ANNUAL PROGRESS REPORT – 2011-12
(01.04.2011 TO 31.03.2012)

1. GENERAL INFORMATION ABOUT THE KVK

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

Address	Telephone		E mail
	Office	FAX	
Krishi Vigyan Kendra Navsari Agricultural University Regional Rice Research Station Vyara, Dist. Tapi, Gujarat-394 650	(02626) 221869	(02626) 221869	kvkvyara@yahoo.co.in

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

Address	Telephone		E mail
	Office	FAX	
Director of Extension Education Navsari Agricultural University Navsari	(02637) 282026	(02637) 282706	deenaunvs@yahoo.co.in

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Nikulsinh M. Chauhan	-	9427868668	nikulsinh_m@yahoo.in

1.4. Year of sanction: 2004 (As ZARS KVK – 2000)

1.5. Staff Position (as on 1st March 2012)

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	Dr. N. M. Chauhan	PC	Extension Education	37400-67000 G.P. - 9000	46400	16/02/2009	Permanent	General
2	Subject Matter Specialist	--	SMS	Plant Protection	15600-39100 G.P. – 6000	-- Post is vacant --		Permanent	--
3	Subject Matter Specialist	Dr. C. D. Pandya	SMS	Extension Education	15600-39100 G.P. – 6000	26270	29/07/2009	Permanent	General
4	Subject Matter Specialist	Dr. A. P. Patel	SMS	Agronomy	15600-39100 G.P. - 6000	222920	10/07/2009	Permanent	ST
5	Subject Matter Specialist	Dr. S. T. Bhatt	SMS	Horticulture	15600-39100 G.P. – 6000	21600	01/04/2011	Permanent	General
6	Subject Matter Specialist	Arti N. Soni	SMS	Home Science	15600-39100 G.P. – 6000	23610	04/04/2008	Permanent	General
7	Subject Matter Specialist	Dr. J. K. Raval	SMS	Veterinary Science	15600-39100 G.P. – 6000	21600	01/04/2011	Permanent	OBC
8	Programme Assistant	Mr. N.K.Gajre	Prog. Assi.	Plant Pathology	Fixed	10000	25/1/2012	Permanent	SC
9	Computer Programmer	Nisheeta R. Patel	Comp. Prog.	--	Fixed	10000	21/08/2008	Permanent	SC
10	Farm Manager	Mr. V. N. Parmar	Farm Manager	--	Fixed	10000	23/08/2007	Permanent	General
11	Accountant / Superintendent	Mr. A.N.Vanjaria	Acct. / Super.	--	9300-34800 G.P. 4200	16320	21/11/2011	Permanent	ST
12	Stenographer	Mr. K. R. Parmar	Steno.	--	Fixed	5300	18/08/2008	Permanent	General
13	Driver	Mr. C. I. Patel	Driver	--	Fixed	5300	23/08/2007	Permanent	OBC
14	Driver	--	Driver	--	Vacant	--	--	--	--
15	Supporting staff	--	Supp. Staff	--	Vacant	--	--	--	--
16	Supporting staff	--	Supp. Staff	--	Vacant	--	--	--	--

1.6. Total land with KVK (in ha) :

S. No.	Item	Area (ha)
1	Under Buildings	2.50
2.	Under Demonstration Units	0.50
3.	Under Crops	5.23
4.	Orchard/Agro-forestry	0.80
5.	Others (specify)	--

1.7. Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1	Administrative Building	ICAR	31/3/2011	516	--	--	--	--
2	Farmers Hostel	ICAR	31/3/2011	248	--	--	--	--
3	Staff Quarters (5)	ICAR	31/3/2011	348	--	--	--	--
4	Demonstration Units (2)	--	--	--	--	--	--	--
5	Fencing	--	--	--	--	--	--	--
6	Rain Water harvesting system	--	--	--	--	--	--	--
7	Threshing floor	--	--	--	--	--	--	--
8	Farm godown	--	--	--	--	--	--	--

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Jeep (Bolero)	2004	4,30,500=00	257430	Working
Tractor	2001	3,31225=00	4502	Working
Motorcycle	2011	48,816=00	2625	Working

C) Equipments & AV aids

Sr. No.	Name of Equipments/ Instruments/ Farm Machineries	No.	Date of Purchase	Price	Present Status
1	2	3	4	5	6
(1)	Furniture (Godrej)				
1	Table T-9	4	30/3/2001	26636	Working
2	Table T-104	1	30/3/2001	8515	Working
3	Chair CH-18C	20	30/3/2001	43300	Working
4	Chair PCH-700 B	1	30/3/2001	8168	Working
5	Chair CH-7 B	4	30/3/2001	5692	Working
6	Store Well – Glass Door	1	30/3/2001	9259	Working
7	Slotted Angel Racks	4	30/3/2001	4900	Working

Sr. No.	Name of Equipments/ Instruments/ Farm Machineries	No.	Date of Purchase	Price	Present Status
(2)	Mahindra Tractor model 575 DI 45 HP & Accessories	1	30/3/2001	3,31,225	Working
(3)	Photo Copier NP 7160 Canon NPG-1	1	31/3/2001	117274	Not working
(4)	Furniture (Godrej)				
1	Table –T- 402	5	27/12/2002	24600	Working
2	Comp. Table C-6	1	27/12/2002	5255	Working
3	Store Well – Glass Door	1	27/12/2002	9330	Working
4	Store Well Plane	2	27/12/2002	16000	Working
5	Chair CHR-7B	15	27/12/2002	22350	Working
6	Chair PCH-5000 2 T	2	27/12/2002	7230	Working
7	Filing Cabinet	1	27/12/2002	7900	Working
(5)	Computer & Peripherals	1	28/12/2002	51850	Working
(6)	3 KVA on line UPS	1	28/12/2002	38000	Not working
(7)	HP Laser Jet 1200 Printer	1	28/12/2002	20600	Not working
(8)	MSXP standard edition with Indian Longwise Proofing tools	1	30/12/2002	6450	Not Working
(9) 1	CD writer	1	28/12/2002	3025	Working
2	HP Scan jet 2300c Scanner	1	28/12/2002	3700	Not Working
(10) 1	Ceramic steel white writing board 4'x6'	1	21/2/2003	9000	Working
2	Ceramic chalk writing board 4'x 6'	1	21/2/2003	9000	Working
(11) 1	Over Head Projector	1	22/3/2003	27690	Working
2	Plastic screen with tripod stand	1	22/3/2003	4500	Working
(12) 1	LG 29 CA Color TV 29"	1	21/3/2003	26990	Working
2	Thomson 5 in 1 VCD player	1	21/3/2003	6990	Working
(13)	P.A. System				
1	Amplifier SSA 250	1	22/3/2003	9400	Working
2	Eco Mixture DMX 40	1	22/3/2003	3249	Working
3	Full Range Speaker SRX 250 D	4	22/3/2003	24472	Working
4	Microphone		22/3/2003		Working
	ALD 101 x LR	1	22/3/2003	1140	Working
	ATP 20 M	1	22/3/2003	489	Working
	WM 201	1	22/3/2003	1615	Working
5	Unit Horn Combination UHC 30 x T	1	22/3/2003	1188	Working
6	Micro Phone Stand		22/3/2003		Working
	DGN	1	22/3/2003	456	Working
	DGT	1	22/3/2003	285	Working
	ATS:5	1	22/3/2003	100	Working
(14)	A.V. Trolly	1	22/3/2003	4132	Working
(15)	Laminated Chart with wooden Frame size 20" x 30"	33	22/3/2003	24420	Working
(16)	Sony Digital Handy cam	1	22/3/2003	32750	Working

Sr. No.	Name of Equipments/ Instruments/ Farm Machineries	No.	Date of Purchase	Price	Present Status
1	Power adapter	1	22/3/2003		Working
2	Battery	1	22/3/2003		Working
3	Remote Control	1	22/3/2003		Working
4	AV Connecting Cable	1	22/3/2003		Working
5	Belt shoulder strap	1	22/3/2003		Working
6	Handy Cam Recording Caset	1	22/3/2003		Working
(17)	Automatic slide Projector	1	22/3/2003	13695	Working
(18)	Portable Generator EXK 2000 AC	1	24/3/2003	38200	Working
(19)	Education Exhibition Panel System	1	25/3/2003	13500	Working
1	News Paper Stand	1	25/3/2003	3500	Working
2	Displayer/Book/ Magazine Stand	1	25/3/2003	3500	Working
3	Notice Writing Board with Acrylic Shutter	1	25/3/2003	4450	Working
(20)	Stainless steal Vessels	23	28/3/2003	19450	Working
(21)	Modem	1	31/3/2003	2020	Working
(22)	Laminated Charts with Plywood Framing size 24”x30”	5	12/3/2004	3000	Working
(23)	Colour Enlargement charts	33	29/3/2004	24420	Working
(24)	Jeep Mahindra & Mahindra Bolero D.I.	1	2/12/2004	430500	Working
(25)	Bolero Acessories		2/12/2004	21650	Working
(27)	Whirlpool freez	1	27/3/2006	15800	Working
(28) 1	Electronic Automatic Kel Pus Microprocessor based eight place macro block digestion system model KES-08L	1	27/3/2006	88120	Working
2	Electronic Kel plus micro processor based Automatic Distillation system model distil EM	1	27/3/2006	142300	Working
(29)	Double still with thermo sensor hr (All glass) cat No 2348	1	27/3/2006	33924	Working
(30)	Nova Rotary shaking machine				
1	(a)Capacity 16 flasks of 250 ml	1	28/3/2006	24500	Working
2	(b)Capacity 25 flasks of 250 ml	1	28/3/2006	29750	Working
3	Nova Hot plate Rectangular model NV-8535 stainless steel				
	(a) Size 12” x 20”	1	28/3/2006	8500	Working
	(b) Size 18” x 24”	1	28/3/2006	11250	Working
4	Nova willy mill stain lese steel camber Size 100 x 50 mm	1	28/3/2006	31900	Working
(31)1	Laboratory Table	4	27/3/2006	34400	Working
2	Racks	6	27/3/2006	9000	Working
3	Stools	12	27/3/2006	5400	Working

Sr. No.	Name of Equipments/ Instruments/ Farm Machineries	No.	Date of Purchase	Price	Present Status
4	Steel cupboard storewell	4	27/3/2006	19200	Working
5	Steel cupboard storewel	4	27/3/2006	14000	Working
6	Steel racks	4	27/3/2006	8600	
7	Partition racks	3	27/3/2006	22500	Working
8	Office chair	4	27/3/2006	4000	Working
(32)	Systronics make				
1	Micro controller based Digital spectrophotometer model -106	1	27/3/2006	26800	Working
2	Systronics make micro controller based flame photometer compressor model-128	1	27/3/2006	35200	Working
3	Systronics make micro controller based PH meter	1	27/3/2006	10900	Working
4	Systronics make micro processor based conductivity meter	1	27/3/2006	12800	Working
(33)	Hot air oven	1	27/3/2006	21200	Working
(34) 1	Chemical Balance	1	27/3/2006	75000	Working
2	CENTRO FIX WATERBATH	1	27/3/2006	10800	Working
3	CENTRO FIX – Muffle furnace	1	27/3/2006	29500	Working
4	Automatic autoclave	1	27/3/2006	21000	Working
(35)	City weigh balance model ST-10 Cap- 10 kg	1	27/3/2006	10640	Working
(36) 1	LG AC-15 ton	1	31/3/2006	23740	Working
2	Micro kjeldahl Assembly	1	31/3/2006	10700	Working
(37)	Burner maker type with stop coke	8	31/3/2006	2000	Working
(38)	Voltas make water cooler	1	31/3/2006	26500	Working
(39) 1	Soft Pin up Board	25	29/11/2007	96250	Working
2	Single Pole Stand	26	29/11/2007	35360	Working
(40)	Microscope for Computer	1	17/3/2008	294028	Working
(41) 1	SDZ – TR – PL – HL Microscope controlled Transformer	1	15/3/2008	209444	Working
2	OP – 150 R Fibre Optic Illumivater	1	15/3/2008		Working
3	GMTV – 33 H High Resolution Coloured CCTV system	1	15/3/2008		Working
(42)	Colony Counter – MSW – 408	1	15/3/2008	5668	Working
(43)	Oven Universal – MSW – 213	1	15/3/2008	65788	Working
(44)	Insect Rating Case	5	17/3/2008	14000	Working
(45)	LG A/C machine 2.0 Ton Split AC with Remote	2	17/3/2008	58680	Working
(46)	LG Refrigeration–280 Lit. Model -295TMG4	1	25/3/2008	18000	Working

Sr. No.	Name of Equipments/ Instruments/ Farm Machineries	No.	Date of Purchase	Price	Present Status
(47)	Phillips Grinder – 1618	2	25/3/2008	6000	Working
(48)	Sony Cyber Shot – DSC – W 90	1	25/3/2008	14800	Working
(49) 1	Pressure Cooker – 8 lit.	1	24/3/2008	4500	Working
2	S/A/S Tope – 17''	1	24/3/2008		Working
3	S/A/S Tope – 21''	1	24/3/2008		Working
4	S. S. Cover	2	24/3/2008		Working
(50) 1	Insect Display show cases	4	24/3/2008	17420	Working
2	Insect Show cases cabinet	1	24/3/2008		Working
(51) 1	Compaq Computer – 3250 IL	1	25/3/2008	28950	Working
2	MS XP Professional Vista License Copy	1	25/3/2008	6000	Working
(52)	Top Loading Balance – BH 200 H	1	19/3/2008	28120	Working
(53)	Digital Conductivity TDS Meter Model - 307	1	24/3/2008	11648	Working
(54)	Digital PH meter Model - 802	1	24/3/2008	7006	Working
(55)	Distillation Apparatus (J – sil)	1	24/3/2008	15912	Working
(56)	H/P Laser Jet Printer - 1022	1	25/3/2008	10990	Working
(57)	Steel Rack KV-110 78''x36''x15''	5	25/3/2008	9844	Working
(58) 1	Steel Cupboard – 78''x36''x19''	2	23/3/2008	11100	Working
2	Computer Table	1	23/3/2008	3300	Working
3	Computer Chair	2	23/3/2008	5200	Working
(59)	Shaking Incubator – 24 BL	1	25/3/2008	95387	Working
(60)	CentriFuge – R – 24 Voltage stabilizer 3.0 KVA	1 1	25/3/2008 25/3/2008	32025 6630	Working
(61)	Double Pan Balance Analytical Weight Box	1 1	24/3/2008	3640	Working
(62)	Gas Cylinder, Regulator, Gas Stove	1	13/3/2008	1930	Working
(63)	B.O.D. Incubator - 270	1	22/3/2008	90534	Working
(64)	KLENZFLO Horizontal laminar clean air work station – 1500c	1	28/3/2008	138320	Working
(65)	Crompton Greaves Fans	4	28/3/2008	6800	Working
(66)	Humidifier (S.S. Body)	1	30/3/2008	11034	Working
(67)	ASPEE Tractamount Bloover fro Intranational	1	30/3/2008	99960	Working
(68)	Panasonic Multifunctional Device Copy/Print/Scan/Fax	1	28/03/2010	14900	Working
(69)	Eco Display Unit Size : 6' x 2'	1	28/03/2010	9625	Working
(70)	DIM System size : 36'' x 24''	2	28/03/2010	19250	Working
(71) 1	Podium	1	28/03/2010	4200	Working

Sr. No.	Name of Equipments/ Instruments/ Farm Machineries	No.	Date of Purchase	Price	Present Status
2	Podium	1	28/03/2010	4200	Working
(72) 1	LCD Projector - Mo.D.832 Mx	1	06/01/2011	66305	Working
2	VIVITEK Dongel	1	06/01/2011	16910	Working
3	WALTOP 6'' Interactive RF Pod	1	06/01/2011	14863	Working
4	Motorized Screen size – 5'x7'	1	06/01/2011	12905	Working
5	Impact 65 T (PA system)	1	06/01/2011	17800	Working
(73) 1	23'' – LCD Computer	1	15/10/2010	33420	Working
2	Branded CPU E-Machine		15/10/2010	''	Working
3	Printer – Canon	1	15/10/2010	8500	Working
4	UPS – Umax 600 VA	1	15/10/2010	1850	Working
5	HP Scanner	1	15/10/2010	4500	Working
6	Q.H. Internet Security	1	15/10/2010	1150	Working
(74)	Crystal EPABX system set and accessories	1	11/02/2011	49219	Working
(75) 1	Power Tiller	1	18/02/2011	149430	Working
2	Multi crop Thresher	1	18/02/2011	23100	Working
		1	18/02/2011	26000	Working
3	Power Sprayer	1	18/02/2011	24850	Working
4	Winnower	1	18/02/2011	24150	Working
5	Seed cum Ferti. drill	1	18/02/2011	28880	Working
(76) 1	Steel Cupboard 18"X 36"X 78"	9	8/1/2011	58977	Working
2	Visitor Chair	25	8/1/2011	48475	Working
3	Rack- 6 X 3 X 1 foot	15	8/1/2011	43170	Working
4	Rivolving Chair	6	8/1/2011	21810	Working
***(77)**1	Gayatri two-way Leveller Heavy Duty	1	11/3/2011	12600	Working
2	Gayatri Cultivator Heavy Duty	1	11/3/2011	20700	Working
***(78)**	Plough & Harrow	1	17/2/2011	19000	Working
***(79)**1	Rotavator- 5.25	1	13/3/2011	60380=95	Working
2	Hydrolic trailor	1	13/3/2011	102380=90	Working
(80)	Varoon Vinowing Monoblock Electric Fan	1	25/3/2011	6900	Working
(81)	Splender Pro Kick Spoke	1	31/3/2011	41860	Working
(82)	Sub-mersible pump set 2 H.P. with accessories	1	28/3/2011	14600	Working
(83) 1	Steel Cupboard	13	28/12/2012	71500	Working
2	Table (4 X 2.5) rek	10	28/12/2012	35000	Working
3	Steel Coat (6 X 3.5)	10	28/12/2012	40000	Working

Sr. No.	Name of Equipments/ Instruments/ Farm Machineries	No.	Date of Purchase	Price	Present Status
4	Sofa set- Tipoi	1 set	28/12/2012	17500	Working
5	Chair-Table-Tipoi	1 set	28/12/2012	7500	Working
6	News paper stand	3	28/12/2012	3150	Working
7	Computer Table-Chair	2	28/12/2012	12558	Working
8	Water cooler	2	28/12/2012	84000	Working
9	Post weigh balance	2	28/12/2012	2100	Working
10	Steel cupboard	2	28/12/2012	37000	Working
84 1	Sofa three seater waiting chair	20	13/1/2012	62980	Working
2	Fix Chair	10	13/1/2012	23090	Working
85	10 H.P. 4 stage falkan sub-mersible pump set with accessesories	1 set	4/2/2012	64125	Working

***77, 78 and79 purchased from University Grant not from ICAR**

1.8. A). Details SAC meeting* conducted in the year 2011

Sl. No.	Date	Name and Designation of Participants	Salient Recommendations	Action taken
1.	9/8/2011	1.Dr. A. R. Pathak Hon. Vice Chancellor Navsari Agricultural University, Navsari 2.Dr. M. S. Purohit, Director of Extension Education Navsari Agricultural University, Navsari 3.Dr. R. P. Rohilla, Representative Hon. Zonal Project Director Zone-VI, ICAR, Jodhpur Rajasthan 4.Dr. B. N. Patel, Representative Director of Research Navsari Agricultural University, Navsari 5.Dr. V. J. Zinzala, District Agriculture Officer Department of Agriculture, District Panchayat, Vyara, Tapi 6. Mr. Abhesingbhai M.Chaudhari, Chairman A. P. M. C., Market Yard Vyara, Dist. Tapi 7. Dr. D. C. Chaudhari, Deputy Director of Animal Husbandry, District Panchayat, Tapi 8. Mr.K.V. Tandel, Assistant Director (Fisheries) Near CRPF Campus, Ukai, Dist. Tapi 9.Mr. N. G. Gamit, Deputy Director of Agriculture(Training)	1. District Profile should be updated. 2. More emphasizes to be given on Seed village concept for Paddy. 3. Success stories should be published in English and local language. 4. More emphasizes to be given on Farm Mechanization. 5. Trainings on Soybean value addition are included in Action Plan.	Followed Followed Followed Followed Followed

		Farmers Training Centre, Vyara 10. Mr. Kamrajbhai M. Chaudhary. Assistant Director (G.L.D.C.) Parsiwad, Vyara, Dist. Tapi 11.Mr. S.C. Dave, Representative Joint Director of Agriculture Lal Banglow, Athwalines, Surat 12.Mr. Dharmesh R. Parmar Dy. Commissionor of industry & GM.,DIC, Vyara 13. Mr. R. M. Patel, Depo Incharge GSFC, Market Yard, Vyara, Dist. Tapi 14. Mr. B. J. Savaliya Kendra Incharge GNFC, Market Yard, Vyara, Dist. Tapi 15.Mr. D. T. Desai Patidar Agro Centre, Vyara, Dist. Tapi 16.Mr. Ganpatbhai D. Gamit, Chairman Gram Seva Samaj, Vyara 17.Dr.H.B. Kharecha Gramin Vikas Trust Moti Bhamti, Ta. Vansda 18.Revaben Ranjitbhai Chaudhari Leader, Sakhi Mandal, Ghodchit,Ta. Songadh,Dist. Tapi 19.Mr. Vipinbhai Chaudhari Secretary,Co-Operative Mandli, Vanskui, Ta- Vyara. 20.Mr. Nilesh Patel Krushi Agro Chemicals, 26, Mahendra Park, Nr. Satyadev Plaza, Jahangirpur, Surat		

		21.Mr. Narayan Lachheta Synzenta India Ltd, Surat Region 22.Smt. Revaben Ranjitbhai Member, Farm Science Club, KVK, Village, Godhchit, Ta- Songadh. 23.Mr. Madhubhai J. Chaudhari Project Co-ordinator, Food, Fat and Fertilizer co., Vyara 24. Smt.Induben Ramanbhai Gamit SHG, Leader, Tribal innovative woman and Member, KVK SHG, Kapura,Vyara, Dist. Tapi 25. Smt.Kapilaben Premchand gamit, SHG Leader, Tribal innovative woman and Member, KVK SHG, Kapura,Vyara, Dist. Tapi 26. Smt.Shakuntalaben J. Gamit Small Tribal farmer representative, Bhararda village, Ta- Songadh 27. Smt.Nanduben Chhanabhai Kotwaliya, Small Tribal farmer (Kotwaliya)representative, Jharali village, Ta- Songadh 28. Smt.Babliben Ramsingh Kotwaliya, Small Tribal farmer (Kotwaliya)representative, Jharali village, Ta- Songadh 29. Smt.Raytaben Rameshbhai Gamit, Small Tribal farmer representative, Bhararda village, Ta- Songadh 30. Smt.Jyotiben rameshbhai Gamit Tribal Youth, lady representative, Hangati Mahila Mandal,Mandal village, Ta- Songadh 31. Dr. Ramkumar Singh Managing Trusty Suruchi Vasahat, Bardoli 32. Smt. Ramaben R.Singh Managing Trusty Suruchi Vasahat, Bardoli		

		33. Mr. Ravibhai R. Patel Representative Chairman, Nizar taluka kharid-vechan sangh ltd., Nizar, Ta. Nizar, Dist. Tapi 34. Mr. Jayesh Udhdhavbhai Patel Progressive Young Farmer, At. Mubarakpur, Ta. Nizar, Dist. Tapi 35. Mr. Ajitbhai Nathubhai Chauudhary, Secretary, Co-operative Mandli, Kelkui, Ta- Vyara. 36. Mr. Rangji Ukabhai Gamit, Tribal innovator, Gunkhadi, Ta- Songadh. 37. Kiran Devjibhai Gamit, Tribal innovator farm Woman, Gunkhadi, Ta- Songadh. 38. Dr. N. M. Chauhan Programme Coordinator Member Secretary, K.V.K.,Vyara, Dist. Tapi 39. Father Fransis Mandal, Ta. Songadh 40. Mr. Bhupendra Desai Co-operative Leader, Valod 41. Mr. Balvantbhai G. Ahir Social worker, Buhari		

**** Attach a copy of SAC proceedings along with list of participants: -*** **Annexure - I**

2. DETAILS OF DISTRICT

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

S. No	Farming system/enterprise
1.	Agriculture and Animal Husbandry as well as and Agro forestry
2.	Agriculture and horticulture
3.	Agro-forestry

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

1. Agro-climatic zones

S. No	Agro-climatic Zone	Characteristics
1.	South Gujarat Heavy Rainfall Zone-I	• It consists of three talukas of Tapi district i.e. Songadh, Vyara and Valod taluka • It has an intensive rainfall over 1500 to 2200 mm per annum • Rain mostly received during month of July-August • The zone has clyey soil with normal pH and Ec, medium organic carbon and phosphorous and high potash
2.	South Gujarat Rainfall Zone-II	• It consists of two talukas i.e. Uchchhal and Nizar. • Rainfall of the area varying between 1000 to 1500 mm per annum • This zone has black soil of medium to heavy texture • 75 per cent of the area is rainfed.

2. Agro-ecosystems

Sr. No	Agro ecological situation	Characteristics
1.	Situation I	• The total geographical area is about 5.57 lack ha., which is 58 per cent of the zone, of which 53 Per cent is under forest • Cultivated area is 15.29 per cent as it is a heavy rainfall situation • 5 per cent area is under doubled crop • Major Field crops grown are paddy, minor millets, pulses, sorghum and oilseeds like ground nut and soybean.
2.	Situation III	• The total geographical area is about 2.22 lack ha, which is 25.21 per cent of the zone, of which 59.3 Per cent is under cultivation • Cultivated area is 1.64 lakh ha. • 14.5 per cent area is under doubled crop. Soil of this situation is deep and fine Textured.

