training of extension functionaries			-----
H	Maintenance of Farm			1,01,722
J	Library (Porches of News paper & Journals)			3,558
K	Honorium Of Trainees			2,000
L	Kissan Melas at (KVK farm)			7,700
m	Publication of extension literature			12,020
TOTAL (A)		44,50,000	44,50,000	43,78,057
B. Non-Recurring Contingencies				
1	Works	43,00,000	43,00,000	42,98,121
2	Equipments including SWTL & Furniture	-----	-----	-----
3	Vehicle (Four wheeler/Two wheeler, please specify)	-----	-----	-----
4	Library (Purchase of assets like books & journals)	-----	-----	-----
TOTAL (B)		43,00,000	43,00,000	42,98,121
C. REVOLVING FUND		-----	-----	-----
GRAND TOTAL (A+B+C)		87,50,000	87,50,000	86,76,178

Utilization of KVK funds during the year 2010-11

Sr. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	37,00,000	37,00,000	37,17,284
1.1	VI th CPC Arrears	40,47,000	40,47,000	40,30,728
2	Traveling allowances	75,000	75,000	69,892
3	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running	2,10,000	2,10,000	61,665
B	POL, repair of vehicles, tractor and equipments			1,48,335
C	Meals/refreshment for trainees (ceiling up to Rs.40/day/trainee be maintained) @ Rs. 75/day/trainee for residential nature			80,705
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)			5,38,900
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)			74,534
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)			1,51,877
G	Training of extension functionaries			-----
H	Maintenance of Farm			1,18,781
J	Library (Porches of News paper & Journals)			2,295
K	Honorium Of Trainees			-----
L	Kissan Melas (at KVK farm)			18,000
m	Publication of extension literature			4,548
TOTAL (A)		90,22,000	90,22,000	90,17,544
B. Non-Recurring Contingencies				
1	Works	47,00,000	47,00,000	51,99,400
2	Equipments including SWTL & Furniture	-----	-----	-----
3	Vehicle (Four wheeler/Two wheeler, please specify)	-----	-----	-----
4	Library (Purchase of assets like books & journals)	-----	-----	-----
TOTAL (B)		47,00,000	47,00,000	51,99,400
C. REVOLVING FUND		-----	-----	-----
GRAND TOTAL (A+B+C)		1,37,22,000	1,37,22,000	1,42,16,944

7.5 Status of revolving fund for the three years

Year	Opening balance as on 1 st April	Income during the year	Expenditure during the year	Net balance in hand as on 1 st April of each year
April 2008 to March 2009	84,393	26,934	102	1,11,225
April 2009 to March 2010	1,11,225	44,350	2,591	1,52,984
April 2010 to March 2011	1,52,984	1,21,426	1,95,366	79,044

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

8.1 Constraints

- (a) Administrative: -
- (b) Financial: -
- (c) Technical: -

District Profile

Latur district is located between 18.050 to 18.70 North latitudes and 73.250 to 77.250 East longitude in the Deccan plateau zone. It comprise ten tahasils i.e. latur, Ausa, Nilanga, Sirur Anantpal, Renapur, Udgir, Jalkot, Deoni, Ahmedpur & Chakur with 945 Villages. Latur district is situated 636 metres above the sea level.

The Manjara is the main river flowing from west to south east along with other subrivers Tavarja, Terna, Manyad & Dev.

1. General Census

According to the 2001 census the general census of the Latur district are as follows.

Total number of house holds	-	381600
Total population	-	2080285
Total Male Population	-	1075257
Total Female Population	-	1005028
Sex Ratio		
Urban Population	-	490261
Rural Population	-	1590024
Percentage of Urban Population to total population	-	23.56 %
Percentage of Rural population to total population	-	76.44 %
Population density	-	290 per sq.m.
Literacy rate	-	71.54%
Male literacy rate	-	82.90%
Female Literacy rate	-	59.40%

2. Agricultural and allied Census

Area, Production and Productivity of major crops cultivated in the district

S. No	Crop	Area (ha)	Production (Tones)	Productivity (Qtl /ha)
1	Jowar	125700	183500	1460
2	Bajri	4900	2500	509
3	Maize	4900	3800	950
4	Rice	6700	4200	625
5	Other cereal crops	700	-	-
	Total cereal crops	142900	190200	1331
6	Pigeon pea	93000	113600	1221
7	Green gram	26900	17000	632

8	Black gram	60200	44100	732
9	Other pulses	700	-	-
	Total pulses	180800	174700	966
10	Ground nut	2200	1300	608
11	Sunflower	6300	4200	663
12	Soybean	191500	431100	2251
13	Other oil seed crops	7900	1700	420
	Total oil seed crops	207900	438300	2108
14	Cotton	4600	11100	411
15	Sugarcane	41000	3485000	85
	Total cash crops	45600	3496100	496

Area, Production and Productivity of major Horticultural Crops in the district

Horticulture Fruit Crops

S. No	Crop	Area (ha)	Production (Tones)	Productivity (Qtl /ha)
1	Banana	113.80	6981.00	61.34
2	Sapota	66.95	2837.00	42.37
3	Guava	60.80	1109.00	18.24
4	Grape	822.00	17064.00	20.76
5	Mango	1069.00	4188.00	3.92
6	Mandarin	5.00	54.00	10.80
7	Sweet orange	24.40	411.00	16.84
8	Tamarind	92.50	541.00	5.85
9	Papaya	8	201	25.12
10	Anola	10.00	167.00	16.70
11	Fig	51.00	427.50	8.38
12	Watermelon	43.7	7591	-
13	Muskmelon	14	1490	-
Total Fruit Crops		2381.15	43061.5	230.32

Vegetable Crops

S. No	Crop	Area .00 hec	Production .00 Qtl	Productivity
1	Tomato	1105.69	177541.4	-
2	Brinjal	782.78	96932.35	-
3	Ladyfinger	28.3	3047.0	-
4	Chili	1461.38	97981.37	-
5	Potato	678.75	173192.3	-
6	Capsicum	8.75	964	-
7	Onion	2564.45	208121.2	-
8	Garlic	758.7	49566.05	-
Total Vegetable Crops		9526.96	1241911.6	

Spices Crops

S. No	Crop	Area .00 hec	Production .00 Qtl	Productivity
1	Turmeric	145.55	16637	-

2	Ginger	345.2	54924.3	-
3	Coriander	761.34	111132	-
Total Spices Crops		1252.09	182693.3	

Floriculture Crops

S. No	Crop	Area .00 hec	Production .00 Qtl	Productivity
1	Marigold	19327	11812.64	-
2	Shevanti	29.87	1294.1	-
3	Mogara	2.2	133.5	-
4	Rose	25.14	4300.4	-
5	Gerbera	12.1	386.5	-
6	Lilli	4.25	1246	-
7	Nishigandh	10.25	434	-
8	Aster	19.25	568.1	-
9	Gyllardia	17.75	393	-
Total Floriculture Crops		314.08	20568.3	

