

Executive Summary

Salient Achievements of KVK, Latur

On Farm Testing (Assessment)

Crop / Enterprise	Technology	Salient Result
Cash crop/ Sugarcane	Management of sugarcane whitefly by use of 2% urea in recommended dose of DDVP	➤ the infestation was mostly observe on cv. CO-671 ➤ The use of 2%urea in recommended dose of 1100ml DDVP in 1000 lit of water gives 81.90 % control of pupal stage of sugarcane white fly after 5th day of spraying. Also,
Farm Machinery	CRIDA 4 row bullock drawn planter	➤ CRIDA planter saves 18.5 % seed, 63.8 % labour, 42.3 % cost of operation and 27.7 % time over the conventional method of sowing by <i>tifan</i> or <i>dufan</i> ➤ The cost of CRIDA bullock drawn planter is slightly higher ➤ Needs refinement to make it suitable for location specific conditions
Fodder crop	Phule Jaywant	➤ Phule Jaywant fodder crop gives 16.97 % more yield, 34.06% More tillers per plant and 16.16 % less cost of production as compared to other napier fodder crops (Gajraj, Phule Yashwant and CO₃) ➤ Stem is more juicy ➤ Leaf blade and surface is without hairs ➤ less wastage of fodder after feeding to the animal than other napier fodder crops (Gajraj, Phule Yashwant and CO₃)
Adolescent Girls	Iron rich Seasmum Chikki (50 g Seasmum + 50 g Jaggary + 5 g garden Cress seeds)	➤ The use of iron rich food increases the Hb level by 14.87% and reduces clinical sign and symptoms by 70% as compared to traditional food ie Roti + Any type of Subji or Dal
Drudgery reducing technology	Smokeless chullha (ARTI, Pune)	➤ Smokeless chullha saves 46.5 % fuel and it is safe for eyes, & also no need to plaster it frequently as compared to traditional chulla used by the FF
Farm Machinery	Mechanical weeder (Wheel hoe weeder)	➤ Manual wheel hoe give three times more output (0.1 ha/day), ➤ Saves 63.9 % labour & time over the conventional method of weeding by <i>khurpi</i> ➤ Reduces the drudgery of operator considerably

On Farm Testing (Refinement)

Farm Machinery	CRIDA 3 row bullock drawn planter	➤ Refined CRIDA 3 row BD planter increased field capacity & field efficiency by 23 to 28 & 14 to 18 % respectively as compared to CRIDA 4 row BD planter over the traditional sowing by tifa or dufan. ➤ Similarly increases saving in labour & cost of operation by 61 to 64 & 38 to 42 % respectively as compared to CRIDA 4 row BD planter and traditional sowing by tifa or dufan.
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Front Line Demonstrations

Soybean	MAUS-71	➤ The yield of Soybean MAUS-71 was 23.8 % more than JS-335
Pigeon pea	BSMR-853 IPM	➤ The use of IPM technique in Pigeon pea increased yield by 18.2 %
Bengal gram	Vishal & IPM	➤ The use of IPM technique in Bengal gram - Vishal increased yield by 14 % as compared to local practice ie cultivation of Vijay
Soybean	IPM	➤ The use of IPM technique in Soybean increased yield by 21.6 %
Bengalgram	IPM	➤ The use of IPM technique in Bengal gram increased yield by 8.7 %
Rabi Jawar	Seed treatment of imidocloprid 70 WP for control of early shootfly	➤ The seed treatment of imidacloprid 70 % WP for control of early shoot fly in R. Jowar increased yield by 8.15% as compared traditional practice.
Farm Machinery	Groundnut decorticator	➤ The productivity of the workers increased tremendously (by 96.5 %) than traditional practice apart from the safety of the worker ➤ Saves labour and cost of operation by 69.5 % respectively
Goat	Ivermectin injection	➤ Use of Ivermectin inj. as a paraciticide in goat reduces disease incidence up to 62.5% and increase body weight up to 41.5 %
Buffalo	Mineral mixture feeding	➤ Feeding of mineral mixture increases the milk production up to 12.8 % and improves the health condition of the animal
Drudgery reducing technology	Sarai Cooker (ARTI, Pune)	➤ Sarai cooker saves 21 & 71 % time and fuel respectively than traditional method
Drudgery reducing technology	Smokeless chullha	➤ Smokeless chullha saves 46.5 % fuel and it is safe for eyes & also no need as compared to traditional chullha

Training Programmes

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

Clients	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
A) ON Campus										
(A) Farmers & Farm Women	07	119	-	119	23	-	23	142	-	142
(B) Rural youth	03	22	09	31	10	04	14	32	13	45
B) OFF Campus										
(A) Farmers & Farm Women	43	297	244	541	86	120	206	383	364	747
(B) Rural youth	04	21	40	61	08	24	32	29	64	93
(C) Extension Personnel	03	48	-	48	30	-	30	78	-	78
Grand Total	60	507	293	800	157	148	305	664	441	1105

Vocational training programmes

Vocational	No. of Courses	No. of Participants including SC/ST			No. of SC/STParticipants		
		Male	Female	Total	Male	Female	Total
Rural youth	01	-	24	24	-	06	06

Sponsored Training Programmes

Client	No. of Courses	No. of Participants including SC/ST			No. of SC/STParticipants		
		Male	Female	Total	Male	Female	Total
PF/PFW	13	65	126	191	25	70	95

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1. GENERAL INFORMATION ABOUT THE KVK

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

MANJARA KRISHI VIGYAN KENDRA, LATUR

Address	Telephone		E mail
Manjara Krishi Vigyan Kendra Latur Addi.MIDC Plot. No - P-160 (B) Harangual (B) Tq.Dist.Latur	Office 02382-267411	FAX 02382-267411	kvklatur@yahoo.co.in

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

Manjara Charitable Trust

Address	Telephone		E mail
	Office	FAX	
Manjara Krishi Vigyan Kendra Latur Addi.MIDC Plot. No - P-160 (B) Harangual (B) Tq.Dist.Latur	02382-267411	02382-267411	-----

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Digrase S.S.	02382- 208530	09423211384	Sachin_digrase@ yahoo.com

1.4. Year of sanction: **2005**

1.5. Staff Position (as on 30th September 2009)

Sr. 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.	I/C PC	Horticulture	8000-13500	8825	13.10.06	Permanent	Others
3	Subject Matter Specialist	Bedre S.B.	SMS	Agril.Extension.	8000-13500	8825	11.07.06	Permanent	Others
4	Subject Matter Specialist	Mohite A.S.	SMS	Agronomy	8000-13500	8825	11.07.06	Permanent	Others
5	Subject Matter Specialist	Gunjal A.A.	SMS	Home Science	8000-13500	8825	13.10.06	Permanent	Others
6	Subject Matter Specialist	Kawade S.C.	SMS	Agril. Engineering	8000-13500	8825	09.10.06	Permanent	Others
7	Subject Matter Specialist	Deshmukh S.B.	SMS	Entomology	8000-13500	8825	11.07.06	Permanent	Others
8	Programme Assistant	Salunke S.B.	Prog.Asst.	Animal Science	5500-9000	6025	01.10.06	Permanent	Others
9	Computer Programmer	Suryawanshi V.M.	Prog.Asst.	Computer	5500-9000	5675	19.01.09	Permanent	Others
10	Farm Manager	Kokate S.L.	Farm Manager	-----	5500-9000	6025	16.10.06	Permanent	Others
11	Accountant / Superintendent	Deshmukh A.J.	Superintendent / Accountant	-----	5500-9000	6025	11.07.06	Permanent	Others
12	Stenographer	Adgaonkar M.M.	Steno	-----	4000-6000	4300	01.04.06	Permanent	Others
13	Driver	Jadhav R.R.	Driver	-----	3050-4590	3275	01.04.06	Permanent	Others
14	Driver	Pitale N.B.	Driver	-----	3050-4590	3275	01.04.06	Permanent	Others
15	Supporting staff	Sagar O.K.	Supporting staff	-----	2550-3200	2720	01.04.06	Permanent	O.B.C.
16	Supporting staff	Jadhav V.H.	Supporting staff	-----	2550-3200	2720	01.04.06	Permanent	Others

1.6. Total land with KVK (in ha): 20 ha

Sr. No.	Item	Area (ha)
1	Under Buildings	02
2.	Under Demonstration Units	0.008
3.	Under Crops	04
4.	Orchard/Agro-forestry	01
5.	Others (specify)	-

1.7. Infrastructural Development:

A) Buildings

Sr. 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				25.02.09	550	Slab Level
2.	Farmers Hostel	ICAR				25.02.09	305	Slab Level
3.	Staff Quarters (6)	ICAR				25.02.09	400	Slab Level
4.	Demonstration Units (2)	ICAR	26.03.09	80	5,00,000	---	--	---
5	Fencing	--	--	--	--	--	--	--
6	Rain Water harvesting system	--	--	--	--	--	--	--
7	Threshing floor	--	--	--	--	--	--	--
8	Farm godown	--	--	--	--	--	--	--
9	Road Formation	ICAR	23.03.10	--	2,98,151	02.03.10	--	Completed

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	592.4 hrs	Under Working
Jeep (MH-24-H-3000)	2006-2007	5,52,738	62246	Under Working
Motor Cycle (MH-24-Q-1404)	2006-2007	50,714	30224	Under Working
Motor Cycle (MH-24-Q-1405)	2006-2007	50,714	27015	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
V shape harrows (02 Nos.)	2006-07	1,860.00	Under workings

1.8. A) Details of SAC meeting conducted in the year 2008-09

Sl .No.	Date	Name and Designation of Participants	Salient Recommendations	Action taken
1.	12.08.09	1. Dr. S.D. More Director of Extension Education, MAU, Parbhani	- Conduct FLD/OFT on large scale - Formation of farmers clubs - Conduct base line survey of the adopted villages - Develop farm implement museum and provide equipments to farmers on hire bases.	Efforts are being made in this respect
			- Conduct SAC meeting twice a year - Compile the agricultural data base 07 Latur district - Compilation of success stories - Compile the questionnaires of agriculture base problems - Try to develop / provide IT services like AQUA - Develop website of KVK - Provide marketing information & diseases forecast information through IT services - Initiate to publish quarterly news letter - Establish nursery and start the need based production of sampling under revolving fund - Attend the HRD training programmes especially organized by Anand, NAARM	Action will be taken in future
			Develop crop cafeteria /museum on KVK farm representing district crop	Crop cafeteria is being maintained at KVK farm
		2. Shri. Trimbakdasaji Zanwar Technical Advisor, KVK, Latur	- Looking to the dry spell arised during this season, KVK may undertake training programmes on crop management during adverse condition - Promote the farmers for plantation of fodder crop and provide planting material of Phule Jaywant to the farmers	Efforts are being made in this respect
			- promote the farmers for sowing of short duration varieties during late mansoon /sowing - promote the farmers for maize cultivation as an alternative to other crops - Promote the farmers to go for sunflower and pearl millet sowing during advers4e rainfall situation - Identify the water scare area in Latur district and prepare crop plan accordingly - Promote the farmers especially in adopted villages to implement Gramin Bhandar Yojana - Promote and train the farmers for cultivation of vegetables/flowers in shed net	Action will be taken in future
		3. Shri M.N. Raiwad DDM, NABARD, Latur	- Formation of commodity wise farmers club - Rural entrepreneurship development programmes	Efforts are being made in this respect