2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
1.	Hilly Area – Light soil	Lateritic and eroded shallow soil with high infiltration rate	130023
2.	Plain area- Heavy Black soil	Heavy Black to medium black with medium to poor drainage. In some area it is water logged and salt affected	208779

2.4. Area, Production and Productivity of major crops cultivated in the district (2010-11)

S. No	Crop	Area (ha)	Production (M.T.)	Yield (kg/ha)
1	Rice irrigated	137	316	2289
2	Rice unirrigated	217	403	1856
3	Kharif bajara	1	1	1144
4	Kharif jowar	131	170	1291
5	Kharif maize	10	16	1638
6	Other kharif cereals	4	3	748
7	Kharif mung	12	5	453
8	Kharif udad	34	24	702
9	Kharif tur	164	101	615
10	Other kharif pulses	8	4	510
11	Irrigated wheat	53	175	3295
12	Rabi jowar	48	52	1077
13	Gram	22	32	1423
14	Other rabi pulses	24	19	768
15	Summer rice	26	79	3035
16	Summer maize	3	6	1995
17	Summer mung	32	17	526
18	Kharif groundnut	31	52	1711
19	Summer groundnut	101	159	1573
20	Sesamum	1	1	1000
21	Soyabean	50	42	840
22	Other oilseeds (total)	30	11	381
23	Irrigated cotton (lint)	3	11	743
24	Unirrigated cotton (lint)	40	66	283
25	Sugarcane	101	516	5105
26	Onion rabi	7	179	27396
27	Chilli es	1	1	1039
28	Banana	3	200	74010
	TOTAL	**1294**	**2661**	**137446**
Fruit Crops (2009-10)				
1	Mango	3250	19500	6000
2	Sapota	40	440	11000
3	Lemon	13	143	11000
4	Banana	1550	77500	50000
5	Guava	7	77	11000
6	Papaya	480	21600	45000
7	Custard Apple	35	245	7000

8	Amla	7	56	8000
9	Cashew nut	150	60	400
10	Coconut tree	40	320	8000
11	Others	132	972	7364
	Total	**5704**	**120733**	**164764**
Spices and Condiments (2009-10)				
1	Chilli (Green)	2030	16240	8000
2	Chilli(Dry)	2030	1465	722
3	Garlic	20	120	6000
4	Coriander	20	240	12000
5	Ginger	35	630	18000
6	Haldar	40	720	18000
7	Methi	15	120	8000
8	Ajmo	190	95	500
9	Suva	40	20	500
	Total	**2390**	**20215**	**71722**
Vegetables (2009-10)				
1	Onion	50	1550	31000
2	Brinjal	2940	58800	20000
3	Cobbage	110	2310	21000
4	Okra	3650	40150	11000
5	Tomato	620	10540	17000
6	Cauliflower	360	6660	18500
7	Clusterbean	380	2850	7500
8	Cowpea	610	4270	7000
9	Leafy Vegetables	1720	18920	11000
10	Others	280	3080	11000
	Total	**10720**	**149130**	**155000**
Medicinal and aromatic crops				
1	KUWARPATHU	3	72	24000
2	ASHWAGANDHA	2.5	3	1200
3	PACHAULI	6.5	47	7231
4	MENTHA	1.5	9	6000
5	PAMAROZA	0.5	4	8000
	Total	**14**	**133**	**46431**
Flowers				
1	Rose	97	834	8598
2	Merigold	110	1232	11200
3	Jasud	3	12	4000
4	Lili	30	270	9000
5	Others	105	535	5095
	Total	**345**	**2883**	**37893**

Source: Directorate of Agriculture, Gandhinagar and Department of Horticulture, Navsari

2.5. Weather data

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
April-11	--	36.10	20.20	57.10
May-11	--	35.30	20.60	74.30
June-11	46.00	31.42	19.89	81.30
July-11	404.00	30.60	21.17	87.70
August-11	556.50	30.15	19.82	89.00
September-11	169.50	30.32	19.90	85.60
October-11	--	30.42	20.20	81.40
November-11	--	30.62	20.32	77.30
December-11	--	25.19	17.02	67.00
January-12	--			
February-12	--			
March-12	--			

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

Category	Population	Production ('000 tones)	Productivity (kg/day)
Cattle			
Crossbred	45123	55.31	7.357
Indigenous	170127	27.63	3.228
Buffalo	176000	86.75	4.181
Sheep	5000	0.67 metric tonnes	1.146 kg/sheep
Goats	91273	2.82	0.305
Pigs	2723	--	--
Rabbits	1576	--	--
Poultry			
Desi	421200	131.70 lakh egg	115 eggs per layer
Improved	77400	206.12 lakh egg	300 eggs per layer
Donkey	1943	--	--

* Source: 27th survey report on estimates & major livestock products for the years 2009-10 Guj. State, Directorate of Animal Husbandry, Gandhinagar, Districtwise main findings of the integrated sample survey to estimate major livestock products, 1993-84 to 2009-10 Guj. State, Livestock Census 2007.

2.7 Details of Operational area / Villages (2009-10 to 2011-12)

Sr.No.	Taluka	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1.	Vyara	Mirpur	Mirpur	Paddy, Groundnut, Gram, Vegetable, Sorghum	▪ Productivity of major crops is very low ▪ Majority of the area is un-irrigated ▪ No scope for other crops due to erratic heavy rainfall ▪ Lack of technology knowledge in farmers ▪ Poor food grain storage practices ▪ Inadequate intake of fruits & vegetables ▪ Poor economic condition ▪ Poor livestock management & disease management	▪ Crop production technology ▪ IPM in field crops and vegetables ▪ Storage of fruit grains ▪ Health & nutrition for vulnerable groups ▪ Introduction of soybean crop to replace drilled paddy ▪ Livestock management ▪ Kitchen gardening ▪ Income generating activities ▪ Crop diversification
2.	Vyara	Vanskui	Vanskui	Paddy, Sugarcane, Groundnut, Vegetables	▪ Lack of technological knowledge among farmers ▪ Poor drainage of soil ▪ Adoption level of farmers is very low ▪ Lack of Knowledge about scientific method of fruit & vegetable preservation ▪ Low milk production ▪ Lack of knowledge about inter cropping ▪ High mortality rate in calf	▪ IPM in field crops ▪ Land configuration ▪ High value horticulture crop cultivation ▪ Short duration vegetable crops ▪ Milch animal management ▪ Calf rearing ▪ Fruits & vegetable preservation ▪ Practices of inter crops in sugarcane
3.	Songadh	Ghodchit	Ghodchit	Paddy, Pigeon pea, Soybean, Sorghum, Sugarcane, Gram, Groundnut	▪ Low awareness about Agriculture and Animal Husbandry ▪ Fear in adoption of new technology ▪ Lack of guidance about new agricultural technology ▪ Poor animal management ▪ Equipments (Oil-engine) for irrigation is very less ▪ Poor food grain storage practices	▪ Organic farming ▪ Introduction of soybean crop to replace drilled paddy ▪ Dry land horticulture ▪ Advanced irrigation methods ▪ Vermi – composting ▪ Balanced diet for animal ▪ Care of milch animal ▪ Kitchen gardening

Sr.No.	Taluka	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
					▪ Lack of awareness about Health & Nutrition	▪ Replacing the paddy with vegetable in well drained soil ▪ Increase area under vegetable ▪ Food grain storage ▪ Health & Nutrition for pregnant & lactating mother & children ▪ Increase area under drip irrigation
4.	Songadh	Nishana (Amji)	Nishana (Amji)	Paddy, Pigeon pea, Sorghum, Groundnut, Watermelon and Brinjal	▪ Low irrigation facility ▪ Erratic heavy rainfall ▪ Majority of area has light soil with undulated land ▪ Low technological level among farmers ▪ Poor economic status ▪ Poor food grain storage ▪ Lack of awareness about health & nutrition	▪ Increase area under drip irrigation ▪ Low-cost green house ▪ Storage of food grains ▪ High-value horticultural crop ▪ Increase area under pulses and oil seed crops in un-irrigated area ▪ Crop production technology ▪ Health and nutrition for vulnerable groups ▪ Kitchen gardening ▪ Income generation activities
5.	Uchchhal	Bhadbhunja	Bhadbhunja	Paddy, Gram, Pigeon pea, Sorghum, Vegetable, Udad, Maize	▪ Lack of knowledge about scientific package of practices of different crops ▪ Lack of awareness about insects and pests & diseases ▪ Lack of knowledge about soil analysis ▪ Lack of knowledge about balanced nutritional diet ▪ Lack of knowledge about fruits & vegetable preservation ▪ Inadequate intake of fruits & vegetables	▪ Introduction of soybean crop to replace drilled paddy ▪ Crop production technology ▪ Awareness about insects, pests and diseases ▪ Short duration vegetable cultivation if Arid horticulture development ▪ Gobar gas plant ▪ Vermi composting ▪ Compost making ▪ Kitchen gardening ▪ Bucket drip

Sr.No.	Taluka	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
					▪ Disease management	▪ Increase area under oil seed and pulse crops ▪ Fruit & vegetable preservation ▪ Balanced diet from locally available food material ▪ Give demonstration of silage and urea treatment ▪ Training on vaccination and de-worming
6.	Uchchhal	Selud	Selud	Paddy, Pigeon pea, Sorghum, Gram, Maize, Groundnut	▪ No facilities for irrigation after October ▪ Soil of this area is very light ▪ Uneven distribution of rainfall ▪ Socio-economic condition is very poor ▪ No knowledge of scientific agricultural production technology and animal husbandry ▪ Youth club is not active ▪ Poor livestock management ▪ Lack in dietary pattern of pregnant & nursing mother and children ▪ Lack of awareness about health & nutrition ▪ High mortality in calf	▪ Increase area under Soybean ▪ Low cost production technology and drip irrigation ▪ Income generation activities and kitchen gardening ▪ Livestock management ▪ Disease management ▪ Initiating youth club activities ▪ Women and child care ▪ Low cost green house ▪ Calf rearing
7.	Valod	Kanjod	Kanjod	Paddy, Sugarcane, Groundnut, Okra	▪ Low production in field crops ▪ Lack of knowledge about scientific production technology ▪ High doses of insecticides ▪ Youth club is not active ▪ Poor facilities of rural bank ▪ Low productivity of okra ▪ Lack of knowledge about off season cultivation of vegetable.	▪ Crop production technology ▪ Increase area under vegetable crops ▪ Increase area under oil seed crops ▪ Drip irrigation ▪ Initiating youth club activities ▪ Value addition ▪ INM in vegetable

Sr.No.	Taluka	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
						▪ Off season cultivation
8.	Valod	Degama	Degama	Sugarcane, Paddy, Groundnut, Vegetable	▪ Lack of technological knowledge about crop production technology ▪ Lack of knowledge about fruits & vegetable preservation ▪ Level of adoption in field crops & vegetables are very low ▪ SHGs is not active ▪ No cooperative society ▪ Lack of knowledge about insect & pest ▪ Lack of knowledge about Sugarcane & vegetable	▪ Crop production technology ▪ Value addition ▪ Income generating activities ▪ Activation of SHGs ▪ IPM in field crops & vegetables ▪ INM in vegetables & sugarcane
9.	Nizar	Sarvala	Sarvala	Cotton, Gram, Wheat, Sorghum, Soyabean, Papaya, Banana	▪ High cost of cultivation ▪ Information centre is far away from the village ▪ Poor marketing ▪ Lack of technological knowledge about crop production technology ▪ Lack of knowledge regarding IPM ▪ Highly dependent on Private Traders for agricultural information ▪ Weed management in black soil is a big problem ▪ High production cost due-to lift irrigation	▪ Crop production technology ▪ IPM in cotton ▪ Increase area under papaya crop ▪ Popularize maize crop ▪ Introduction of chemical weed control ▪ Value addition in soyabean and papaya
10.	Nizar	Mubarakpur	Mubarakpur	Cotton, Papaya, Banana, Wheat, Gram, Soybean, Castor, Sorghum	▪ High cost of cultivation in field crops ▪ Poor marketing ▪ Lack of availability of inputs ▪ Poor grain storage practices ▪ Lack of knowledge about insect & pest in Cotton ▪ Poor Livestock management	▪ Crop production technology ▪ IPM in Cotton ▪ Value addition ▪ Marketing management ▪ Food grain storage ▪ Livestock management

2.8 Priority/thrust areas

Crop/Enterprise	Thrust area
Paddy, Sorghum, Groundnut, Vegetables, Sugarcane, Oilseed crops & pulses	Crop production management (ICM)
Drumstick, Custard apple	Dry land horticulture
Vegetables, Soybean, Groundnut, Gram	Organic farming
Paddy, Sugarcane, Cotton, Groundnut	Integrated pest management
Paddy, Sorghum, Sugarcane, Cotton, Groundnut, Vegetables	Integrated nutrient management
Green house technology, Drip irrigation, High value crops	High tech horticulture
Soybean, Sorghum, Pigeon pea	Soil and Water conservation
Sugarcane, Paddy, Vegetables, Maize	Water management
Low cost green house	Low cost green house
Formation of Self Help Groups	Women empowerment
Sewing & Preservation	Self employment to farm women and rural youth
Fruits, Vegetables, Cereals & pulses	Value addition
Dairy management	Management of milch animals
Health & Nutrition	Health & nutrition for vulnerable groups.
Soybean & Vegetables	Introduction of Soybean & Vegetables instead of drilled paddy (Crop diversification)
Okra, Tomato, Watermelon	Off-season cultivation

3. TECHNICAL ACHIEVEMENTS

3. A. Details of target and achievements of mandatory activities by KVK during Rabi: 2010-11 and Kharif: 2011-12

OFT (Technology Assessment and Refinement)				FLD (Oilseeds, Pulses, Cotton, Other Crops/Enterprises)			
1				2			
Number of OFTs		Number of Farmers		Number of FLDs (ha)		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
5	5	60	60	255	193.32	361	699

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	56	63	1120	2510	873	2454	4284	434450
Rural youth	17	18	340	554				
Extn. Functionaries	6	6	120	193				
Total	**79**	**87**	**1580**	**3257**	**873**	**2454**	**4284**	**434450**

Seed Production (Qtl.)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
350	381.70	--	--

3. B. Abstract of interventions undertaken

Sr. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions					
				Title of OFT if any	Title of FLD if any	Title of Training if any	Title of training for extension personnel if any	Extension activities	Supply of seeds, planting materials etc.
1	Crop production management	Paddy Ground nut Sugarcane Cotton Soybean Gram Pigeon pea	Use of local variety High seed rate, Imbalance use of fertilizers No use of bio fertilizer	--	Varietal demonstration Nutrient management Use of biofertilizers	Scientific Cultivation of major crops	Scientific cultivation of sugarcane and oilseed crops	Field days, khedut shibirs, News paper coverage, film show Radio talk Exhibitions etc.	Seeds of improved varieties paddy, ground nut, soybean Gram Pigeon pea etc
2	Dry Land Horticulture	Drum stick Custard apple Ber, guava Vegetables	Due to rain fed area, and inadequate irrigation facility cultivated area under fruits and vegetable is very less and per capita consumption is also less	--	Low cost green house Vadi yojna	Arid horticulture development in rain fed area	--	Field days, khedut shibirs, News paper coverage, film show Exhibitions etc.	Seeds of different vegetables and planting material of mango, drum stick and custard apple
3	Organic farming	Vegetables, Groundnut, Gram, Soybean	High use of chemicals	--	--	Training on vermicompost	--	khedut shibirs, News paper coverage, film show Exhibitions etc Vermi-compost demonstrations	--

Sr. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions					
				Title of OFT if any	Title of FLD if any	Title of Training if any	Title of training for extension personnel if any	Extension activities	Supply of seeds, planting materials etc.
4	Integrated Pest Management	Brinjal, Okra, Cotton, Mango cucurbits	Farmers are unable to manage disease and insect pest eventhogh frequent application of insecticides at higher doses	--	IPM of Brinjal fruit and shoot borer IPM of okra fruit and shoot borer IPM in cotton Integrated management of fruit flies in mango and cucurbits	IPM in vegetables IPM in cotton Management of fruit flies	IPM in Vegetables	Field days, khedut shibirs, News paper coverage, film show Exhibitions etc.	Pheromone traps, neem products, Microbial products Methyl eugenol traps
5	Integrated Nutrient Management	Brinjal, Okra, Cotton	Imbalance use of fertilizers farmers are unable to harvest good crop	--	INM in Brinjal INM in Okra Nutrient management in Cotton	INM in vegetables & Cotton	INM in vegetables & Cotton	Field days, khedut shibirs, News paper coverage, film show , etc.	Bio compost & Chemical, Fertilizers, Potassium Nitrate
6	High tech Horticulture	Green house technology, Drip irrigation, High value crops	Due to lack of technological knowledge farmers are unable to get good returns	--	--	Green house technology	--	khedut shibirs, News paper coverage, film show	--
7	Soil & water conservation and water management	Pigeon pea, Ground nut, Gram	Heavy rainfall and water logging cause high mortality of plants	Land configuration in pigeon pea	Growing ground nut and gram on raised bed	Land configuration in field crops	--	Field days, khedut shibirs, News paper coverage, film show Exhibitions etc.	Seeds, ground nut, Gram , pigeon pea and bio-fertilizer, saplings

Sr. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions					
				Title of OFT if any	Title of FLD if any	Title of Training if any	Title of training for extension personnel if any	Extension activities	Supply of seeds, planting materials etc.
8	Low Cost Green House	Major crops	Poor economic condition of farmers	--	--	Low cost green house	--	khedut shibirs, News paper coverage, film show Exhibitions etc	--
9	Women empowerment	Formation of Self Help Groups	Poor socio-economic condition of farm women	--	Kitchen Gardening	Health & Nutrition Fruits & Vegetable preservation, SHG formation, Income generation activities	--	khedut shibirs, News paper coverage, film show, Mahila Shibir, Pashupalan shibir	Seeds for kitchen garden
10	Self employment to Rural youth and farm women	Mushroom Value addition & Sewing	Poor economic condition of farmers	--	--	Vocational training on Value addition, Masala Preparation	--	News paper coverage, film show, Method of demonstration	--
11	Value addition	Fruits, Vegetables, Cereals & Pulses	Low price of the products	--	--	Training of Value Addition	--	Khedut shibir, News Paper Coverage, Method Demonstration	--
12.	Management of Milch	management of dairy	Poor management of	--	--	Daily requirement	--	khedut shibirs, News paper	--

Sr. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions					
				Title of OFT if any	Title of FLD if any	Title of Training if any	Title of training for extension personnel if any	Extension activities	Supply of seeds, planting materials etc.
	animals	animal	dairy animals			of Nutrition in milch animal. Scientifically calf rearing		coverage, film show Demonstration units on campus	
13.	Health & Nutrition for Vulnerable groups	- Pregnant and Lactating women, Infant and children	Malnutrition	--	Kitchen Gardening	Health & Nutrition, Kitchen Gardening, Nutritional deficiencies& its management, Balance Diet from locally available food material	--	Mahila Shibir, News Paper coverage, Field Day, SHG Meeting, Film Show	Seeds & Seedling of vegetables
14.	Crop Diversification	Soybean and Vegetables	Low yield of drilled paddy	--	--	Scientific cultivation of Soybean & Vegetables	--	Khedut Shibir, News paper Coverage, Field Day, Film Show, Popular Articles	--
15.	Off-season cultivation	Okra, Tomato, Watermelon	Low Market Value	--	--	Scientific cultivation of Off-season crops	--	Field Day, Khedut Shibirs, Film Show, News Paper, Coverage, Popular Articles.	--

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
Integrated Crop Management	1	--	1	1	--	--	--	--	--	3
TOTAL	**1**	**--**	**1**	**1**	**--**	**--**	**--**	**--**	**--**	**3**

A.1.1 Abstract of the number of technologies assessed in respect of livestock / enterprises

Thematic areas	Cattle	Poultry	Sheep	Goat	Piggery	Rabbitary	Fisheries	TOTAL
Nutrition Management	1	--	--	--	--	--	--	1
Home Science	--	--	--	--	--	--	--	1
TOTAL	**1**	**--**	**--**	**--**	**--**	**--**	**--**	**2**

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
--	--	--	--	--	--	--	--	--	--	--
TOTAL	--	--	--	--	--	--	--	--	--	--

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

A. Technology Assessment

1.	**Title**	**:**	Low yield of paddy
2.	**Problem diagnose/defined**	**:**	Use of higher and over age seedlings for transplanting
3.	**Details of technologies selected for assessment /refinement**	**:**	T_1.Randomly transplanting of paddy - Farmer practices T_2. Line method of transplanting (20 X 15 cm) T_3. System of Rice Intensification method (25 X 25 cm)
4.	**Season**	**:**	Kharif-2011
5.	**Source of technology**	**:**	NAU
6.	**Production system thematic area**	**:**	Paddy – Sugarcane cropping system
7.	**Thematic area**	**:**	System of Rice Intensification (ICM)
8.	**Performance of the Technology with performance indicators**	**:**	The SRI technology of paddy had required less seed rate and gave more number of tillers, filled grain and increased seed yield than traditional method.
9.	**Final recommendation for micro level situation**	**:**	SRI technology is better than traditional method of transplanting paddy.
10.	**Constraints identified and feedback for research**	**:**	Time consuming
11.	**Process of farmers participation and their reaction**	**:**	Appreciate the technology and ready to adopt.

Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology refined	Para-meters	Data on the parameter				Results of refinem-ent	Feedback from the farmer
							No. of Tillers/ hill	No. of filled grains/ panicle	Panicle length (cm)	Yield (q/ha)		
1	2	3	4	5	6	7	8				9	10
Paddy	Irrigated	Use of higher and over age seedlings for transplanting	Low yield of paddy	5	T_1.Randomly transplanting of paddy - Farmer practices	--	10	98	21.5	54.00	T_3. SRI method (25x25) gave higher yield	In SRI technology of paddy cultivation used less seed rate and gave higher tillering, higher no. of filled grains & seed yield. farmers are very much interested because maintain soil health, maximum water use efficiency, less water required in this technology.
					T_2. Line method of transplanting (20 X 15 cm)	--	16	124	26	60.15		
					T_3. System of Rice Intensification method (25 X 25 cm)	--	24	148	28.5	70.25		

**** No. of farmers***

Technology Refined	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
Randomly transplanting of paddy -Farmer practices	54.00	42200	1 : 3.72
Line method of transplanting (20 X 15 cm)	60.15	48658	1 : 4.24
System of Rice Intensification method (25 X 25 cm)	70.25	61463	1 : 6.00

Trial 2

1.	**Title**	**:**	Low yield of Gram
2.	**Problem diagnose/defined**	**:**	No irrigation at critical stages
3.	**Details of technologies selected for assessment /refinement**	**:**	T_1. No use of Phosphatic fertilizer (Farmers practices) T_2 Basal dose of fertilizer + Biofertilizers + two irrigation at critical stages T_3. Basal dose of Phosphatic fertilizer + Biofertilizers + one irrigation at pod filling stage.
4.	**Season**	**:**	Rabi-Summer -2010-11
5.	**Source of technology**	**:**	NAU
6.	**Production system thematic area**	**:**	Paddy – Sugarcane cropping system
7.	**Thematic area**	**:**	ICM
8.	**Performance of the Technology with performance indicators**	**:**	In this technology of Gram, we recommend land configuration in Gram crop and giving life saving irrigation at critical stages and Phosphatic fertilizers as basal dose gave more number of Branch, Pods and increased seed yield than traditional method.
9.	**Final recommendation for micro level situation**	**:**	One light irrigation at critical stage is better than traditional method of gram cultivation.
10.	**Constraints identified and feedback for research**	**:**	Increasing Production
11.	**Process of farmers participation and their reaction**	**:**	Appreciate the technology and ready to adopt.

Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology refined	Para-meters	Data on the parameter				Results of refinem-ent	Feedback from the farmer
							Plant Height (cm)	No. of Branches	No. of Pods/ Plant	Yield (q/ha)		
1	2	3	4	5	6	7	8				9	10
Gram	Irrigated/ Unirrigated	No irrigation at critical stages	Low yield of Gram	5	T_1. No use of Phosphatic fertilizer (Farmers practices)	--	32	6	37	1165	T_3 Basal dose of Phosphatic fertilizer + Biofertilizers + one irrigation at pod filling stage.	Land configuration in Gram crop and giving life saving irrigation at critical stages and Phosphatic fertilizers as basal dose gave more number of Branch, Pods and increased seed yield than traditional method.. farmers are very much interested because maintain soil health, maximum water use efficiency, in this technology.
					T_2 Basal dose of fertilizer + Biofertilizers + two irrigation at critical stages	--	35	10	55	1735		
					T_3. Basal dose of Phosphatic fertilizer + Biofertilizers + one irrigation at pod filling stage.	--	39	13	89	1800		

**** No. of farmers***

Technology Refined	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
No use of Phosphatic fertilizer (Farmers practices)	1165	32115	1:4.71
Basal dose of fertilizer + Biofertilizers + two irrigation at critical stages	1735	51625	1:6.67
Basal dose of Phosphatic fertilizer + Biofertilizers + one irrigation at pod filling stage.	1800	53901	1:6.92

OFT – 3

1.	**Title**	**:**	Low milk production of Cow
2.	**Problem diagnose/defined**	**:**	1. Lack of knowledge about urea treatment. 2. Poor management of Dairy animal (breeding, feeding and management) 3. Poor knowledge of health & cost efficient livestock rearing.
3.	**Details of technologies selected for assessment /refinement**	**:**	T1. Farmers practice (Paddy straw without urea treatment) T2. Paddy straw with urea treatment (6-8 kg daily) T3. Paddy straw with urea treatment + Mineral mixture (35 gm mineral mixture feeding daily)
4.	**Source of technology**	**:**	Text book of Animal Husbandary- G.C.Benerji
5.	**Production system thematic area**	**:**	**--**
6.	**Thematic area**		Nutrition Management
7.	**Performance of the Technology with performance indicators**	**:**	**--**
8.	**Final recommendation for micro level situation**	**:**	Paddy straw treated with 4% urea and 35 gm mineral mixture feeding daily gaves higher milk production.
9.	**Constraints identified and feedback for research**	**:**	**--**
10.	**Process of farmers participation and their reaction**	**:**	Farmers appreciate the technology & ready to adopt.

Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters	Data on the parameter		Results of assessment	Feedback from the farmer
							Milk production (kg/day)			
							Before	After		
1	2	3	4	5	6	7	8		9	10
Animal Science	Low milk production in HF Cow	1. Low Milk Production 2. Lack of knowledge about urea treatment. 3. Poor manage-ment. 4. Poor knowledge of health & hygiene. 5. Lack of knowledge about feeding management.	Low milk production in HF Cow	10	T1. (Farmers practices) Paddy straw without urea treatment	Milk production and service period	5.455	6.420	Paddy straw with urea treatment + Mineral mixture (35 gm mineral mixture feeding daily)	Increase milk production after urea treated paddy straw and mineral mixture feeding
				10	T2. Paddy straw with urea treatment (6-8 kg daily)		5.680	6.650		
				10	T3. Paddy straw with urea treatment + Mineral mixture (35 gm mineral mixture feeding daily)		5.656	6.892		

Technology Assessed	Production per unit (Lit.)	Net Return (Profit) in Rs. / unit	*BC Ratio
11	12	13	14
T1 - Farmers practice (Paddy straw without urea treatment)	6.420	83.60	1:1.77
T2 - Paddy straw with urea treatment	6.650	90.50	1:1.83
T3- Paddy straw with urea treatment + Mineral mixture (35 gm daily)	6.892	97.76	1:1.90

Result: T3: Urea treated paddy straw along with mineral mixture (35 gm mineral mixture feeding daily)can result in increased milk yield as compared to T1 and T2.