LIVESTOCK

Production and productivity of Livestock, poultry, fisheries etc. in the Latur district

Category	Population	Production	Productivity
Cattle			
Crossbred	32700	344.76 Lakh Kg.	5.5 Liter
Indigenous	352263	282.95 Lakh Kg.	1.8 Liter
Buffalo			
Sheep			
Crossbred	783	-	-
Indigenous	45852	26.406 MT (Wool)	0.5 Kg.
Goats	235962	57.88 Lakh kg. (Milk) 113.26 MT (Meat)	0.20-0.80 ml 12 Kg.
Pigs			
Crossbred	1172	-	-
Indigenous	8159	-	-
Rabbits	520	-	-
Poultry			
Hens	128991	-	-
Desi	114626	124.85 Lakh (Eggs)	-
Improved	14365	46.11 Lakh (Eggs)	
Ducks	104	-	-
Turkey and other	54	-	-

Fishery

Category	Area (ha)	Production (MT)	Productivity (kg/ha)
Fish	13696	3440	258.84
Marine	-	-	-
Inland	13696	3440	258.84
Prawn	-	-	-
Scampi	-	-	-
Shrimp	-	-	-

Land Utilization Statistics of the Latur district

Geographical Area	-	7157
Gross Cropped Area	-	7243
Cultivable Area	-	6523
Forest	-	213
Net Area	-	5188
Permanent Pasture	-	213
Area Sown more than once	-	2055
Cultivable Waste Land	-	241

Meteorological Data of the Latur district

District	Av. Rainfall	Humidity		Temperature	
	(mm)	AM	PM	Maxi. °C	Mini. °C
Latur	959.5	62	48	40	17

Soil Fertility Index of Latur District

Sr. No.	Taluka	Fertility Index					
		N	Availability	P	Availability	K	Availability
1	Latur	1.76	Medium High	1.18	Low	2.91	Very High
2	Renapur	1.41	Medium	1.05	Low	2.83	Very High
3	Ausa	1.68	Medium	1.13	Low	2.87	Very High
4	Nilanga	1.61	Medium	1.11	Low	2.91	Very High
5	Udgir	1.86	Medium High	1.26	Medium	2.88	Very High
6	Ahmedpur	1.89	Medium High	1.24	Low	2.89	Very High
7	Chakur	1.34	Medium	1.1	Low	2.86	Very High
	Average	1.65	Medium	1.15	Low	2.88	Very High

Agro Climatic Zones

The Latur district falls under Assured rainfall zone and Moderate rainfall zone.

Sr. No.	Characteristics
Assured rainfall zone	It comprises part of Ahemadpur, Chakur, Jalkot, Udgir Talukas with light to heavy soils with hilly area. (881-900 mm)
Moderate rainfall zone	Some part of Latur, Renapur, Ausa, Nilanga, Sirur Anantpal, Deoni Taluka is under moderate rain fall zone with annual rainfall 700 mm & heavy soils.

3. Agro Ecosystems

Latur District is divided into six zones according to Agro ecological situations prevailing in different parts of the district. These situations are based on rainfall, topography, soil type etc.

Sr. No.	Agro ecological situations	Rainfall	Soil Type	Area covered
1	CMP – I	Low rainfall	Light to medium soil with flat area	Western part of Latur & central part of Ausa
2	CMP – II	Low rainfall	Medium to heavy soil with flat area	Renapur, Northern part of S. Anantpal & east of Latur
3	CMP – III	Moderate rainfall	Medium to heavy soil with flat area	Nilanga, Western part of Udgir, East of Chakur & Deoni
4	CMP – IV	Moderate rainfall	Light medium soil	Jalkot & Western part of Ahemadpur north east of Chakur
5	CMP – V	Moderate rainfall	Light medium soil	Ahemadpur
6	CMP – VI	Moderate rainfall	Medium to heavy soil	Central part of Latur & Central part of Sirur Anantpal

4. Major and Micro-farming systems

S. No	Farming system/enterprise
1.	Dryland D. Single cropping system Sorghum (K), Soybean, Pigeon pea, Sunflower E. Inter-cropping system Sorghum + Pigeon pea (4:2/3:3), Soybean + Pigeon pea (4:2) F. Double cropping system Sorghum (K) – Bengal gram, Green gram – sorghum (R), Soybean – Bengal gram/Sorghum (R)/Safflower
2.	Irrigated Soybean – Sorghum (R)/ Groundnut
3.	Multiple cropping system Sorghum (K)- wheat – Green gram vaishakhi Soybean – Bengal gram – Summer groundnut

Irrigation potential in Latur district

Sr. No.	Particulars	Command area ha.
1	Major Projects (2)	42126
2	Medium Projects (12)	32909
3	Minor Irrigation Projects (20)	10000

5. Major Production Systems in Latur District

Major System

SN	Kharif	Rabi	Summer
1	Jowar	Bengalgram	Sugarcane
2	Soybean	Wheat, B.gram	-
3	Soybean	Sugarcane	-
4	Jowar	Safflower	-
5	Green gram/ Black gram	R.Jowar, Wheat, Safflower	Sugarcane
6	Jowar	Sunflower	-

Redgram is taken as a intercrop

Minor System

Sr. No.	Kharif	Rabi	Summer
1	Cotton	Wheat, B. gram	-
2	Cotton	-	Sunflower

6. Major agriculture and allied enterprises.

Sr. No.	Particulars / Enterprises	Existing Units
1	Dairy Units	254
2	Fisheries	78
3	Sericulture	119
4	Api-culture	
5	Agro-industries - a) Ginning & pressing cotton mills b) Oil mill c) Dal mills d) Spinning mill e) Sugar co-operative factories f) Fruit processing units g) Cashew nut processing units h) Cold storage i) Solvent extraction units	 4 65 140 4 10 5 13 11 5