			• Give SMS free services to farmers having mobile by using internet	Action will be taken in future
		4. Dr. M. U. Gohotre, DAHO, Latur	• Organize vaccination camp regularly • Promote the farmers to plant phule jaywant fodder crop	Efforts are being made in this respect
		5. Shri. Dipratna Nilangekar Doordarshan News representative, Latur	• Use audio visual aids during training, farmers rally etc. activities	According to the requirement of the subject audio visual aids have been used by the KVK
		6. Shri. Laxman Deshpande Head of office, AIR, Osmanabad	• KVK may undertake residential entrepreneurship development programmes for rural youth	Action will be taken in future
			• Value addition in fodder	Efforts are being made in this respect
		7. Shri. Sanjay Deshmukh Coordinator, Manjara charitable trust's, Latur	-	-
		8. Sou. P. S. Ganacharya Sericulture Development Officer, Latur	-	-
		8. Shri. Digarase S. S. i/c Programme Coordinator Manjara KVK, Latur	-	-
		9. Shri. Jadhav N. S Progressive farmer	-	-
		10. Shri. Tattapure V. B. Progressive farmer	-	-
		11. Shri. Ramraje Shinde Progressive farmer	-	-
		12. Sou. Primal P. Awate Progressive female farmer	-	-
		13. Sou. Haribai d. Jadhav Progressive female farmer	-	-

2. DETAILS OF DISTRICT (2008-09)

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

S. No	Farming system/enterprise
1.	Dryland 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. A. Area, Production and Productivity of major crops cultivated in the district

S. No	Crop	Area ('00' ha)	Production (M.Ton/ha.l)	Productivity (Kg./ha)
Cereals				
1.	Rice	126	88	700
2.	Kharif Jowar	1106	1659	1500
3.	Bajara	56	33	585
	Rabi Jowar	439	41266	940
	Wheat	239	3585	1500
4.	Maize	41	66	1600
5.	Other	11	7	600
Pulses				
6.	Pigeon Pea	755	918	1216
7.	Green Gram	269	83	310
8.	Black Gram	671	252	376
	Gram	297	26136	880
9.	Other pulses	17	08	450
Oilseeds				
10.	Groundnut	88	75	850
11.	Sunflower	99	70	710
12.	Soybean	2061	2885	1399
	Sunflower	114	1231	1080
	Safflower	44	335	760
13.	Other oilseeds	103	34	327
Cash crops				
14.	Sugar cane	530	45050	85
15.	Cotton	17	31	310

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

S. No	Crop	Area (ha)	Production (M.Ton/ha.l)
Fruit Crops			
1.	Mango	2200	11000
2.	Sapota	155	2170
3.	Sweet orange	75	2250
4.	Pomegranate	213	1278
5.	Fig	125	625
6.	Custard apple	145	725
7.	Anola	50	300
6.	Tamarind	435	3480
7.	Other fruit crops	850	6800
Vegetables			
8.	Tomato	850	10200
9.	Brinjal	650	4550
10.	Lendiesfigner	956	4780
11.	Chili	990	6930
12.	Other Vegetables	1350	9450
Commercial Fruit Crops			
13	Grapes(table purpose)	700	14000
14.	Grapes(winery)	70	910
15.	Papaya	20	1500
16.	Banana	160	11200
Spices and Condiments			
17.	Turmeric	36	648
18.	Ginger	60	360
19.	Coriander	700	700

Flowers			
20.	Rose	20	560
21.	Tuberose	15	975
22.	Marigold	30	1350
23.	Gaillardia	12	720
24.	Aster	60	3960
25.	Chrysanthemum	06	420
26.	Others	10	150

2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)
		Maximum	Minimum	
October 08	52.6	32.7	18.2	69.8
November 08	4.0	30.5	12.3	60.4
December 08	-	31.7	10.6	69.4
January 09	-	31.9	10.8	55.8
February 09	-	34.1	13.1	51.8
March 09	9.5	37.9	16.5	43.16
April 09	-	40.1	20.1	34.8
May 09	21.5	40.7	20.5	34.2
June 09	141.0	37.9	20.4	51.5
July 09	59.0	31.7	20.4	61.6
August 09	165.0	30.5	18.7	78.4
September 09	108.0	32.0	21.0	84.5

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 Hecor	3440 MT	258.84 Kg/hect
<i>Marine</i>	-	-	-
<i>Inland</i>	13696 Hecor	3440 MT	258.84 Kg/hect
Prawn	-	-	-
Scampi	-	-	-
Shrimp	-	-	-

2.6 Details of Operational area / Villages (2008-09)

S. N	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	Dairy Goat	• Less availability of green fodder and low yield of green fodder • Low milk yield • Reproductive disorders • Low weight gain • Incidence of diseases	• Fodder management • Nutritional management • Disease management
3.	Renapur	Renapur	Darji bargaon	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, Goat	- 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
Horticultural crops	Commodity wise interest group formation

3. TECHNICAL ACHIEVEMENTS

3.A. Details of target and achievements of mandatory activities by KVK during 2008-09

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
08	08	95	129	09	09	170	119

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		52		1076				
Rural youth		04		79				
Extn. Functionaries		03		72	-	-	-	-

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

3.B. Abstract of interventions undertaken

S N	Thrust area	Crop/Enterprise	Identified Problem	Interventions					
				Title of OFT	Title of FLD	Title of Training	Title of training for extension personnel	Extension activities	Supply of seeds, planting materials etc.
1.	Variety & INM	Soybean	Less use of biofertilizer and micronutrient	Varietal assessment of MAUS-71	FLD on soybean	Improved technologies in soybean Seed treatment in various kharif crops	-	Field Day	Seed, bio fertilizer, micro nutrient

2.	Variety & IPM	Pigeon pea	Less use of biofertilizer/ micronutrient and low yield due to heavy infestation of pod borer	-	FLD on pigeon pea	Pigeon: Integrated pest management	-	Field day, group discussion	bio fertilizer, micro nutrient, helilure & fertilizer & pheromone trap
3.	Variety	Bengal gram	Low yield	-	FLD on bengal gram	INM in bengal gram	-	Field day	Seed, bio fertilizer, endo sulphon, neemmark & fertilizer
4.	Variety	Safflower	Low yield		FLD on safflower	-	-	Field day	Seed, fertilizers, urea, bensulf, confidor, neemmark
5.	Low level of mechanization	Cereals, pulses, oilseeds	Uneven seed distribution, unavailability of skilled labour, poor output, late sowing	Assessment of MAU bullock drawn seed-cum-ferti drill & Jyoti BD planter Refinement of CRIDA planter	-	Improved sowing/planting equipment CRIDA bullock drawn planter: Operation, care & maintenance	Training-cum-visit & demonstration of improved agricultural machinery	Method demonstration on use of machinery	Respective equipment for demonstration/ testing
6.	Drudgery reduction technologies	Soybean, Bengal gram	Low output, occupational health problems like finger injury, backache pain etc., low quality of work	Assessment of wheel hoes for interculture/ weeding		Drudgery reduction tools & equipment for farm women Improved harvesting & threshing tools & equipment		Method demonstration on use of tools & equipment	Equipment for demonstration
7.	Feed and fodder management	RBN-13 (Phule Jaywant)	Limited availability of green fodder Low yield of fodder	On farm testing of Phule Jaywant fodder crop	-	Cultivation of new fodder varieties in irrigated area	-	Field on cultivation of Phule Jaywant fodder crop	Root cuttings of Phule Jaywant fodder crop
8.	Disease management	Goat	Endo and ecto parasite infestation Poor body condition	-	Control of endo and ecto parasites in goat by using Ivermectin injection	Goat rearing	-	Pomplante on parasite control in animal, Animal Health Camp	Inj. Ivermectin

9.	Nutritional management	Buffalo	Low milk yield	-	Feeding of mineral mixture in buffalo	Importance of feeding mineral mixture to the dairy animals	-	Demonstration	Mineral mixture
10.	Integrated nutrient management	Mango	Irregular bearing on mango	Assessment of use of cultar for regular bearing in mango	-	Methods to improve bearing in mango Use of cultar in mango	-	-	Cultar
11.	Integrated pest management	Chickpea	Loss in yield due to heavy infestation of pests	-	Integrated pest management in chickpea	Use of IPM techniques in Chickpea	-	Method demonstration on use of Pheromone trap	Seed – Var. Vijay Pheromone traps (Helicoverpa) Neem oil
12.	Integrated pest management	Rabi Jowar	Low germination	-	Management of early shoot fly by seed treatment with Imidacloprid 76%	Seed treatment with Imidacloprid 76% for early shoot fly	-	Method demonstration	Imidacloprid 70 WP
13.	Integrated pest management	Soybean	Loss in yield due to heavy infestation of pests	-	Integrated pest management in Soybean	Use of IPM techniques in Soybean	-	- Method demonstration on use Biopesticide	Pheromone trap(Spodoptera) Neem oil
14.	Integrated pest management	Sugarcane	Low yield in sugar percentage due to white fly sugar	OFT on Management of sugarcane white fly by adding 2 % urea in recommended dose of DDVP	-	Time for Spraying of insecticides in sugarcane for management of white fly	Integrated pest management in sugarcane crop	Method demonstration	Dichlorodans 76 Urea
15.	Implementation of biopesticide use	Soybean	Yield losses due to leaf eating caterpillars	Assessment on spraying of <i>Beauveria bassiana</i> against Leaf eating caterpillars	-	Importance of Bio pesticides in pest management		Method demonstration	<i>Beauveria bassiana</i>
16.	Efficient nutritious diet	Adolescent girls	Low Hb % in adolescent girls	Importance iron rich food for improving health status	-	Preparation of different iron rich recipes	-	-	Iron rich Sesamum laddu
17.	Drudgery reduction technologies	Smokeless chullha	Unavailability of fuel	Use of smokeless chullha	-	Method demonstration on use of smokeless chullha	-	-	Smokeless Chullha

18.	Drudg ery reducti on technol ogies	Sarai cooker	Maximum fuel consumpti on and more time requireme nt	-	Demonst ration of sarai cooker	Method demonstration on use of smokeless chullha	-	-	Sarai cooker
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3.1 Achievements on technologies assessed and refined

A.1 Abstract of the number of technologies assessed* in respect of crops/enterprises

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						01				01
Integrated Farming System										
Mushroom cultivation										
Drudgery reduction										
Farm machineries		01								01
Value addition		01								01
Integrated Pest Management				01						01
Integrated Disease Management										
Resource conservation technology										
Small Scale income generating enterprises										
TOTAL		02		01		01				04

A.2 Abstract of the number of technologies refined* in respect of crops/enterprises

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								

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

Technology Assessment:

Trial 1

- | | | | |
|-----|---|---|---|
| 1) | Title | : | Control of iron chlorosis in sugarcane |
| 2) | Problem diagnose/defined | : | Whitening of leaves mostly in ratoon |
| 3) | Details of technologies
selected for assessment
/refinement | : | i. Farmers practice
ii FeSO ₄ @ 40 kg/ha(Technology Assessment) |
| 4) | Source of technology | : | IISR, Lucknow |
| | Production system | | |
| 5) | Production system | | |
| | thematic area | : | - |
| 6) | Thematic area | : | Integrated crop management |
| | Performance of the | | |
| 7) | Technology with | | |
| | performance indicators | : | Result awaited |
| 8) | Final recommendation for | | |
| | micro level situation | : | Result awaited |
| 9) | Constraints identified and | | |
| | feedback for research | : | Result awaited |
| 10) | Process of farmers | | |
| | participation and | | |
| | their reaction | : | Group discussion, training, demonstration. |

11) 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
Sugarcane	Irrigated	Whitening of leaves	Control of iron chlorosis in sugarcane	12	1. Farmers Practice	Whitening of leaves	Results awaited	. Results awaited	. Results awaited
					2 use of FeSO ₄ @ 40 kg/ha	Yield			
						Whitening of leaves			
						Yield			