OFT- 4:

1.	**Title**	**:**	Prevalence of Anemia among rural tribal adolescent girls (16 to 18 yrs)
2.	**Problem diagnose/defined**	**:**	1.Low iron content in diet 2.Use of traditional diet 3.Lack of knowledge about nutritional foods 4.Prevalence of infectious diseases 5.Poor socio-economic condition
3.	**Details of technologies selected for assessment /refinement**	**:**	T1.Farmers practices(Traditional practices)-existing dietary pattern T2.Recommended practices-iron tablet/day with existing dietary pattern T3.100gm roasted Bengal gram + 100gm roasted Rice flakes/day + iron tablet/day with existing dietary pattern
4.	**Season**	**:**	Summer-2011
5.	**Source of technology**	**:**	A text book of “Nutritive value of Indian foods” by National Institute of Nutrition, Hyderabad
6.	**Production system thematic area**	**:**	---
7.	**Thematic area**	**:**	Nutrition Management
8.	**Performance of the Technology with performance indicators**	**:**	---
9.	**Final recommendation for micro level situation**	**:**	Daily use of iron rich diet (100gm roasted Bengal gram + 100gm roasted Rice flakes) and one iron tablet with existing dietary pattern increased Hb level and body weight of tribal adolescent girls as compared to other treatment.
10.	**Constraints identified and feedback for research**	**:**	---
11.	**Process of farmers participation and their reaction**	**:**	Appreciate the technology and ready to adopt.

Results of On Farm Trials

Crop/ enterprise	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters	Data on the parameter						Results of assess-ment	Feedback from the farmer
						Hb level (gm%)			Body weight (Kg.)				
						Before	After	increase in Hb level	Before	After	Wt. gain		
1	2	3	4	5	6	7						8	9
Home Science	1.Low iron content in diet 2.Use of traditional diet 3.Lack of knowledge about nutritional foods 4.Prevalence of infectious diseases 5.Poor socio-economic condition	Prevalence of Anemia among rural tribal adolescent girls	5	T1.Farmers practices (Traditional practices)-existing dietary pattern	Hb level & Body weight for **three months** period	9.72	10.03	**0.31**	37.200	37.400	**0.200**	Daily use of 100gm roasted Bengal gram + 100gm roasted Rice flakes + one iron tablet with existing dietary pattern gave better result to prevent Anemia	Hb level & body wt. of rural tribal adolescent girls increased by using iron rich diet and iron tablet daily with existing dietary pattern
			5	T2.Recommended practices-iron tablet/day with existing dietary pattern		9.38	10.81	**1.43**	38.800	40.000	**1.200**		
			5	T3**.100gm roasted Bengal gram + 100gm roasted Rice flakes/day + iron tablet/day with existing dietary pattern		9.44	11.85	**2.41**	39.200	42.000	**2.800**		

No. of tribal adolescent girls (16 to 18 yrs)

**** 100 gm Bengal gram contains 9.5 mg iron.**

100 gm Rice flakes contains 20.0 mg iron.

OFT-5

1.	**Title**	**:**	Low productivity in cotton
2.	**Problem diagnose/defined**	**:**	High dose of agro chemicals and imbalance use of nitrogenous fertilizers
3.	**Details of technologies selected for assessment /refinement**	**:**	T1 – No seed treatment and 6-7 application of imidacloprid 70% WS @ 15 ml in 10 ltr of water T2- Seed treatment with imidacloprid 70% WS @ 7.5 gm/kg seed + two foliar application of thiomethoxam @ 3 gm/10 ltr. at ET level T3- Seed treatment with imidacloprid 70 % WS @ 7.5 gm/kg seed, raising maize or jowar as border crop, castor as a trap crop, chrysopa release and two foliar applications of thiomethoxam 5 gm in 10 ltr. of water, use of 1500 ppm neem ban
4.	**Season**	**:**	Kharif – 2011
5.	**Source of technology**	**:**	NAU
6.	**Production system thematic area**	**:**	--
7.	**Thematic area**	**:**	IPM
8.	**Performance of the Technology with performance indicators**	**:**	Refined technology gave higher BC ratio (1:5.74)
9.	**Final recommendation for micro level situation**	**:**	Use of IPM for better control of pest of cotton
10.	**Constraints identified and feedback for research**	**:**	--
11.	**Process of farmers participation and their reaction**	**:**	Appreciate the technology and ready to adopt.

Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Data on the parameter				Results of assessment	Feedback from the farmer
						No. of aphids/ leaf	No. of jassids / leaf	No. of white fly/ plant	No. of Mealybug/ plant		
1	2	3	4	5	6	7				8	9
Cotton	Irrigated	High dose of agro chemicals and imbalance use of nitrogenous fertilizers	Low productivity in cotton	5	T1 – No seed treatment and 6-7 application of imidacloprid 70% WS @ 15 ml in 10 ltr of water	12	13	77	37	--	IPM gave good control of insects on cotton
					T2- Seed treatment with imidacloprid 70% WS @ 7.5 gm/kg seed + two foliar application of thiomethoxam @ 3 gm/10 ltr. at ET level	9	12	68	32		
					T3- Seed treatment with imidacloprid 70 % WS @ 7.5 gm/kg seed, raising maize or jowar as border crop, castor as a trap crop, chrysopa release and two foliar applications of thiomethoxam 5 gm in 10 ltr. of water, use of 1500 ppm neem ban	8	10	58	23		

**** No. of farmers***

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
10	11	12	13
T1 – No seed treatment and 6-7 application of imidacloprid 70% WS @ 15 ml in 10 ltr of water	21.75	58764	1:3.63
T2- Seed treatment with imidacloprid 70% WS @ 7.5 gm/kg seed + two foliar application of thiomethoxam @ 3 gm/10 ltr. at ET level	26.45	68672	1:4.67
T3- Seed treatment with imidacloprid 70 % WS @ 7.5 gm/kg seed, raising maize or jowar as border crop, castor as a trap crop, chrysopa release and two foliar applications of thiomethoxam 5 gm in 10 ltr. of water, use of 1500 ppm neem ban	29.50	88600	1:5.74

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 2010-11 and recommended for large scale adoption in the district

Sr. No	Crop/ Enterprise	Thematic Area*	Technology demonstrated	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
					No. of villages	No. of farmers	Area in ha
1	Sugarcane	ICM	New variety	FLDs	19	125	76
2	Maize	ICM	New variety	FLDs	10	85	35
3	Paddy	INM	Green Manuring	FLDs	35	178	45
4	Paddy	ICM	New variety	FLDs	50	350	175
5	Paddy	ICM	New variety	FLDs	25	154	115
6	Paddy	ICM	New variety	FLDs	12	78	35
7	Paddy	ICM/INM	SRI technology	FLDs	35	168	46
8	Paddy –NAUR-1	ICM	New variety	FLDs	46	215	85
9	Pigeon pea	ICM	New variety	FLDs	75	216	156
10	Moongbean	ICM	New Variety	FLDs	10	55	13
11	Gram (IDM)	IDM	IPM	FLDs	26	245	125
13	Cotton	IPM	IPM	FLDs	36	652	280
14	Okra	INM	INM	FLDs	75	586	86
15	Brinjal	INM	INM	FLDs	56	389	57
16	Okra(IPM)	IPM	IPM	FLDs	12	310	166
17	Brinjal(IPM)	IPM	IPM	FLDs	16	185	42
18	Cucurbits(IPM)	IPM	IPM	FLDs	17	86	22

**** Thematic areas as given in Table 3.1 (A1 and A2)***

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

Sl. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
Cereal crops										
1	Sugarcane	ICM	New variety	Rabi 2010-11	0.50	0.50	2	--	2	--
2	Maize	ICM	New variety	Rabi 2010-11	4	4	17	--	17	--
3	Paddy -Jaya	INM	Green Manuring	Kharif-11	5	5	20	--	20	--
4	Paddy-GR-5	ICM	New variety	Kharif-11	5	5	20	--	20	--
5	Paddy- NAUR-1	ICM	New variety	Kharif-11	5	5	20	--	20	--
6	Paddy GAR-13	ICM	New variety	Kharif-11	1.8	1.8	6	--	6	--
7	Paddy- NAUR-1	ICM/INM	SRI technology	Kharif-11	42	42	106	--	106	
8	Paddy –NAUR-1	ICM	New variety	Kharif-11	80	80	200	--	200	
9	Paddy	IPDM	IPDM	Kharif-11	20	20	5	--	5	
Pulses										
1	Pigeon pea	ICM	New variety	Kharif-11	8	8	32	--	32	--
2	Moongbean	ICM	New Variety	Summer-11	4	4	20	--	20	
3	Gram	IDM	IDM	Rabi-10-11	5	5	24	--	24	
Cotton										
1	Cotton	IPM	IPM	Kharif-11	10 Acre	10Acre	--	10	10	
Horticultural Crops										
1	Okra	INM	INM	Rabi—10-11	2.0	2.0	8	--	8	
2	Brinjal	INM	INM	Rabi-10-11	2.0	2.0	8	--	8	
3	Okra	IPM	IPM	Rabi-10-11	3.0	3.0	12	--	12	
4	Brinjal	IPM	IPM	Rabi-10-11	3.0	3.0	12	--	12	
5	Cucurbits(IPM)	IPM	IPM	Rabi-10-11	2.0	2.0	10	--	10	

Details of farming situation

Crop	Season	Farming situation (RF/ Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seaso -nal rainfal l (mm)	No. of rainy days
				N	P	K					
Cereal Crops											
Sugarcane	Rabi 2010-11	Irrigated	Medium Black	L	M	H	Paddy	3rd Octo, to 5th Oct, 2010	19th Dec. to 21st Dec. 2011	1576	74
Maize	Rabi 2010-11	Irrigated	Medium Black	L	M	H	Paddy	23rd Nov. to 10th December, 2010	4th Oct. to 18th Oct. 2010		
Paddy - Jaya	Kharif-11	Irrigated	Medium Black	L	M	H	GM	10th June to 29th June, 2011	29th Oct. to 10th Nov.,2011		
Paddy-GR-5	Kharif-11	Rainfed	Light soil medium black	L	M	H	Fallow	5th July to 18th July, 2011	10th Oct. to 29th Oct.,2011		
Paddy-NAUR-1	Kharif-11	Irrigated	Medium black	L	M	H	Summer G'nut	25th June to 19th July, 2011	29th Oct. to 12th Nov.,2011		
Paddy GAR-13	Kharif-11	Irrigated	Medium black	L	M	H	Fallow	3rd July, to 11th July, 2011	29th Oct. to 15th Nov. 2011		
Paddy-NAUR-1	Kharif-11	Irrigated	Medium black	L	M	H	Summer G'nut	25th June to 10th July, 2011	29th Oct. to 12th Nov.2011		
Paddy – NAUR-1	Kharif-11	Irrigated	Medium black	L	M	H	Fallow	25th June to 19th July, 2011	29th Oct. to 12th Nov.2011		

Crop	Season	Farming situation (RF/ Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seaso -nal rainfal l (mm)	No. of rainy days
				N	P	K					
Paddy	Kharif-11	Irrigated	Medium black	L	M	H	Fallow	25th June to 19th July, 2011	29th Oct. to 12th Nov.2011		
Pulses											
Pigeon pea	Kharif-11	Rainfed	Light soil and Light Shallow	L	M	H	Fallow	10th June to 29th June, 2011	4th Feb. to 18th Feb. 2012		
Moongbean	Summe r-11	Irrigated	Light soil and Light Shallow	L	M	H	Fallow	3rd Feb. to 19th Feb., 2011	25th April to 5th May 2011		
Gram	Rabi-10-11	Rainfed	Light soil and Light Shallow	L	M	H	Paddy	6th Dec. to 22nd Dec., 2011	15th March to 25th March 2011		
Cotton											
Cotton	Kharif-11	Irrigated	Cotton Black Soil	L	M	H	Wheat	20th May to 29th May, 2011	15th Dec to 26th Dec, 2011		
Horticultural Crops											
Okra	Rabi—10-11	Irrigated	Light shallow & Medium black	L	M	H	Paddy	15th Nov. to 20th Nov., 2010	10th April to 20th April 2011		
Brinjal	Rabi-10-11	Irrigated	Light shallow & Medium black	L	M	H	Paddy	12th Nov. to 20th Nov., 2010	14th May to 28th May 2011		

Crop	Season	Farming situation (RF/ Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seaso -nal rainfal l (mm)	No. of rainy days
				N	P	K					
Okra	Rabi-10-11	Irrigated	Light shallow & Medium black	L	M	H	Paddy	15th Nov. to 20th Nov., 2010	10th April to 20th April 2011		
Brinjal	Rabi-10-11	Irrigated	Light shallow & Medium black	L	M	H	Paddy	12th Nov. to 20th Nov., 2010	14th May to 28th May 2011		
Cucurbits (IPM)	Rabi-10-11	Irrigated	Medium black	L	M	H	Fallow	6th Jan. to 25th January 2011	28th April to 1st May 2011		

Performance of FLD

Sr. No.	Crop	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield Qtl/ha			Yield of local Check Qtl./ha	Increase in yield (%)	Data on parameter in relation to technology demonstrated	
						H	L	A			Demo	Local
1	2	3	4	5	6	7	8	9	10	11	12	13
Cereal Crops												
1	Sugarcane	New variety	CoN 05072	2	0.50	989.00	751.00	870	715	21.67	870	715
2	Maize	New variety	HQPM-1	17	4	57.00	33.00	45.00	35.00	28.57	45.00	35.00
3	Paddy	Green Manuring	GM+Jaya	20	5	65.25	54.70	60.00	48.23	24.40	60.00	48.23
4	Paddy	New variety	GR-5	20	5	18.70	13.75	16.23	12.75	27.30	16.23	12.75
5	Paddy	New variety	NAUR-1	20	5	67.40	55.60	61.50	48.23	27.51	61.50	48.23
6	Paddy	New variety	GAR-13	6	1.8	61.25	55.70	58.48	45.75	27.32	58.48	45.75
7	Paddy	SRI technology	NAUR-1 (SRI)	106	42	72.45	59.65	66.05	54.00	22.31	66.05	54.00
8	Paddy	New variety	NAUR-1	200	80	67.80	54.65	61.23	52.50	16.62	61.23	52.50
9	Paddy	IPDM	NAUR-1	20	5	65.50	54.70	60.10	51.50	16.69	60.10	51.50
Pulses												
1	Pigeon pea	New variety	Vaishali	39	8	19.25	11.50	15.40	10.70	43.93	15.40	10.70
2	Moongbean	New Variety	Pusa Vishal	20	10	16.85	10.65	13.75	10.70	28.50	13.75	10.70
3	Gram (IDM)	IDM	GG-2	24	5	20.00	12.50	16.25	11.55	40.70	16.25	11.55
Cotton												
1	Cotton	IPM	Bt	25	10	28.80	21.75	25.58	19.70	28.32	25.58	19.70
Horticultural Crops												
1	Okra	INM	Hybrid	8	2.0	185.20	130.90	157.6	105.5	49.38	157.6	105.5
2	Brinjal	INM	Surti ravaiya	8	2.0	205.70	175.75	190.7	155.3	23.00	190.7	155.3
3	Okra(IPM)	IPM	Hybrid	10	3	161.50	150.80	156.15	104.03	50.10	156.15	104.03
4	Brinjal(IPM)	IPM	Surti raviya	10	3	208.25	152.70	180.48	136.80	31.93	180.48	136.80
5	Cucurbits(IPM)	IPM	Hybrid	5	2	120.0	85.0	102.50	81.35	26.00	102.50	81.35

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 Ratio (Gross Return / Gross Cost)	
Demonstration	Local Check	Demonstration	Local Check	Demonstration	Local Check	Demo	Local
14	15	16	17	18	19	20	
Cereal Crops							
23500	29500	174000	143000	150500	113500	1:7.40	1:4.85
10600	12200	39375	30625	28775	18425	1:3.71	1:2.51
15000	17500	57000	45819	42000	28319	1:3.80	1:2.62
6300	5600	12173	9563	5873	3963	1:1.93	1:1.71
14500	15500	58425	45819	43925	30319	1:4.03	1:2.96
14500	15500	58480	45750	43980	30250	1:4.03	1:2.95
12300	15500	62748	51300	50448	35800	1:5.10	1:3.31
14500	18000	58169	49875	43669	31875	1:4.01	1:2.77
14500	15500	57095	48925	42595	33425	1:3.94	1:3.16
Pulses							
8700	7650	61600	42800	52900	35150	1:7.10	1:5.60
9580	9425	55000	42800	45420	33375	1:5.74	1:4.54
9375	8680	56875	40425	47500	31745	1:6.06	1:4.66
Cotton							
20470	23680	71624	55160	51154	31480	1:3.50	1:2.33
Horticulture Crops							
57450	60600	197000	131875	139550	71275	1:3.43	1:2.18
41300	43750	143025	116475	101725	72725	1:3.46	1:2.66
57850	60600	195187	130375	137337	69775	1:3.37	1:2.15
41950	42890	135360	102600	93410	59710	1:3.23	1:2.39
29200	30250	79950	62673	50750	32423	1:2.74	1:2.07

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
Sugarcane	Rabi 2010-11	ICM	Irrigated	870	715	21.67
Maize	Rabi 2010-11	ICM	Irrigated	45	35	28.57
Paddy -Jaya	Kharif-11	INM	Irrigated	60.00	48.23	24.40
Paddy-GR-5	Kharif-11	ICM	Rainfed	16.23	12.75	27.30
Paddy- NAUR-1	Kharif-11	ICM	Irrigated	61.50	48.23	27.51
Paddy GAR-13	Kharif-11	ICM	Irrigated	58.48	45.75	27.32
Paddy- NAUR-1	Kharif-11	ICM/INM	Irrigated	66.05	54.00	22.31
Paddy –NAUR-1	Kharif-11	ICM	Irrigated	61.23	52.50	16.62
Paddy(IPDM)	Kharif-11	ICM	Irrigated	60.10	51.50	16.69
Pigeon pea	Kharif-11	ICM	Rainfed	15.40	10.70	43.93
Moongbean	Summer-11	IDM	Irrigated	13.75	10.70	28.50
Gram	Rabi-10-11	INM	Rainfed	16.25	11.55	40.70
Cotton	Kharif-11	IPM	Irrigated	25.58	19.70	28.32
Okra	Rabi—10-11	INM	Irrigated	190.7	155.3	23.00
Brinjal	Rabi-10-11	INM	Irrigated	157.6	105.5	49.38
Okra	Rabi-10-11	IPM	Irrigated	156.15	104.03	50.10
Brinjal	Rabi-10-11	IPM	Irrigated	180.48	136.80	31.93
Cucurbits(IPM)	Rabi-10-11	ICM	Irrigated	102.50	81.35	26.00

Technical Feedback on the demonstrated technologies

Sr. No	Technical Feed Back
1	Require YVM resistant variety in moong bean.
2	Value addition and marketing requirement of pulse crop in Nizar, Uchchhal and Songadh taluka of Tapi district.
3	Require to develop high yielding hybrid rice suitable for this region.
4	Fertilizer dose for hybrid rice and ratoon crop.
5	Development of location specific pigeon pea variety for early *summer* and *Kharif* for Tapi district.
6	Recognition of new pest introduced in cotton.
7	Short duration, early, dual purpose pigeon pea variety.
8	Harvesting tool for okra fruits.
9	YVM, fruit & shoot borer management technology require in Okra.
10	Control of wilt complex in brinjal.
11	Bio control of termite.
12	Micronutrient requirement for okra, brinjal and cucurbits.

Farmers' reactions on specific technologies

Sr. No	Farmer's Feed Back
1	SRI of paddy is good because it requires less seeds, gave more tillers, less water and less pest problem.
2	New variety of paddy NAUR-1 gave higher as compare to other varieties.
3	New variety of paddy NAUR-1 is good in eating and making ***Rotla*** purpose
4	New variety of Paddy and moong bean gave good results than old.
5	Raised bed methods in Pigeon pea gave really good results. Appreciate the variety of Pigeon pea like Vaishali. This variety gives good results under bio-fertilizer treated plot.
6	Green manuring in paddy transplanting gave good results it maintain soil health &gave more yield than traditional method.
7	Large scale adoption of IPM technology should be made and more concentration should be given to collection and destruction of fallen fruits in brinjal, okra, cotton and cucurbits crops.
8	The technology of INM increases yield and soil health and quality of fruits in brinjal and okra.
9	Land configuration in gram and pigeon pea gives good results than local method.

Extension and Training activities under FLD

Sr. No.	Activity	No. of activities organized	Date	Number of participants	Remarks
1	**Field days**				
	i. Oilseeds& Pulses	6	8/12/2011, 28/12/2011, 3/1/2012, 24/2/2012,18/4/2011, 22/4/2011	725	--
	ii. Other than FLDs	7	24/4/2011,10/9/2011,12/9/2011, 18/9/2011,3/10/20118/10/2011, 11/1/2012	865	--
2	**Farmers Training**				
	i. Oilseeds & Pulses	12	26/12/2010,4/1/2011,15/2/2011, 24/2/2011,8/3/2011,12/3/2011, 3/6/2011, 15/6/2011, 21/6/2011, 13/2/2012, 14/2/2012, 28/3/2012	360	--
	ii. Other than FLDs	10	5/6/2011,18/6/2011,28/62011, 5/7/2011,15/92011,23/9/2011, 10/11/2011,17/11/2011, 16/12/2011,6/1/2012	350	--
3	**Media coverage**				
	i. Oilseeds& Pulses	3	--	--	--
	ii. Other than FLDs	4	--	--	--
4	**Training for extension functionaries**				
	i. Oilseeds& Pulses	3	3/3/2012, 5/3/2012, 12-13/3/2012	79	--
	ii. Other than FLDs	2	6/1/2012, 24/2/2012	60	--

c. Details of FLD – Discipline - Home Science:

(1) Result of Front Line Demonstration on Kitchen Gardening:

No. of Farm women: 50 **Area: 1 Guntha/demo.** **Season:- Rabi:2010-11**

Name of Enterprise	No. of Demo	Crop yield (Kg)													Total Prod-uction	Average rate (Rs/kg)	Gross return (Rs.)	
		Carrot	Radish	Long Brinjal	Bitroot	Coriander	Muskmelon	Cauliflower	Cucumber	Chilli	Brinjal gota	Cabbage	Palak	Cowpea			Before FLD	After FLD
Kitchen Garden	50	4.51	4.14	20.99	2.40	2.52	10.19	3.48	4.22	10.03	23.24	3.45	2.30	8.18	99.65	30	not done kitchen garden	2989=50, along with domestic consumption

Farm women Reaction:

S. No	Feed Back
1	Before Demonstration, farm women were not growing vegetable crops in their backyard but after demonstration they are growing different vegetable crops through kitchen gardening in scientific way.
2	Kitchen gardening gives continuous supply of fresh vegetables at lower cost which gives daily nutritious diet.
3	In kitchen gardening, farm women are not applying any agrochemicals so they produce organic vegetables.
4	We are utilized maximum backyard space and waste water.
5	Income is generated by selling extra vegetables grown in kitchen garden.
6	Farm women are attracted towards hybrid vegetables.

(2) Result of Front Line Demonstration on Kitchen Gardening (Discipline-Home Science):

No. of Demonstration: 50

No. of Farm women: 50 **Area: 1 Guntha/demo.** **Season:- Kharif: 2011**

Name of Enterprise	Average Crop yield (Kg.)									
	Okra	Cow pea	Tur	Cluster bean	Bottle gourd	Bitter gourd	Sponge gourd	Ridge gourd	Cabbage	Cauliflower
1	2	3	4	5	6	7	8	9	10	11
Kitchen Garden	16.6	8.2	9.4	3.9	11.3	4.0	5.3	5.5	3.5	3.8

Average Crop yield (Kg.)							Total Production	Average rate (/Kg)	Gross return ()	
Palakh	Cucumber	Brinjal	Tomato	Ginger	Chilli	Turmeric			Before FLD	After FLD
12	13	14	15	16	17	18	19	20	21	22
2.6	4.3	21.4	17.9	2.1	9.3	1.8	130.9	30	960.00	3927.00 along with domestic consumption

Farm women Reaction:

S. No	Feed Back
1	Before Demonstration, farm women were growing only two or three vegetable crops in their backyard but after demonstration they are growing different vegetable crops through kitchen gardening in scientific way.
2	Kitchen gardening gives continuous supply of fresh vegetables at lower cost which gives daily nutritious diet.
3	In kitchen gardening, farm women are not applying any agrochemicals so they produce organic vegetables.
4	We are utilized maximum backyard space and waste water.
5	Income is generated by selling extra vegetables grown in kitchen garden.
6	Farm women are attracted towards hybrid vegetables.

(3) Result of FLD on Introduction of improved NAVEEN sickle for paddy harvesting:

Thematic area: Women drudgery reduction technology

Crop	Season & Year	No. of Demonstration	Field capacity per labour (ha/h)		Increase in field capacity (%)	Labour requirement (man-h / ha)		Economics		
			Harvesting by NAVEEN sickle	Harvesting by local sickle		Demon	Local check	Cost of operation * ₹/ ha / day		Saving cost (%)
								Demon	Local check	
Paddy	Kharif 2011	20	0.0078	0.0061	27.86	128	164	1600	2100	31.25

***Cost of operation is calculated as per Govt. rules.

****NAVEEN sickle is recommended by CIAE, Bhopal.

Technical feedback:

1. Improved NAVEEN sickle reduces women drudgery in terms of time, efficiency and physical hazards (finger injuries, hand grip, muscle stress etc.)
2. During paddy harvesting, field capacity per farm woman is increased up to 27.86% by using NAVEEN sickle as compared to local sickle.
3. NAVEEN sickle saves 28.12% labour and 31.25% cost of operation as compared to local sickle.

Farm women's reaction:

1. NAVEEN sickle increases working efficiency in short period of time, i.e. it is cost saving and time saving.
2. NAVEEN sickle reduces fatigue, muscle stress, wrist pain and pain in shoulders as compared to local sickle.

d. Details of FLD - Animal Science:

Urea treatment to paddy straw

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No.of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
					Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Buffalo	Nutrition management	Urea treatment to paddy straw	20	20	Avg. milk yield lit per day	Avg. milk yield lit per day	18.86%	----	---	98	186.52	88.52	1:1.90	90	156.92	66.92	1:1.74
					5.829 (32 Rs/lit)	4.904(32 Rs/lit)											

Farmers Reaction:

S. No	Feed Back
1	Use of Urea treatment make the paddy straw more palatable to the animals
2	Urea treated paddy straw increase milk production of buffaloes.