Agro-ecosystem Analysis of the focus/target area - II

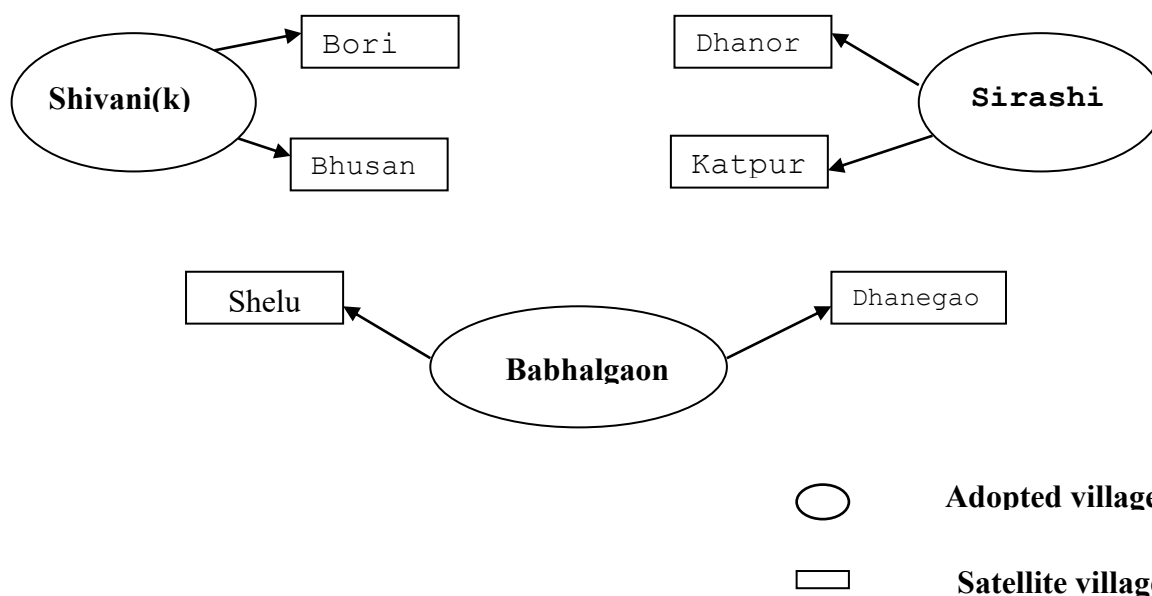
1. Names of villages focus area, target area etc.

On the basis of primary survey following three villages have been adopted by KVK, Latur

- 1) Babhalgaon,
- 2) Shivni (K.)
- 3) Sirashi

SN	Name of village	Geographic al area (Ha)	Area (Ha)		
			Kharif	Rabi	Summer
1	Babhalgaon	1637.65	1372	975	110
2	Shivni (K)	551	480	290	88
3	Sirashi	532.60	462	253	60

Adonted and satellite villages of KVK. Latur



2. Survey methods used

The survey of the adopted villages was conducted by using **questionnaire** method with individual contact to each and every family in the villages.

3. Various techniques used and brief documentation of process involved in applying the techniques used like release transact, resource map, etc.

PRA survey of the village Sirashi was conducted by applying various techniques such as Social mapping, Resource mapping, Land use pattern, Time line analysis and seasonality. Along with the participation of the farmers as an informers.

4. Analysis and conclusions

5. List of location specific problems and brief description of frequency and extent/ intensity/severity of each problem

Discipline/Thrust area	Problem	Severity
Crop production		
Plant population	Low plant population Lack of seed treatment	P
Irrigation	Lack of protective irrigation Scattered and untimely rains	P
Low yield	Lack of knowledge Lack of awareness	P
Use of fertilizers	Indiscriminate use of chemical fertilizers and pesticides leading to increasing cost of production Micro-nutrient application	P
Horticulture		
Planting material	Unavailability of good quality planting material	F
Post harvest technology	Harvesting and farm level processing in fruit crops	F
	Lack of technical knowledge of post harvest technology	F
Floriculture	Less area under floriculture	P
Plant protection	Loss in yield due to low plant protection	P
Fruit crops	Use of special horticultural practices	P
Use of fertilizers	Indiscriminate use of chemical fertilizers and pesticides leading to increasing cost of production Micro-nutrient application	P
Plant Protection		
Pigeon pea	Heavy infestation of pod borer complex & sterility mosaic	F
Black gram	Heavy infestation of powdery mildew & sucking pest complex	F
Green gram	Heavy infestation of powdery mildew & sucking pest complex	F
Soybean	Leaf minor and stem fly	P
Groundnut	Leaf minor	P
Gram/Chick pea	Pod borer & wilt	F
Sugarcane	Early shoot borer , wooly aphids & Pokka boeing	F
Agricultural Engineering		
Improved farm Implements and Machines	Labour availability	P
	Delay in operation	F
	Uneven application of inputs	F
	Drudgery prone activities causing health problems especially in farm women	F
	Occupational health hazards & accidents	F
	Availability of improved hand tools and equipment	F
Soil & water conservation	Heavy erosion of cultivable land	F
	Excess use of available water sources	F
	Improper water management	P
	Insitu moisture conservation	F
PHT & value addition	Storage of fresh fruits and vegetables	F
	scale processing & value addition	F
Pressurized irrigation system	Maintenance of micro irrigation system	F
Home science		
Foods and Nutrition	Common nutritional deficiency diseases	F

	Lack of knowledge about scientific grain storage	P
	Infectious diseases due to poor hygiene	P
	Lack of knowledge of nutritional care during early childhood, adolescent years, pregnancy and lactating period	F
	Value addition	F
	Nutrient losses during cooking process	P
Drudgery reduction	Wastage of fuel in traditional chullha	F
Drudgery reduction	Drudgery prone activities at home and farm	F

Animal Science

Sr. No.	Location specific problem	Frequency	Extent / intensity / severity
1	Low milk yield	Observed frequently	70% of cattle owners
2	Mastitis(Clinical & Sub clinical)and Cracks , pustules , wound on teat	Observed frequently in CB cow	60 % of animals are facing these type of problems
3	Less Fodder availability	- Frequently observed - Severe problem in summer season	60 % of the farmers are not having green fodder round the year. Crop residue specially wheat straw is not used as fodder
4	Outbreak of infectious diseases	Seasonally sometimes	About 30 % of the farmers not vaccinate their animal due to any reason
5	Reproductive problems and mineral deficiency diseases and disorders	Observed frequently	70% of the animal are having reproductive problems (like repeat breeding, anoestrous, watery estrus discharge, metritis, retention of placenta, Infertility etc.), 50 % animals are showing mineral deficiency symptoms (like Pica, Milk fever etc.)
6	Poor health condition and slow growth	Observed frequently	Problem is with 60 % growing animals

6. Matrix ranking of problems

7. **List of location specific thrust areas**

Crop production

- Integrated Nutrient Management (INM)
- Resource conservation technologies
- Weed management
- Irrigation management
- Sugarcane productivity, recovery and varietal planning