Technology Assessed	*Production per unit q/ha.	Net Return (Profit) in Rs. / unit	CB Ratio
11	12	13	14
1. Farmers Practice	-	-	
2. use of cultar	-	-	-

Trial 2

- | | | | |
|-----|---|---|---|
| 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
ii Use of cultar (Technology Assessment) |
| 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 | : | Result awaited |
| 8) | Final recommendation for micro level situation | : | Result awaited |
| | | | |
| 9) | Constraints identified and feedback for research | : | Result awaited |
| | | | |
| 10) | Process of farmers participation and their reaction | : | Group discussion, training, demonstration. |

11) 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	Yield	Results awaited	. Results awaited	. Results awaited
						Sprouting inflorescence			
						CB ratio			
					2 use of cultar	Yield			
						Sprouting inflorescence			
						CB ratio			

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	Result awaited	-	

2. use of cultar: 50 kg compost + 3 kg urea + 3 kg SSP + 2 kg SOP + Cultar 20 ml/plant	Result awaited	-	-
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Trial 6

1. Title : OFT on management of sugarcane whitefly by use of 2% urea in recommended dose of DDVP
2. Problem diagnose/defined :
 - i. Farmers are using various recommended pesticides to control sugarcane whitefly.
 - ii. But the farmers are not getting results as expected because the followed spray has not playing role for damage the pupal stage of whitefly.
 - iii. There is wax coating on pupae that prevent to penetrate the chemicals in side, hence pupal stage remain not control even spray of pesticide is given.
 - iv. With the through discussion with scientist and farmers it was observed that the addition of 2% urea in 1 ml Dichlorovos in 1 lit of water for spray that can help to burst the wax coat of pupae of white fly effectively.
3. Details of technologies selected for assessment :

T1 : Farmers practice :
Use of Endosulfan or Dimethoate 1-1.5 ml/lit)

T 2 : Assessment Practice :
1. Recommended dose of NPK
2. Well drainage
3. Avoid excess dose of urea
4. Spraying of DDVP 1100 ml in 1000 lit. Of water with 2 % urea
4. Source of technology : VSI, Pune
5. Production system thematic area : Irrigated crop production system
6. Thematic area : Integrated pest management
7. Performance of the Technology with performance Indicators : Results showed that the use of 2%urea in recommended dose of 1100ml DDVP in 1000 lit of water gives 81.90 % control of pupal stage of sugarcane white fly after 5th day of spraying. Also, the infestation was mostly observe on cv. CO-671.
8. Final recommendation for micro level situation : a.) Whitefly infestation were high in ratton crop. So, nutritional management and spray has to be given at initial stage of infestation.
b.) Infestation were more during high humidity and high temperature. So, field observations should be during months of July to September.

c.) So, adopt Paired row plantation method

d.) Prepare 2 % urea solution by adding 20 gm urea in 10 ltrs of water and then add recommended dose of 10 ml DDVP.

9. Constraints identified and

feedback for research

: a.) The spray given to infected field have difficulties in interior side of field.

b.) In some cases, heavy infestation at interior side.

10. Process of farmers

participation and their reaction :

Group discussion, training, demonstration.

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11). 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 paramet er	Results of assessment	Feedbac k from the farmer	
1	2	3	4	5	6	7	8	9	10	
Sugarcane	Irrigated	There is wax coating on pupae that prevent to penetrate the chemicals in side, hence pupal stage remain not control even spray of pesticide is given.	OFT on managem ent of sugarcane whitefly by use of 2% urea in recomme nded dose of DDVP	10	1.(Farmers Practice)	Avg. No. Pupae observed on infected leaves	847	:Results showed that the use of 2%urea in reccomended dose of 1100ml DDVP in 1000 lit of water gives 81.90 % control of pupal stage of sugarcane white fly after 5 th day of spraying. Also,.	The infestation was mostly observe on cv. CO-671	
						Avg. No. Pupae damaged after 05 day of spraying	129			
						Avg. No. of Pupae & larval infestation after 15 Day of spraying.	316			
							31			
					2.	Avg. No. Pupae observed on infected leaves	894			
						Avg. No. Pupae damaged after 05 day of spraying	678			
						Avg. No. of Pupae & larval infestation after 15 Day of spraying.	23			
							09			

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
1. (Farmers Practice)	77500 kg/ha.	82500	1:2.4
2.	87500 kg/ha	96250	1: 2.8

**** Farmer's practice: T1:** Use of Endosulfan or Dimethoate 1-1.5 ml/lit)

**** T 2: Assessment Practice:**

1. Recommended dose of NPK
2. Well drainage
3. Avoid excess dose of urea
4. Spraying of DDVP 1100 ml in 1000 lit. Of water with 2 % urea

Trial 3

- 1) Title : On farm testing of Phule Jaywant fodder crop
- 2) Problem diagnose/defined :
 - 1) Limited availability of green fodder
 - 2) Slow growth and low yield
 - 3) Gajraj and Phule Yashwant fodder is coarse textured, leaf blade and sheaths are hairy and stem is hard and more fibrous
- 3) Details of technologies selected for assessment /refinement :
 - i. Gajraj, CO3 and Phule Yashwant (RBN-9) (Farmers Practice)
 - ii. Phule Jaywant (RBN-13)
- 4) Source of technology : MPKV, Rahuri
- 5) Production system thematic area : Irrigated fodder production system
- 6) Thematic area : Feed and fodder management
- 7) Performance of the Technology with performance indicators : Result showed that Phule Jaywant fodder crop gives 16.97 % more yield, 34.06% More tillers per plant and 16.16 % less cost of production, stem is more juicy, leaf blade and surface is without hairs and less wastage after feeding to the animal than Other napier fodder crops (Gajraj, Phule Yashwant and CO3)
- 8) Final recommendation for micro level situation : Phule Jaywant fodder crop may be used in place of Other napier fodder crops(Gajraj, Phule Yashwant and CO3)in Latur district.
- 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 performance of Phule jaywant fodder crop

11. 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
Phule Jaywant (RBN-13) fodder crop	Irrigated	Limited availability of green fodder throughout the year Low yield	On farm testing of Phule Jaywant fodder crop	10	Farmres practice: Napier fodder crops(Phule Yashwant,CO3, Gajraj)	1. Green fodder yield q/ha/year	1927
						2. No. of tillers /plant	
						1 st cut	20
						2 nd cut	42
						3 rd cut	53
						4 th cut	71
						5 th cut	82
						6 th cut	93
						3. No of cuts/year	06
						4. Cost of production of green fodder/ha	68290 Rs.
					Technology assessed: Phule Jaywant (RBN-13) fodder crop	1.Green fodder yield q/ha/year	2321
						2. No. of tillers /plant	
						1 st cut	25
						2 nd cut	72
						3 rd cut	92
						4 th Cut	112
						5 th cut	117
						6 th cut	130
						3. No. of cuts/year	06
						4. Cost of production of green fodder/ha	68290 Rs.

Result of assessment	Feedback from the farmers	Production per unit	Net returns(profit) in Rs/unit	BC ratio
9	10	11	12	13
Farmres practice: Napier fodder crops(Phule Yashwant,CO3,Gajraj) ** 1. Green fodder production is 1927 q/ha/year 2. No. of tillers per plant is 20 at first cut and 93 at last cut 3. 06 cuts in a year 4. Cost of production of green fodder per Kg. is Rs. 0.36	1. Leaf blade and surface of leaf is with hairs. So, it is difficult to cut and handle 2. wastage of fodder after feeding to the animals 3. stem is less juicy and hard as compared to Phule Jaywant fodder crop	1927 q/ha/year	85870 Rs.	1:2.25
Technology assessed: Phule Jaywant (RBN-13) fodder crop** 1. green fodder production increased by 17 % 2. 34 % more tillers in the Phule Jaywant fodder crop 3. 06 cuts in one year 4. Cost of production of green fodder per kg. is Rs. 0.30	1. Leafs of Phule Jaywant fodder crop is more green in colour 2. Leaf blade and surface of leaf is without hairs. So, it is easy to cut and handle 3. Stem is more juicy and not hard as compared to other fodder varieties 4. Vary negligible wastage of fodder after feeding to the animals	2321 q/ha/year	117390 Rs.	1:2.71

**** Farmer's practice:** Usually farmers are planting Gajraj, CO3 fodder crops for green fodder having slow growth and low yield. Gajraj, CO3 & phule yashwant is coarse textured, leaf blade and sheaths are hairy and stem is hard and more fibrous

**** Phule Jaywant (RBN-13):** Phule Jayant is improved perennial forage crop as like that of Nepier gives 225-250T/ha fodder production with less oxalic acid content (1.21 %) and profuse growth after cutting. The leaf are smooth, large and having good width.

Trial 4

ON Farm Testing:

- | | | | |
|-----|---|---|--|
| 1. | Title | : | Importance of iron rich food for improving health status |
| 2. | Problem diagnose/defined deficiency symptoms | : | Low Hb% in adolescent girls, commonly observed |
| 3. | Details of technologies selected for assessment /refinement | : | <ul style="list-style-type: none">i Roti + Any type of Subji or Dalli Iron rich Seasamum Chikki (50gm Seasamum + 50gm Jaggary + 5gm garden Cress seeds) |
| 4. | Source of technology | : | MAU, Parbhani |
| 5. | Production system thematic area | : | NA |
| 6. | Thematic area | : | Designing and development for high nutrient efficiency |
| 7. | Performance of the Technology with performance indicators | : | Results showed that the recommended practice increases the Hb level by 14.87% and reduces clinical sign and symptoms by 70% 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 | : | Identification of adolescent girls with the help of PHC, Group discussion, training, demonstration on iron rich recipes

The adolescent girl's were satisfied for this method and adopted the dietary management for control and prevention of anemia. |

11) **Results of On Farm Trials (Assessment)**

Crop Enter Prise	Problem Diagnosed	Title of OFT	No. of trials	Technology assessed	Parameters Of assessment		Data on the Parameter	Result of assessment	Feed back from the farmer
Adol esce nt Girls	-Low Hb % in adolescent girls -Commonly observed deficiency symptoms	Importance of Iron rich food for improving health status	10	Dietary practice (T1) Roti + any type of subji or dal	Change in Hb level	Initial Stage	8.5	Dietary management is essential to prevent and control the anemia.	For control of anemia the nutritional management is effective.
						After 1 month	8.54		
						After 2 month	8.61		
						After 3 month	8.67		
					% Change in Hb level	Initial Stage	-		
						After 1 month	0.46		
						After 2 month	1.20		
						After 3 month	1.96		
					% reduction in clinical sign and sympotoms	-	20		
				Recommende d practice (T2) Iron rich seasamum chikki (50 gm sesamum + 40 gm groundnut + 5 gm garden cress seeds)	Change in Hb level	Initial Stage	8.3		
						After 1 month	8.75		
						After 2 month	9.32		
						After 3 month	9.75		
					% Change in Hb level	Initial Stage	-		
						After 1 month	5.14		
						After 2 month	10.94		
						After 3 month	14.87		
					% reduction in clinical sign and sympotoms	-	70		

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
1.Roti + Any type of Subji or Dal**	-	-	-
2. Iron rich Seasmum Chikki(50gm Seasmum+ 50gm Jaggary+5gm garden Cress seeds) **	-	-	-

**** Farmer's practice:** The meal pattern of Adolescent girls is roti + any type of subji or dal which provides near about 12-13 mg/day

****Recommended Practise:** It provides 16 mg iron along with daily practice which provides near about 28-29 mg iron per day to adolescent girls.