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

A) ON CAMPUS

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
(A) Farmers & Farm Women										
I Crop production										
Integrated Crop Management	5	0	0	0	191	190	381	191	190	381
II Horticulture										
a) Vegetable Crops										
Off-season cultivation	2	0	0	0	116	3	119	116	3	119
b) Fruits										
Management of young plants/orchards	1	0	0	0	26	9	35	26	9	35
III Soil Health and Fertility Management										
Integrated Nutrient Management	3	0	0	0	56	32	88	56	32	88
IV Livestock Production and Management										
Feed Management	1	0	0	0	16	11	27	16	11	27
Dairy Management	1	0	0	0	18	9	27	18	9	27
Disease Management	2	0	0	0	47	25	72	47	25	72
V Home Science/Women empowerment										
Household food security by Kitchen gardening and nutritional gardening	1	0	0	0	0	50	50	0	50	50
Location specific drudgery reduction technology	1	0	0	0	0	20	20	0	20	20
Women and child care	1	0	0	0	0	49	49	0	49	49
Designing and development for high nutrient efficiency diet	1	0	0	0	0	25	25	0	25	25
Design and development of low/minimum cost diet	1	0	0	0	0	30	30	0	30	30

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
VII Plant Protection										
IPM	1	0	0	0	47	0	47	47	0	47
X Capacity Building and Group Dynamics										
Formation and Management of SHGs	3	0	0	0	0	65	65	0	65	65
Enterpreneurial development of farmers/youths	2	0	0	0	61	0	61	61	0	61
TOTAL (A)	**26**	**0**	**0**	**0**	**578**	**518**	**1096**	**578**	**518**	**1096**
(B) Rural Youth										
Integrated Crop Management	3	0	0	0	111	0	111	111	0	111
Integrated Nutrient Management	1	0	0	0	18	2	20	18	2	20
Protected cultivation of vegetable crops	1	0	0	0	25	0	25	25	0	25
Dairying	2	0	0	0	32	19	51	32	19	51
Disease management	1	0	0	0	26	0	26	26	0	26
Capacity building for ICT application	1	0	0	0	30	0	30	30	0	30
Designing and development for high nutrient efficiency diet	1	0	0	0	0	20	20	0	20	20
TOTAL (B)	**10**	**0**	**0**	**0**	**242**	**41**	**283**	**242**	**41**	**283**
(C) Extension Personnel										
Integrated Nutrient Management	1	7	0	7	30	5	35	37	5	42
Protected cultivation technology	1	0	0	0	5	25	30	5	25	30
Women and Child care	1	0	9	9	0	26	26	0	35	35
Capacity building for ICT application	2	14	1	15	32	0	32	46	1	47
Leadership Development	1	0	0	0	36	3	39	36	3	39
TOTAL (C)	**6**	**21**	**10**	**31**	**103**	**59**	**162**	**124**	**69**	**193**
GRAND TOTAL	**42**	**21**	**10**	**31**	**923**	**618**	**1541**	**944**	**628**	**1572**

B) OFF Campus

Thematic area	No. of courses	Participants								
		others			SC/ST			Grand Total		
		M	F	T	M	F	T	M	F	T
(A) Farmers & Farm Women										
I Crop Production										
Integrated Crop Management	5	0	0	0	156	190	346	156	190	346
II Horticulture										
a) Vegetable Crops										
Off season veg. cultivation	3	0	0	0	52	62	114	52	62	114
ICM	1	0	0	0	25	2	27	25	2	27
b) Fruits										
Layout and Management of Orchards	1	0	0	0	19	21	40	19	21	40
III Soil Health and Fertility Management										
Integrated Nutrient Management	3	0	0	0	105	41	146	105	41	146
IV Livestock Production and Management										
Dairy Management	2	0	0	0	72	25	97	72	25	97
Feed Management	1	0	0	0	0	20	20	0	20	20
Disease Management	3	0	0	0	0	79	79	0	79	79
Poultry Management	1	0	0	0	22	20	42	22	20	42
V Home Science/Women empowerment										
Women & Child care	6	0	0	0	0	139	139	0	139	139
Designing & development for high nutrient efficiency diet	2	0	0	0	0	49	49	0	49	49
Minimization of nutrient loss in processing	2	0	0	0	0	38	38	0	38	38
VII Plant Protection										
Integrated Pest Management	3	26	0	26	20	119	139	46	119	165
Integrated Pest Disease Management	1	0	0	0	13	10	23	13	10	23
X Capacity Building and Group Dynamics										
Leadership Development	1	0	0	0	0	31	31	0	31	31

Thematic area	No. of courses	Participants								
		others			SC/ST			Grand Total		
		M	F	T	M	F	T	M	F	T
Enterpreneurial development of farmers/rural youth	2	0	0	0	0	58	58	0	58	58
TOTAL (A)	**37**	**26**	**0**	**26**	**484**	**904**	**1388**	**510**	**904**	**1414**
(B) RURAL YOUTH										
Integrated Crop Management	3	0	0	0	85	50	135	85	50	135
Dairying	3	0	0	0	39	29	68	39	29	68
Integrated Pest Management	1	0	0	0	18	13	31	18	13	31
Bee keeping	1	0	0	0	22	15	37	22	15	37
TOTAL (B)	**8**	**0**	**0**	**0**	**164**	**107**	**271**	**164**	**107**	**271**
GRAND TOTAL	**45**	**26**	**0**	**26**	**648**	**1011**	**1659**	**674**	**1011**	**1685**

C) Consolidated table (ON and OFF Campus)

Thematic area	No. of courses	Participants								
		others			SC/ST			Grand Total		
		M	F	T	M	F	T	M	F	T
(A) Farmers & Farm Women										
I Crop Production										
Integrated Crop Management	10	0	0	0	347	380	727	347	380	727
II Horticulture										
a) Vegetable Crops										
Off season veg. cultivation	5	0	0	0	168	65	233	168	65	233
ICM	1	0	0	0	25	2	27	25	2	27
b) Fruits										
Layout and Management of Orchards	1	0	0	0	19	21	40	19	21	40
Management of young plants/orchards	1	0	0	0	26	9	35	26	9	35
III Soil Health and Fertility Management										
Integrated Nutrient Management	6	0	0	0	161	73	234	161	73	234
IV Livestock Production and Management										

Thematic area	No. of courses	Participants								
		others			SC/ST			Grand Total		
		M	F	T	M	F	T	M	F	T
Dairy Management	3	0	0	0	90	34	124	90	34	124
Feed Management	2	0	0	0	16	31	47	16	31	47
Disease Management	5	0	0	0	47	104	151	47	104	151
Poultry Management	1	0	0	0	22	20	42	22	20	42
V Home Science/Women empowerment										
Women & Child care	7	0	0	0	0	188	188	0	188	188
Location specific drudgery reduction technology	1	0	0	0	0	20	20	0	20	20
Household food security by Kitchen gardening and nutritional gardening	1	0	0	0	0	50	50	0	50	50
Designing & development for high nutrient efficiency diet	3	0	0	0	0	74	74	0	74	74
Design and development of low/minimum cost diet	1	0	0	0	0	30	30	0	30	30
Minimization of nutrient loss in processing	2	0	0	0	0	38	38	0	38	38
VII Plant Protection										
Integrated Pest Management	4	26	0	26	67	119	186	93	119	212
Integrated Pest Disease Management	1	0	0	0	13	10	23	13	10	23
X Capacity Building and Group Dynamics										
Leadership Development	1	0	0	0	0	31	31	0	31	31
Entrepreneurial development of farmers/youths	4	0	0	0	61	58	119	61	58	119
Formation and Management of SHGs	3	0	0	0	0	65	65	0	65	65
TOTAL (A)	**63**	**26**	**0**	**26**	**1062**	**1422**	**2484**	**1088**	**1422**	**2510**
(B) RURAL YOUTH										
Integrated Crop Management	6	0	0	0	196	50	246	196	50	246

Thematic area	No. of courses	Participants								
		others			SC/ST			Grand Total		
		M	F	T	M	F	T	M	F	T
Integrated Nutrient Management	1	0	0	0	18	2	20	18	2	20
Protected cultivation of vegetable crops	1	0	0	0	25	0	25	25	0	25
Dairying	5	0	0	0	71	48	119	71	48	119
Disease management	1	0	0	0	26	0	26	26	0	26
Capacity building for ICT application	1	0	0	0	30	0	30	30	0	30
Designing and development for high nutrient efficiency diet	1	0	0	0	0	20	20	0	20	20
Integrated Pest Management	1	0	0	0	18	13	31	18	13	31
Bee keeping	1	0	0	0	22	15	37	22	15	37
TOTAL (B)	**18**	**0**	**0**	**0**	**406**	**148**	**554**	**406**	**148**	**554**
(C) Extension Personnel										
Integrated Nutrient Management	1	7	0	7	30	5	35	37	5	42
Protected cultivation technology	1	0	0	0	5	25	30	5	25	30
Women and Child care	1	0	9	9	0	26	26	0	35	35
Capacity building for ICT application	2	14	1	15	32	0	32	46	1	47
Leadership Development	1	0	0	0	36	3	39	36	3	39
TOTAL (C)	**6**	**21**	**10**	**31**	**103**	**59**	**162**	**124**	**69**	**193**
GRAND TOTAL	**87**	**47**	**10**	**57**	**1571**	**1629**	**3200**	**1618**	**1639**	**3257**

Note: Details of above training programmes given in the proforma as Annexure-II

(D) Vocational training programmes for Rural Youth

Crop / Enterprise	Date	Training title*	Identified Thrust Area	Duration (days)	No. of Participants			Self employed after training			Number of persons employed else where
					Male	Female	Total	Type of units	Number of units	Number of persons employed	
Home Science	15-16/2/2012	Value addition in fruits & vegetables	Value addition	2	0	21	21	-- Work in progress --			
	21-22/2/2012	Preparation of masala	Income generation activities for empowerment of rural women	2	0	27	27	-- Work in progress --			
Agronomy	3/3/2012	Vermicomposting	Integrated Nutrient Management	1	3	23	26	-- Work in progress --			

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)		
				M	F	T	M	F	T	M	F	T	M	F	T
1	Krishi Mela	-	1	18,000	36,000	54,000	34,000	1,12,000	1,46,000	48	8	56	**52048**	**148008**	**200056**
2	Field Day	For FLD	7	0	0	0	137	98	235	6	1	7	**143**	**99**	**242**
3	Farmers' Day	For paddy	1	0	0	0	240	960	1200	6	1	7	**246**	**961**	**1207**
4	Khedut Shibir	Cereals, Pulses, Vege., other crops	8	0	0	0	3473	5796	9269	6	1	7	**3479**	**5797**	**9276**
5	Mahila Shibir	Health & Nutrition, SHG, Women empowerment	3	3	1	4	07	1101	1108	6	1	7	**16**	**1103**	**1119**
6	Agril. Exhibition	Krishi Mela, Khedut din, Krishi Mahotsav	9	255	120	375	64717	100916	165633	6	1	7	**64978**	**101037**	**166015**
7	Crop Symposium	Paddy crop(SRI) & Export oriented Okra	11	768	0	768	5841	13206	19047	6	1	7	**6615**	**13207**	**19822**
8	Pashupalan Shibir	-	3	0	0	0	453	501	954	5	0	5	**458**	**501**	**959**
9	Scientist visit to Farmers' Field	-	59	13	0	13	199	171	370	6	1	7	**218**	**172**	**390**
10	Farmers Visit to KVK	-	125	16	83	99	382	532	914	6	1	7	**404**	**616**	**1020**
11	Telephone Helpline	-	32	10	0	10	299	95	394	6	1	7	**315**	**96**	**411**
12	Guidance through letter	-	1	0	0	0	1	0	1	1	0	1	**2**	**0**	**2**
13	Celebration of Women in Agril. Day	Agriculture, Nutrition & Health	1	0	0	0	0	50	50	1	1	2	**1**	**51**	**52**

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)		
				M	F	T	M	F	T	M	F	T	M	F	T
		03/12/11													
14	Celebration of International Women's Day	Women Empowerment 21/3/12	1	0	0	0	223	2372	2595	2	1	3	**225**	**2373**	**2598**
15	Parthenium Awareness Week – 2010 programme	(8-13/9/2011)	1	227	0	227	0	0	0	5	0	5	**232**	**0**	**232**
16	Soil & Water Sample analyzed	-	1824/11	0	0	0	1835	0	1835	1	0	1	**1836**	**0**	**1836**
17	Sample diagnosed in PHC	-	36	0	0	0	48	1	49	3	0	3	**51**	**1**	**52**
18	Kishan Gosthi	-	6	50	0	50	52	11	63	5	0	5	**107**	**11**	**118**
19	Ex-trainee sammelan	-	2	0	0	0	3	34	37	1	1	2	**4**	**35**	**39**
20	Formation of New SHG	For women empowerment	1	0	0	0	0	10	10	0	1	1	**0**	**11**	**11**
21	SHG Meeting	For activation of new & exsisting SHGs	6	0	0	0	0	111	111	0	1	1	**0**	**112**	**112**
22	Farmers-Farm Women Meeting	-	5	178	0	178	89	90	179	3	1	4	**270**	**91**	**361**
23	Guest Lecture	FTC & ATMA,KAPP	24	139	25	164	1738	10149	11887	6	1	7	**1883**	**10175**	**12058**
24	Film Show	SHG, Pashupalan, Agriculture	15	0	9	9	225	468	693	5	1	6	**230**	**478**	**708**
25	Diagnostic Visit	-	25	4	0	4	30	24	54	5	0	5	**39**	**24**	**63**
26	Field Visit	-	25	3	0	3	242	342	584	6	1	7	**251**	**343**	**594**
27	FLD Meeting	-	4	0	0	0	0	90	90	0	1	1	**0**	**91**	**91**

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)		
				M	F	T	M	F	T	M	F	T	M	F	T
28	FLD visit	-	21	18	0	18	96	92	188	5	1	6	**119**	**93**	**212**
29	Krishi Mahotsav	--	1	28	0	28	4610	3682	8292	6	1	7	**4644**	**3683**	**8327**
30	Night camp	-	4	0	0	0	98	75	173	3	0	3	**101**	**75**	**176**
31	Method Demonstration	Paddy weeder & Bio-fertilizer, Preparation of vermicompost and masalas	18	0	0	0	347	274	621	6	1	7	**353**	**275**	**628**
32	Popular Articles	-	12	0	0	0	0	0	0	4	1	5	**4**	**1**	**5**
33	Newspaper Coverage	-	48	0	0	0	0	0	0	6	1	7	**6**	**1**	**7**
34	TV Telecast	-	1	0	0	0	0	0	0	1	0	1	**1**	**0**	**1**
35	Book published	-	6	0	0	0	0	0	0	3	0	3	**3**	**0**	**3**
36	Folder Prepared	-	25	0	0	0	0	0	0	6	1	7	**6**	**1**	**7**
37	Extension literature distributed	-	25	0	0	0	3323	2216	5539	6	1	7	**3329**	**2217**	**5546**
38	Research Paper published	-	23	0	0	0	0	0	0	3	0	3	**3**	**0**	**3**
39	Farmers-Scientists Interaction	-	3	0	0	0	55	8	63	3	0	3	**58**	**8**	**66**
40	Orientation Programme attended	HRD	1	0	0	0	0	0	0	1	1	2	**1**	**1**	**2**
41	Seminar/Conference/workshop/meeting attended	-	14	0	0	0	0	0	0	6	1	7	**6**	**1**	**7**
42	Guidance to RAWE/BRS	-	4	8	0	8	0	4	4	1	1	2	**9**	**5**	**14**

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)		
				M	F	T	M	F	T	M	F	T	M	F	T
	students														
43	Suscribtion to Krishi Govidhya Magazine	-	1	0	0	0	1	0	1	0	1	1	**1**	**1**	**2**
Grand Total			**2443/11**	**19720**	**36238**	**55958**	**122764**	**255479**	**378243**	**211**	**38**	**249**	**142695**	**291755**	**434450**

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	Paddy	Gurjari	110	250000	400
		IR-28	40	75000	130
Pulses	Moong	Pusa Vishal	3.60	14400	180
	Groundnut	GG-2	6.90	22816	40
	Gram	GG-2	1.20	3000	8
Sugarcane	Sugarcane	Co-5071	220	51700	11

SUMMARY

Sr. No.	Major group/class	Quantity (qtl.)	Value (Rs.)	Provided to No. of Farmers
CEREALS	paddy-Gurjari	110	250000	400
	Paddy-IR-28	40	75000	130
Pulses	Moong- Pusa Vishal	3.60	14400	180
	Groundnut- GG-2	6.90	22816	40
	Gram- GG-2	1.20	3000	8
Sugarcane	Sugarcane- Co-5071	220	51700	11
	TOTAL	**381.70**	**416916**	**769**

PLANTING MATERIALS

Major group/class	Crop	Variety	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
FRUITS	Mango	Kesar	--	--	--
	Mango	Dasheri	--	--	--

SUMMARY

Sl. No.	Major group/class	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
1	FRUITS – MANGO	--	--	--
	TOTAL	**--**	**--**	**--**

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

KVK News Letter: - Regular news of KVK is published in NAU Spectrum, NAU Publication.

(B) Literature developed/published

Item	Title	Authors name	Number of copies
Research papers	Extension Management Ability of Programme Co-ordinators of KVKs	Dr.N.M.Chauhan Dr. N.B. Chauhan	Not applicable
	Effect of phosphorous and pseudomonas on growth, yield and economics of sweet corn (Zea mays L.)	Dr.N.M.Chauhan	Not applicable
	Role performance of tribal farm women in domestic and agricultural activities in Gujarat state	Dr.N.M.Chauhan	Not applicable
	Effect of integrated nutient management on growth, yield and economics of Sweet Corn (Zea mays L.)	Dr.N.M.Chauhan	Not applicable
	Expectations and opinions of the farmers from ICT in agriculture at village level.	Dr.N.M.Chauhan	Not applicable
	Managerial ability of the Programme Coordinators of Krishi Vigyan Kendras (KVKs) of India	Dr.N.M.Chauhan Dr. N.B.Chauhan	Not applicable
	Opinion of the farmers about use of internet technology in agriculture in India	Dr.N.M.Chauhan Dr. N.B.Chauhan	Not applicable
	Use of internet technology for agriculture knowledge management in India	Dr.N.M.Chauhan	Not applicable
	Evaluation of training needs of members of tribal women Self Help Groups(SHGs) for agriculture management	N.M.Chauhan S.M.Kshirsagar	Not applicable
	Telephone- a source of agro-technology information	Timbadia C.K. C.D.Pandya	Not applicable
	Prospects and opinions of the farmers from ICT in agriculture at village level	N.M.Chauhan	Not applicable
	Effect of urea treated paddy straw along with mineral mixture on milk yield and economics of	Jeetendra raval N.M.Chauhan	Not applicable

	H.F. cow		
	Aptitude of the Programme Coordinators of Krishi Vigyan Kendras of India	Nikulsinh M. Chauhan	Not applicable
	Managerial ability of the Programme Coordinators of Krishi Vigyan Kendras (KVKs) of India	N.M.Chauhan N.B.Chauhan	Not applicable
	Attitude of Farmers Regarding Use of IT in Agriculture	N.M.Chauhan N.B.Chauhan	Not applicable
	Training Needs of Tribal Women SHGs for Agriculture Development	N.M.Chauhan S.M.Kshirsagar	Not applicable
	Increasing Area and Productivity of Paddy in Tribal Belt of South Gujarat Through Effective TOT Efforts: A Success Stor	N.M.Chauhan A.P.Patel	Not applicable
	Effect of INM on yield, economics and soil properties of okra cultivation	N.M.Chauhan A.P.Patel	Not applicable
	Information on the pay attention of the rice growers	N.M.Chauhan	Not applicable
	Participation of the tribal farm women in crop management	N.M.Chauhan	Not applicable
	Relationship latent on integrated nutrient management on yield attributes and economics of sweet corn (Zea mays L.)	N.M.Chauhan A.P.Patel	Not applicable
	Role performance of tribal farmwomen in agricultural and animal husbandary in Gujarat	N.M.Chauhan	Not applicable
	Role performance of tribal farmwomen in domestic and agricultural activities in Gujarat State	N.M.Chauhan	Not applicable
Total	**23**		
Technical reports	MPR, QPR, SAC report, FLD report, AAP, APR, MER, AGRESCO, ZREAC report, QRT Report	PC & All SMS	-
Popular articles	List of articles given in Annexure – III	PC & All SMS	
Leaflets/folders	KRISHI VIGYAN KENDRA-MAHITI PATRIKA(Colour & B/W)	-	1500
	AAMBANU VANSHVARDHAN, KALAMONI PASANDGI ANE ROPANI	Dr. S.T.Bhatt Dr. N.M.Chauhan	500
	RINGANI AADHUNIK KHETI PADHDHATI	Dr. S.T.Bhatt Dr. N.M.Chauhan	500
	OCHA KHARCHAL (LOW-COST) GREEN HOUSENI KHETI VISHE SAMAJ	Dr. S.T.Bhatt Dr. N.M.Chauhan	500

	TUVERNI VAIGYANIK KHETI PADHDHATI	Dr. A.P.Patel Dr. N.M.Chauhan	500
	APANAVAVA JEVO PAK “SOYBEAN”	Dr. A.P.Patel Dr. N.M.Chauhan	500
	DANGARMA SANKALIT JIVAT NIYANTRAN	Dr. J.H.Rathod Dr. N.M.Chauhan	1000
	GHAUVNI KHETI PADHDHATI	Dr. A.P.Patel Dr. N.M.Chauhan	500
	SVA SAHAYA JUTH: GRAM VIKASNI GARUCHAVI	Arti N.Soni Dr. N.M.Chauhan	500
	SAGARBHA STRI ANE MATA MATE POSHAK AAHAR	Arti N.Soni Dr. N.M.Chauhan	500
	SHAKBHAJINU AAHARMA MAHTVA	Arti N.Soni Dr. N.M.Chauhan	500
	STRIOMA ANEMIA(PANDUROG) ANE SARVAR	Arti N.Soni Dr. N.M.Chauhan	500
	BALKOMA KUPOSHAN NIVARAVA AATLU KARO	Arti N.Soni Dr. N.M.Chauhan	500
	AAHARMA POSHAK GHATAKONU MAHTVA	Arti N.Soni Dr. N.M.Chauhan	500
	GHAR AANGANE SHAKBHAJI (KITCHEN GARDEN)	Arti N.Soni Dr. N.M.Chauhan	500
	FAL ANE SHAKBHAJI PARIRAKSHAN	Arti N.Soni Dr. N.M.Chauhan	500
	VIVIDHA VANGIO DWARA MAGAFALIMA MULYAVRUDHDHI	Dr. C.D.Pandya Arti N. Soni Dr. N.M.Chauhan	500
	JAIVIK KHATARO ANE TENO UPYOG KARVANI VIVIDHA RITO	Dr. C.D.Pandya Dr. A.P.Patel Dr. N.M.Chauhan	500
	MANUSHYANO JANI DUSHAMAN: UNDAR	Dr. C.D.Pandya Dr. N.M.Chauhan	500
	PASHUDARDONO DESHI ELAJ	Dr. C.D.Pandya	500

		Dr. J.K.Raval Dr. N.M.Chauhan	
	SVACHCHHA DOODH UTPADAN	Dr. J.K.Raval Dr. N.M.Chauhan	500
	PASHUPALAN SAFAL BANAVAVA AATLU KARO	Dr. J.K.Raval Dr. N.M.Chauhan	500
	BAKARAPALAN	Dr. J.K.Raval Dr. N.M.Chauhan	500
	DOODHALA GAY-BHENSANI PASANDGI	Dr. J.K.Raval Dr. N.M.Chauhan	1000
	PASHUAAHARMA KHANIJ TATVONU MAHTVA	Dr. J.K.Raval Dr. N.M.Chauhan	500
Total	**25**		**15000**
Book Published	KRISHI VIGYAN KENDRA, VYARA (TAPI)- A Boon for upliftment of farming community		
	SHERDI NI VAIGYANIK KHETI PADHDHATI		
	EK ADARSH ROKADIYO PAK- SHERDI		
	VAIGYANIK PADHDHATI THI BIJ UTTPADAN		
	Glimpses of KVK		
	Achieved Dreams of KVK		

(C) Details of Electronic Media Produced

S. No.	Type of media (CD / VCD / DVD / Audio-Cassette)	Title of the programme	Number
1	DVD	Success stories of KVK(Tapi) and Hangati Trust, Mandal	10
2	DVD	Okra crop symposium cum seed village feedback at JAMKHADI	10

3.7 SUCCESS STORIES / CASE STUDIES:

3.7.1 System of Rice Intensification – Success Story of farmer

In year 2010/11, KVK, Vyara has adopted the village Amalgundi for intensive approach for increasing agricultural production there by raised the standard of living of farmers. Interacting with farmers it was found that the farmers are unable to get economical yield in T.P.Paddy. In T.P.Paddy farmers was using more seed rate, improper spacing, imbalance fertilizers & poor management in their field. The farmers of this tribal belt were unable to adopting new technologies in agriculture.

Considering the situation, SMS (Agronomy) dialoged with farmers and suggested to adopt new paddy cultivation technology SRI. Among those farmers one farmer Rangajibhai Gamit was ready to accept this technology on their field. One acre land first he was applied FYM 15 ton. 10 to 15 day interval. After transplanting he was used paddy weeder three time in between row of paddy for control weed & air circulating in root zone.

He was used 2 kg seeds in paddy nursery. Planting management is important factor for increase production. He was used 12 days old paddy seedling and planting at 25x25 cm. spacing. One plant per one hills. For weed control used paddy weeder at 10-15 days interval after transplanting. Three to four time used of paddy weeder for more air circulation in root zone area. In fertilizer management he was apply only 50% of recommended dose (120-30-0 NPK kg/ha). For limitation of water availability he was keep moist in paddy field. but after panical initiation 1-3 cm. water was applied & before harvest completely water was drain out. 50% water was saved in this method of sowing. Production point of view he get 55-60 tillers per hills and average production was 9580 kg/ha. In SRI method he get net profit of Rs. 58550 / ha. So in limited irrigation facility farmers get double income.

Name of innovative technology :

The “System of Rice Intensification” was first demonstrated by father Hanry d Lolen in 1980 at Madagasker. This system give limited use of chemical fertilizer, weedicides etc. and more use of organic and bio fertilizer. This system use limited water, less seeds, less use of chemicals which is good for environment and health of mankind.

Nursery preparation :

- Seeds of any variety.
- Seed rate 5 kg per ha.
- Prepare beds mixing soils, cow dung / FYM, rice hill / burned husk forming 1.5 to 2 cm thick layer at the top.
- Sowing – sprouted seeds i.e. 20 gm per sq.m. on raised bed.
- Cover seeds with mixture of soil, cow dung / FYM, rice hill / burned husk forming thin layer and spread paddy straw.
- Remove paddy straw after 2-3 day.

- No flooding (Keep moist)

Planting management :

- 8-13 days old seedling (2-4 leaves stage)
- Remove seedling with trowel.
- Seed sat should be kept attached.
- Transplanted as soon as (within 15-30 min.).
- Only single seedling per hill.
- Spacing 25 x 25 cm.

Fertilizer management :

- SRI performs better under organic source of fertilizer.
- Blending of organic and chemical fertilizer (in case of limited availability of organics)
- 25% RDF through chemical fertilizer
- 15-20 kg of Bio-fertilizer (4 kg each N-fixing *viz*. Azotobactor, Acospirilum & PSB)
- FYM / Neem cake / Compost @ 10-15 t/ha or green manuring.

Water management :

- Keep moist but not saturated flooded (Vegetative growth)
- If no rain, apply water in evening and drain it in morning.
- After flowering 1-3 cm water.
- Drain completely 25 days before harvesting.
- 50% water can be saved.

Weed management :

- By hand.
- Use of mechanical weeder.
- First weeding 10-12 days after T.P.
- Second weeding – 12-14 days after First weeding.
- Third after 15-20 days after second weeding.
- No use of weedicides.