Plant protection

- Integrated Pest Management (IPM)
- Integrated Nutrient Management (INM)
- Awareness about seed treatment
- Implementation of bio pesticide use
- Awareness about technical knowledge regarding insecticidal and fungicidal formulation
- Judgement building about selection and use of insecticide and fungicide
- Integrated pest and disease management
- Bee keeping

Horticulture

- Improved cultivation practices in quality fruit production
- Dry land horticulture promotion
- Cultivation of fruits and nursery management
- Export potential cultivation of fruits
- Use of high yielding varieties
- Use of integrated nutrient management

Agricultural Engineering

- Soil and water conservation
- Improved farm machinery
- Drudgery reducing technology
- Production of small tools and equipment
- Small scale processing and value addition
- Post harvest technology
- Maintenance of micro irrigation system

Home Science

- Establishment of nutritional garden
- Efficient nutritious diet
- Enterpreneuership development

- Use of non-conventional energy sources
- Women and child care
- Value addition

Agricultural Extension

- Communication and information support
- Group promotion
- Empowerment of farming community
- Improving productivity and income of existing enterprises
- Enterprenuership development

Veterinary Science

- Fodder management
- Feed management
- Disease management
- Dairy management
- Nutrient management
- Backyard poultry by rearing improved birds
- Scientific goat rearing

9. List of location specific technology needs for OFT and FLD

Sr No	Needs	Technology
Crop production		
1	Low pro.ductivity of crop	- Use of micronutrient - Use of high yielding varieties - Irrigation at critical growth stages - Use of recommended chemical fertiliser at proper stages
2	Less plant population	- Maintain recommended seed rate - Gap filling and thinning
3	Labour scare city for weed management	Use of pre & post emergence herbicide
4	Organic farming	- Use of biofertilizer & biopesticide - Use of vermicompost & vermi wash
Horticulture		
1	Good quality planting material	Demonstration on use of good planting material
2	Use of special horticultural practices	Demonstration on Use of special horticultural practices to increase the yield.
Plant protection		
1	Resistant varieties	Demonstration on pest and disease resistant varieties
2	Seed treatment for prevention of diseases	Demonstration on seed treatment
3	Use of biopesticides for ecofriendly pest management	Implementation of spraying of biopesticides
4	Insecticidal and fungicidal formulations	- Aware about technical knowledge of Insecticidal and fungicidal formulations - Demonstration about importance of Insecticidal and fungicidal formulations
5	Selection and use of Insecticide and fungicide	Judgement awareness for selection and use of Insecticide and fungicide
6	IPM techniques	Demonstration for IPM techniques for different crops
7	Identification of pest , diseases and biocontrol agents	Demonstration for identification of pest , diseases and biocontrol agents
Agricultural Engineering		
1	Even seed distribution Timely sowing To overcome the problem of labour availability Increase output per unit area Drudgery reduction	- Introduction of improved seed drills - Use of improved farm tools and equipment - Use of women friendly improved tools and equipment
2	Arrest erosion of cultivable land In-situ moisture conservation	- Adoption of soil & water conservation techniques - Use of dry land technology and contour cultivation
3	On farm storage of fresh fruits and vegetables	Use of low cost cool chamber
4	Maintenance of micro irrigation system	Work planning and Maintenance of micro irrigation system scheduling
Home Science		
1	Adequacy in all nutrients and prevention of deficiency diseases	Appropriate nutritional practices for sound health
2	Demonstration of solar devices such as solar cooker, solar drier, and biogas	Resource conservation technology

	Demonstration on use of fuel and energy saving device like improved chullha	
3	Processing of fruits and vegetables Such as juices, jams ,jellies, dried fruits, canned fruits etc. Dehydration of vegetables	▪ Value addition
4	Improving in occupational health of the farm women	▪ Drudgery reduction
5	Motivating the parents for obtaining the overall development of children	▪ Understanding the domains of developments
Animal Science		
1	Feeding green fodder along with dry fodder for better milk yield	▪ Introduction of new varieties of fodder crops ▪ Silage making
2	Increasing milk production and reproduction	▪ Use of mineral mixture in cows and buffaloes ▪ Feeding Azolla to the cows and buffalo
3	Minimise problems of repeat breeding ,long inter calving period and low conception rate	▪ Use of cryscope to determine right time of AI in cattle and buffalo ▪ Use of mineral mixture in cattle and buffaloes
4	Minimise incidence of infectious and non infectious diseases	▪ Use of dewormer in cattle and buffalo ▪ Dusting and spraying of ectoparasiticides
5	Minimise calf mortality	▪ Use of dewormer in calf ▪ Use of calf starter
6	Minimise fodder losses	▪ Use of chaff cutter for cutting fodder ▪ Use of feed alley for feeding fodder to the animals
7	Mastitis in crossbred cattle	▪ CMT testing for prevention of mastitis ▪ Use of 'Teat Dip' for dipping teat after milking
8	Backyard poultry	▪ Improved birds for backyard poultry
9	Proper weight gain in goat	▪ Concentrate feeding to the goat ▪ Kid fattening by Kid ration
10	Improving quality and utilisation of poor quality roughages	▪ Treatment of poor quality roughages

10 Matrix ranking of technologies

11 List of location specific training needs

- Capacity building and Skill enhancement training Programme
- Technical knowledge gain training Programme

For reducing gap in communication and information

Technology Inventory and Activity Chart - III

Include

1. Names of research institutes, research stations, regional centres of NARS (SAU and ICAR) and other public and private bodies having relevance to location specific technology needs
2. Inventory of latest technology available *

Sl. No	Technology	Crop/ enterprise	Year of release or recommendation of technology	Source of technology	Reference/citation
Crop production					
1.	MAUS-71	Soybean	2001-02	MAU, Parbhani	AIRCP on Soybean, MAU, Parbhani
3.	BSMR-853	Pigeon pea	2000-01	MAU, Parbhani	
4.	Vishal	Bengal gram	20004	MPKV, Rahuri	
Horticulture					
1	Use of cultar	Mango		BSKKV, Dapoli	-
Plant protection					
1.	To see the effect of addi- tion of 2 % urea in reco mmended dose of pest icide for control of sugarcane Whitefly	Sugarcane	2004	VSI, Pune	-
2.	Management of Leaf eating caterpillars by spraying of Beaveria bassania	Soybean	2004	MAU, Parbhani	Pg no. 05 Inventory of Technologies for Marath wada,MAU, Parbhani 2008
3.	Seed treatment for Early shoot fly fly	Rabi jowar	---	MAU, Parbhani	Pg no. 05 Inventory of Technologies for Marath wada,MAU, Parbhani 2008
4.	IPM techniques	Chick pea	--	MAU, Parbhani	Pg no. Inventory of Technologies for Marathwada,MAU ,Parbhani 2008
5.	IPM techniques	Soybean	---	MAU, Parbhani	Pg no. 18 Inventory of Technologies for Marathwada,MAU ,Parbhani 2008
Agricultural Engineering					
1.	CRIDA bullock drawn multi-crop planter-cum-ferti drill	Improved farm implements	-	CRIDA, Hyderabad	CRIDA implements for timely sowing of dryland crops, CRIDA,