Trial 5

1. Title : Assessment of mechanical weeders for Intercultural / weeding operation
2. Problem diagnose/defined : Postural discomfort due to bending/squatting
Posture, High labour requirement, Low output
3. Details of technologies
selected for assessment: i. Weeding by *Khurpi* (Farmers practice)
/refinement ii. Wheel hoe
4. Source of technology : CRIDA, Hyderabad & MPKV, Rahuri
5. Production system
thematic area : Rainfed crop production system
6. Thematic area : Farm machinery
7. Performance of the
Technology with
performance indicators : Results showed that manual wheel hoe give three times more output and saves 63.9 % labour & time over the conventional method of weeding
8. Final recommendation for
micro level situation : -
9. Constraints identified and
feedback for research : i) The hoe has to operate twice in a row due to less working width
ii) An increase in width of blade upto 300 mm will increase the output
10. Process of farmers
participation and
their reaction : Group discussion, training, demonstration.

11) 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
Soybean, Soybean + pigeon pea	Rainfed	Postural discomfort due to bending / squatting Posture High labour requirement Low output	Assessment of mechanical weeders for Intercultural / weeding operation	10	1. weeding by <i>Khurpi</i>	Field capacity, ha/day	0.036	✓ Manual wheel hoe performed intercultural operation satisfactorily It saves 64 % time, and 63.9 % labour over the conventional method of weeding	✓ The use of manual wheel hoe saves time as well labour as compared to <i>khurpi</i> Most of the farmers reported that they usually sow the crops at 45 cm row distance. Hence the hoe needs to operate twice in a row ✓ The increase in width of blade will increase the output of the operator
						labour requirement, man-h/ha	222		
						Width of coverage, mm	-		
						Plant damage, %	0.8		
						Weeding Efficiency, %	96		
						Depth of tilling, mm	25		
					2. Wheel hoe	Field capacity, ha/day	0.10		
						labour requirement, man-h/ha	80		
						Width of coverage, mm	210		
						Plant damage, %	1.8		
						Weeding Efficiency, %	83		

						Depth of tilling, mm	30		
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Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
Weeding by <i>Khurpi</i> (Farmers practice)**	-	-	-
Manual Wheel hoe	-	-	-

**** Farmer's practice:** Intercultural/weeding operation is carried out traditionally by using *khurpi* /short handle hand hoe. It forces the worker to adopt bending/squatting posture while working, which results in low output as well as postural discomfort

****Manual wheel hoe:** It is manually operated equipment. This is operated in standing posture by a person easily in push – pull mode for intercultural/weeding operation.

Trial 1

- Title : Refinement of CRIDA bullock drawn planter
2. Problem diagnose/defined :
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
3. Details of technologies selected for assessment/refinement :
T₁ – CRIDA 4 row bullock drawn planter
T₂ – CRIDA 3 row bullock drawn planter
4. Source of technology : CRIDA, Hyderabad
5. Production system thematic area: Rainfed crop production system
6. Thematic area : Farm machinery
7. Performance of the Technology with performance indicators : Increased field capacity & field efficiency by 23 to 28 & 14 to 18 % respectively. Increases saving in labour & cost of operation by 61 to 64 & 38 to 42 % respectively.
8. Final recommendation for micro level situation : The CRIDA 3 row bullock drawn planter is suitable for precise sowing of dryland crops
9. Constraints identified and feedback for research :
i. The zig-zag rubber agitator worn out every year
ii. The pegs of guide wheel made of MS plate make an open Box like section and clog while sowing at high m.c. in heavy soil results in higher wheel skid
iii. Use of seed covering device as an attachment, will save operational time and energy
iv. Boot with seed & fertilizer delivery pipe is necessary and may increase efficiency
10. Process of farmers participation and their reaction : Training, Group discussion, Demonstration

11). Results of On Farm Trials

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	1.40		CRIDA planter saves seed & labour with more output Suitable for precise sowing of most of the crops Clogging of guide wheel due to MS plate pegs	The efficiency of the sowing operation increased due to refinement Time losses due to delivery tube clogging reduced
						field efficiency, %	60.2			
						labour requirement, man-h/ha	11.4			
						Operating cost, Rs/ha	356			
					2. CRIDA 4 row bullock drawn multi-crop planter	Field capacity, ha/h	1.82			
						field efficiency, %	70.2			
						labour requirement, man-h/ha	4.4			
						Operating cost, Rs/ha	220			
					3. CRIDA 3 row bullock drawn multi-crop planter	Field capacity, ha/h	1.95			
						field efficiency, %	73.4			
						labour requirement, man-h/ha	4.1			
						Operating cost, Rs/ha	205			

* No. of farmers

Results of refinement	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
12	13	14	15
-	-	-	-
Increased field capacity by 23 % Increased field efficiency by 14 % Saves labour by 61 % Saves cost of operation by 38 %	-	-	-
Increased field capacity by 23 to 28 % Increased field efficiency by 14 to 18 % Increase Saving in labour by 61 to 64 % Increase saving in cost of operation by 38 to 42 %	-	-	-

***Field crops – kg/ha, * for horticultural crops -= kg/t/ha, * milk and meat – litres or kg/animal, * for mushroom and vermi compost kg/unit area.**

**** Give details of the technology assessed or refined and farmer's practice**

3.2 Achievements of Frontline Demonstrations

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

List of technologies demonstrated during previous year and popularized during 2008-09 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

b. Details of FLDs implemented during 2009-10 (Information is to be furnished in the following **three tables** for **each category** i.e. **cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops.**)

S N	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	Integrated crop management	MAUS-71, Biofertilizer	2009-10 Kharif	10	10	03	22	25	
2	Pigeon pea	Integrated crop management	BSMR 853, Biofertilizer	2009-10 Kharif	10	10	03	17	20	
3	Bengal gram	Integrated crop management	Vishal, Biofertilizer	2009-10 Rabi	10	10	03	22	25	
4	Groundnut	Integrated crop management	TG-26, Biofertilizer	2009-10 Summer	02	02	-	05	05	-
5	Mango	Production technology	Use of NAA to avoid fruit drop in Mango	Kharif 2009	02	02	01	09	10	-

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	RF	Medium black	7.10	0.37	0.45	Wheat rabi jawar	2 nd to 3 rd week of July	4 th week of Oct.	750	24
Pigeon pea	Kharif	RF	Medium black	7.5	.63	.30	Rabi jawar wheat + Bengal gram	1 st week of July	2 nd week of Dec.	750	24
Bengal gram	Rabi	Irrigated	Medium black	7.30	.47	.47	Black gram & soybean	3 rd week of Oct.	3 rd to 4 th week of Feb.	52.60	03
Groundnut	Summer	Irrigated	Medium black	7.30	.47	.47	Bengal gram, R. Jowar	4 th week of March	Result awaited	-	-
Mango	Kharif	RF	Medium black	7.5	0.63	0.30	Mango	-	-	-	-

Performance of FLD

SN	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	Variety	MAUS-71	25	10.0	17	10	13.0	10.6	18.7	Average no pods/m ² 415	Average no pods/m ² 321
2.	Pigeon pea	Variety & IPM	BSMR-853	20	10.0	10.4	6.2	8.4	7.02	17.8	Average no pods/m ² 560	Average no pods/m ² 401
3.	Bengal gram	Variety & IPM	Vishal	25	10	17.25	15.0	16.1	14.17	12.0	Average no capsule/m ² 607	Average no capsule/m ² 522
4.	Groundnut	Variety	TG-26	05	02	Result awaited						
5.	Mango	Use of NAA to avoid fruit drop in Mango	Keshar	10	02	Result awaited						
6.	Soybean	IPM	JS-335	13	05	15.5	9.5	12.5	9.8	21.6	Yield/ha. 12.5	Yield/ha. 9.8
7.	Bengalgram	IPM	Vijay	13	05	16.8	14.3	15.55	14.2	8.7	Avg. pod damage % - 26	Avg. pod damage % - 37
8.	Rabi Jawar	Seed treatment of imidocloprid 70 WP for control of early shootfly	Parbhani Sweta	13	05	11.3	10.00	10.67	9.8	8.15	% mortality of seedlings/sq m - 06	% mortality of seedlings/sq m - 17

Economic Impact (continuation of previous table)

Average Cost of cultivation (Rs./ha)	Average Gross Return (Rs./ha)	Average Net Return (Profit) (Rs./ha)	Benefit-Cost
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Demonstration	Local Check	Demonstration	Local Check	Demonstration	Local Check	Ratio (Gross Return / Gross Cost)
14	15	16	17	18	19	20
9500	9100	26080	21200	16580	12100	1:2.74
17390	16230	21550	17550	3960	1320	1:1.22
19190	18790	40250	35425	21060	16635	1:1.20
-	-	-	-	-	-	-

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	Variety & Biofertilizer	Rainfed	13.0	10.6	18.7
Pigeon pea	Kharif	Variety & Biofertilizer	Rainfed	8.4	7.02	17.8
Bengal gram	Rabi	Vaiety & Biofertilizer	Irrigated	16.1	14.17	12.0
Groundnut	Summer	Variety & Biofertilizer	Irrigated	-	-	-

Technical Feedback on the demonstrated technologies

S. No	Crop	Feed Back
1	Soybean-MAUS-71	- yield of Soybean MAUS-71 is more than JS-335 - MAUS-71 is resistant to shattering - MAUS-71 matures 7-8 days earlier than JS-335 - Germination and plant vigour increased due to use of biofertilizer
2	Pigeon pea BSMR-853	Pheromone traps helps in proper monitoring of pod borer

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	03	05.10.2009 28.12.2009 16.02.2010	107	
2	Farmers Training	08	-	176	
3	Media coverage	07			
4	Training for extension functionaries	01		26	

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		
Groundnut Decorticator	Groundnut	10	10	Capacity Kg of pod decorticated/h	32.3	1.12	96.5	The productivity of the workers increased tremendously than traditional practice apart from the safety
				Labour requirement, man-h/q	3.0	91	96.5	
				Cost of	26	773	96.5	

				operation, Rs./q				of the workers
				Shelling Efficiency, %	90.5	100	-	
				Broken kernels, %	3.5	1	-	

*** Field efficiency, labour saving etc.**

(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		
Ivermectin injection	Goat	10	30	Weight gain in two months Kg/goat	0.530	0.310	41.5	Use of Ivermectin inj.as a paraciticide in goat reduces disease incidence up to 62.5% and increase body weight up to 41.5 %
				% disease occurrence	10.0	26.66	62.5	
Mineral mixture feeding	Buffalo	15	15	Milk yield lit/day/ animal	3.9	3.4	12.8	Feeding of mineral mixture increases the milk production up to 12.8 % and improves the health condition of the animal
				Fat %	6.7	6.5	3.0	
				Degree of milk	31.0	30.0	3.2	

(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		
Sarai Cookers	Sarai Cooker (ARTI Institute)	10	-	Time requirement to cook 250gm food	50 min.	63.5 min.	21.05	Sarai cooker saves time and fuel than traditional method
				Fuel requirement to cook 250gm food	100 gm	355 gm	71.33	
Smokeless chullha	Smokeless chullha	10	-	Fuel requirement for traditional chullha gms/1 kg food	500	935	46.5	Smokeless chullha saves 46.5 % fuel and it is safe for eyes & also no need

				preparation Visual analogue discomfort scale	Light discomf ort	Extre me disco mfort		to plaster frequently
Post harvest technology	Zero energy cool chamber	10	-	Result awaited				