Benefit of innovation to the farmer & Society :

Paddy cultivation by SRI method Rangajibhai J. Gamit get net return of rupee 65,000/ha & 45% water saving. Due to this around Amalgundi village at least 106 farmers was adopting this technology. The Rangajibhai himself act as a extension worker. He got to the farmers filed and advise other farmers how to cultivate paddy in SRI technology.

3.7.2 Self sufficiency in Paddy seed through Seed Village Programme-Sucess Story

District Profile

Krishi Vigyan Kendra Vyara is located in the Tapi district – the southeastern part and the tribal belt of Gujarat. The district shares it borders with Surat, Navsari and Dang district in North-west, South and East respectively with Maharashtra state in East .The

geographical area of the district is 7.79 lac ha. The conspicuous feature of the district are undulating topography with steep slopes and heavy rainfall. The av. Rainfall of the district is about 80 –100 inches per annum. The distribution is erratic and thus, causing damage to the crops like Pulses, Paddy and other cereals.The district is composed largely of tribal communities. This, communities depend primarily on agriculture for their livelihood supplemented by income from seasonal employment in nearest industrial town. Soils of the district in general can be classified as medium black to heavy black, Red murrum and rocky with low innate fertility. Agriculturally, about 60 per cent of the cultivated area is undersigned crop during monsoon. The main crops of the district are – Paddy, Sorghum, Groundnut, Pulses, Sugarcane, Gram and vegetables-Brinjal,Okra. Paddy is the staple foods of the tribal communities of the district. Among Vegetable crops Okra is main crop for export quality.

Krishi Vigyan Kendra

KVK Vyara is working under the auspices of Navsari Agricultural University. It has started its activities since September,2000. Kendra has undertaken **Seed multiplication programme of Paddy since 2000-01**.

Genesis of Programme

To ascertain the constraints encountered by Paddy growers of this area, a Benchmark **survey was carried out by multidisciplinary team of scientist of KVK during the year 2009-10. The results of the survey revealed following …**

a. Large majority of the tribal farmers are cultivating conventional varieties (Tichun native –1, Sathi and Kada) of paddy.
b. Conventional varieties are early mature, having coarse grain with dull husk colour, and highly susceptible to water logging as the rain coincide with maturity of paddy in later stage.
c. Paddy growers are using higher seed rate i.e. 30 – 40 Kg for transplanting 1 acre of land as they produce seed of their own.
d. They were planting 10-12 seedlings / hill resulting in to over plant population and lower yield. It also increases the cost of cultivation because harvesting takes much time.
e. Farmers were using impure seed, as they produce it on their farm without taking much care.
f. Av. Yield of Paddy (conventional varieties) is about 2500 Kgs./ha.under good management practices.
g. Market value of the conventional varieties is less ranges between Rs. 5 –6 /Kg. because of coarse grain and unpleasant colour of husk.
h. Tribal farmers are not satisfied with yield status of conventional varieties of Paddy.
i. The farmers having assured irrigation facilities or low land kyari expressed their desired to have high yielding variety with **late maturity** to avoid damage by rains to crop at the maturity time.

j. On the contrary, farmers growing paddy under rainfed condition expressed their desire to have high yielding **early mature** variety.

k. It was also noticed that most of the tribal farmers posses small piece of land. Whatever they produced from the land during monsoon, they have to depend on it for their livelihood. They are striving hard for their food especially during August and September.

The basic concept of seed village is to make the villagers self-sufficient for quality sees of their region.The seeds produced of the appropriate varieties of various crops, locally. The following steps may be taken to ensure effective implementation of seed village programme.

1. As far as possible, seed village should be organized in a compact area with adequate irrigation facilities comprising of few adjacent villages.
2. The area selected for seed village should produce enough seeds to meet the requirement of the particular area (i.e.) block or district for which seed village has been organized.
3. The area entitled for seed village programme may not be changed every year but it should be kept permanent for 5-10 years.
4. The selected farmers should be provided with training in seed production so that they are in a position to take all possible care for quality seed production.
5. Adequate quantity of source seeds should be mobilised in advance
6. Adequate inputs should be made available in time
7. Integrated plant protection measures should be advocated.
8. Seed processing facilities should be made available at the nearest destination
9. Proper planning should be made to distribute the seeds produced in time.
10. The seed producers may attempt for successful implementation of seed village concept in their areas. It is always better to test the seeds or seed lots before sowing or offering for sale. To test the seeds a service sample should be drawn and submitted to the Seed Testing Laboratory. Following should be born in while drawing a service sample.
11. Prescribed quantity of seed samples should be sent along with the sample slip
12. In the sample slip the details on crop, variety, lot number should be indicated clearly.
13. A fee of Rs.20 per sample should be paid for each service sample
14. If the moisture test is required a separate sample should be sent in a polythene container with 70 gauge thickness
15. A regular training programme was conducted to the seed law enforcement officials on 15.6.2010 at KVK Vyara about 50 officials participated in this training programme.

16. The Subject Matter Specialist of Krishi Vigyan Kendra, Vyara inspected Paddy seed production field in Tapi district on 28-9-2010 and guided the seed grower for successful seed production.

Seed Grower through Woman Cooperative.

Seed is an important determinant of agricultural production and the efficacy of other agricultural inputs like labour, fertilizers depends on the quality of seed. Hence, the availability of the right seed material is very crucial. In Tapi district Paddy is grown in an area of 114291 ha and the approximate seed requirement is around 6857t. In order to achieve higher seed requirement, a major effort is required to cover more area under seed production. The production and supply of quality seeds and enhancing the seed replacement rates of various crops are the important issues in seed sector. Hence, training on seed production to the farmers is needed to increase the production of quality seeds.

Krishi Vigyan Kendra intervention

The farmers have purchased the seeds from private seed companies, government outlets and also used their own farm saved seeds. KVK scientists explained the uses and production of quality seeds. But, the resource poor farmers were unable to produce the seeds of their own due to lack of technical know how. Then the Krishi Vigyan Kendra intervened and trained the farmers of Hangati Mahila trust, Mandal about the seed production technologies such as land selection, sources of seed, isolation distance, rouging, foliar nutrition, harvesting and post harvest handling of seeds in three stages under seed village training programme

If we consider the success story of trained farmers of Hangati mahila trust villages in Tapi District is one of the progressive farmers in this village has shown impressive progress both as an early adopter and entrepreneur. He is also a convener and SAC member of Krishi Vigyan Kendra, Vyara.

KVK Intervention

Two days training programme on **'Seed Production Technology'** was imparted to the farmers on the basic aspects of Seed Production technology, improved technologies on Integrated nutrient Management etc., were given at Krishi Vigyan Kendra, Vyara and field exposure visit was arranged in the Seed Village Scheme fields at Vyara so as to acquire practical skill on the production technology. The farmers were supplied with resource materials on seed production Technology.

The farmers had acquired modern technologies and skill. A very good impact has been created among the farmers and in turn they developed confidence in the seed production. The farmer prepared nursery his land by ploughing followed by rotavator and finally prepared his nursery bed for paddy seedlings. He applied farm yard manure @ 15-20 t/ha during ploughing and incorporated in the land.

Paddy seeds of Jaya and Gurjari, treated with thirum @ 3 gm / kg were sown in the second week of June 2010 with the suitable guidelines of the scientists. Irrigation and

fertilizer were given in nursery after 23rd days after sowing transplanting of Paddy was done with line planting recommended spacing, fertilizer and irrigation according to the prescribed schedule given by the scientists of KVK.

By the seed production technology, he could achieve uniform crop stand, limited weed problem and problems of pest and diseases.He has harvested the Paddy crop during the third week of October 2010. He obtained yield of 6.5 t/ha.

A field day was conducted in the field of Hangati Mahila Trust farmers of Zarali, Jamkhadi, Bharadada, Amalgundi villages so as to create awareness among the other farmers on the achievement of higher yield in Paddy by Seed Production technology. Most of the farmers had expressed the advantages of raising Paddy for getting higher returns within a period of four months It is imperative that seed production technology has to be scaled up over larger area in forthcoming years, thereby the farmers fetch higher yield and higher net return. In such attempts, the role of KVK is very vital and necessary.

Impact

He is having 30 acres of wet land with good irrigation sources. Previously, he followed conventional system of rice cultivation for grain production. After few years he felt that this system would not have benefit in terms of both yield and soil fertility maintenance. Then, he planned to start seed production in rice as advised by scientists of Krishi Vigyan Kendra, Vyara. Previously he had undergone the training on the direct seeding techniques with drum seeder and SRI techniques in rice during 2009. He practiced these techniques in seed production and he found that this techniques required low seed rate (2-3 kg ha^{-1}), nitrogen (LCC based nitrogen management), water and labour requirement. Based on this experience, he extended to an area of 30 acres for seed production in rice. He was able to harvest higher seed yield of 6400 kg ha^{-1} with low cost of cultivation (Rs.12, 500) when compared to conventional method. Now he became a Own Hangati Mahila trust seed entrepreneur and marketing his seeds by this trust.

Seed village trainings to the farmers

Sr. No	Activity	No.	Participants
1	On / Off campus training programme	17	270
2	Field days	4	578

S.No.	Particulars and impact of the training	Production and income details
1.	Area	30 Acre
2.	Crops in which seed produced	Paddy, Pulse
3.	Unit production capacity	6.5 tonnes / ha –Paddy
4.	Seed supply	Krishi Vigyan Kendra, Vyara
5.	Net income	Rs.64,000 / ha –paddy
6.	Rural employment	2500 man days / year
7.	Estimated area coverage	25 ha.–paddy

Summary

Small and Marginal farmers are often at a disadvantageous position in absorbing the agricultural technology related to genetic enhancement of production potential of agricultural crops. This is because of centralized production and distribution of improved seeds by a seed companies. Though the organized sector is able to produce a large quantity of seeds, the supply chain is unable to cope with the huge demand for seeds across the length and breadth of the country. Thus, the farming community depends to a large extent on external sources for important inputs such as seeds. Seed village programme provide an alternative to this problem and help farmers become self reliant. This initiative needs both organized communities and scientific backstopping. Efforts towards up scaling seed village programme under Krishi Vigyan Kendra, Vyara in the Tapi district resulted in encouraging learning outcomes and demonstrated the viability of seed village with suitable technical backstopping by KVK scientist and empowerment of the community members. The seed village concept not only ensure good quality seeds for enhancing productivity but also in generating income for the community members resulting in improved livelihood. The self sufficiency in the seed is a great impact in the area like Tribal dominated District of Tapi.

Implication: - The whole stock of the seed materials have been sold by high remunerative rates at farmer's field only. The consciousness of the farmers regarding quality seed materials have been increased drastically. The cheating and looting by private seed traders have been reduced remarkably and the area under recommended cultivars of paddy has been developed in clusters and it leads towards value addition through need based paddy production for industrial use as well as for food grain purpose. The seed village concept of the farmers have been cultivated in the mind of orthodox tribal farmers to shift their age old seed through recently released high yielding paddy varieties. It was really a big achievement in the field of agriculture to run on sustainability and profitability super high way.

3.7.3 Boost production of Paddy from a New Variety NAUR-1- Success Story

Introduction :

In year 2009-10, KVK, Vyara has adopted the village **Ghodchit** with intensive approach for increasing agricultural production and thereby raised the standard of living of farmers. During PRA, interacting with farmers it was found that the farmers were unable to get economical yield in Transplanted paddy (**TP Paddy**). In **TP Paddy** farmers was using local variety of paddy, higher seed rate, improper spacing, imbalance fertilizers & poor crop management in their fields. The farmers of this tribal belt were unable for adopting new technologies in agriculture due to lack of proper technical guidance.

Considering the situation, SMS (Agronomy) dialoged with farmers and suggested to adopt new paddy Variety NAUR-1**.** Among those farmers one farmer

Jagubhai Panjibhai Gamit was ready to accept this variety on their field very first time. He had applied FYM @15 ton/ha at 10 to 15 day interval. After line transplanting he used paddy weeder three times in between row of paddy for control of weed & air circulating in root zone.

Adoption & Promotion of Technology :

He used only 6 kg seeds in paddy nursery. Planting management is important factor for increase production. He used 21 days old paddy seedling and transplanted at 15x20 cm spacing. Used two plant per one hill. For weed control used paddy weeder at 10-15 days interval after transplanting. two to four times use of paddy weeder for more air circulation in root zone area. In fertilizer management he applied only 50% of recommended doses (**120-30-0 NPK kg/ha**). With limited water availability he kept moist soil in paddy field. But after panicle initiation 1-3 cm. water was applied & before harvest completely water was drain out. 50% water was saved in this method of sowing. Production point of view ***he got 30-35 tillers per hills and average production was 6500 kg/ha. In new variety he got net profit of Rs. 45,000 / ha. So in limited irrigation facility farmers got double income.***

Benefit of innovation to the farmer & Society :

Paddy cultivation by new variety NAUR-1 Jagubhai P. Gamit could get net **return of Rupee 45,000/ha.** Due to this success among another village around Ghodchit village at least **160 farmers** had adopted this variety. The Jagubhai P. Gamit himself act as an extension worker. He visited the farmer's fields and advised other farmers regarding new variety of paddy with improved technology. This efforts made by Jagubhai P. Gamit has opened the door for effective and efficient adoption of new variety in Paddy in Whole block as well as District as a whole. We can say he is one of the best innovator and extension workers for said new variety.

3.7.4 Yellow sticky trap – An important tool for okra pest management – Success Story

Introduction:

Okra (*Abelmoschus esculentus* (L.)Moench) is one of the most important vegetable crop grown in India. Its cultivation is also done in Gujarat. India is the largest producer of okra in the world. Total area under okra cultivation in India is estimated to be 3.6 lakh tons. The area of okra in Gujarat is 35908 hectares, with the production of 299136 MT. (Anon., 2005).

It is seen that this crop is being damaged by different types of insect-pest which drastically reduced the yield and exportable quality of okra. Among them some are Jassid(Amrasca biguttula biguttula Ishida), Aphid(Aphis gossypii Glover), Spotted bollworm or Fruit borer(Earias spp.) and White fly(Bemisia tabaci) are very important. The damage is mostly done by the sucking pests by spreading the YMV.

Since last 7 years, the tribal people of the Tapi district started okra cultivation. Tribes were using higher doses of Chemical fertilizers and Insecticides- Pesticides for control of the pests as guided by the local traders. They expensed a huge budget behind Agrochemicals which resulted in higher cost of production. Ultimately they are with expectation of higher prices of their okra in the market. Since last four years Export of Okra had been started by brokers. One or two big containers every after an alternate days, are exported from dolvan market, which is costed around 33 cores per season. The okra market has created an identity of the region at National as well as international level. The role played by KVK in this task is immeasurable.

In year 2009, **Krishi Vigyan Kendra (KVK), NAU, Vyara** started work to decrease the cost of cultivation by reducing the use of agro chemicals. In this context, KVK Subject matter specialist(Entomology) started trainings(On & Off campus) on IPM in Okra. Yellow Sticky Trap is one of the components of the IPM. First of all trainings on IPM of cotton pest were given to the farmers of different villages of Tapi district particularly Okra growing areas i.e. Gadat, Pati, Dolvan etc. Farmers were trained about the use of Yellow Sticky Trap in the okra field. Demonstrations were also given them. **Krishi Vigyan Kendra (KVK), NAU, Vyara** has organized one day seminar on **"Export oriented Okra" at Dolvan market on 14th November-2009, at Gadat on 4th December-2010, at Padamdungari on 23rd February-2011 at Garvan on 30th September-2011 and at Jamkhadi on 8th October-2011** for the spread of technology related to export quality okra production.

The Yellow Sticky Traps of 25 x 10 Cm were given to the farmers for the demonstration @ 10 nos. / ha. They were placed at the height of 30 Cm above the crop canopy. The results obtained are as under.

Table-1: Comparison of economics of Yellow Sticky Trap demonstration plot and control plot in Okra crop.

Particulars	Yellow Sticky Trap Demonstration Plot	Control Plot (No Trap)
Number of spray	5	11
Cost of Plant Protection (Rs/ha)	5500	8500
Average Yield (Qt/ha)	156.11	104.03
Gross income (Rs/ha)	195137	130037
Net profit (Rs/ha)	**140250**	**70807**

Table-2: Adoption of Sticky Trap Technology N=100

Characteristics	Number	Percentage
Overall knowledge level		
Low	10	10.00
Medium	75	75.00
High	15	15.00
Total	**100**	**100.00**

Conclusion:

Yellow Sticky Trap is such a technology which reduces the cost of plant protection and increase the yield. It also helps in reducing the pesticide use and thus, prevents/delays development of pesticide resistance, reduces residues in soil, water, food and definite role in the prevention of environment imbalance. Majority of the respondents gained medium level of the overall knowledge. Number of spraying reduced from 11 to 6. The adoption of Yellow Sticky Trap in okra, the total income of the farmers has been increased by **50.3 %** and the cost of cultivation decreased to the tune of **32.6%** (**Table-1**). The knowledge level of the farmers regarding IPM in Okra has increased (**Table-2**). This may be due to the proper guidance given by KVK scientists, Demonstrations and constant follow up by KVK missionary.

Implication:

The study has acknowledged the knowledge level of the Okra growers towards IPM technology. This story can be guideline for other extension worker to implement this way of extension technology for their clients on use of Yellow sticky trap. On this foundation the extension personnel may locate clients for training and also those who can be used as counselors to other farmers. The study is also useful for effective propagation of the IPM technology in other regions for eco friendly and sustainable agricultural development.

This success story will be a guideline for other extension workers to perform better in their field. It leads toward effective, efficient and result oriented work in the field of Agricultural extension. This is a mile stone work for the effective TOT in the Tribal dominated interior region of the south Gujarat. It will be useful for disseminating any recently released innovative agricultural technology successfully among illiterate and poor participants.

- **Entrepreneurship development of tribal women Self Help Group through preparation of Masala (Case Study)**

Case Study : 1

1.	Name of SHG	:	Shivshakti Self Help Group
2.	Village	:	Kalakava
3.	Taluka & District	:	Vyara, Tapi
4.	Name of President & Secretary of SHG	:	President : Chaudhari Radhaben Dattubhai Secretary : Chaudhari Nutanben Pravinbhai
5.	Total member of SHG	:	10 tribal farm women
6.	Month & Year of Vocational Training on Masala preparation	:	01-02, February' 2011
7.	Group activity before training	:	Nil
8.	Bank loan for income generating activities	:	` 50,000/- Bank loan ` 10,000/- Internal lending through SHG

9.	Materials/ equipments purchased for Masala preparation	:	***Chakki*** – Grinder for Turmeric powder (**capacity:5 kg per 1 hour**), **Pulverizer** for grinding masala (**capacity:15 to 20 kg per hour**), Mixer machine, Weighing balance, Sealing machine, Sieve, raw materials for masala preparation, plastic bags etc.
10.	Income generation of SHG through Masala products	:	` 14,000/- to ` 16,000/- per month and ` 55,000/- income during season (Jan.to March)
11.	Marketing arrangement	:	Use of local market/ social contact/ SHG/ sakhi mandal members/ various Agri fair, tribal fair etc.

Case Study : 2

1.	Name of SHG	:	Saheli Self Help Group
2.	Village	:	Vanskui
3.	Taluka & District	:	Vyara, Tapi
4.	Name of President & Secretary of SHG	:	President : Chaudhari Hetalben Ashwinbhai Secretary : Chaudhari Kokilaben Kamleshbhai
5.	Total member of SHG	:	15 tribal farm women
6.	Month & Year of Vocational Training on Masala preparation	:	22-23, December' 2009
7.	Group activity before training	:	Nil
8.	Bank loan for income generating activities	:	₹ 30,000/-
9.	Materials/ equipments purchased for Masala preparation		Mixer machine, Sieve, raw materials for masala preparation, plastic bags etc.
10.	Income generation of SHG through Masala products	:	₹ 2000/- to ₹ 2200/-per month
11.	Marketing arrangement	:	Use of local market/ religious contact/ social contact/ SHG members

F.W. **Give details of innovative methodology/technology developed and used for Transfer of Technology during the year**

- The mobile telephone numbers of Programme Coordinator and Subject Matter Specialists is being given to farmers and extension functionaries during extension activities which are best utilized by farmers.
- Telephone Advisory Service has been started and its response from farmers is very effective.

- Agricultural Information column in News Paper **Gujarat Mitra** is regularly run by KVK which is published in **Every Monday Edition**. In this column the answers are being given for the questions asked by the farmers.

3.9 Give details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1.	All crops	3 kg of Jathropa leaves is taken in 20 liters of water and boiled at a temperature of 60 to 70^0 C until it becomes 5 liters. Take 250 ml and add it to 15 liters and spray.	For controlling sucking pests
2.	All crops	Farmers are using mixture of cow dung, urine and buttermilk for the control of sucking pest.	For controlling sucking pests
3.	Cotton	One farmer used black ants for the control of cotton insect pests. For the purpose, the used to put jaggery at the base of plant (5-10) grams) and release black ants which are reared in tank.	To control cotton pests
4.	Okra	Growing okra in winter with high seed rate and closer spacing	To get more number of tender fruits per plant which fetch more prices in market.
5.	Pulse crops	Use of ash for storage of Tur, Beans, Gram	To control storage gram pests
6.	Jowar	Use of dry neem leaves for sorghum storage	To control storage gram pests
7.	Animal	Use of wild plants with sand and pest it on neck of the animal	To control HAEMORRHAGIC SEPTICEMIA

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

- Identification of courses for farmers / farm women: – PRA and group discussion, eye to eye contact
- Rural Youth: – Group discussion with youth, at the time of field visit.
- Inservice personnel: – Discussion with extension workers, line department officials, field extension functionaries and NGOs staff.

3.11 Field activities

i. Number of villages adopted: - 10
ii. No. of farm families selected :- 3672
iii. No. of survey/PRA conducted :- 10

3.12 Activities of Soil and Water Testing Laboratory

Status of establishment of Lab : Working (under ICAR)

1. Year of establishment : 2005-06 (September 2006)
2. List of equipments purchased with amount :

Sr. No.	Name of Equipments	Qty.	Cost(Rs.)
1	**2**	**3**	**4**
1.	Whirlpool freeze	1	15800
2.	Electronic Automatic Kel Pus Microprocessor based eight place macro block digestion system model KES-08L	1	88120
3.	Electronic Kel plus micro processor based Automatic Distillation system model distil EM	1	142300
4.	Double still with thermo sensor hr (All glass) cat No 2348	1	38550
5.	Nova Rotary shaking machine		
	(a)Capacity 16 flasks of 250 ml	1	24500
	(b)Capacity 25 flasks of 250 ml	1	29750
6.	Nova Hot plate Rectangular model NV-8535 stainless steel		
	(a) Size 12” x 20”	1	8500
	(b) Size 18” x 24”	1	11250
7.	Nova willy mill stain lese steel camber Size 100 x 50 mm	1	31900
8.	Laboratory Table	4	34400
9.	Racks	6	9000
10.	Stools	12	5400
11.	Steel cupboard – storewel	4	19200
12.	Steel cupboard storewel	4	14000
13.	Steel racks	4	8600
14.	Partition racks	3	22500
15.	Office chair	4	4000
16.	Systronics make		
(a)	Micro controller based Digital spectrophotometer model -106	1	26800
(b)	Systronics make micro controller based flame photometer compressor model-128	1	35200
(c)	Systronics make micro controller based PH meter	1	10900
(d)	Systronics make micro processor based conductivity meter	1	12800
17.	Hot air oven	1	21200
18.	Chemical Balance	1	75000
19.	CENTRO FIX WATERBATH	1	10800
20.	CENTRO FIX – Muffle furnace	1	29500
21.	Automatic autoclave	1	21000
22.	City weigh balance model ST-10 Cap- 10 kg	1	10640
23.	LG AC-15 ton	1	23740
24.	Micro kjeldahl Assembly	1	10700
25.	Burner maker type with stop coke	8	2000
26.	Voltas make water cooler	1	26500
	Total	**67**	**539780**

3. Details of samples analyzed so far :

Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized
Soil Samples	1824	1824	58	364800
Water Samples	11	11	11	550
Total	**1835**	**1835**	**69**	**365350**

4.0 IMPACT

4.1. Impact of KVK activities

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Introduce new variety Moong bean	250	64.00	35000	55000
Introduce new variety (vaishali) in Tur	376	88.00	21700	61800
IPM in cotton	424	82.00	35300	45645
Scientific package of practice of okra	250	85.00	38700	78600
INM in brinjal	173	76.00	62270	94870
Use of biofertilizer and irrigation management in gram	268	60.00	27840	42325
Mineral Mixture	150	77	10000	15400

NB: Should be based on actual study, questionnaire/group discussion etc. with ex-participants.

4.2. Cases of large scale adoption

Sr. No	Crop/ Enterprise	Thematic Area	Large scale adoption (%) in adopted villages	
			Before KVK	After KVK
1	Pigeon pea	New Variety	15	75
2	Gram,	Irrigation Management	10	83
3	Okra	IPM	18	62
4	Brinjal	IPM	18	55
5	Cotton	IPM	8	47
6	Kitchen Garden	--	20	73
7	Okra	INM	10	56
8	Paddy	ICM	24	74
9	Paddy Straw	Nutrition Management	15	60

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

4.3.1 Increasing area and productivity of Paddy in tribal belt of South Gujarat

District Profile

Krishi Vigyan Kendra Vyara is located in the Tapi district – the southeastern part and the tribal belt of Gujarat. The district shares it borders with Surat, Navsari and Dang district in North-west, South and East respectively with Maharashtra state in East .The geographical area of the district is 7.79 lac ha. The conspicuous feature of the district are undulating topography with steep slopes and heavy rainfall. The av. Rainfall of the district is about 80 –100 inches per annum. The distribution is erratic and thus, causing damage to the crops like Pulses, Paddy and other cereals.The district is composed largely of tribal communities. This, communities depend primarily on agriculture for their livelihood supplemented by income from seasonal employment in nearest industrial town. Soils of the district in general can be classified as medium black to heavy black, Red murrum and rocky with low innate fertility. Agriculturally, about 60 per cent of the cultivated area is undersigned crop during monsoon. The main crops of the district are – Paddy, Sorghum, Groundnut, Pulses, Sugarcane, Gram and vegetables-Brinjal,Okra. Paddy is the staple foods of the tribal communities of the district. Among Vegetable crops Okra is main crop for export quality.

Krishi Vigyan Kendra

KVK Vyara is working under the auspices of Navsari Agricultural University. It has started its activities since September,2000. Kendra has undertaken **Seed multiplication programme of Paddy since 2000-01**.

Genesis of Programme

To ascertain the constraints encountered by Paddy growers of this area, a Benchmark **survey was carried out by multidisciplinary team of scientist of KVK during the year 2000-01. The results of the survey revealed following …**

Large majority of the tribal farmers are cultivating conventional varieties (Tichun native –1, Sathi and Kada) of paddy.
Conventional varieties are early mature, having coarse grain with dull husk colour, and highly susceptible to water logging as the rain coincide with maturity of paddy in later stage.
Paddy growers are using higher seed rate i.e. 30 – 40 Kg for transplanting 1 acre of land as they produce seed of their own.
They were planting 10-12 seedlings / hill resulting in to over plant population and lower yield. It also increases the cost of cultivation because harvesting takes much time.
Farmers were using impure seed, as they produce it on their farm without taking much care.