					Hyderabad.2004
2.	Bullock drawn MAU seed-cum-ferti drill	Improved farm implements	2005	MAU, Parbhani	Joint Agresco 2005
3.	Wheel hoe	Improved farm implements	-	CRIDA, Hyderabad MPKV, Rahuri	Technical Bulletin No. NATP/ MMPDM/CRIDA/ TB-22/2004
4.	Groundnut Decorticator	Improved farm implements	-	CIAE, Bhopal/ MAU, Parbhani	Technical Bulletin No. CIAE/2007/128 (Women friendly improved farm tools & equipment p:28-30)
Home science					
1.	Nutritional management	Soya poha laddu	2009	MAU, parbhani	-
2.	Drudgery reducing technology	smokeless chullha	1986	ARTI, Pune	-
3	Drudgery reducing technology	Long handle khurpee	-	MAU,Parbhani	-
Animal Science					
1	Azolla feeding to dairy animal	Dairy	2007	Vivekananda Kendra-Natural Resources Development Project, Kanyakumari, Tamilnadu	Dr. P. K. Pillai, S. Premalatha and S.Rajamony-Leisa India, march, 2002; ICAR bulletin - 2007 TNAU-Agricultural portal
2	Disinfection of teats and udder of cow by dip cup and spray method to reduce incidence of mastitis	Dairy	2006	NDDDB	-
3	New high yielding hybrid napier variety with less oxalate content Phule Jaywant (RBN-13)	Fodder crop	2006	Forage crop research project, MPKV, Rahuri	Krishi Darshani, MPKV, Rahuri 2007 p: 70, Anarse et.al,2007 Journal of Maharashtra Agricultural University, 32 (2); 242-244
4	Mineral Mixture feeding to CB cow	Dairy	1992	NDRI, Karnal IVRI, Izzatnagar	-
5	Soybean straw feeding to buffalo	Dairy	2009	Dept. of Animal Husbandry and Dairy Science, MAU, Parbhani	S.B. Adangale et.al. Indian Journal of Animal Research, 2009, Vol.:43, issue-2
6	Cultivation of Lucerne (RL-88)	Fodder	1995&1996	University of agricultural sciences, Bangalore	University of agricultural sciences, Bangalore

8	Urea treatment on wheat straw	Dairy	1998	PKV- Akola	MAFSU-website, Krishi Darshani, MPKV, Rahuri 2009 p: 234,
9	Backyard poultry-rearing with improved birds (Giriraja, Vanraj, Grampriya,	Back yard poultry	1997&2005	Project Director on Poultry-Hyderabad	website-Pdonpoultry.org
10	Silage making	Fodder	2009	MPKV, Rahuri MAU, Parbhani	Krishi Darshani, MPKV, Rahuri 2009 p: 233-234, Krishi Dainandini, MAU, 2008 p- 281
11	Use of dewormer	Dairy	1998	MAU, Parbhani	Krishi Dainandini, MAU, 2008 p- 281
12	Feeding of concentrates	Dairy	-	MAU, Parbhani	Krishi Dainandini, MAU, 2010 p- 214

3. Activity Chart

Crop/Animal/Enterprise	Problem	Cause	Solution	Activity	Reference of Technology
Crop production					
Soybean	Less productivity	Imbalance fertilizer application	Application of recommended dose of Nutrients	FLD to demonstrate effect of recommended dose of nutrient	
Groundnut	Less productivity	No sole cropping and imbalanced fertiliser application	Sole cropping and application of recommended dose of nutrient	FLD to demonstrate effect of recommended dose of nutrient and sole cropping	
Pigeon pea	Less productivity	Imbalanced fertilizer management and IPM	Application of recommended dose of nutrient	FLD to demonstrate effect of recommended dose of nutrient and IPM	
Bengal gram	Less productivity	Nutrient management and IPM	Application of recommended dose of nutrient	FLD to demonstrate effect of recommended dose of nutrient and IPM	
Horticulture					
Mango	Low yield in mango	1. Irregular bearing 2. Fruit drop in mango	1. Use of cultar for regular bearing 2. Spraying of N.A.A. 20PPM at peanut stage	Assessment of Use of cultar Training on Use of cultar FLD & training on use of growth regulators	
Plant Protection					
				1.	
Sugar	Heavy	High dose of	Use of	1) Assessment on	VSI,

cane	infestation of whitefly	urea Ill drainage Lack of timely plant protection measures	recommended dose of urea Give well drainage Spraying of Dichlorovas at early stages.	use of 2% urea in recommended dose of DDVP 2) Training and demonstration	Pune
Soybean	Low yield in Soybean	Lack of seed treatment Lack of timely plant protection measures Heavy use of pesticide	Adopt seed treatment Spray schedule at proper stages Use of IPM tools	Single component FLD to demonstrate effect of recommended IPM techniques Training and FLD Programme on IPM of soybean pests	Sl. No. of technology inventory 2008
Rabi jowar	High mortality of early seedling in rabi jowar	1. Heavy infestation of early stem borer 2. Lack of seed treatment	4) Adopt seed treatment 5) Spray schedule at proper stages 6) Use of IPM tools	Single component FLD to demonstrate effect of seed treatment of imidacloprid	Sl. No. 37 of technology inventory 2008
Chickpea	Mortality of early seedling due to wilt	1) Heavy infestation of wilt 2) Lack of seed treatment	Adopt seed treatment Use of IPM tools	Single component FLD to demonstrate effect of seed treatment of Trichoderma	Sl. No. 37 of technology inventory 2008
Agricultural. Engineering					
Improved farm implements	Uneven seed distribution, late sowing, less/low use of chemical fertilizer	1) Use of traditional drills 2) Unavailability of skilled labour 3) Low output per unit area	1) Introduction of improved seed cum ferti drill/planter	1) OFT on refinement of CRIDA planter 2) Training on use and repair of improved sowing equipment	CRIDA implements for timely sowing of dryland crops, CRIDA, Hyderabad. 2004
Improved farm implements	Occupational health hazards and low output	1) Use of traditional equipment/methods 2) Use of traditional equipment by farm women primarily developed for male workers	1) Introduction of improved equipment 2) Introduction of women friendly technologies	1) OFT on mechanical weeders 2) Single component FLD to demonstrate effect of use of groundnut decorticator 3) Training programme on women friendly technologies 4) Training programme on improved farm tools and equipment	Technical Bulletin No. NATP/MMPDM/CRIDA/TB-22/2004 Technical Bulletin No. CIAE/2007/128 (Women friendly improved farm tools & equipment p:28-30)
Home science					
Soya	Insufficient	Inadequate	Promotion for	1.OFT	MAU