Monitorable Activity

- Commodity interest group formation
 - Pomegranate growers group-02 groups (42 members)
 - Muskmelon growers group-01 group (09 members)
 - Vegetable growers group under shadenet-02 groups (30 members)



Pomegranate growers group –Darjiborgaon/Kolgaon village



Exposure Visit of CIG- Pomegranate group at village Adhiv tq. Pandharpur

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

C) 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	01	17	-	17	03	-	03	20	-	20
Resource Conservation Technologies										
Cropping Systems	01	18	-	18	04	-	04	22	-	22
Crop Diversification										

Integrated Farming										
Water management										
Seed production	01	22	-	22	04	-	04	26	-	26
Nursery management										
Integrated Crop Management										
Fodder production	01	18	-	18	02	-	02	20	-	20
Production of organic inputs										
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops										
Off-season vegetables	01	16	-	16	02	-	02	18	-	18
Nursery raising	01	15	-	15	03	-	03	18	-	18
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										
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										
IV Livestock Production and Management										
Dairy Management										
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										
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	01	12	-	12	03	-	03	15	-	15
Repair and maintenance of farm machinery and implements	02	32	-	32	10	-	10	42	-	42

Small scale processing and value addition										
Post Harvest Technology										
VII Plant Protection										
Integrated Pest Management	01	18	-	18	03	-	03	21	-	21
Integrated Disease Management	01	14	-	14	04	-	04	18	-	18
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										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
TOTAL	11	182	-	182	38	-	38	220	-	220
(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										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Para vets										
Para extension workers										
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										
(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										

D) 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										
Resource Conservation Technologies										
Cropping Systems	01	20	-	20	02	-	02	22	-	22
Crop Diversification										
Integrated Farming										
Water management	01	20	-	20	02	-	02	22	-	22
Seed production	02	43	-	43	05	-	05	48	-	48
Nursery management										
Integrated Crop Management	02	35	-	35	05	-	05	40	-	40
Fodder production										
Production of organic inputs	01	24	-	24	01	-	01	25	-	25
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops										
Off-season vegetables										
Nursery raising	01	15	04	19	02	02	04	17	06	23
Exotic vegetables like Broccoli										
Export potential vegetables										
Grading and standardization										
Protective cultivation (Green Houses, Shade Net etc.)	01	09	04	13	02	03	05	11	07	18
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit	01	20	-	20	02	-	02	22	-	22
Management of young plants/orchards										
Rejuvenation of old orchards	02	32	02	34	04	02	06	36	04	40

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										
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	02	34	-	34	09	-	09	43	-	43
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	02	19	25	44	07	10	17	26	35	61
Poultry Management	01	-	18	18	-	02	02	-	20	20
Piggery Management										
Rabbit Management										
Disease Management	04	55	04	59	14	01	15	69	05	74
Feed management										
Production of quality animal products										
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	01	-	12	12	-	05	05	-	17	17
Design and development of low/minimum cost diet	01	-	14	14	-	03	03	-	17	17
Designing and development for high nutrient efficiency diet	02	-	28	28	-	10	10	-	38	38
Minimization of nutrient loss in processing										
Gender mainstreaming through SHGs										
Storage loss minimization techniques	01	-	14	14	-	06	06	-	20	20
Value addition										
Income generation activities for empowerment of rural Women										
Location specific drudgery reduction technologies	01	13	02	15	02	-	02	15	02	17
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	18	25	43	07	10	17	25	35	60
Small scale processing and value addition										
Post Harvest Technology	02	17	05	22	05	03	08	22	08	30
VII Plant Protection										
Integrated Pest Management	04	64	04	68	15	-	15	79	04	83
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	01	11	-	11	04	-	04	15	-	15
Group dynamics	01	09	-	09	02	-	02	11	-	11
Formation and Management of SHGs										
Mobilization of social capital	01	12	-	12	03	-	03	15	-	15
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
TOTAL	39	470	161	633	93	57	150	563	218	781
(B) RURAL YOUTH										
Mushroom										

Production										
Bee-keeping										
Integrated farming										
Seed production										
Production of organic inputs	01	15	-	15	02	-	02	17	-	17
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										
Production of quality animal products										
Dairying	01	13	-	13	05	-	05	18	-	18
Sheep and goat rearing	01	-	22	22	-	18	18	-	40	40
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Para vets										
Para extension workers										
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	03	28	22	50	07	18	25	35	40	75
(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	01	16	02	18	02	01	03	18	03	21
Information networking among farmers										
Capacity building for ICT application										
Care and maintenance of farm machinery and implements	01	17	-	17	03	-	03	20	-	20
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	02	33	02	35	05	01	06	38	03	41

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	17	-	17	03	-	03	20	-	20
Resource Conservation Technologies										
Cropping Systems	02	38	-	38	06	-	06	44	-	44
Crop Diversification										
Integrated Farming										
Water management	01	20	-	20	02	-	02	22	-	22
Seed production	03	65	-	65	09	-	09	74	-	74
Nursery management										
Integrated Crop Management	02	35	-	35	05	-	05	40	-	40
Fodder production	01	18	-	18	02	-	02	20	-	20
Production of organic inputs	01	24	-	24	01	-	01	25	-	25
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops										
Off-season vegetables	01	16	-	16	02	-	02	18	-	18
Nursery raising	02	30	04	34	05	02	07	35	06	41
Exotic vegetables like Broccoli										
Export potential vegetables										
Grading and standardization										
Protective cultivation (Green Houses, Shade Net etc.)	01	09	04	13	02	03	05	13	05	18
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit	01	20	-	20	02	-	02	22	-	22
Management of young plants/orchards										

Rejuvenation of old orchards	02	32	02	34	04	02	06	36	04	40
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										
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	02	34	-	34	09	-	09	43	-	43
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	02	19	25	44	07	10	17	26	35	61
Poultry Management	01	-	18	18	-	02	02	-	20	20
Piggery Management										
Rabbit Management										
Disease Management	01	10	04	14	03	01	04	13	05	18
Feed management	04	55	04	59	14	01	15	69	05	74
Production of quality animal products										
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	01	-	12	12	-	05	05	-	17	17
Design and development of low/minimum cost diet	01	-	14	14	-	03	03	-	17	17
Designing and development for high nutrient efficiency diet	02	-	28	28	-	10	10	-	38	38
Minimization of nutrient loss in processing										
Gender mainstreaming through SHGs										
Storage loss minimization techniques	01	-	14	14	-	06	06	-	20	20
Value addition										
Income generation activities for empowerment of rural Women										
Location specific drudgery reduction technologies	01	13	02	15	02	-	02	15	02	17

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	01	12	-	12	03	-	03	15	-	15
Repair and maintenance of farm machinery and implements	05	50	25	75	17	10	27	67	35	102
Small scale processing and value addition										
Post Harvest Technology	02	17	05	22	05	03	08	22	08	30
VII Plant Protection										
Integrated Pest Management	05	82	04	86	18	-	18	100	04	104
Integrated Disease Management	01	14	-	14	04	-	04	18	-	18
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	01	11	-	11	04	-	04	15	-	15
Group dynamics	01	09	-	09	02	-	02	11	-	11
Formation and Management of SHGs										
Mobilization of social capital	01	12	-	12	03	-	03	15	-	15
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
TOTAL	51	662	165	827	134	58	192	796	299	1095
(B) RURAL										

YOUTH										
Mushroom Production										
Bee-keeping										
Integrated farming										
Seed production										
Production of organic inputs	01	15	-	15	02	-	02	17	-	17
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										
Production of quality animal products										
Dairying	01	13	-	13	05	-	05	18	-	18
Sheep and goat rearing	01	-	22	22	-	18	18	-	40	40
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Para vets										
Para extension workers										
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	03	28	22	50	07	18	25	35	40	75
(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	01	16	02	18	02	01	03	18	03	21
Information networking among farmers										
Capacity building for ICT application										
Care and maintenance of farm machinery and implements	01	17	-	17	03	-	03	20	-	20
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	02	33	02	35	05	01	06	38	03	41

Annexure II

Date	Clientele	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
06.04.2009	PF	Leadership development for effective transfer technology	Agril exten.	Leadership development	01	Off	11	-	11	04	-	04	15	-	15
17.04.2009	PF	Management of early top shoot borer of sugarcane	Plant protection	Pest management	01	Off	13	-	13	05	-	05	18	-	18
21.04.2009	PFW	Nutritional requirement of children & tips for developing good food helps	Home Science	Designing and development for high nutrient efficiency diet	01	OFF	-	14	14	-	03	03	-	17	17
25.04.2009	PF/ PFW	Zero energy cool chamber	Agri Engg.	Post harvest technology	01	OFF	05	04	09	02	01	03	07	05	12
27.04.2009	PF	Urea treatment on wheat straw	Animal Science	Fodder management	01	OFF	15	-	15	03	-	03	18	-	18
07.05.2009	PF	Organization of study tour	Agril. Exten.	Group dynamics	01	Off	09	-	09	02	-	02	11	-	11
05.06.2009	PF	Layout and management of orchards	Horticulture	Silent fertility management	01	Off	17	-	17	05	-	05	22	-	22
08.06.2009	PF	Role of seed treatment in healthy growth of crop plant	Crop production	Seed Production	01	Off	19	-	19	04	-	04	23	-	23
10.06.09	PF	Improved sowing Planting equipments	Agril .Engg.	Production of small tools and implements	01	ON	12	-	12	03	-	03	15	-	15
16.06.09	RY	Preschool management	Home Science	Rural craft	07	OFF	-	18	18	-	06	06	-	24	24
17.06.09	PF	Raising of vegetable nursery	Horticulture	Nursery raising	01	ON	15	-	15	03	-	03	18	-	18
17.06.09	PF	Seed treatment in various crops	Crop production	Seed production	01	ON	22	-	22	04	-	04	26	-	26
18.06.09	PF	Cultivation of new fodder varieties in irrigated area	Animal Science	Fodder production	01	ON	18	-	18	02	-	02	20	-	20
19.06.09	PF	Improved cultivation practices in black and green gram	Crop production	Cropping system	01	ON	18	-	18	04	-	04	22	-	22
24.06.09	PF	Operation and maintain aces	Agri Engg.	Repair and	01	ON	17	-	17	04	-	04	21	-	21

		CRIDA planter		maintenances of farm machineries and implements											
25.06.09	PF	Use of pre and post emergence weedicides for weed control	Crop production	Weed management	01	ON	17	-	17	03	-	03	20	-	20
10.07.09	PF	Mechanical weeders for intercultural operation	Agri. Engg.	Location specific drudgery reduction technologies	01	OFF	13	02	15	02	-	02	15	02	17
14.07.09	PFW	Establishment of nutritional garden to improve health and economic status of family	Home Science	Household food security by kitchen garden nutritional gardening	01	OFF	-	12	12	-	05	05	-	17	17
18.07.09	PF	Control and looses occurring due to ecto and endo parasites	Animal Science	Diseases management	01	OFF	10	04	14	03	01	04	13	05	18
18.07.09	RY	Management of goat during water scarcity period	Home Science	Goat rearing	01	OFF	-	22	22	-	18	18	-	40	40
21.07.09	PF	Identification, management of pest and diseases in kharif crops	Plant protection.	Pest management	01	OFF	12	01	13	03	02	05	15	03	18
22.07.09	PF	Propagation techniques of ornamental plants	Horticulture	Nursery rearing	01	OFF	15	04	19	02	02	04	17	06	23
11.08.09	PFW	Symptoms and causes for food spoilage	Home Science	Storage loss minimization techniques	01	OFF	-	14	14	-	06	06	-	20	20
14.08.09	PF	Care and management of orchards during draughts	Horticulture	Soil and fertility management	01	OFF	17	-	17	04	-	04	22	-	22
17.08.09	PF	Use of safety kit during spraying operation	Agri Engg.	Repair and maintenances of farm machineries and implements	01	OFF	07	-	07	03	-	03	10	-	10
31.08.09	PF	Orientation of KVK programmes to farmers	Agri Extension	Mobilization of social capital	01	OFF	12	-	12	03	-	03	15	-	15
31.08.09	PF	Use of IPM techniques for controls of soyabean pest	Plant protection	Integrated pest management	01	OFF	15	02	17	05	-	05	20	02	22
08.09.09	PF	Preparation of home made feed for dairy animal	Animal Science	Feed management	01	OFF	12	-	12	06	-	06	18	-	18
09.09.09	PF	Protective cultivation of vegetables	Horticulture	Protective cultivation	01	OFF	09	04	13	02	03	05	13	05	18