Av. Yield of Paddy (conventional varieties) is about 2500 Kgs./ha.under good management practices.
Market value of the conventional varieties is less ranges between Rs. 5 –6 /Kg. because of coarse grain and unpleasant colour of husk.
Tribal farmers are not satisfied with yield status of conventional varieties of Paddy.
The farmers having assured irrigation facilities or low land kyari expressed their desired to have high yielding variety with **late maturity** to avoid damage by rains to crop at the maturity time.
On the contrary, farmers growing paddy under rainfed condition expressed their desire to have high yielding **early mature** variety.
It was also noticed that most of the tribal farmers posses small piece of land. Whatever they produced from the land during monsoon, they have to depend on it for their livelihood. They are striving hard for their food especially during August and September.

Intervention of KVK

Considering the above facts KVK has initiated the **programme of multiplication of seeds of high yielding varieties of Paddy** under both rain fed and irrigated condition since 2000-01 on instructional farm. The objective was to popularize high yielding varieties by supplying pure seeds to the farmers on regular basis and thereby increase the area and productivity of Paddy. It has been planned to cover at least 20-25 per cent of the area under the Paddy in the surrounding 45 villages with increasing the productivity and profitability per unit area.

Approach

As many as 92 training programmes especially on production technologies of HYVs of Paddy are organized covering 2636 farmers.(Table-3). Front Line Demonstrations of HYVs of Paddy are also conducted on farmer's field to show them the production potentialities. The details of the demonstrations conducted is given in Table-4. Field trials of the HYVs were conducted on instructional farm of Kendra to screen the best varieties from among the seeds of different varieties supplied by Navsari Agrilcutural University. In all, 41 Field days and 18 farmers days are also organized on KVK farm as well as on demo plots on farmer's field, benefiting 17593 paddy growers. Details are given in Table-5. This has created awareness amongst tribal farmers about use of HYVs of paddy .

Efforts are made to produce and supply the improved seeds of the paddy to the paddy growers of this area.

Details of seed production by KVK and its distribution to the farmers on cost basis**..**

Sr. No	Year	Season	Qty produced (Kg)	Qty sold (Kg)	No. of farmers	Area (Acre) Covered
1	2000	Kharif	3570	3570	68	103
2	2001	Kharif	551400	551400	215	86
3	2002	Kharif	53865	53865	1567	125
4	2003	Kharif	60320	60320	1850	145
5	2004	Kharif	46603	46603	1465	128
6	2005	Kharif	44440	44440	1288	115
7	2006	Kharif	51803	51803	1572	135
8	2007	Kharif	37310	37310	344	75
9	2008	Kharif	10300	10300	364	76
10	2009	Kharif	22693	22693	1025	150
11	2010	Kharif	23785	23785	1245	163
Total			**906089**	**906089**	**11003**	**1301**

Achievement of the programme

Successfully introduced HYVs of paddy such as IR-28,GR-3, GR-4, GR-5, GR-7, GR-11, Gurjari and Jaya in this area.

- About **545** ha of land have been covered under HYVs of Paddy replacing conventional varieties. More then **1200 farmers of 45 villages** are directly benefited by this programme.
- **Av. Yield of Paddy per unit area is almost doubled.**
- Reduction in cost of cultivation as a means of reduction in seed rate and maintenance of optimum plant population. Earlier farmers were using 30-40 Kg seed rate for transplanting of one acre of land . Now with adoption of HYVs they are using 10-12 Kg of seeds for the transplanting of same area.
- Farmers getting higher yields and more profit from the unit area as improved varieties fetch little higher prices as compared to local varieties because of slender grains .
- More than 55 farmers have started multiplication of seeds in their own farm under the supervision and guidance of KVK scientist. This will increase the area under HYVs at a faster rate in coming years. This in turn will helps in changing socio-economic status of the tribal farmers of this area.

Economics

Conventional varieties

- Av. Yield 3000 Kg/ha.
- Av. Market price Rs. 5-7 /Kg.
- Total cost of cultivation Rs.9170 / ha.
- Av. Income Rs. 21000 / ha.
- **Net profit Rs. 11838 / ha**

High yielding varieties

- Av. Yield 4500 Kg/ha.
- Av. Market price Rs. 6-8 /Kg.

- Total cost of cultivation Rs.8120/ha.
- Av. Income Rs.36000/ ha.
- **Net profit Rs. 27880 / ha**.

Thus, by adopting HYVs and recommended improved technologies (Table 4) such as seedrate, fertilizer doses , crop geometry, timely hand weeding and plant protection measures for the control of stem borer, tribal farmers of the targeted area are getting higher production and income from paddy cultivation.

Table 1: Year wise area, Production and Productivity of Paddy of the Tapi district.

Sr. No	Year	Season	Area(ha)	Production (MT)	Productivity Kg/ha
1	1997-98	Kharif	53,276	1,55,198	2913
		Summer	15,007	6,00,93	4004
2	1998-99	Kharif	59,552	1,22,266	2053
		Summer	1,037	31,480	3035
3	1999-00	Kharif	59,980	1,86,480	3109
		Summer	1,454	5,905	4061
4	2000-01	Kharif	58,010	1,69,302	2918
		Summer	1,553	6,379	4108
5	2001-02	Kharif	85167	16777	1970
		Summer	1311	3833	2924
6	2002-03	Kharif	79627	236378	2969
		Summer	4831	14009	2900
7	2003-04	Kharif	80000	154800	1935
		Summer	5300	17000	3226
8	2004-05	Kharif	79535	201130	2529
		Summer	1205	18600	3100
9	2005-06	Kharif	77817	198393	2550
		Summer	3839	6086	3500
10	2006-07	Kharif	77817	198393	2550
		Summer	3839	6086	3500
11	2007-08	Kharif	94306	252660	2679
12	2008-09	Kharif	257	381	1482
13	2009-10	Kharif	257	381	1482

Table 2 : Year wise details of the area covered under HYVs of Paddy

Sr.No	Year	Name of village	Area (ha)
1	2000-01	Dhamodi	07
		Chikhalda	04
		Saraiya	02
		Chhindiya	13
		Tichakiya	08
		Total	**34**
2	2001-02	Chhirma	14
		Khanpur	08
		Ambach	06
		Velda	09
		Total	**37**
3	2002-03	Madav	29

		Vedachhi	36
		Vanskui	10
		Olpad	15
		Choryasi	19
		Unchamala	20
		Total	**129**
4	2003-04	Khurdi	09
		Nani chikhali	08
		Paniyari	07
		Lotarva	05
		Total	**29**
5	2004-05	Unchamala	16
		Gunkhadi	25
		Amalgundi	10
		Total	**51**
6	2005-06	Bandharpada	19
		Dolara	20
		Agasvan	14
		Dhajamba	38
		Total	**91**
7	2006-07	Gadat	38
		Pati	25
		Champawadi	67
		Total	**130**
8	2007-08	Bedi	41
		Gatadi	36
		Ambach	24
		Kapura	38
		Vadkui	54
		Total	**193**
9	2008-09	Dolvan	20
		Panchol	15
		Rupwada	18
		Allu-Boriya	25
		Shiker	10
		Total	**88**
10	2009-10	Godchit	12
		Mirpur	10
		Bhadbhunja	13
		Selud	08
		Gadat	24
		Pati	32
		Mandal	45
		Nishana-Amji	15
		Jamkhadi	11
		Vanskui	25
		Degama	24
		Limdada	10
		Total	**229**

Table : 3 Training Programmes on Production Technologies of HYVs of Paddy.

Year	No's of Training Programme			Participants		
	On	Off	Total	Male	Female	Total
1997-98	2	8	10	167	24	191
1998-99	1	6	7	127	17	144
1999-00	3	4	7	133	20	153
2000-01	2	4	6	78	45	123
2001-02	2	5	7	134	--	134
2002-03	4	7	11	232	37	269
2003-04	3	6	9	179	56	235
2004-05	1	10	11	298	84	382
2005-06	2	11	13	344	141	485
2006-07	2	5	7	120	67	187
2007-08	2	7	9	125	54	179
2008-09	2	5	7	130	55	185
2009-10	4	8	12	272	185	457
Total	**24**	**68**	**92**	**1912**	**724**	**2636**

Table : 4 Front Line Demonstration on HYVs of Paddy organized by KVK

Year	Season	Area	No.of Farmers	Variety	Village	Average Yield (Q/ha)		Incre. In yield (%)
						Demo	Local	
2001	Kharif	4	10	Jaya GR-5	4	59.15 24.99	52.00 18.00	13.75 38.80
2002	Kharif	3.80	9	Gurjari GR-7 GR-5 GR-8	6	55.75 62.50 20.40 15.27	52.00 55.00 17.00 17.00	7.21 13.64 20.00 9.82
2002	Summer	12.5	24	Gurjari GR-3 GR-7	4	69.29 64.97 79.66	62.00 -- 65.29	11.75 -- 22.00
2003	Kharif	14	31	Gurjari GR-7 GR-5 GR-8	7	65.08 68.24 26.96 17.48	53.92 61.50 19.50 14.00	21 11 38 25
2003	Summer	2	4	Gurjari	4	68.38	60.00	14
2004	-	-	-	-	-	-	-	-
2004	Summer	-	-	-	-	-	-	-
2005	Kharif	10	26	Gurjari GR-7 GR-8 GR-12	8	52.90 54.66 15.60 45.58	41.41 41.84 11.92 40.74	28 31 31 12
2005	Summer	8	16	Gurjari	3	61.38	49.04	25
2006	-	-	-	-	-	-	-	-
2007	Kharif	10	42	GR-5 GR-7 GR-8 GR-9 GR-12	8	22.23 52.05 16.74 20.66 51.09	13.75 40.65 13.28 16.00 40.93	60 28 26 29 25

2008	Kharif	17	42	GR-5	6	18.63	11.13	62
				GR-8		14.19	9.14	27
				GR-9		10.53	9.14	15
				Jaya		52.59	43.77	20
2009	Kharif	15	54	GR-9	8	11.13	9.30	19.67
				GR-7		51.50	41.50	24.09
				Jaya		58.75	47.25	24.34
2010	Kharif	22	81	Jaya	8	59.50	47.75	24.61
				GR-5		15.50	12.25	28.75
				NAUR-1		60.50	47.75	26.70
				GAR-13		55.75	46.50	18.89

Table : 5 Extension Activities on Production Technologies of Paddy

Year	Name of Activity	No	Participants		
			Male	Female	Total
2000-01	Field Day	3	50	75	125
	Farmers Day	2	412	88	500
2001-02	Field Day	1	55	45	100
	Farmers Day	1	750	430	1180
2002-03	Field Day	4	431	107	538
	Farmers Day	1	370	430	800
2003-04	Field Day	4	102	37	139
	Farmers Day	1	670	145	815
2004-05	Field Day	5	121	55	176
	Farmers Day	2	700	250	950
2005-06	Field Day	2	73	0	73
	Farmers Day	1	400	210	610
2006-07	Field Day	2	95	65	160
	Farmers Day	1	375	125	500
2007-08	Field Day	4	85	55	140
2007-08	Farmers Day	1	475	145	620
2008-09	Field day	7			301
	Farmers Day	2	1209	1942	3151
2009-10	Field day	6	125	170	295
	Farmers Day	4	2749	2130	4879
2010-11	Field day	3	123	6	129
	Farmers Day	2	398	1014	1412

Table : 6 Adoption of Paddy production technologies by tribal farmers.

N= 120

Sr. No	Reco. practices	Before		After	
		No.	%	No.	%
1	High yielding varieties	41	35.65	91	71.00
2	Reco. Seed rate	35	24.53	94	73.45
3	No. of seedlings /hill	32	20.45	82	67.43
4	Cutting of tips of young seedlings	28	21.23	73	60.53
5	Spraying of insecticide for stem borer	25	17.28	64	54.38
6	Soil application of Carbofuran for stem borer	32	23.55	78	67.78
7	Reco. Dose of fertilisers	25	20.83	66	55.00
8	Hand weeding	38	32.43	89	74.55

4.3.2 Money-making Animal Husbandry by Guidance of KVK Tapi in Tribal dominated village.

Introduction

As per 27th survey on estimates of major livestock products for the year 2009-10 and District wise main findings of integrated sample survey (1983-84 to 2009-10), total number of livestock in Tapi district is 489057, in which cows are 214554. Among these cows, there are only 45123 cross bred cows. Buffaloes are 176458 and total sheep-goats are 94465. (Livestock *census, 2007 (Provisional*). Animal owners of Tapi district are maintaining their buffaloes mainly on paddy straw and other locally available grasses which generally have low nutritional elements and also lack of knowledge regarding breeding, feeding and management practices. . In general, the milk yield of crossbred cow (H.F and Jersey)) is found to be higher as compared to non descript cattle Animal Husbandry had always played a leading role in sustainable lively hood among rural farmers. Many efforts are made by central and state government organization toward profitable and triumph bursting animal husbandry of villagers. KVK, Vyara had played a guiding force and role model act for the scientific, profitable, successful as well as effective animal husbandry in villages of Tapi district. Here is the narrative detail about success story of vanskui village in the animal husbandry field. A success story of Village vanskui regarding success full intervention of KVK scientists for resultant dairying.

Genesis of the Problem

The traditional farmers are keeping the Surati buffaloes for milk yield. Surati buffalos have average milk yield of 4.184 liter per day. The farmers are maintaining their livestock mostly on dry paddy fodder and few green fodders which is available at fleeting time during monsoon. In dry months of the year (summer), cattle and buffalo animal keeping for milk yield is becoming a problematic issue due to more care, high cost and comparatively less compensation. The KVK scientists of KVK Tapi had adopted a village Vanskui for dairying development and diagnosed the root cause of the said problem. The KVK Tapi has created an intensive effort for successful dairying in this village by sound breeding, feeding and management practices edification to the tribal farmers.

Intensive Efforts made by KVK Tapi.

Krishi Vigyan Kendra, Navsari Agricultural University instituted at Vyara ,Di-Tapi in the State of Gujarat is playing a major role in rural farmer upliftment in case of Para agriculture /allied sectors like animal husbandry with the expert guide of subject mater specialist of respective field. The main aim is to get higher profit from livestock through dairying. The village Vanskui belongs to Vyara Taluka, Di-Tapi is one of the adopted villages of the Krishi Vigyan Kendra for overall development of the tribal farming community. Dairy sector is one of the major means of employment in this village. Numerous extension activities like off campus trainings at the doorstep of farmers

house, on Campus trainings at KVK , diagnostic visits related with animal health problems , Scientists visit to the livestock owners house, frequent telephonic guidance about scientific animal husbandry were made by the KVK. Beyond these so many feet fall of farmers to KVK for solution of animal husbandry problems were occurred. Due to all these efforts, huge progress in terms of awareness about scientific and profitable animal husbandry was achieved.

Materials and methods:-

The glimpses regarding efforts by KVK made for the Vanskui Village in relation to animal husbandry were given in nut shell.

I. Trainings conducted for Animal Husbandry.

Sr. no.	Type of the training	Topic of the Training	Thematic area	No. of beneficiaries	Type of the participants
1	On campus	**4**	**Dairy, Feeding & Animal Health Management**	**119**	**RY/PF/FW**
2	Off campus	**3**		**115**	**RY/PF/FW**
	Total	**7**		**234**	

II. Scientist Visit to Farmers including diagnostic visits

Sr. No.	Purpose of the visit	No. of Beneficiaries
1.	Guidance about metabolic diseases in animal	15
2.	Guidance about anoestrus in cattle	15
3.	Guidance about measures for blood in milk of buffalo	12
4.	Guidance about lameness in H.F. cow	22
5.	Guidance about dermatitis in buffalo	31
6.	Guidance about anorexia and pain over mouth	62
7.	Guidance about tick infestation	44
	Guidance about mastitis	
	Total	**201**

III. Telephonic information to farmers

Details	Beneficiaries
Information about different problems and remedies regarding Animal Science related problems to the Villagers	Total 68 telephonic messages to the Villagers were from KVK Scientists

F. . **Front line Demonstration and On Farm Testing**

Sr.No	Thematic area	Title	Objective	Impact/ follow-up
On Farm Testing (OFT) (5 in Numbers)	Management of Milch Animal (Milk Production)	"Low milk production of Cow".	To refine the feeding practices and to test the effect of urea treated fodder and mineral mixture	Farmers had adopted the technologies with refinement

			feeding.	
Front line Demonstration (FLD) (15 in Numbers)	Nutrition management	Urea treatment to paddy straw	To demonstrate the practice of mineral mixture feeding and urea treatment to paddy straw	Livestock owners were encouraged through demonstration to perform the technologies at their own houses. They have started to make the same by themselves.
		Mineral Mixture feeding		

Apart from these, many extension activities like Krishi Mahotsav, FLDs and OFTs follow-up, night meetings, exposures, exhibitions seminars, shibirs, monitoring and evaluation were also conducted.

Results:-

Previously, Farmers were keeping nondescript cattle and buffalos for milk production purpose. They were encouraged to keep the animal having good genetic potentialities and economically sustainable animals like cross bred cows with proven records. The benefits of keeping Cross bred HF(Holstein-Friesian) cows in terms of higher milk yield were made understood to the animal owners. The farmers purchased HF cows with the financial aid from Sumul Dairy. It was resulted in better milk yield from the animals.Benefit Cost Ratio was increased from 1:1.17 to 1: 1.31 in case of urea treatment while the same was increased from 1: 1.15 to 1:1.28 in case of mineral mixture feeding FLDs. Benefit of the cross breeding genetic vigour of Holstein Friesian (HF) cow could be available to farmers.

HF cross bred cow is comparatively less resistant to the external parasites (Ticks and flies). The farmers of the aforesaid village were advised the protective and curative measures against external parasitic infestation through frequent diagnostic visits. The animal owners were skilled about the hygienic practices like daily cleaning of byre and grooming of the animal. The aforesaid efforts had resulted in lower tick infestation to the HF cow. Again this lowered tick infestation has resulted in protection against hemoprotozool diseases which are transmitted by ticks.

The use and benefit of deworming were taught to the farmers by KVK experts. This has resulted in low calf mortality and reduction in the age of puberty.

Horizontal and Vertical Spread:-

The feeding technologies of mineral mixture (50/gm/day/animal) were practiced by the farmers. The animal owners have adopted the new technology of Urea treated fodder.

Knowledge and adaptation of Frontline demonstration of feeding technology have resulted in horizontal spread from one farmer to another. Majority of the villagers had adopted the same. The demand from neighboring villages to adopt their villages by KVK is emerged out. It is the biggest achievements made by effective TOT (Transfer of

technology) through KVK scientists.Again the farmers have also shown keen interest to follow-up the technology for their younger generation. Many livestock owners were so skilled to perform urea treatment that they have also taught to other farmers, too.

Implications:-

Mineral mixture feeding along with urea treated paddy straw can solve nutrition related problems and could be very beneficial to cattle for enhanced production and reproduction ability. Hence, the technology of feeding animal with mineral mixture along with urea treated fodder needs to be demonstrated to the rural farmers of Tapi district. Effective development requires identification of local needs and opportunities. Looking to the success of the same, different Organizations of the region applied different methods, ranging from top down to more participatory ones, and depending on felt needs arising from system changes in time and space. The feeding method of urea treated paddy straw along with mineral mixture has to be implemented in a large scale for better growth and production of livestock.

This success story can inject an inspiration to the other livestock owners. The study has acknowledged the knowledge level of the livestock farmers towards sound breeding, feeding and management practices edification to the tribal farmers. This story can be guideline for other extension worker to implement this way of extension technology for their clients on LMP (Low milk Production) .On this foundation the extension personnel may locate clients for training and also those who can be used as counselors to other farmers. The study is also useful for effective propagation of the dairying in other regions for eco friendly and sustainable animal husbandry development.

4.3.3 Constraints and Remedies for implementation of Feeding – Rumen Bypass Fat in Dairy Animals of South Gujarat.

Introduction

Animal owners of Tapi district are maintaining their buffaloes mainly on paddy straw and other locally available grasses which generally have low nutritional elements. Fat % in milk of surati buffalo mainly depends upon diet having higher fat. For maintaining proper level of fat in milk and to cope up the challenges of Negative Energy Balance just after parturition, buffalo requires fat enriched diet. Conventional fat containing diets like linseed oil, (Oilseeds, kapasiya, animal fats, and animal fat-oil blends) have low scrumptiousness. These diets get digested mostly in rumen and hence disturbs ruminal flora.

Rumen BYPASS FAT is a feeding practice in buffalo rearing which can cope up negative energy balance and increase fat yield without disturbing ruminal flora. It has many benefits over conventional fat enriched diet like linseed oil, kapasiya etc as conventional fat sources are less palatable, costly and ruminal micro flora disturbing agent. As Bypass fat is more palatable, no ruminal flora disturbing and more cost

efficient, its feeding can be helpful over conventional fat enriched diet for increasing quality of milk yield.

Scenario of Animal Husbandry and feeding Practices

As per 27th survey on estimates of major livestock products for the year 2009-10 and District wise main findings of integrated sample survey to estimate major livestock products 1983-84 to 2009-10 made by Gujarat animal husbandry department, total number of livestock in Tapi district is 489057, in which cows are 214554. Amongst these cows, there are only 45123 cross bred cows. Buffaloes are 176458 and total sheep-goats are 94465. (Livestock *census, 2007 (Provisional*). Average milk yield per crossbred cow/ day is 7.357 liter which is far better than 2.172 liter/ day of nondescript cattle. Tapi district has contributed 172510 tones of milk for the year 2009-10 which is only 1.95% of the total milk produced by the state for the same year. (27th survey on estimates of major livestock products for the year 2009-10). This lacuna in milk contributing capacity of the district is mainly due to lower nutrition supply to high producing H.F Cows.

In tribal area milk production is important industry as complementary employment. Everyday more than 4.50 lakh liter milk is collected by good marketing network of milk co-operative societies run by SUMUL dairy in Surat district. Two additional cooling-chilling plants are functioning for this purpose. Retail milk producers and domestic dairy industries are also well developed. Bright opportunities of development have been created on animal husbandry frontage in five talukas of district under jurisdiction of SUMUL dairy. In view of one important source of generating employment by development of animal husbandry and considering the marketing network of Sumul dairy and increasing requirement of milk consumption of Surat district, it is very important to give priority to animal husbandry by effective nutritional diets to the cattle. Hence, activities of animal husbandry and its development can be made intensive by developing proper nutritional strategy to the animals.

Need of Rumen Bypass Fat in Feed

Now a day BYPASS FAT has become a new feeding practice in cattle/buffalo feeding. This is known as ruminal inert fat, protected fat and escape fat, and by-pass fat. These fats are made rumen digestion protected through partially hydrogenation technology and other integrated technology. Thus, it can be help in improvement of total energy balance and fat% in milk. Such bypass fat containing diet is fed @ 200 gm/day per buffalo for increasing fat per cent.

These feeding can be helpful in improving the fat% in milk of Surati buffalo. Again, it is required to tackle problem of negative energy balance in buffaloes. By increasing fat% in milk, nutritive value of the milk can also be enhanced. Overall, this feeding method may be indirectly helpful for profitable livestock rearing.

Rumen BYPASS FAT is a feeding practice in buffalo rearing which can manage negative energy balance and increase fat yield without distressing ruminal flora. It has

several returns over conventional fat enriched diet like linseed oil, kapasiya etc as conventional fat sources are less edible, expensive and ruminal micro flora disturbing agent. Bypass fat is more palatable, no ruminal flora disturbing and more cost efficient for increasing fat yield. Above mentioned feeding practice can be an alternative source for fat enriched diet. Rumen Bypass fat feeding can be helpful in better milk yield having high fat which can be an busting step for Dairy Cooperatives. This New feeding technology should be demonstrated to rural farmers, because by bearing in mind this feeding method at farmer's house, other farmers can also be encouraged for implementing this feeding technology.

Extension activity related with feeding methods in animal husbandry should be undertaken about profitable and scientific livestock rearing where Krishi Vigyan Kendra can play a great role. Efforts to increase the awareness about scientific feeding technology of rumen bypass fat can be made by popularizing the Feeding Practice of "Rumen Bypass Fat", so that it can be implemented in large scale. The KVK can have an ideal grass root level net work, which can disseminate this technology to the door step of rural poor. It can also be helpful in the golden era of organic farming and market led extension programmes.

Constraints and remedies for implementation of Feeding Rumen Bypass Fat

Education has always played a great role in extension activities. Animal husbandry extension activity is no more an exception. In Tapi district, there is Low literacy rate which is 57.05 (6^{th} Global Summit, Gujarat). Most of the farmers are belonging from tribal area, where proper attentiveness about scientific feeding practices is not available. Again, farmers in tribal area are very reluctant to adopt new feeding technology. They are more orthodox, suffering from some prejudices, religious beliefs and reservations. There is a current need to change their mind set towards scientific live stock management. Feeding concentrate and mineral mixture has been somewhat traditional ways for improvement of milk yield and Fat % in milk. To divert the livestock owners from traditional way to innovative way is an exhaustive extension task in the areas like Tapi district.

Effective development requires identification of local needs and opportunities. Different organizations apply different methods, ranging from top down to more participatory ones, and depending on felt needs arising from system changes in time and space. Thoranus-Chapetch (1997) recommended that training on animal health, animal management, milk increase and cost reduction factors should be implemented continuously. This new feeding practice in diary animals requires effective awareness about its benefits and limitations. Framers need to be made aware about this type of feeding technology. Bhosale (1982) also recorded that a significant association between milk production and adaptation of scientific animal husbandry practices. Again, cost factor is a critical factor for animal husbandry. Rumen bypass fat is costing around 150 Rs /Kg, while the mineral mixture costs up to 140 Rs/Kg. It means, both of the

sources i.e mineral mixture and bypass fat are cost wise almost similar, but rural farmers are vacillating to implement any new practice. Cost effectiveness information of feeding practice to farmers can be of great help. Natraju (1989) revealed that animal health and feeding practices can be adapted by large per cent of dairymen.

Two step methods i.e first step is identification of progressive rural farmers for providing bypass fat from the villages of Tapi district and second step is after identification of rural farmers, training will be given by Scientists of extension organizations about details of feeding practice. The increasing per cent in adoption of rumen bypass by tribal dominated districts would be a good sign of sustainable dairy development on high net profit basis. For vertical growth in cooperative milk industries, the efficient and effective dissemination of rumen bypass feeding is an essential input. The persons engaged with rural extension work may know this fact for better prospects of dairy industry in Agrarian country like, India.