poha Laddu	growth in preschool children	supply of nutritional diet	consumption of protein-energy rich recipes	(Assessment) on use of soya poha laddu to prevent malnutrition among preschool children 2.Training Programme on symptoms and causes of malnutrition & its remedial diet	Parbhani
Smokeless Chullha	unavailability of fuel, health hazards due to traditional chullha, cooking food on traditional chullha is a time and energy consuming activity	unawareness about Smokeless Chullha	motivating the farm women for using fuel and energy saving smokeless chullha	OFT (Assessment) and method demonstration on smokeless chullha	ARTI Institute
Long Handle Khurpee	Occupational health hazards	Unawareness about improved and Drudgery reducing devices	Use of improved farm implement	FLD on use of long handle khurpee	MAU Parbhani
Animal Sciences					
Cross bred Cow	Low milk yield, Unbalanced diet	Under feeding of concentrates due to high cost	Feeding azolla along with regular feed	Training Oft(Assessment)	Dr. P. K. Pillai, S. Premalatha and S.Rajamony-Leisa India, march, 2002; ICAR bulletin - 2007 TNAU-Agricultural portal
Cross bred Cow	Mastitis	Unhygienic condition in the farm, Improper milking technique, No use of teat disinfectants after milking	Disinfection of teats and udder of cow by dip cup and spray method to reduce incidence of mastitis	Training FLD Preparation of folder	NDDB
Cross bred Cow	Repeat breeding, anoestrous, low milk yield and mineral deficiency diseases and disorders	No feeding of mineral mixture, Deficiency of minerals in the fodder, stress of milk production on animals	feeding of mineral mixture daily to the animals	Training FLD	NDRI, Karnal IVRI, Izzatnagar
Cross bred Cow	Low milk yield	Under feeding of concentrates Feeding of CSC	Feeding of recommended dose of	OFT Training	MAU, Parbhani

		as a protein source	concentrate		
Fodder	No leguminous green fodder available for the milking animals, Poor quality green fodder	No area under cultivation of Lucerne fodder crop High cost of seed and seed not locally available	Cultivation of Lucerne for green fodder Supply quality seed material to the farmers	Training FLD	University of agricultural sciences, Bangalore
Fodder	Shortage of fodder, Poor quality fodder, Low fodder yield	No cultivation of improved varieties, Improper cultivation methods, Water scarcity	Cultivation of high yielding new hybrid napier variety Phule Jaywant (RBN-13)	Training FLD	Forage crop research project, MPKV, Rahuri
Wheat straw	In spite of fodder scarcity in the summer and early monsoon season farmers burnt available wheat straw	Animal cannot like wheat straw as it is, because of no taste and smell, Poor quality roughage, Unconventional fodder	Wheat straw treatment with urea Feeding by mixing with available green fodder Soaking in water	Training and Method demonstration	PKV, Akola

1. Details of each of the technology under Assessment, Refinement and demonstration

Crop Production

Detail of OFT

Control of Iron Chlorosis in sugar cane

- FeSO₄ (Ferrous sulphate) soil application

Application of Sulphur in Soybean

- Sulphur application

Cultivation of Pigeon pea by transplanting method

- Transplanting of pigeon pea

Detail of FLD

MAUS-71 (Samrudhi)

- Purple colored flower and bold grains
- Pod remains unbroken for 10 to 12 days after maturity
- Suitable for inter crop

TAG-26

- Dormancy of 15 days
- Suitable for Rabi and Summer season.

BSMR-853 (Vaishaly)

- Medium duration (170-175 days)
- White bold seeded
- Wilt and sterility mosaic resistant
- Red colored flowers
- Suitable for inter crop between soybean and black gram

Vishal

- Suitable for dry land and irrigated cultivation
- Bold grains

Horticulture

Detail of OFT

Assessment of rejuvenation of old & unproductive orchards of aonla

- Cutting of old & unproductive trees in Dec-Jan at a height of 2.5 to 3.0 m above ground level
- Pasting cut portion with cowdung/copper oxychloride
- Pruning of selected shoots during May – June
- Yield starts from IIIrd year onwards

Assessment of use of cultar for regular bearing in mango

- Cultar Application – 20 ml/plant during August
- Alongwith cultar application of 50 kg compost + 3 kg urea + 3 kg SSP + 2 kg SOP

Use of improved variety Phule Samarth

- Released by MPKV, Rahuri in 2005
- Local selection
- Colour dark red
- Less bolting
- Good keeping quality
- Yield 250 – 270 q/ha

FLD

Use of growth regulator

- Application of NAA to avoid fruit drop in mango
- Spraying of 20 ppm NAA at pea size of fruits

Use of seedlings trays to get quality seedlings of vegetables

- Sowing of seeds in seedling trays
- The seedlings develop with good quality and well developed root of seedlings

Plant Protection

FLD: IPM Soybean

- Use of pheromone trap
- Spraying 5 % NSKE Extract
- Spraying of *Beauveria bassiana*

FLD: Management of shoot fly in Rabi jowar

- Early sowing (first fortnight of July).
- Use of higher seed rate.
- Removal of infested plants.
- Seed treatment with Thimoxam.
- Need base spray application
- Removal of stubbles

FLD: IPM of Bengal gram

- Early sowing (first fortnight of July).
- Use of optimum seed rate.
- Removal of infested plants.
- Seed treatment with *Trichoderma Viridae*
- Need base spray application

FLD: Management of Hoppers & Powdery mildew in mango

- Hoppers suck the sap from flower panicles due to which flowers dry up and drop prematurely, leaves become curled. and
- 1st spray – 15-20 days before panicle emergence / budburst spray, Imidacloprid 17.8 SL (@1.5ml) + Wettable Sulphur (3g) /L on the entire tree.
- 2nd Spray – To control leaf hopper at budburst stage spray or imidachloprid 17.8 SL (0.3ml) + Hexaconazole (2ml) / L.
- 3rd spray – To control powdery mildew and hopper at flowering and fruit set stage spray endosulphan (2ml) + karathane (1ml) /L.
- Spray – At marble fruit stage spray Multi K (10g) /L + Copper Oxy chloride (3g) /l.
- Add adjuvant @ 0.5m /L to spray solution

OFT: Management of early shoot borer using Water traps:

- This specially designed water trap consists of an adaptor, basin to hold water and a lure holder with canopy.
- The trap has to be fixed on ground so that the basin is 60 cm. above ground level.
- The adapter provided with the basin should be used to fit the trap onto a stick which is driven into the ground.
- The trap is readied for use by putting water into the basin up to the rim and adding few drops of oil such as kerosene.
- The lure has to be fixed to the lure holder and fixed on one of the studs provided in the canopy.
- The pheromone lures for other types of borers should be fixed only after thoroughly washing one's hands with soap and water to prevent migration of pheromone odours from one type of sugarcane borer lure to another.
- Adult male moths, attracted by the lure, fly around it, fall and drown in the water.
- Catches can be easily identified and counted, as moths remain intact.
- Water trap can be removed at harvest time and stored for re-use.