11.09.09	PF	Symptoms and causes of anemia	Home Science	Designing and development for high nutrient efficiency diet	01	OFF	-	17	17	-	04	04	-	21	21
12.10.09	PF	IPM in rabi jawar	Plant protection	Integrated pest management	01	OFF	16	-	16	03	-	03	19	-	19
22.10.09	PF	Introduction of new variety & production technology for Bengal gram	Crop production	Cropping system	01	OFF	20	-	20	02	-	02	22	-	22
22.10.09	PF	Water management with micro irrigation system	Crop production	Water management	01	OFF	20	-	20	02	-	02	22	-	22
23.10.09	PF	Rejuvenation of mango	Horticulture	Rejuvenation of orchards	01	OFF	16	-	16	02	-	02	18	-	18
27.10.09	PF	Importance of feeding mineral mixture	Animal Science	Feed management	01	OFF	18	-	18	02	-	02	20	-	20
28.10.09	PF	Red gram – irrigated nutrient management	Crop production	Integrated crop management	01	OFF	18	-	18	02	-	02	20	-	20
03.11.09	PF	Organic farming for Rabi jawar	Crop production	Production of organic inputs	01	OFF	24	-	24	01	-	01	25	-	25
11.11.09	PF	Saff flower cultivation	Crop production	Cropping system	01	OFF	24	-	24	01	-	01	25	-	25
17.11.09	PF	Integrated crop management in wheat	Crop production	Integrated crop management	01	OFF	17	-	17	03	-	03	20	-	20
26.11.09	PF	Seed treatment in Bengal gram	Crop production	Seed production	01	OFF	24	-	24	01	-	01	25	-	25
26.11.09	PF	management of backyard poultry	Animal Science	Poultry production	01	OFF	-	18	18	-	02	02	-	20	20
10.12.09	PF	Management of dairy animals	Animal Science	Dairy management	01	OFF	19	-	19	07	-	07	26	-	26
14.12.09	RY	Entrepreneurship deve in rural youth	Agril. Exten.	Production of organic inputs	01	OFF	15	-	15	02	-	02	17	-	17
15.12.09	PFW	Women friendly tools & equipments	Agril Engg.	Repair & maintenance of farm machinery	01	OFF	-	11	11	-	04	04	-	15	15
17.12.09	PF	Off season vegetable production	Horticulture	Vegetable production	01	ON	16	-	16	02	-	02	18	-	18
18.12.09	PF	Importance of soybean in the diet of preschool children	Home Science	Designing & development for high nutrient efficiency diet	01	OFF	-	11	11	-	06	06	17	-	17

21.12.09	PF	Measures for healthy flowering	Plant protection	Pest management	01	On	18	-	18	03	-	03	21	-	21
12.01.10	PF	Nutritional & reproductive management of dairy animals	Animal Science	Dairy management	01	OFF	13	-	13	05	-	05	18	-	18
14.01.10	PF	Operation and maintance of CRIDA planter	Agril Engg.	Repair & maintenance of farm machinery	01	OFF	15	-	15	06	-	06	21	-	21
20.01.10	PF	Use of micro nutrients in mango and fig	Horticulture	Rejuvenation of orchards	01	OFF	16	02	18	02	02	04	18	04	22
28.01.10	PF	Techniques of low cost pest & disease management	Plant protection	Disease management	01	On	14	-	14	04	-	04	18	-	18
18.02.10	PF	Improved tools and equipments for farm women	Agril Engg.	Repair & maintenance of farm machinery	01	OFF	-	25	25	-	10	10	-	35	35
18.02.10	PF	Clean milk production	Animal Science	Dairy management	01	OFF	-	25	25	-	10	10	-	35	35
23.02.10	PF	Rejuvenation of Ambemohar in pomegranate	Horticulture	Cultivation of fruits	01	OFF	20	-	20	02	-	02	22	-	22
25.02.10	PF	IPM for early shootborer in sugarcane	Plant protection	Pest management	01	OFF	20	02	22	02	-	02	22	02	24
09.03.10	PF	Improved agricultural tools and equipments	Agril Engg.	Repair & maintenance of farm machinery	01	OFF	17	-	17	03	-	03	20	-	20
09.03.10	PF	Group formation techniques	Agril . Exten.	Group Dynamics and farmers organization	01	OFF	16	02	18	02	01	03	18	03	21

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
1.	Field Day	Soybean 05.10.09	01	19	-	19	03	-	03	02	-	02	24	-	24
1.	Field Day	Pigeon pea 28.12.09	01	25	-	25	03	-	03	01	-	01	29	-	29
2.	Field day	Bengal gram 16.02.10	01	30	-	30	02	-	02	04	-	04	36	-	36
	Total		03	74	-	74	08	-	08	07	-	07	89	-	89
5.	Kisan Mela	Kharif Crop management 29.05.10	01	34	-	34	04	-	04	01	-	01	39	-	39
6.	Kisan Mela	Sugarcane & Khairf crop management 16.07.10	01	73	-	73	09	-	09	04	-	04	86	-	86
		Rabi Crop management 14.12.09	01	115	-	115	10	-	10	04	-	04	129	-	129
	Total		03	222	-	222	23	-	23	09	-	09	254	-	254
7.	Kisan Ghosthi		05	70	18	88	05	02	07	-	-	-	75	20	95
8.	Exhibition		02	395	135	530	55	15	70	05	-	05	455	150	605
9.	Film Show	Vermicomposting 16.10.09 Sericulture 15.12.09	02	34	-	34	05	-	05	-	-	-	39	-	39
10.	Method Demonstrations	Seed treatment	01	21	-	21	04	-	04	-	-	-	25	-	25
		Urea treatment on wheat straw	01	15	-	15	02	-	02	-	-	-	17	-	17
		Hand operated maize shaller	02	-	18	18	-	01	01	-	-	-	-	19	19
		CRIDA bullock drawn planter	01	12	-	12	03	-	03	-	-	-	15	-	15
		Use of pheromone trap	02	17	-	17	02	-	02	-	-	-	19	-	19
		Raising of seedlings	01	08	-	08	01	-	01	01	-	01	10	-	10
11	Farmers Seminar		-	-	-	-	-	-	-	-	-	-	-	-	-
12	Workshop														
13	Group meetings		06	80	10	90	-	-	-	-	-	-	80	10	90
14	Lectures delivered as resource persons		23	1698	18	1716	60	14	74	12	-	12	1770	32	1802

15	Newspaper coverage		20												
16	Radio talks	Formation of commodity Interest farmers groups 28.05.09	08												
		Care , management & plantation of fruit crops 30.05.09													
		Development of farm women through agri allied business 24 / 31.05.09													
		Role of seed treatment in healthy growth of crop plants 27.05.09													
		Improved cultivation practices for high yield in soybean 26.05.09													
		Cultivation of improved fodder variety for green fodder 27.05.09													
		Improved sowing equipment :-CRIDA Planter 29.05.09													
		Pre Kharif planning 25.05.09													
17	TV talks		-												
18	Popular articles		09												
19	Extension Literature		02												
20	Advisory Services														
21	Scientific visit to farmers field		33												
22	Farmers visit to KVK		172												
23	Diagnostic visits		14												
24	Exposure visits		02												
25	Ex-trainees Sammelan														
26	Soil health Camp														
27	Animal Health Camp	Care & management of animals & importance of vaccination 09.02.2010	01	190	45	235	10	05	15	03	-	03	203	50	253

28	Agri mobile clinic	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	Soil test campaigns	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	Farm Science Club Conveners meet	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	Self Help Group Conveners meetings	-	06	-	75	75	-	14	14	-	-	-	-	89	89
32	Mahila Mandals Conveners meetings	-													
33	Celebration of important days (specify)	Farm implement Day 04.07.09	01	18	-	18	07	-	07	-	-	-	25	-	25
		ICAR Day 16.07.09	01	73	-	73	09	-	09	04	-	04	86	-	86
	Grand Total	-	327	3223	319	3542	225	51	276	57	-	57	3505	370	3875

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
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						
BIOFERTILIZERS						
BIO PESTICIDES						

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

KVK Yearly Information Letter	2007	Yearly	100
KVK Yearly Information Letter	2008	Yearly	100
KVK Yearly Information Letter	2009	Yearly	100

(B) Literature developed/published

Item	Title	Authors name	Number of copies
Research papers			
Total			
Technical reports	ZREAC report		02
	Monthly report		12
	Quarterly report		04
	Draught mitigate report		01
Total			19
	Backyard vegetable production May 2009	Gunjal A.A.	
	CRIDA bullock drawn multiple crop planter 24.05.09	Kawade S.C.	
	Improved sowing / planting equipments May 2009	Kawade S.C.	
	Transplanting technique in pigeon pea 26.05.09	Kokate S.L.	
	Vegetable nursery –Today's need June 2009	Digrase S.S.	
	Cultivation of improved fodder 14.07.09	Dr. Salunke S.B.	
	New directions for milk revolution August 2009	Dr. Salunke S.B.	
	Alternate fodder management for animals during droughts 18.08.09	Dr. Salunke S.B.	
	Pola festival care & management of Animals 20.08.09	Dr. Salunke S.B.	
	Control of pod borer in pigeon pea by use of trap & neemark 24.11.2009	Deshmukh S.B.	
Pamphlet/Leaflets/folders	Transplanting technique in pigeon pea	Mohite A.S.Kokate S.L.	1000
	CRIDA bullock drawn planter	Kawade S.C.	500
Total			1538
Grand TOTAL			

(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)
- 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 ie 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 : 03
- ii. No. of farm families selected : 259
- iii. No. of survey/PRA conducted : 01

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

5.1 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
AIRTI, Pune	Source of technology for resource conservation
AIR, Osmanabad	Broadcasting agricultural programs for farmer
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

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.)
Women in Agriculture	April 08	State Agri Govt	80,000.00

5.3 Details of linkage with ATMA

a) Is ATMA implemented in your district: Yes

S. No.	Programme	Nature of linkage	Remarks
1.	Women in Agriculture	• Formation of women farmers group • Training • Women Empowerment through fruit processing and value addition	

5.4 Give details of programmes implemented under National Horticultural Mission

S. No.	Programme	Nature of linkage	Constraints if any
1.	Strengthening of fruit growing farmers	- Giving training to farmers	

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	

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									
Rabi jowar	25.10.09	25.03.10	1.20	Parbhani moti	Seed	12.0	3700	23700	
Pulses									
Pigeon pea	02.07.10	10.12.10	0.20	BSMR-853	Seed	2.0	2000	11000	
Oilseeds									
Soybean	02.07.10	15.10.09	2.0	MAUS-71	Bulk	20.0	9500	40000	
Fibers									