4.3.4 Effect of Urea Treated Paddy straw Along With Mineral Mixture On Milk Yield and Economics of HF Cow.

Abstract:

Mineral mixture feeding along with urea treated paddy straw can decipher nutrition related tribulations and could be very beneficial to cattle for enhanced production and facsimile ability. Hence, the technology of feeding animal with mineral mixture along with urea treated fodder needs to be demonstrated to the rural farmers of Tapi district. The farming situation of low milk production in H.F Cow was identified by Participatory Rural Appraisal method (PRA), in tribal dominated Tapi District of Gujarat State. Three treatments were tested in two blocks including 45 H.F. Cows within three years, i.e. 2009- 2011. Among all the three treatments, Treatment -3 (T3) was found beneficial in terms of Milk production (kg/day), Milk Production per unit, Net Return (Profit) in Rs. / HF Cow and also got higher Benefit Cost Ration (BCR). The feeding method of urea treated paddy straw along with mineral mixture has to be implemented in a large scale for better growth and production of livestock.

Introduction:

Dairy industry in our country is closely interwoven with agriculture and plays an important role in rural economy, mostly in terms of milk, milk products and draft power. Gujarat is a leading State in Cooperative milk marketing. Minerals are very essential for vital body functions, milk yield and other productive concert of cattle/ H.F Cattle. Mineral mixture can help in urbanized of mineral status (Calcium, magnesium and other micro minerals) of high yielder H.F Cow, but the efficient productive and reproductive animal requires minerals as well as protein. Paddy straw is the major fodder source for livestock in Tapi District, but it is a poor source of protein and it is also having lower digestibility. Urea treatment to fodder is recommended/suggested technology for improvement of poor protein status of paddy straw (*Reijntjes et al., 1992*). Urea

treatment is an economical and less expensive treatment which makes paddy straw more nutritious and digestible at reduced cost. Feeding mineral mixture along with urea treated paddy straw can improve both mineral and protein content of the ration at lower cost and can also resulted in increasing milk yield (Bhoyar et al, 2010). To demonstrate the consequence of urea treated paddy straw along with mineral mixture in tribal dominated Tapi district, the said OFT was conducted for continuous three years.

Materials and Methods:-

The on farm trial was arranged in rural farmers of three villages in Tapi District, Gujarat (India) were contacted door to door. The Farming situation of low milk production in H.F Cow was identified by Participatory Rural Appraisal method (PRA). The associated problems with the farming situation identified for low milk production were as follows.

1. Low Milk Production
2. Lack of knowledge about urea treatment.
3. Poor livestock management.
4. Poor knowledge of health & hygiene.
5. Lack of knowledge about feeding management.

From these five villages, total 15 numbers of rural farmers each having H.F cow were selected for the on farm trial, 5 from each village. Animals were identified and selected for performing on farm trails. These 15 H.F cows were allotted for following treatment for continuous 40 days since last three years.

1. Treatment 1(T1): 5 H.F cows were fed only paddy straw (6-8 kg) without urea treatment
2. Treatment 2(T2): 5 H.F cow were fed urea treated paddy straw (6-8 Kg daily)
3. Treatment 3(T3): 5 H.F cow were fed urea treated paddy straw (6-8 Kg daily)+ Mineral mixture (35gm daily)

Table 1: Methodology of the On Farm Trial

Treatments		No. of animals	Duration	Procedure
T1	Only paddy straw feeding without urea treatment	5	40 Days	6-8 Kg/day Paddy straw feeding
T2	Urea treatment to fodders	5	40 Days	6-8 Kg /day Urea treated paddy straw feeding
T3	Urea treatment to fodders + Mineral mixture	5	40 Days	6-8 Kg /day Urea treated paddy straw feeding + 35 gm mineral mixture/ day feeding

The same OFTs were taken for three years. The pooled data regarding milk yield, net returns and cost benefit ration were presented in the next part.

Result and Discussion:

The experimental findings as influenced by different feed components are as below. The major parameters evaluated were as follows:

4 Milk production (kg/day)

5 Milk Production per unit

6 Net Return (Profit) in Rs. / HF Cow

7 Benefit Cost Ration (BCR)

Table 2: Results of the On Farm Trial

Parameters	Treatment	Data on the parameter	Results of assess-ment	Feedback from the farmer
		Average Milk production (kg/day)		
Milk production	**T1**	5.9	Paddy straw with urea treatment + Mineral mixture (35 gm mineral mixture feeding daily)	Increased milk production after urea treated paddy straw and mineral mixture feeding
	T2	6.7		
	T3	7.2		

The milk Production per unit (Lit/day) was found 5.9 lit in the case of T1, 6.7 Lit .in case of T2 and the same parameter was observed 7.2 Liters in case of T3.The average milk yield was increased with T3 by 7.5% and 22.00% over treatment T2 and T3, respectively.

The value of Net Return (Profit) in Rs. / HF Cow was recorded for all the three treatment. The value for T1 was 15 Rs. and for T2 was 29.2 Rs while the same for T3 was 32.6 Rs. The net return per HF cow per day was increased by 117% only with urea treated paddy straw and 95% with mineral mixture as compared with only simple paddy straw feeding.

As benefit cost ratio (BCR) is the very critical parameter for economics of the trial. It was also evaluated and given in Table-3. The BCR obtained for treatment one, T1 was 1: 1.16, for T2 was 1:1.30 and the same for T3 was observed to be 1:1.34. Bhoyar et al, 2010 were also reported the similar trends. The above results are also in agreement with the opinion mentioned in animal husbandry literature for the benefit of urea treatment and mineral mixture in livestock feeding. (Handbook *of Animal Husbandry (1997)*

Table 3: Economics of On Farm Trial

Technology Assessed	Average Production per unit (Lit)	Average Net Return (Profit) in Rs. / HF Cow	IBC Ratio
T1 – Farmers practice (Paddy straw without urea treatment)	5.9	15	1:1.16
T2 – Paddy straw with urea treatment	6.7	29.2	1:1.30
T3- Paddy straw with urea treatment + Mineral mixture (35 gm daily)	7.2	32.6	1:1.34

Farmers feed back was also recorded for the assistance or downside of each treatment. Use of mineral mixture increased milk production and decreased the probability of anoestrus in buffaloes. Urea treated paddy straw increased milk production of cows. Farmers treasured the feeding method as per T3 & were ready to espouse in large scale. Gopala et al (2010) also reported the same impact on rural poor.

Conclusion:

Among all the three treatment, Treatment 3 (T3) was found beneficial in terms of Milk production (kg/day), Milk Production per unit, Net Return (Profit) in Rs. / HF Cow, Benefit Cost Ration (BCR). The feeding method of urea treated paddy straw along with mineral mixture has to be implemented in a large scale for better growth and production of livestock.

Implication: -

These OFTs were eye opener for tribal dairy entrepreneurs.The mineral mixture and urea treatment to paddy straw were become popular in the region by **seeing is believing.** It would be a great significance in tribal dominated areas for economic upliftment through higher milk production and also to raise their standard of living. This OFT can paved the way of sustainable dairy business in the region and also in surrounding region.

4.3.5 Impact of Training Programme of Breeding, Feeding and Management of Animal Husbandry on Socio economic facets of farm women.

Introduction:

The socio-economic aspects of Animal husbandry production play a key role when farmers make decisions about Livestock management and related activities. Nevertheless, planners often give primary attention to the technical aspects of production, for example when they are investigating the use or introduction of innovations. These technical aspects include the extent to which veterinary inputs are used, the type of animal husbandry and the degree of participation in Breeding, Feeding and Management of Animal Husbandry and its impact . Extensive, broad-spectrum, socio-economic surveys are often an important prerequisite in identifying the key areas and central factors of live stock management concepts.

Material and Methods

The study was conducted by collecting data from farm women). Datawere collected from 200 sample respondents from 10 different villages of Tapi district adopted by Krishi Vigyan Kendra , Navsari Agricultural University Vyara. The primary data were collectedon the socio-economic profile of the farm womens related with animals being reared, housing system, care and management of animals and constraints being faced by them.

F. . **Data related with Trainings on Animal Husbandry**

No. of On/Off Campus trainings	Pratcipants		
	Male	Female	Total
18	414	274	686

B. Data related with Extension activities on Animal Husbandry

Extension activities	No.	Pratcipants		
		Male	Female	Total
Pashupalan Shibir	6	941	794	1735
Film Show	3	66	34	100
Popular Article	8	-	-	-
Guest Lecture	11	113	413	526
Farmers Meeting	1	26	7	33
Guidance through Letter	6	55	16	71

C. Data related with Survey:
Table I

Sr. No.	Particulars	Extent of Participation					Mean Score
		Regular	Recurrent	Occasional	Rare	Never	
A	**Selection of milch animals**						
1	Type of milch animals	143 (71.50)	25 (12.50)	14 (7.00)	7 (3.50)	11 (5.50)	4.41
2	Selecting of breed	136 (68.00)	30 (15.00)	14 (7.00)	7 (3.50)	13 (6.50)	4.35
B	**Purchase and sale of animals**						
1	Purchase of improved / cross breed animals	151 (75.5)	18 (9.00)	10 (5.00)	11 (5.50)	10 (5.00)	4.45
2	Culling of uneconomic animals	108 (54.00)	23 (11.5)	22 (11.00)	11 (5.50)	36 (18.00)	3.78

Table II Participation of the farm women in the activities of feeding of milch animals.

Sr. No.	Particulars	Extent of Participation					Mean Score
		Regular	Recurrent	Occasional	Rare	Never	
1	Bringing fodder	192 (96.00)	4 (2.00)	2 (1.00)	1 (0.50)	1 (0.50)	4.93
2	Cutting fodder	126 (63.00)	2 (1.00)	3 (1.50)	31 (15.50)	38 (19.00)	3.76
3	Grazing animals	94 (47.00)	4 (2.00)	3 (1.50)	11 (5.50)	88 (44.00)	3.03
4	Feeding animals	188 (94.00)	5 (2.50)	2 (1.00)	1 (0.50)	4 (2.00)	4.86
5	Preparing feed mixtures	176 (88.00)	16 (8.00)	5 (2.50)	0 (0.00)	3 (1.50)	4.81
6	Purchase of feeds	111 (55.50)	31 (15.50)	12 (6.00)	3 (1.50)	43 (21.50)	3.82

Table III Participation of farm women in breeding of milch animals.

Sr. No.	Particulars	Extent of Participation					Mean Score
		Regular	Recurrent	Occasional	Rare	Never	
A	**Method of breeding**						
1	Natural service	47 (23.50)	22 (11.00)	10 (5.00)	25 (12.50)	96 (48.00)	2.50
2	Artificial insemination	156 (78.00)	20 (10.00)	7 (3.50)	7 (3.50)	10 (5.00)	4.53
B	**Care at the time of calving**						
1	Giving warm water bath	177 (88.50)	8 (4.00)	10 (5.00)	1 (0.50)	4 (2.00)	4.77
2	Feeding cooked grains	155 (77.50)	13 (6.50)	14 (7.00)	6 (3.00)	12 (6.00)	4.47
3	Giving warm water to drink	156 (78.00)	15 (7.50)	12 (6.00)	6 (3.00)	11 (5.50)	4.50
C	**Care of new born calf**						
1	Cleaning of calf, dehorning, cutting navel cord and hoof trimming	115 (57.50)	31 (15.50)	32 (16.00)	3 (1.50)	19 (9.50)	4.10
2	Feeding colostrums	183 (91.50)	6 (3.00)	3 (1.50)	2 (1.00)	6 (3.00)	4.79

Table IV Participation of the farm women in management of milch animals

Sr. No.	Particulars	Extent of Participation					Mean Score
		Regular	Recurrent	Occasional	Rare	Never	
A	**Adopting veterinary aids**						
1	Vaccinating animals	141 (70.50)	30 (15.00)	17 (8.50)	3 (1.50)	9 (4.50)	4.46
2	Taking animals to veterinary doctors	43 (22.50)	35 (17.50)	34 (17.00)	25 (12.50)	63 (31.50)	2.85
3	Treating animals with home made medicines	44 (22.00)	22 (11.00)	23 (11.50)	12 (6.00)	99 (49.50)	2.50
B	**Care and Management**						
1	Watering at proper time	195 (97.50)	0 (0.00)	3 (1.50)	0 (0.00)	2 (1.00)	4.93
2	Grooming and bathing	126 (63.00)	68 (34.00)	3 (1.50)	0 (0.00)	3 (1. 50)	4.57
3	Brooming and cleaning the shed	125 (62.50)	1 (0.50)	73 (36.50)	1 (0.50)	0 (0.00)	4.25
4	Preparing Gobar gas mixture	29 (14.50)	18 (9.00)	2 (1.00)	3 (1.50)	148 (74.00)	1.89
5	Preparing compost	143 (71.50)	6 (3.00)	2 (1.00)	0 (0.00)	49 (24.50)	3.97

Table V Participation of the farm women in financial activities.

Sr. No.	Particulars	Extent of Participation					Mean Score
		Regular	Recurrent	Occasional	Rare	Never	
A	**Taking loan for**						
1	Purchase of animals	70 (35.00)	13 (6.50)	2 (1.00)	7 (3.50)	108 (54.00)	2.65
2	Purchase of feed / fodder	119 (59.50)	12 (6.00)	3 (1.50)	3 (1.50)	63 (31.50)	3.61
3	Construction of byres	16 (8.00)	5 (2.50)	7 (3.50)	3 (1.50)	169 (84.5)	1.48
B	**Marketing of milk**						
1	House hold sale of milk	81 (40.50)	23 (11.50)	14 (7.00)	5 (2.50)	77 (38.50)	3.13
2	Selling of milk through cooperative society	187 (93.50)	2 (1.00)	4 (2.00)	1 (0.50)	6 (3.00)	4.82

Table VI Participation of farm women in milking and preparing milk products.

Sr. No.	Particulars	Extent of Participation					Mean Score
		Regular	Recurrent	Occasional	Rare	Never	
A	**Milking**						
1	Milking the animal	167 (83.50)	2 (1.00)	8 (4.00)	1 (0.50)	22 (11.00)	4.46
2	Cleaning milk vessels	196 (98.00)	1 (0.50)	1 (0.50)	0 (0.00)	2 (1.00)	4.95
B	**Preparation of milk products**						
1	Curd	82 (41.00)	12 (6.00)	9 (4.50)	12 (6.00)	85 (42.50)	3.03
2	Butter milk	65 (32.50)	6 (3.00)	8 (4.00)	7 (3.50)	14 (7.00)	2.01
3	Ghee	7 (3.50)	0 (0.00)	2 (1.00)	5 (2.50)	186 (93.00)	1.19
4	Mava	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	200 (100.00)	1.00

Result and Discussion:

As per 18th livestock census of India (2007), total number of livestock in Tapi district is 513441, in which cows are 214554, buffaloes 176458 and total sheep-goats are 94465. There is a major stack of Tapi district in milk Procurement of the Sumul Dairy (Surat District Co-operative Milk Producers Union Ltd. In tribal area milk production is important means of livelihood as well as supplementary employment.

It is a well known fact that womens are playing major role in livestock raisisng at rural areas. They contribute most of the time in daily animal husbandry acts like bringing fodder, Cleaning animal byres, Milking of animals etc. But their participatory roles in socio economic activities are less known through stastical study. Hence to know the extent of womens participation in dairy occupation and to study the level of

participation of farm women in dairy occupation stastically, the above mentioned survey activity was conducted. The results of the study had indicated many facets of farm women's participation as bellow:

(I) Participation of the farm women in purchase and sale of dairy animals.

In dairy enterprise , proper selections of dairy animals i.e cattle and buffalo taking care of milk yield capacity pays a vital role. Farm womens even though being a lead player of running livestock enterprise, they play somehow secondary/ deprived role.

From the data of Table I, it is apparent that 71.50 % of the farm women were taking regular participation in activity of selection of type of the milch animals , while 68% of the respondents were taking regular participation in activity of selecting breed of the dairy animals. These can be considered as large extent and huge involvement of farm women participation on regular basis. It is clear from the data in the that about 5.50% farm women never participated in activity of selection of type of the milch animals and 6.50% had never participated in activity of selecting breed of the dairy animals.

Financial interactions are the core part of any enterprise. Diary occupations is no more exception. In the above survey it was observed that 75.5% of respondents were taking participation in activity of Purchase of improved / cross breed animals on regular basis (Mean score 4.45) and in the same way about half number (54 %) have shown regular involvement in activity of culling of uneconomic animals. The never participating approach was observed among farm womens ranging from 5 to 18% in such activities.

(II) Participation of the farm women in the activities of feeding of milch animals

Huge numbers of farm women were observed to have taken participation in activities like Bringing fodder (96.00), Cutting fodder (63.00), Grazing animals (47.00), Feeding Animals (94.00), preparing feed mixtures (88.00) and Purchase of feeds (55.50) . Interestignly 44 % of farm women have indicated about their negligible participation in the taking the animal in jungle for grazing.

(III) Participation of farm women in breeding of milch animals.

Breeding the animals is a work requiring skill as well as some knowledge about genetic make up of the animals. Artificial service option and natural service option was adopted by 78.00 % and 23.50% respectively. About 88.5% and 77.50% women participated in the survey were observed to have daily participation in giving warm water to bath at calving and feeding cooked grains to dam respectively. 99.5% women are taking contribution in feeding colostrums to the calf. Negligible on an average reanging from 3.00 % to 6.00% were no taking participation in activities like care at the time of calving and newborn.

(IV) Participation of the farm women in management of milch animals.

44 to 70.50% women have palyed the role in adopting veterinary aids like vaccination as wlas treatment to the animals. About 97.50 % and 71.50% women have revealed their contribution in activities like Watering at proper time to animals and Preparing compost from dung respectively. Very few participants ranging from have decline to have participated in watering and grooming. About 49.5% were not participating in the Treating animals with home made medicines.

(V) Participation of the farm women in financial activities.

Majority of th e participants (59.50 %) and 93.50% have revealed have reaveled thir stack in activities of Purchase of feed / fodder and Purchase of feed / fodder respetively. insignificant nubers were observed to have not participation (3 %) in activitie of purchase of feed/ fodder, while 84.5%) were not playing role in construction of byre.

(VI) Participation of farm women in milking and preparing milk products.

Participation of farm women was observed to be (98.00) and (83.50) for Cleaning milk vessels and Milking the animal respectively.

Moderate number of farm women have observed to have contribution in making milk products like curd (41.00) , butter milk (32.50), ghee (3.50) etc , but 0% were observed to have participation in mawa making .Activities of animal husbandry and its development can be made intensive by increasing consumption of milk among tribal masses.

Conclusion:

Farmers mainly focus on socio-economic aspects in their farming concepts. In doing so, they consider complex technical, economic and socio-cultural opportunities and objectives. We have been examining the factors involved, which of course also include animal husbandry. Our analysis of overall farm activities derives from a survey of local conditions.

We have also identified factors which have a positive impact on the development of animal husbandry in the region, particularly with respect to animal care and management area by larger participation of farm women.

The results of this socio-economic analysis of animal husbandry could provide a general basis for more thorough investigations of animal production at tropical and sub-tropical sites, as well as for further studies on traditional animal husbandry at the village level.

Impact on livelihood security of the farmers

- **Community Approach for implementation of Eco-friendly IPM of mealy bug in Cotton**

For implementation of Eco-friendly IPM of mealy bug in Cotton, Nizer taluka of Tapi district was selected as the working area of the project. The duration of the project is 4 years. Total 500 farmers of Ten different villages were selected during each year

for giving inputs of IPM components for the control of mealy bug. During first year 500 ha of the area was covered. Total 18 off campus trainings were conducted during first year. Remarkable reduction in injudicious use of chemical insecticides was observed during first year. Farmers were using bio-agents and bio-pesticides in their fields.

Campaigns on management of Parthenium weed (Congress grass):

In Nizer taluka of Tapi district, the population of Parthenium weed is very much. It is a very harmful weed for the crops as well as human beings. It acts as a host plant for the many insects especially mealy bugs in cotton and also causes skin disease and asthma in humans. KVK, Vyara initiated a campaign for creating awareness about harmful effect of the weed. Two trainings were conducted by KVK, Vyara at Kanjod and Nizer

4.3.7 Impact on skill development of farmers

1. Line planting of paddy: It was a traditional practice of random planting of paddy in the puddle field. After continues effort of KVK by training, and demonstration 50 % farmers are now adopting the line planting in their field.
2. Line sowing of Wheat: Earlier, wheat growing farmers were broadcasting their seed and fertilizer in their field. Contact after KVK, conducting training, demonstration, krishi mahotshav and shibir 27 % farmers are growing the wheat with line sowing and basal application of fertilizer.
3. Method of sowing in Okra: In generally farmers of Tapi district were used to drill the okra seed. In tapi district, Okra is grown in about 1900 ha. area. Training programmes, demonstrations, shibir were arranged by KVK. Now out of 1900 ha. 450 ha. Area of okra is grown by dibbling method of sowing were reduce 50 % seed rate.
4. Spraying of insecticides: Farmers were aware about the method of spraying of pesticides. They were not using even proper nozzles for insecticides and weedicides. Due to method demonstrations they became aware about the proper method of spraying and use of proper nozzles.
5. Phosphatic fertilizer application: Farmers were applying Phosphatic fertilizers by broadcasting after germination of crop but after training and demonstration farmers are applying phosphatic fertilizers as a basal dose.
6. Spraying of weedicide: Farmers were walking in the sprayed area after spraying of weedicides which adversely affected the effectiveness of weedicide. They were advised to spray by side of the walking area

Impact of KVK in Terms of Agricultural and Animal Productivity, Socio-economic Conditions and Employment Generation during the QRT period in the Adopted Villages

Sl. No.	Item	Unit	Period to KVK (Just prior to this QRT period)	Post KVK activities (Just after this QRT period)
1	Change in cropping pattern **-Drilled Paddy to Soybean**	(%)	52	82
2	Change in productivity of			
	(a) cereal crops Paddy(T.P.)- Paddy(Drilled)- Sorghum-	(kg/ha)	 4400 1100 800	 5300 1800 1200
	(b) pulses Pigeon pea Gram	(kg/ha)	 750 1450	 1250 2050
	(c) oilseeds Groundnut Soybean	(kg/ha)	 1350 1500	 1650 1950
	(d) overall		1621	2171
3	Use of HYV (high-yielding varieties) Paddy(GR-5) Pigeon pea(Vaishali) Sorghum(GJ-38)	(%)	 -- -- --	 56 82 33
4	Use of fertilizers (NPK) (nutrient)	(kg/ha)	Randomly	Recommended
5	Use of FYM and other bio-fertilizers	(kg/ha)	Nil Nil	10 tones/ha As per Recco.
6	Tractor/machinery	(No.)	01	04
7	Change in economic indicators (in adopted villages)	(No.)		
	a. Net returns/ha/yr Papaya Pigeon pea Soybean	Rs	 25000 7332 4187	 200000 10609 6475

4.3.8 Linkages with stake holders and how has the KVK made it effective.

1. State Agricultural Universities

a. Navsari Agricultural University, Navsari

b. Anand Agricultural University, Anand

c. Junagadh Agricultural University, Junagadh

d. Sardar Krishinagar Agricultural University, Dantiwada

KVK Vyara (Tapi) linked with the all above universities for the getting latest recommendation on different crops and different aspects, utilizing them for giving FLD's and OFT's. KVK also collect feedback from farmers and again give it to University for further research.

When there is a need of any technical expertise, for training on newer topics, KVK made them available from above SAUs.

2. Non Government Organizations:-

- Catholic Missionaries:-Mandal, Vyara
- Market Yards
- Agro service Centers
- Private Companies

KVK linked with above NGOs for the arrangement of training programmes on need based aspects of farmers. Sometimes physical facilities are also available from the NGO's.

Line Department just transfer the technologies generated by SAUs. While KVK takes the research technology from SAU's, apply them on farmers field through FLDs and if it is not found suitable to the farmers KVK refined them on the farmers field through OFT's.

- **Mega Events Sponsored by Other Agencies : 07 Participants: 14592**
- **Awards- 2011**
  1. **" *Best Extension Agricultural Scientist for Tribal Development*"** from Gujarat Adivasi Sangh on 8th October-2011.
  2. **"*Outstanding Grass Roots Level Extension Scientist*"** from Hangati Mahila Trust, Mandal
  3. **"*Outstanding Socio-Agricultural Scientist*"** from Mandal Education Trust, Mandal
  4. **"*National Best KVK Professional Award*"** from Society of Extension Education, Agra(U.P.) on 17th December-2011.
- **Capacity utilization & economic performance of various training units**

Krishi vigyan Kendra has been established nursery for vegetable crops like brinjal, onion etc. KVK is selling seedlings of such vegetables throughout the year for increasing vegetable area. KVK has also established mother orchard of mango variety-kesar and Dasheri. Graft of such varieties is sold to the farmers. KVK scientist guided the farmers for developing wadi yojana in Tapi districts.

KVK developed low cost of green house unit. Conducting training programmed on low cost green house, out of them 20 **LCGH** were made in tribal belt area of vyara taluka. one demonstration unit of vermin compost, two training programmed was conducted on vermin composting. Tribal farmers start vermin compost on small scale basis. They are use vermin compost on their own field. In plant health clinic, farmers are diagnosis perfectly of their infected plant sample. KVK scientist were gave perfect diagnostic service to farmers and save their money in insecticides and fungicides purchasing.

- **A concise statement highlighting the most significant contributions made by the KVK.**

This KVK has achieved all mandatory installation as per the directives given by ICAR lucratively. More over urbanized good linkages with all GOs, NGOs, Cooperatives, Line departments, SAUs, catholic Missionaries, ATMA, RKVY and all other agencies for effective and efficient TOT work. Covered each and every objectives of the KVK satisfactorily. In each and every mandatory works achievements are always higher than the targets. All of the extension activities also twice in a number than targets. Every extension activities completed by the KVK scientist covering more than 95% tribal population and participation of tribal farm women in all activities made by KVK team is higher than 80%. Sponsored training was also twice than the target. While Inservice training was thrice than the target. Obtained a huge amount of financial help from the **RKVY** scheme. Celebrated a grand festival of **Technology Week** first in the Zone and sent the detail technical report to the Council. The **feedback from the 100 farmers** had been collected and send to the Council in **DVD, VCD** form. The VCD of 75 minutes was prepared entitled" KVK Vyara in the service of Tribal People" and sent to the council, earlier. **Ten success stories, six Impact studies and 10 case studies** had been sent to the council earlier. IPM block is developed for cotton in Nizer Block. Four villages had been decorated as **seed villages** for **paddy and Tur**. Successfully launched a **NAU Wadi Yojna, Kitchen gardening, Bio village schemes** in the selected villages. **Rs.420.24 Lakh** had been sanctioned under **RKVY scheme** to this KVK. The **Mobile Plant Health and soil Health Clinic wane** is working with this KVK.The **STL along with Micro nutrient** are working with KVK.**10000 Soil samples** are being analyzed for **Soil Health Card in the State**. The NHM has given **Modern Plant Health Clinic** to this KVK. Rs. 10.00 lakh had been sanctioned by **Tribal Sub Plan, Songadh** for different Projects of this KVK inTribal areas.The year round nursery for vegetable seedlings and mango-Chiku Graft is famous among the district. The Paddy seed supply is a big achievement of the KVK. Frequent visits of the Union Tribal Minister, **Dr.Tushar Chaudhary**, State Ministers and all Dignitaries from the State and SAUs as a whole is a grand success of the KVK seen by necked eyes.A regular agricultural column in the **Gujarat Mitra, News paper** is a another rock mounted success of the KVK. In short the KVK is running on" **Information Super Highway for Tribal people of South Gujarat**."