OFT: Management of pomegranate Stem borer, shot hole borer by different physical and chemical practices

- Soil drenching with chlorpyrifos 20EC 5 ml/litre or lindane 20 EC 5 ml/litre near the collar region of the stem.
- Examine branch for holes/excreta/ gummosis. If detected, inject with dichlorvos @ 10 ml/lit. in holes and seal the hole with mud
- Paste application of Chlorpyrifos 20 EC @ 5 ml + Neem oil 1 ml + Caw (geru) @ 400 g + COC 2.5 g in one litre of water. application in a year, preferably in June-July

OFT: Management of brinjal fruit and shoot borer by integrated pest management techniques

- Timely Mechanical removal of affected shoots & fruit from the field at weekly interval
- Installation of pheromone traps @ 75 per ha., starting from flower bud initiation (45 days old crop) till monthly intervals
- Mass trapping involves catching the insects in a baited trap. In this case the bait is the female-produced sex pheromone used to catch the adult male moth.
- The lure is highly attractive to male moths and specific to the target species. The purpose of this activity is to reduce the chances of female moths finding a mate so that she is unable to produce viable offspring. .
- Spraying of Azadirachtin 1500 ppm (Neem based botanicals)@1500 ml/ha. gives repellent role for oviposition

Agricultural Engineering**Technology Assessment****CIAE Rotary Dibbler**

It is manually operated push type equipment for dibbling bold and medium size seeds in rows at uniform spacing in well prepared soil.

It is suitable for dibbling maize, soybean, sorghum, pigeon pea, and Bengal gram in black or

alluvial soil region.

It consists of seed hopper, seed delivery jaw, jaw operating lever, wooden roller, handle, transport cum press wheel etc.

Field capacity: 0.046 ha/h

Jyoti planter (Single row)

It is single row manually operated equipment for dibbling medium to bold seeds in rows into well prepared soil.

It is suitable for dibbling sorghum, soybean, green gram, wheat, maize, safflower, sunflower, groundnut, pigeon pea etc.

It consists of tyne, vertical plate metering mechanism, handle, transport cum drive wheel, seed box with delivery system.

Field capacity: 0.05 ha/h

Sugarcane bud chipper

The device consists of a platform, hemi spherical chipping knife, linkage system and handle. It is used to chip out the bud from sugarcane for sowing purpose and for tissue culture.

Technology Refinement

CRIDA bullock drawn planter

It is an animal drawn equipment with inclined plate metering mechanism for planting soybean, pigeon pea, sorghum, Bengal gram, maize, ground nut, pea etc. crops. It consists of seed & fertilizer boxes, drive wheel, ground depth control wheel, furrow opener and chain & sprocket drive system.

Capacity: 1.5-1.8 ha/day

Front Line Demonstration

Seed treatment drum

It consists of frame, handle and cylindrical drum. The cylindrical drum is mounted on a tripod angle frame. Three pieces of mild steel flat are welded inside the drum for helping in uniform mixing. A batch of 20 kg seeds requires about 5-6 min to complete operation ie filling seeds, treating and emptying.

Capacity: 2 q/h

Home Science

OFT (Assessment)- Use of soya poha laddu to prevent malnutrition among preschool children

- It improves the consumption of protein energy rich recipes for prevention of malnutrition
- one soya poha laddu provides 14 gm protein and 512 energy per day per child

FLD on Smokeless chullha

Characters

- Fuel requirement is minimum than smokeless chullha
- Comparatively smoke from improved chullha is very less than traditional chullha
- Five improved chullha is to be assessed

Veterinary sciences

On farm testing

Assessment

OFT 1:

Azolla feeding to increase milk production in CB cow

Azolla:

Azolla is very rich in protein, essential amino acids, vitamins (Vit. A, Vit. B12 and Beta Carotene), growth promoter intermediates and minerals like calcium, phosphorus, potassium, ferrous, copper, magnesium etc. On a dry weight basis azolla is constituted of protein content 25-35 %, mineral content 10-15 %, and combination of amino acids, bioactive substances, and biopolymers 7-10 %. Carbohydrate and oil content in azolla is very low. Due to that it is economic and efficient feed for animals. Moreover, azolla can be easily digested by livestock owing to its high protein and low lignin content.

Animal: Crossbred Cow
No. of farmers: 05
Feeding of azolla: 2 kg/cow/day
Critical inputs: Azolla production unit
Azolla production Pit size; 2M x 2M x 0.2M
No. of Azolla production pits: 2/ farmers
Azolla production: azolla biomass 300-350 gms/Sq. meter/day

OFT 2:

Assessment of method of application of disinfectant on teats to reduce incidence of mastitis

Animal: Crossbred cow

No. of farmers: 10

No of animals: 10

Disinfectant to be used: Depol (Delaval): 0.71 % w/v contains Iodine, Glycerine and Sorbitol

Dose & Method of application:

For dipping teats: Diluted 1:9 with water for dipping teat after milking

For spraying on teats and udder: Diluted 1:9 with water for spraying on teat and udder after milking

Critical inputs supplied: Iodine disinfectant, dip cup and plastic hand spray

FLD 1:

Feeding of mineral mixture to CB cow

Animal: Crossbred cow

Critical inputs: mineral mixture

Dose of feeding: 30 gms /day/cow for 60 days

FLD 2:

On farm testing of Lucerne (RL-88) fodder crop

Crop: Lucerne

Variety: RL-88

No. of farmers: 08

Area (ha): 0.80

Critical inputs: Seed of Lucerne (RL-88)

FLD 3:

Hybrid Napier fodder crop Phule Jaywant (RBN-13)