Spices & Plantation crops									
Floriculture									
Fruits									
Mango	25.07.2007	-	1.00	Keshar,Hapus	-	-	9079	-	-
Vegetables									
Others (specify)									
Medicinal crps	10.08.08	-	.080	Medicinal plants	-	-	8970		

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	

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/R/Y/E/F)	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) : 60

Months	Title of the training course/Purpose of stay	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
October 2007	Nursery management	25	125*	
	Improved farm implements			
Total				

November 2007				
Total				
December 2007				
Total				
January 2008				
Total				
February 2008				
Total				
March 2008				
Total				
April 2008				
Total				
May 2008				
Total				
June 2008				
Total				
July 2008				
Total				
August 2008				
Total				
September 2008				
Total				
Grand total				

5 X 25= 125 (Duration of the training course X No. of trainees)

7. FINANCIAL PERFORMANCE

7.1 Details of KVK Bank accounts

Bank account	Name of the bank	Location	Account Number
With Host Institute	L DCC bank	Tilak Nagar Branch, Latur	00232
With KVK	State Bank of India	Adrash Colony Branch, Latur	30029035891

7.2 Utilization of funds under FLD on Oilseed (Rs. In Lakhs)

Item	Released by ICAR		Expenditure		Unspent balance as on 1 st April 2010
	Kharif 2009	Rabi 2009 – 10	Kharif 2009	Rabi 2009-10	
Inputs	0.35,000	0.17,500	0.34,800	0.17,250	(- 00.8609)
Extension activities	00.5,000	00.2,500	00.3,800	0.00	
TA/DA/POL etc.	00.7,500	00.3,750	00.5,670	0.00923	
TOTAL	0.47,500	0.23,750	0.39,167	0.18173	

7.3 Utilization of funds under FLD on Pulses (Rs. In Lakhs)

Item	Released by ICAR		Expenditure		Unspent balance as on 1 st April 2010
	Kharif 2009	Rabi 2009 -10	Kharif 2009	Rabi 2009-10	
Inputs	0.35,000	0.35,000	0.34,295	0.33,930	(- 0.30807)
Extension activities	00.5,000	00.5,000	00.3,500	00.4,900	
TA/DA/POL etc.	00.7,500	00.7,500	0.00373	00.1,309	
TOTAL	0.47,500	0.47,500	0.38,168	0.40,139	

7.4 Utilization of funds under FLD on Cotton (Rs. In Lakhs)

Item	Released by ICAR	Expenditure	Unspent balance as on 1 st April 2010
	Kharif 2009	Kharif 2009	
Inputs	N A	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		31,47,142
2	Traveling allowances	0.60,000		0.40,220
3	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	4,00,000		2,75,209
B	POL, repair of vehicles, tractor and equipments			1,17,783
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)			0.67,554
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)			0.34,271
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	8,00,000		0.82,286
G	Training of extension functionaries			-----
H	Maintenance of Farm			1,01,722
I	Establishment of Soil, Plant & Water Testing Laboratory			-----
J	Library (Purchase of News paper & Journals)			0.3,558
K	Honorarium Of Trainees			0.2,000
L	Kissan Mela			0.7,700
m	Publication of extension literature			0.12,020
TOTAL (A)		44,50,000		11,90,695
B. Non-Recurring Contingencies				
1	Works	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		42,98,121
C. REVOLVING FUND		-----		-----
GRAND TOTAL (A+B+C)		87,50,000	87,50,000	86,76,178

7.5 Status of revolving fund (Rs. in lakhs) 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 2007 to March 2008	1,00,000	Nil	0.15,607	0.84,393
April 2008 to March 2009	0.84,393	0.26,934	0.00102	1.11,225
April 2009 to March 2010	1,11,225	0.44,350	00.2,591	1.52,984

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	Name of Crop	Area ('00' ha)	Production (M.Ton/ha.l)	Productivity (Kg./ha)
Cereals				
1.	Rice	126	88	700
2.	Kharif Jowar	1106	1659	1500
3.	Bajara	56	33	585
	Rabi Jowar	439	41266	940
	Wheat	239	3585	1500
4.	Maize	41	66	1600
5.	Other	11	7	600

Pulses				
6.	Pigeon Pea	755	918	1216
7.	Green Gram	269	83	310
8.	Black Gram	671	252	376
	Gram	297	26136	880
9.	Other pulses	17	08	450
Oilseeds				
10.	Groundnut	88	75	850
11.	Sunflower	99	70	710
12.	Soybean	2061	2885	1399
	Sunflower	114	1231	1080
	Safflower	44	335	760
13.	Other oilseeds	103	34	327
Cash crops				
14.	Sugar cane	530	45050	85
15.	Cotton	17	31	310

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

S. No	Crop	Area (ha)	Production (M.Ton/ha.l)
Fruit Crops			
1.	Mango	2200	11000
2.	Sapota	155	2170
3.	Sweet orange	75	2250
4.	Pomegranate	213	1278
5.	Fig	125	625
6.	Custard apple	145	725
7.	Anola	50	300
6.	Tamarind	435	3480
7.	Other fruit crops	850	6800
Vegetables			
8.	Tomato	850	10200
9.	Bringal	650	4550
10.	Lendiesfigner	956	4780
11.	Chili	990	6930
12.	Other Vegetables	1350	9450
Commercial Fruit Crops			
13	Grapes(table purpose)	700	14000
14.	Grapes(winery)	70	910
15.	Papaya	20	1500
16.	Banana	160	11200
Spices and Condiments			
17.	Turmeric	36	648
18.	Ginger	60	360
19.	Coriander	700	700
Flowers			
20.	Rose	20	560
21.	Tuberose	15	975
22.	Marigold	30	1350
23.	Gaillardia	12	720
24.	Aster	60	3960
25.	Chrysanthemum	06	420
26.	Others	10	150

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	750-800	63	33	39-42	11-13

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

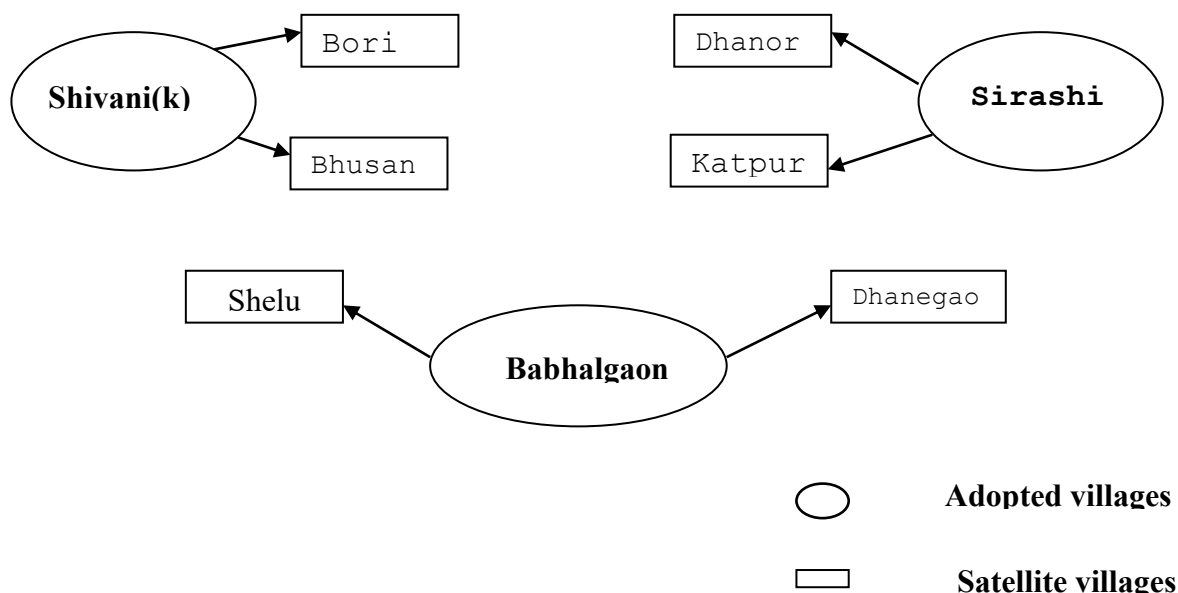
1. Names of villages focus area, target area etc.

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
	In situ 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		
Crossbred cattle and buffaloes	Improper feed and fodder management	F
	Low productivity and production	F
	Insufficient green fodder	F
	Incidence of diseases	P
	Deterioration of genetic status in subsequent generation	P
	Reproductive problems	F
	Increase in age of first calving	F
	General managerial practices	P
Goat	Improper feed and fodder management	F
	Slow weight gain	F
	Incidence of diseases	P
	Indiscriminate breeding	F

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
- Enterpreneuership development

Animal Science

- Fodder management
- Feed management
- Disease management
- Dairy 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 productivity 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 scarcity 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,	Resource conservation technology

	solar drier, and biogas 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 addition of 2 % urea in recommended dose of pesticide 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 Marathwada, MAU, Parbhani 2008
3.	Seed treatment for Early shoot fly fly	Rabi jowar	---	MAU, Parbhani	Pg no. 05 Inventory of Technologies for Marathwada, 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	Iron rich food	2004	MAU, parbhani	-
2.	Drudgery reducing technology	smokeless chullha	1986	ARTI, Pune	-
3	Drudgery reducing technology	Sarai cooker	2001	ARTI, Pune	-
Animal Science					
1	Phule Jaywant RBN-13	Fodder crop	2006	Forage crop research project, MPKV, Rahuri	Krishi Darshani, MPKV, Rahuri 2007 p: 70
2	Mineral Mixture	Buffalo	1992	NDRI, Karnal IVRI, Izzatnagar	
3	Ivermectin inj.	Goat	-	MAFSU, Nagpur	

3. Activity Chart

Crop/ Animal /Enter prise	Problem	Cause	Solution	Activity	Referen ce of Technol ogy
Crop production					
Soybe an	Less productivity	Imbalance fertilizer application	Application of recommended dose of Nutrients	FLD to demonstrate effect of recommended dose of nutrient	
Groun dnut	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	
Pigeo n 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	
Benga l 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 cane	Heavy infestation of whitefly	High dose of urea Ill drainage Lack of timely plant protection measures	Use of recommended dose of urea Give well drainage Spraying of Dichlorovas at early stages.	1) Assessment on use of 2% urea in recommended dose of DDVP 2) Training and demonstration	VSI, 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	Singal component FLD to demonstrate effect of seed tretment 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	Singal component FLD to demonstrate effect of seed tretment 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/MMPD M/CRID A/TB-22/2004
					Technical Bulletin No. CIAE/2007/128 (Women friendly improved farm tools & equipment p:28-30)
Home science					
Iron deficiency-Anemia	Commonly observed deficiency symptoms, Low Hb % in adolescent girls	Inadequate supply of dietary Iron	Promotion for consumption of pulses, Green vegetables, iron rich food stuffs. Encouragement for regular consumption of Vit. C rich foods the consumption of Tea ,coffee should be avoided as they inhibit the iron absorption	1.OFT (Assessment)on importance of Iron rich food for improving health status 2.Training Programme on symptoms and causes of anemia and its remedial diet	MAU 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
Sarai cooker	Maximum fuel consumption	Unawareness about improved and Drudgery	Use of improved cooking devices	Fld and Method demonstration on sarai cooker	ARTI Institute

	n and more time requiremen t	reducing cooking devices			
Animal Sciences					
Dairy	Low milk yield, Reproducti ve disorders	1) Imbalanced feed 2) Limited availability if green fodder 3) Poor health	1. Providing balanced ration 2. Mineral mixture feeding 3.Green fodder feeding 4.Timely vaccination and deworming 5. Cultivation of new fodder varieties	1) Training and single component FLD to demonstrate effect of mineral mixture feeding on milk production and general body condition of animals 2) On farm testing of Phule jaywant forage crop	Krishi Darshan i, MPKV, Rahuri 2007 p: 70
Goat	Endo and ecto parasite infestation, Poor growth, Disease incidence	Farmers were not giving dewormer to the goat No ecto paraciticide use	Regular deworming and ecto paraciticide spraying or use of ivermectin injection	Training and single component FLD to demonstrate Control of endo and ecto parasites in goat by using Ivermectin injection Health camp	