- Perennial forage crop
- Gives more fodder production
- Less oxalic acid content (1.21 %)
- Profuse growth after cutting
- Tillers length good
- Leaf are smooth, large and having good width
- Planting: 90x90 cm
- Cutting/years-06
- Production- 200-250 T/ha
- **No. of farmers :** 10
- **Area (ha) :** 01
- Critical inputs: Root cutting/stem cutting of Phule Jaywant

POPULAR ARTICLES

SN	Title of Popular Article
1.	.Improved sugarcane bud chipper
4	.Information of bullock drawn seed planter
5	.More Production with low cost from CRIDA seed planter
6	More income by biofertilizer seed treatment
7	Improved soybean production technology
8	Farmers group organization –Todays need
9	Successful demonstration of CRIDA seed planter by KVK,Latur
10	Salient features of maize production
11	Cultivation of green fodder crop-1
12	Cultivation of green fodder crop-2
13	Milk production and animal management in rainy season
14	Use of Azolla as animal feed -1

List of Folder/Pamphlet

SN	Title of Folder
1.	Folder- 1.Azolla – a sustainable animal feed
2.	Pamphlets -1.Plant protection schedule for pomegranate crop

ANNEXURE III

NEWS PAPER COVERAGE

SN	Title of News
1.	Need of farm ponds for irrigation
2.	Organization of farm womens rally by KVK
3.	Increase productivity per acre of pulses
4.	Vaccination of Crops
5.	Promote farmers for more production with less inputs
6.	Cultivation of pomegranate by improved technology
7.	Response for farm womens rally
8.	Pomegranate farming for development of farmers
9.	Guidance on pomegranate from exposure visit
10.	Good response for Manjara Stall
11.	Discussion on sugarcane management by Agrowon
12.	Good response for sugarcane, Onion and soil testing programme
13.	Technical guidance of capsicum
14.	Good response for PRA training programme

Proceeding of Scientific Advisory Committee (SAC) Meeting

Held on 04th August 2010

The Fourth Scientific Advisory Committee (SAC) meeting of Manjara Charitable Trust's, Manjara Krishi Vigyan Kendra, Latur was held on 04th August 2010 in the presence of Hon. Director of Extension Education, Marathwada Agricultural University, Parbhani. Other SAC members/dignitaries present for the meeting are as follows:

- Dr. S.D. More, Director, Directorate of Extension Education, Marathwada Agricultural University, Parbhani.
- Shri. Mote T.S., DSAO, Latur
- Shri. Bhargande, ADO, Zillha Parishad, Latur.
- Shri. Dr. U.G. Kulkarni, Associate Dean, College of Agricultural, Marathwada Agricultural University, Parbhani.
- Shri. M.N. Raiwad, DGM, NABARD, Latur
- Sanjay Deshmukh, Co-ordinator, M.C.T, Latur.
- Shri. Syed Nazir M.Y. Syed, Trustee, Manjara Charitable Trust, Latur.
- Shri. D.S. Bankar, Manager Dist. Industries Center, Latur.
- Narayan Pawar, Programme .officer, AIR, Osmanabad.
- Ankush Dynoba Lonkar, Progressive Farmer, Darjiborgaon, Latur.
- Shinde Shrikrishna Sadashivrao, , Progressive Farmer, Sugaon Tq. Chakur, Latur
- Prof. B.D. Thakur, Extension Agronomist, Agricultural College, Latur
- Deepratna P. Nilangekar, D.D. News Representative, Latur
- E.R. Mule, Industrial Inspector, DIC, Latur.
- J.M. Shaikh, Assistant Fishery Development Officer, Latur
- Mrs. P.S. Ganacharya, Sericulture Officer, Latur
- Mrs. Urmila Dhanraj Aharekar, Female Farmer Representative, Bhabalgaon, Latur
- Mrs. Premala Pralhad Awate, Female Farmer Representative, Bhabalgaon, Latur

In the beginning Shri.Digrase S.S. Programme Co-ordinator I/C, Welcomed all the SAC members, dignitaries, mnitees, trustee and co-ordinator trust. He has presented the progress report of 2009-10. The report includes the results of On Farm Testing, Front Line Demonstrations, Trainings, Other extension activities and farm development activities. Further, he presented the action plan for kharif 2010-11. Finally he has requested all the SAC members to give valuable suggestions.

The suggestions given by SAC members for efficient transfer of technologies are as follows:

1. Shri. M.N. Raiwad, DGM, NABARD, Latur

- Extend the various schemes of NABARD for farmers through various activities.
- Biogas plant scheme.
- Formation of farmers club based on commodity.
- Initiate free SMS services to farmers.

2. Bhargande, ADO, Latur

- Compile database of CRIDA planter owner in the district.
- Promote farmers to use improved technologies.

3. Shri. B.D. Thakur, Extension Agronomist, CA, MAU, Parbhani

- To overcome the problem of labour security during peak weeding season, promote farmers to and pre-emergence weedicides.

4. Dr. U.G. Kulkarni, Associate Dean& Principal, College of Agriculture (MAU), Latur

- Consider age of plantation during testing of cultar on mango orchard.
- Maintain quality of biofertilizer produced by KVK.
- Conduct on farm testing on pre & post emergence weedicides.

5. Shri. Narayan Pawar, Programme Officer, AIR, Osmanabad

- If provided, the weekly advisory sheet for major crops will be broadcasted by AIR, Osmanabad.

6. Dr. T.S. Mote, DSAO, Latur

- Organize skill development based trainings for rural youth.
- Packaging of biofertilizer produced by KVK may be as good as private companies.
- Prepare a success story on 'Azolla Production Unit.'
- Conduct demonstrations of 2-3 varieties in demonstrated shednet and also record lux-light database during crop production in shednet of KVK.
- Establish advanced vegetable nursery and use, use & throw trays for seedling production.
- Submit proposal for construction of polyhouse from ATMA Scheme.
- Submit proposal on 'Farm Implement Museum' upto Rs.5.00 Lakh to be granted from Central Government Scheme.

7. S.D. More, DEE, MAU, Parbhani

- Compile soil health map of Latur District.
- Prepare micronutrient led recommendation based on soil fertility map for Latur District.
- Transfer technologies related to conservation agriculture practices.

- Promote and train farmers for adopting precision farming technologies.
- Organize training on use, repair and maintenance of micro irrigation technologies.
- Focus on diversification of agriculture.
- Compile impact analysis of various activities conducted by KVK.
- Involve all the line departments in various programmes of KVK.
- Conduct demonstrations on Major dryland crops of the District.

The meeting concluded with the vote of thanks by Shri Kawade S.C., SMS (Agric. Engg.), MKVK, Latur