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

Crop Production

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

BSMR-853

- 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

Safflower

- PBNS 40

Horticulture

OFT Assessment of use of cultar for regular bearing in mango

- CULTAR (Paclobutrazol)
- Growth retardant
- For regular bearing in mango
- To decrease no of days from flowering to fruiting
- To increase the yield
- Use: used in trees having age more than 10 years

Plant Protection

FLD Var.: - JS-335

- Duration 95-98 days
- Colour of flower purple
- Medium seed size

- After maturity remain unaffected up to 5-7 days
- Under irrigated condition cultivate double cropping system

FLD Var.: -Parbhani Moti

- Suitable for rainfed condition
- Duration 125-127 days
- Use under heavy to medium soils
- Seeds are bold and shiny

FLD

- Use of pheromone trap
- Spraying of neem oil

FLD

- Seed treatment of Imidacloprid 5% one gm per kg of seed

Agricultural Engineering

OFT Refinement of CRIDA bullock drawn multi-crop planter

OFT on CRIDA bullock drawn multi-crop planter and Bullock drawn MAU seed-cum-ferti drill

Bullock drawn CRIDA seed planter-cum ferti drill

- Developed at CRIDA, Hyderabad and commercially available
- Suitable for crops: Soybean, Pigeon pea, Sorghum, Bengal gram, Maize, Ground nut, Pea etc.
- Field Capacity :- 2.0 ha./h
- Field Efficiency :- 65 to 70%
- Metering Mechanism : Inclined plate
- Cost : 15,000/-

Bullock drawn MAU seed-cum-ferti drill

- Released by MAU, Parbhani and available at MAU, Parbhani
- Suitable for crops: Sorghum, soybean, pearl millet, wheat etc.
- Metering mechanism: Fluted roller
- Field capacity: 1.5 ha/day
- Field efficiency: 65-70 %
- Cost: Rs. 6500/-

Wheel hoe (Mechanical weeder)

- Developed at MPKV, Rahuri and CRIDA, Hyderabad
- Requires one person to operate
- Field capacity: 150 – 200 m²/h

Groundnut Decorticator

- Developed at CIAE, Bhopal & available at MAU Parbhani
- Shelling Efficiency : 93 to 98%
- Capacity : 40 to 50 kg/h
- Broken kernels : 2.5 to 3%
- Total losses: 2.5 to 3%
- Cost : 12,00/-

Home Science

OFT 1 (Assessment) – On farm testing 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

OFT 2(Assessment)- Importance of iron rich food for improving health status

Characters

- It improves the consumption of iron to prevent and control the anaemia
- one sesamum laddu as a supplementary food for each adolescent girl
- One sesamum laddu provides 15 to 16 mgm iron per day per girl

FLD on Sarai cooker

- Fuel and time saving cooking device prepared by ARTI institutes

Animal Sciences

OFT – OFT of Phule Jayawant (RBN-13) fodder crop

Varietal characters

- Perennial forage crop as like that of Napier
- Gives more fodder production

- Less oxalic acid content (1.91 %)
- Profuse growth after cutting
- Season- Kharif- June to August; Summer- January to February
- Production- 200-250 T/ha
- No disease and pest attack

Frontline demonstration of feeding mineral mixture to the buffalo

- Dose – feeding 40 gm mineral mixture / day / buffalo for 45 days

FLD on Control of Ecto & endo parasites in Goat by using Ivermectin Inj.

- Dose of Ivermectin – 200 µg/Kg body weight through subcutaneous route

Annexure II

POPULAR ARTICLES

SN	Title of Popular Article
1.	Sowing R. Jowar, Maize and Bengal gram by seed planter
4	Bullock drawn CRIDA seed planter
5	Care and management of seed planter
6	Silage for milking animals
7	Improved implements for Intercultural operations
8	Management of animals for increasing milk production
9	Information on improved implements for Intercultural operations
10	Precision farming for high crop production
11	Crop management by precision farming
12	Sustainable milk production in animals
13	Involvement of women in Agriculture Field
14	Control of Pest and Diseases of mango inflorescence
15	Vaccination in Animals
16	Care and Management of Animals
17	Agri allied business – Goat Rearing
18	Backyard vegetable production
19	CRIDA bullock drawn multiple crop planter
20	Improved sowing / planting equipments
21	Transplanting technique in pigeon pea
22	Vegetable nursery –Today's need
23	Cultivation of improved fodder
24	New directions for milk revolution
25	Alternate fodder management for animals during droughts
26	Pola festival care & management of Animals

List of Folder

SN	Title of Folder
1.	Mango food processing unit for self employment
2.	Nutritional gardening for better health
3.	Phule Jaywant (RBN-13)-Perennial fodder crop
4.	Bacterial blight (Oily spot) management in pomegranate
5.	Transplanting technique in pigeonpea
6.	Control of parasites in animal

ANNEXURE III

NEWS PAPER COVERAGE

SN	Title of News
1.	Use of improved technologies for increasing yield of Rabi crops
2.	Necessary to use improved technologies
3.	Guidance to farmers by KVK, Latur
4.	Use of smokeless chulla
5.	Vaccination to control FMD disease
6.	Response of extension functionaries to training
7.	Use of mineral mixture to animals
8.	Animal health camp in Shirsi
9.	Adoption of agricultural technologies by farm women
10.	Alternate cropping system for increasing yield
11.	Women gathering in Babhalgaon
12.	Visit of Dr. Rajendra Reddy to KVK, Latur
13.	Proper management helps in increasing productivity of mango
14.	Concluding of farmers tour
15.	Transplanting technique in Pigeon pea for improving productivity
16.	Visit of Dr. VM Mayande, VC, Dr. PDKV, Akola to KVK, Latur
17.	Distribution of seeds by KVK, Latur
18.	Use improved technologies to increase productivity of <i>Kharif</i> crops
19.	Rural youth training
20.	Farmers rally at Gondegaon
21.	Attack of Spodoptera on Soybean
22.	Kanadi Pigeon pea cultivation
23.	agricultural development through modern technologies
24.	Agro advisory services
25.	Response to Animal health camp

Proceeding of Scientific Advisory Committee (SAC) Meeting

Held on 12th August 2009

The Second Scientific Advisory Committee (SAC) meeting of Manjara Charitable Trust's, Manjara Krishi Vigyan Kendra, Latur was held on 12th August 2009 in the presence of Hon. Director of Extension Education, Marathwada Agriculture University, Parbhani. Following members of SAC were present.

- Dr. S .D. More, Director, Directorate of Extension Education, Marathwada Agricultural University, Parbhani
- Shri Sanjay Deshmukh, Co-ordinator, Manjara Charitable Trust, Latur
- Shri.Trimbakdasji Zanwar, Advisor, MKVK, Latur
- Shri M. N. Raiwad, DDM, NABARD, Latur
- Dr. M. U. Gohotre, District Animal Husbandry Officer, Latur
- Sou. P.S. Ganacharya, Sericulture Development officer, Latur
- Shri. Laxman Deshpande, Head of office, AIR Osmanabad
- Shri Deepratna P. Nilangekar, D. D. News Representative, Latur
- Shri. Jadhav N.S., Farmer Representative, Sirsi, Tq Dist Latur
- Shri Tattapure V.B., Farmer Representative, Shivani, Tq Dist Latur
- Shri Ramraje Shinde, Farmer Representative, Bhabhalgaon, Tq Dist Latur
- Sou. Premala P. Awate, Female Farmer Representative, Shivani, Tq Dist Latur
- Sou. Haribai D. Jadhav, Female Farmer Representative, Sirsi, Tq Dist Latur

In the beginning, Shri. Digrase S.S. Programme Co-ordinator I/C, welcomed to all the SAC members, dignitaries, invitees and advisor of Manjara KVK, Latur. Shri. Bedre S.B., SMS (Agricultural Extension) described the aim and objectives of KVK and its role in speedy transfer of technologies developed by state Agriculture Universities, ICAR institutes, etc. Shri Digrase S.S., Programme Co-ordinator I/C, presented the progress reports of 2007-08 & 2008-09 and. Inwhich, detailed results of On Farm Testing, Front Line Demonstrations, trainings and other extension activities conducted were presented. Also, he presented the Annual Action Plan 2009-10. Finally he requested all the members to give valuable suggestions.

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

Shri. M.N. Raiwad, DDM, NABARD, Latur

- KVK may take active part in transferring the following schemes of NABARD for farmers and extend the same to farmers through various activities.
- Venture capital scheme - Dairy
- Venture capital scheme- Poultry
- Financial inclusion scheme - especially promote the farmers to open zero balance account in nationalized bank.
- Rural stores scheme (Gramin Bhandar Yojana), Agriculture Produce
- Formation of commodity – wise farmers club
- Rural Entrepreneurship development programmes
- Further he suggested to give SMS free services to farmers having mobile by using internet

Dr. Gohotre, DAHO, Latur

- Organize the vaccination camp regularly
- Promote the farmers to plant Phule Jaywant fodder crop

Shri. Dipratna Nilangekar - *Doordarshan* Representative

- Use audio visual aids during training, farmers rally etc. activities
- KVK may use Doordarshan media for transfer of technologies especially adopted / effectively used by farmers.

Shri. Laxman Deshpande – AIR Osmanabad

- KVK may under take residential entrepreneurship development programme for rural youth
- Value addition in fodder
- Feasibility of custard apple plantation especially as dryland plantation

Shri Trimbakdasji Zanwar – Advisor, KVK, Latur.

- Looking to the dry spell arised during this season, KVK may undertake training programmes on crop management during adverse condition.

- Promote the farmers for plantation of fodder crop and provide root cuttings of Phule Jaywant to farmers
- Promote the farmers for sowing of short duration varieties during late monsoon/ sowing
- Promote the farmers for maize cultivation as an alternative to other kharif crops
- Promote the farmers to go for sunflower and pearl millet sowing during adverse rainfall situation
- Identify the water-scarce area in Latur district and prepare crop plan accordingly
- Promote the farmers especially in adopted villages to implement gramian Bhandar Yojana
- Promote and train the farmers for cultivation of vegetables / flowers in shednet

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

- Conduct OFT/FLD on large scale
- Conduct / organize SAC meeting twice in a year
- Compile the agricultural Data Base of Latur district
- Develop crop cafeteria/ museum on KVK farm representing district crop
- Formation of farmers clubs
- Compilation of success stories
- Conduct Base line survey of adopted villages
- Compile the questionnaire of agriculture base problems
- Try to develop / provide IT services like AQUA
- Develop Website of KVK
- Provide marketing information, Diseases forecast information through IT service
- Initiate to publish quarterly news letter
- Establish nursery and start the need based production of sapling under revolving fund
- Develop farm implement museum and provide the equipments to farmers on hire base
- Attend the HRD training programmes especially organized by Anand, NAARM.

The meeting concluded with the vote of thanks by Shri Deshmukh SB, SMS, Plant Protection, MKVK, Latur.