Annexure:-

India is the largest democracy in the world. Second in population after China. We are first in case of **BPL** population amongst world. 2/3 of our population is lying under BPL. Infant mortality rate is 65 per 1000 live berth. 2/5 of the infant population in our country is half-starved. We have seen many revolutions like **Green, White, Yellow, Blue** and **Dark Revolutions** in different fields. In the year 1952 our total food grain production was **52 Million Tones** and the total population of the country was also **52**

Million. In the year **2001**, the total population was **1028 million** and the total food grain production was **208 million MT**. It was increased to the tune of **213 million Mt** in the year **2003 and 238 MT in the year2007-08**. At present we are self sufficient as well as exporting, too. However, there is no surety for filling the empty stomaches of the children instinctive in future. It is quiet difficult to increase the food grain production up to the tune of **50 Million MT** by ***all available resources***. ***It is a big challenge for policy makers, Governments, Scientists, Educationists, Farmers and all related to the agriculture and Rural Development***. The soil **fertility. Productivity and health** have been deteriorated day by day. Due to over exploitation of **land, water and environment** every things have been deteriorated. To create an interest of the rural youth towards **modern High- Tech agricultural development** on sustainable basis is a current need of the time. Effective recycling of the farm waste is also popular demand of the **new Millennium**.

Starting from **CDP** in **1952** to **Hill area development project, Tribal area development project, Small and Marginal farmers development Agency, HYVPs, IRD(1974), Training and Visit System, NWDPRFA (1991), NHM, NHB, ATMA (2005), RKVY(2007), and NFSM in the year 2008** is inaugurated, implemented and working, too. We have seen the growth and impact of the same. The Gujarat state has attained a growth rate of **10 %** in the field of agriculture due to its own **TOT** programmes like **Krishi Mahotsav** etc.

The **first KVK** was started in the year **1974** at **Pondichery** under the technical control of **TNAU, Coimbatore**.At the end of year 2008, the total **590 KVKs** have been sanctioned in the country amongst total **627 Districts** in the country. Almost all of the districts have been covered by ICAR under **KVK umbrella**. A popular demand for establishing more than one KVK in the same District reflects its important role in effective **Transfer of Agricultural Technology** in the country as a whole.KVK is found and proved to be a best ***TOT Agency at grass root level in a golden era of sustainable agricultural development***. The world is shifting very rapidly. Our honorable Prime Minister and Hon. Minister of Agriculture and Co-operation, GOI have already announced to sanction more than one KVK in the same Districts on demand base. Already three districts *VIZ*- **Rajkot, Banaskantha and Kutchh** have been given one additional KVK looking to the geographical areas of the District. The **technology of today is become outdated for tomorrow and agriculture is not an exception of it.** People are enthusiastic, anxious and become more desirous to know the change in the field of agriculture around them to acclimatization with changing scenario of world agriculture. Looking to the increasing importance of the **Information and Communication Technology** (**ICTs**) in the field of agriculture, **ICAR has decorated 250 KVKs (50%) as e-linked** in the first phase. In next phase almost all KVKs will be e-linked. **May I request you to be this KVK e-Linked, Sir?** Now the KVK is become an **Information hub** for farming communities. The task assigned to us **Technology**

generation, Technology assessment, Technology evaluation, Technology refinement and Technology Dissemination in the field of agriculture at grass root level. A definite approach to craft India as developed Nation in the shortest possible time is realized by a rapid agricultural growth. To accomplish the dream of father of nation; ***Mahatma Gandhiji, we have to work with commitment in taking over newer information and technology to our millions of farmers who work hard vigorously in the sun to feed the nation.*** TOT plays an important role in development of the agriculture and Indian economy as a whole. To achieve best results from agriculture, Indian farmers will have to make the **maximum use of available modern high tech production technologies**. This can only be possible through effective TOT. The present age has been rightly termed as an**, "Information age**". People want adequate and authentic information as early as possible. Farmers have enthusiasm to obtain knowledge, particularly in the field of modern agriculture to become **psychologically strong and favorable with necessary capacities** to adopt modern methods of agriculture. To fulfill the expectations of the farmers, an efficient transfer of technologies is the sole solution. However, reality is also that expected numbers of the farmers still **do not adopt recently innovated technologies**.

An **extensive extension and training programmes** are highly essential to increase the productivity in agriculture. Moreover, many noteworthy changes in the field of agriculture have also been observed recently. **These major changes include demand for agricultural product, growing population, economic liberalization, operationalization of GATT and DUNKEL Agreements, WTO, privatization of extension services, sustainability in farming practices, rapid growth in information and communication technologies, development of new production technology, role of NGOs and farmer's experiences on ITKs** etc. Most of these changes require **competent farmers** who are able to increase productivity and maintain sustainability of their farming system. Therefore, the extension functionaries in coming years under scenario will have to play larger role as **manager** to discharge their responsibility for the fulfillment of the changing requirements of skills and knowledge of farmers.

KVK is working as a **bridge** between **Research System** and **Farming Community**. It is working based on two main pillars of extension education,**" Seeing is Believing"** and **"Learning by Doing"** .KVK is known as **best jewelers of the ICAR** in the field of **Effective and Efficient TOT** at village level as well as for **Reaching the Unreached.** The main function of the KVK is to impart training to the **Farmers, Farm women, Rural youth village dropouts and District Extension Functionaries** to increase their agricultural productivity and also their **standard of living**.

In short, KVK is proved **Best TOT Centre** at National level. We all have to run on ***Information Super High way***. I am very happy to be a part of that system as well as to be with you. With this few words I am going to present the progress done by this KVK. I

assure you sir; this KVK is on the way of **Model for Zone** within shortest possible time. We wish the blessings, cooperation, warmth, constructive suggestions, dynamic vision and guidance from the dignitaries like you, sir. We have started each and every effort to be an impact oriented Information hub of the District. We have developed linkages with all line departments, NGOs, Resource persons, Christian Missions, all GOs, NGOs, Cooperatives and voluntary organizations to cater the needs of the centre. However, any error in our vision will be a part of our responsibilities. This KVK has covered each and every above said Task successfully and all relevant evidences, photographs, Impact studies, success stories, case studies, research studies had been included in the reports. This KVK has achieved a lot in the field of Agricultural Extension and become a real knowledge and resource centre for the district as a whole.

F.W. **LINKAGES**

5.1 Functional linkage with different organizations

Sr. No.	Name of Organization	Nature of Linkage
1	Dept. of Agriculture	Participation • Khedut Shibir • Soil Health Card & In-service Training • Extension Activities, RKVY, SRI techniques, Krishi Mela, krishi mahotsav etc.
2	Dept. of Horticulture	Participation • Khedut Shibir • Extension Activities, NHB & NHM Krishi Mela, krishi mahotsav etc.
3	ATMA	Participation • Khedut Shibir/Mahila Shibir • Extension Activities • Training programmes • Krishi Mela, krishi mahotsav etc.
4	Main Rice Res. Station, AAU, Nawagam	Collaboration-FLD on paddy
5	Main Cotton Res. Station, NAU, Surat	Collaboration-FLD on cotton IPM Mission in Nizar block
6	Main Water Management Research Unit, NAU, Navsari	Collaboration-FLD on soil & water management, Greenhouse
7	Research Stations, NAU	Participation-Farmers day, Seed-FLDs, etc.
8	FTC, Vyara	Joint implementation- Farmers visit and expert lectures, Farmer's Fair, Krishi Mela, krishi mahotsav etc.
9	Govt. of Gujarat	Collaboration – Krishi Mahotsav, ATMA, RKVY, NFSCM, etc.
10	State Bank of India/Bank of Baroda	SHG work, SAC Meet.

11	Catholic Charch, Mandal	TOT, Seed village, Kitchen Garden, Vermicompost [**52** Villages Network]
12	Integrated Child Development Sevices (ICDS)	Inservice training for Anganwadi workers and SHG activities, Nutritional FLDs etc
13	NGOs	Training, Demonstration, Extension Activities, FLDs, OFTs etc.
14	Department of Animal Husbandry	Animal Husbandry camps, shibirs, Exhibitions, Dairy related activities.
15	College of veterinary, NAU, Navsari	Animal Husbandry camp, Surgical camps, Pashupalan shibirs, Krishi Mela etc..
16	SUMUL	Animal Husbandry related activities

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.)
1. Plant Health Clinic	March 08	National Horticulture Mission	15.50 lakhs
2. RKVY	Nov.'08	Govt. of Gujarat	109.71 lakhs (yr:2010-11)
3. Soil Health Card	Oct.'09	Govt. of Gujarat	4.50 lakhs
4. Mega seed project	Dec.'10	Govt. of Gujarat	2.32 lakhs

5.3 Details of linkage with ATMA

a) Is ATMA implemented in your district **Yes** / No

Sr. No.	Programme	Nature of linkage	Remarks
1	Participation in • Khedut Shibir/Mahila Shibir • Extension Activities, • FLDs, OFTS, FFS, Impact assessment of ATMA Activities AMC, AGB etc Training programmes	Technical Support	--

* All technical support is given by KVK to ATMA

F.W. **Give details of programmes implemented under National Horticultural Mission: -**

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
1. Plant Health Clinic	March 08	National Horticulture Mission	15.50 lakhs

5.5 Nature of linkage with National Fisheries Development Board :-

KVK gives feedback to this department for FLDs, demonstrations, trainings.

(P. . . .) **PERFORMANCE OF INFRASTRUCTURE IN KVK**

6.1 Performance of demonstration units (other than instructional farm)

Sr. No.	Demo Unit	Year of estt.	Area	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1	Small scale Nursery	2010	4 Gunthas	--	--	--	3.00 lakh(RKVY)	--	--
2	Low cost green House	2010	1.00 Guntha	--	--	--	27000/- (RKVY)	--	--
3.	Wadi Model	2010	1.00 ha	--	--	--	-------	--	--
4	Poly House	2011	500 sq.mt.	--	--	--			
5	Shade Net House	2011	2000 sq.mt.	--	--	--			

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.(Kg)	Cost of inputs	Gross income	
Paddy	1-15/7/2011	20-30/10/2011	3.5	Gurjari	Certified	11000	120000	250000	--
Paddy	1-15/7/2011	20-30/10/2011	1.5	IR-28	Certified	4000	50000	75000	--
Moong	12-14/2/2011	2/5/11 to 28/6/11	0.40	Pusa Vishal	Certified	360	10000	14400	--
Groundnut	22/1/2011	1/6/2011 to 14/6/2011	0.5	GG-2	Certified	689	18000	22816	--
Gram	18/12/2011	6/4/2011	0.2	GG-2	Certified	120	2500	3000	--
Sugarcane	2/2/2011	--	0.3	Co-5071	Certified	To be sold as per need of the farmers			

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

6.4 Performance of instructional farm (livestock and fisheries production) :- -- NIL–

6.5 Rainwater Harvesting: - --NIL–

6.6 Utilization of hostel facilities: - --NIL–

(P. . . .) **FINANCIAL PERFORMANCE**

7.1 Details of KVK Bank accounts

Bank account	Name of the bank	Location	Account Number
With Host Institute	State Bank of India	Navsari	2704-1
With KVK	State Bank of India	Vyara	10716339605

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

No Fund is released by council.

(P.F. . . **Utilization of funds under FLD on Pulses *(Rs. In Lakhs)***

No Fund is released by council.

7.4 Utilization of funds under FLD on Cotton *(Rs. in thousand)*

No Fund is released by council.

7.5 Utilization of KVK funds Year: 2011-12

Sr. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	57.00	57.00	37,92,887
2	**Traveling allowances**	1.50	1.50	68,942
3	**Contingencies**	9.00	9.00	8,98,428
a	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	3.00	3.00	
b	POL, repair of vehicles, tractor and equipments			
c	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	2.55	2.55	
d	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)			
e	Training of extension functionaries			
f	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	3.05	3.05	
g	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)			
h	Maintenance of buildings	0.40	0.40	
TOTAL (A)		**67.50**	**67.50**	**47,60,257**
B. Non-Recurring Contingencies				
1	**Equipments and Furniture**			
a)	**Furnishing of office building & Farmer's Hostel**	5.00	5.00	4,97,288
b)	**Plant Health Diagnostic facility**	10.00	10.00	9,97,825
2	**Works**	0.00	0.00	--
3	**Library** (Purchase of assets like books & journals)	0.00	0.00	--
4	**Vehicle (Motorcycle)**	0.00	0.00	--
TOTAL (B)		**15.00**	**15.00**	**14,95,113**
C. REVOLVING FUND		--	--	--
GRAND TOTAL (A+B+C)		**82.50**	**82.50**	**62,55,370**

(P.F. . . **Status of revolving fund (Rs. in lakhs) for the three years**

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year
April 2009 to March 2010	75041	264491	229035	110497
April 2010 to March 2011	110497	992494	614740	488251
April 2011 to March 2012	488251	1002304	1073108	417447

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

8.1 Constraints

(a) Administrative

1. The post of SMS (Plant Protection) (1), Supporting staffs (2) & Driver (1) are vacant.

(b) Financial

1. Provision should be made for educational tour for farmers.Seperate fund are required for technology week celebration, Extension activities, Fencing and Security staff.
2. Lack of tribal allowance for KVK Staff.
3. Lack of Pakka roads and drainage channels in campus.

(c) Technical

1. Lack of facility of Farm Godown, Fencing and Threshing floor and Impliment shed
2. Lack of facility of Minibus.
3. Lack of e-connectivity.

Summary of Annual Progress of KVK 2011-12

STAFF POSITION

KVK	PC			SMS			PA			ADMN			AX			SUPP			TOTAL		
	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V
Vyara, Dist. Tapi	1	1	-	6	5	1	3	3	-	2	2	-	2	1	1	2	-	2	16	12	4

S- Sanctioned F- Filled V- Vacant

REVOLVING FUND

KVK	Opening Balance on 1.4.11 (Rs.)	Revenue Generated (Rs.)	Closing Balance on 31.3.12 (Rs.)
Vyara, Dist. Tapi	488251	1002304	417447

SCIENTIFIC ADVISORY COMMITTEE

KVK	No. of meetings conducted	Date of meeting
Vyara, Dist. Tapi	1	9/8/2011

ACTIVITIES OF KVK

TECHNOLOGY ASSESSMENT AND REFINEMENT

Details of technologies assessed and refined

Technologies assessed**

Sr. No.	Enterprise	Crop/Animal/ Species	Name of the technology**	Thematic Area
1	Commercial crops	Cotton	IPM	IPM
2	Cereals	Paddy	SRI	SRI
3	Pulses	Gram	ICM	Irrigation Management
4	Animal Husbandry	Cow	Urea Treatment of Paddy strow and mineral mixture feeding	Nutrition Management
5	Home Science	Adolescent girls	Use of iron rich diet to prevent anemia	Nutrition Management

Technologies refined**

Sr. No.	Category	Crop/ Enterprise	Name of the technology**	Thematic Area
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
Integrated Crop Management	1	--	1	1	--	--	--	--	--	3
TOTAL	**1**	**--**	**1**	**1**	**--**	**--**	**--**	**--**	**--**	**3**

Abstract of the number of technologies assessed in respect of livestock / enterprises

Thematic areas	Cattle	Poultry	Sheep	Goat	Piggery	Rabbitary	Fisheries	TOTAL
Nutrition Management	1	-	-	-	-	-	-	1
Nutriton Management(Home Science)	1	-	-	-	-	-	-	1
TOTAL	**2**	**-**	**-**	**-**	**-**	**-**	**-**	**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
	--	--	--	--	--	--	--	--	--	--
TOTAL	--	--	**--**	--	--	--	--	--	--	**--**

Abstract on the number of technologies assessed in respect of livestock/enterprises :- -- NIL –

Abstract on the number of technologies refined in respect of livestock/ enterprises :- -- NIL –

PERFORMANCE OF IMPORTANT TECHNOLOGIES

Trial 1

1.	**Title**	**:**	Low yield of paddy
2.	**Problem diagnose/defined**	**:**	Use of higher and over age seedlings for transplanting
3.	**Details of technologies selected for assessment /refinement**	**:**	T_1.Randomly transplanting of paddy – Farmer practices T_2. Line method of transplanting (20 X 15 cm) T_3. System of Rice Intensification method (25 X 25 cm)
4.	**Season**	**:**	Kharif-2011
5.	**Source of technology**	**:**	NAU
6.	**Production system thematic area**	**:**	Paddy – Sugarcane cropping system
7.	**Thematic area**	**:**	System of Rice Intensification (ICM)
8.	**Performance of the Technology with performance indicators**	**:**	The SRI technology of paddy had required less seed rate and gave more number of tillers, filled grain and increased seed yield than traditional method.
9.	**Final recommendation for micro level situation**	**:**	SRI technology is better than traditional method of transplanting paddy.
10.	**Constraints identified and feedback for research**	**:**	Time consuming
11.	**Process of farmers participation and their reaction**	**:**	Appreciate the technology and ready to adopt.

Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials *	Technology refined	Para-meters	Data on the parameter				Results of refinem-ent	Feedback from the farmer
							No. of Tillers/ hill	No. of filled grains/ panicle	Panicle length (cm)	Yield (q/ha)		
1	2	3	4	5	6	7	8				9	10
Paddy	Irrigated	Use of higher and over age seedlings for transplanting	Low yield of paddy	5	T_1.Randomly transplanting of paddy – Farmer practices	--	10	98	21.5	54.00	T_3. SRI method (25x25) gave higher yield	In SRI technology of paddy cultivation used less seed rate and gave higher tillering, higher no. of filled grains & seed yield. farmers are very much interested because maintain soil health, maximum water use efficiency, less water required in this technology.
					T_2. Line method of transplanting (20 X 15 cm)	--	16	124	26	60.15		
					T_3. System of Rice Intensification method (25 X 25 cm)	--	24	148	28.5	70.25		

**** No. of farmers***

Technology Refined	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
Randomly transplanting of paddy –Farmer practices	54.00	42200	1 : 3.72
Line method of transplanting (20 X 15 cm)	60.15	48658	1 : 4.24
System of Rice Intensification method (25 X 25 cm)	70.25	61463	1 : 6.00

Trial 2

1.	**Title**	**:**	Low yield of Gram
2.	**Problem diagnose/defined**	**:**	No irrigation at critical stages
3.	**Details of technologies selected for assessment /refinement**	**:**	T_1. No use of Phosphatic fertilizer (Farmers practices) T_2 Basal dose of fertilizer + Biofertilizers + two irrigation at critical stages T_3. Basal dose of Phosphatic fertilizer + Biofertilizers + one irrigation at pod filling stage.
4.	**Season**	**:**	Rabi-Summer -2010-11
5.	**Source of technology**	**:**	NAU
6.	**Production system thematic area**	**:**	Paddy – Sugarcane cropping system
7.	**Thematic area**	**:**	ICM
8.	**Performance of the Technology with performance indicators**	**:**	In this technology of Gram, we recommend land configuration in Gram crop and giving life saving irrigation at critical stages and Phosphatic fertilizers as basal dose gave more number of Branch, Pods and increased seed yield than traditional method.
9.	**Final recommendation for micro level situation**	**:**	One light irrigation at critical stage is better than traditional method of gram cultivation.
10.	**Constraints identified and feedback for research**	**:**	Increasing Production
11.	**Process of farmers participation and their reaction**	**:**	Appreciate the technology and ready to adopt.

Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology refined	Para-meters	Data on the parameter				Results of refinem-ent	Feedback from the farmer
							Plant Height (cm)	No. of Branches	No. of Pods/ Plant	Yield (q/ha)		
1	2	3	4	5	6	7	8				9	10
Gram	Irrigated/Unirrigated	No irrigation at critical stages	Low yield of Gram	5	T_1. No use of Phosphatic fertilizer (Farmers practices)	--	32	6	37	1165	T_3 Basal dose of Phosphatic fertilizer + Biofertilizers + one irrigation at pod filling stage.	Land configuration in Gram crop and giving life saving irrigation at critical stages and Phosphatic fertilizers as basal dose gave more number of Branch, Pods and increased seed yield than traditional method.. farmers are very much interested because maintain soil health, maximum water use efficiency, in this technology.
					T_2 Basal dose of fertilizer + Biofertilizers + two irrigation at critical stages	--	35	10	55	1735		
					T_3. Basal dose of Phosphatic fertilizer + Biofertilizers + one irrigation at pod filling stage.	--	39	13	89	1800		

**** No. of farmers***

Technology Refined	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
No use of Phosphatic fertilizer (Farmers practices)	1165	32115	1:4.71
Basal dose of fertilizer + Biofertilizers + two irrigation at critical stages	1735	51625	1:6.67
Basal dose of Phosphatic fertilizer + Biofertilizers + one irrigation at pod filling stage.	1800	53901	1:6.92

OFT – 3

1.	**Title**	**:**	Low milk production of Cow
2.	**Problem diagnose/defined**	**:**	1. Lack of knowledge about urea treatment. 2. Poor management of Dairy animal (breeding, feeding and management) 3. Poor knowledge of health & cost efficient livestock rearing.
3.	**Details of technologies selected for assessment /refinement**	**:**	T1. Farmers practice (Paddy straw without urea treatment) T2. Paddy straw with urea treatment (6-8 kg daily) T3. Paddy straw with urea treatment + Mineral mixture (35 gm mineral mixture feeding daily)
4.	**Source of technology**	**:**	Text book of Animal Husbandary- G.C.Benerji
5.	**Production system thematic area**	**:**	**--**
6.	**Thematic area**		Nutrition Management
7.	**Performance of the Technology with performance indicators**	**:**	**--**
8.	**Final recommendation for micro level situation**	**:**	Paddy straw treated with 4% urea and 35 gm mineral mixture feeding daily gaves higher milk production.
9.	**Constraints identified and feedback for research**	**:**	**--**
10.	**Process of farmers participation and their reaction**	**:**	Farmers appreciate the technology & ready to adopt.

Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters	Data on the parameter		Results of assess-ment	Feedback from the farmer
							Milk production (kg/day)			
							Before	After		
1	2	3	4	5	6	7	8		9	10
Animal Science	Low milk production in HF Cow	1. Low Milk Production 2. Lack of knowledge about urea treatment. 3. Poor manage-ment. 4. Poor knowledge of health & hygiene. 5. Lack of knowledge about feeding management.	Low milk production in HF Cow	10	T1. (Farmers practices) Paddy straw without urea treatment	Milk production and service period	5.455	6.420	Paddy straw with urea treatment + Mineral mixture (35 gm mineral mixture feeding daily)	Increase milk production after urea treated paddy straw and mineral mixture feeding
				10	T2. Paddy straw with urea treatment (6-8 kg daily)		5.680	6.650		
				10	T3. Paddy straw with urea treatment + Mineral mixture (35 gm mineral mixture feeding daily)		5.656	6.892		

Technology Assessed	Production per unit (Lit.)	Net Return (Profit) in Rs. / unit	*BC Ratio
11	12	13	14
T1 – Farmers practice (Paddy straw without urea treatment)	6.420	83.60	1:1.77
T2 – Paddy straw with urea treatment	6.650	90.50	1:1.83
T3- Paddy straw with urea treatment + Mineral mixture (35 gm daily)	6.892	97.76	1:1.90

Result: T3: Urea treated paddy straw along with mineral mixture (35 gm mineral mixture feeding daily)can result in increased milk yield as compared to T1 and T2.

OFT- 4:

1.	**Title**	**:**	Prevalence of Anemia among rural tribal adolescent girls (16 to 18 yrs)
2.	**Problem diagnose/defined**	**:**	1.Low iron content in diet 2.Use of traditional diet 3.Lack of knowledge about nutritional foods 4.Prevalence of infectious diseases 5.Poor socio-economic condition
3.	**Details of technologies selected for assessment /refinement**	**:**	T1.Farmers practices(Traditional practices)-existing dietary pattern T2.Recommended practices-iron tablet/day with existing dietary pattern T3.100gm roasted Bengal gram + 100gm roasted Rice flakes/day + iron tablet/day with existing dietary pattern
4.	**Season**	**:**	Summer-2011
5.	**Source of technology**	**:**	A text book of “Nutritive value of Indian foods” by National Institute of Nutrition, Hyderabad
6.	**Production system thematic area**	**:**	---
7.	**Thematic area**	**:**	Nutrition Management
8.	**Performance of the Technology with performance indicators**	**:**	---
9.	**Final recommendation for micro level situation**	**:**	Daily use of iron rich diet (100gm roasted Bengal gram + 100gm roasted Rice flakes) and one iron tablet with existing dietary pattern increased Hb level and body weight of tribal adolescent girls as compared to other treatment.
10.	**Constraints identified and feedback for research**	**:**	---
11.	**Process of farmers participation and their reaction**	**:**	Appreciate the technology and ready to adopt.

Results of On Farm Trials

Crop/ enterprise	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters	Data on the parameter						Results of assess-ment	Feedback from the farmer
						Hb level (gm%)			Body weight (Kg.)				
						Before	After	increase in Hb level	Before	After	Wt. gain		
1	2	3	4	5	6	7						8	9
Home Science	1.Low iron content in diet 2.Use of traditional diet 3.Lack of knowledge about nutritional foods 4.Prevalence of infectious diseases 5.Poor socio-economic condition	Prevalence of Anemia among rural tribal adolescent girls	5	T1.Farmers practices (Traditional practices)-existing dietary pattern	Hb level & Body weight for **three months** period	9.72	10.03	**0.31**	37.200	37.400	**0.200**	Daily use of 100gm roasted Bengal gram + 100gm roasted Rice flakes + one iron tablet with existing dietary pattern gave better result to prevent Anemia	Hb level & body wt. of rural tribal adolescent girls increased by using iron rich diet and iron tablet daily with existing dietary pattern
			5	T2.Recommended practices-iron tablet/day with existing dietary pattern		9.38	10.81	**1.43**	38.800	40.000	**1.200**		
			5	T3**.100gm roasted Bengal gram + 100gm roasted Rice flakes/day + iron tablet/day with existing dietary pattern		9.44	11.85	**2.41**	39.200	42.000	**2.800**		

No. of tribal adolescent girls (16 to 18 yrs)

**** 100 gm Bengal gram contains 9.5 mg iron.**

100 gm Rice flakes contains 20.0 mg iron.

OFT-5

1.	**Title**	**:**	Low productivity in cotton
2.	**Problem diagnose/defined**	**:**	High dose of agro chemicals and imbalance use of nitrogenous fertilizers
3.	**Details of technologies selected for assessment /refinement**	**:**	T1 – No seed treatment and 6-7 application of imidacloprid 70% WS @ 15 ml in 10 ltr of water T2- Seed treatment with imidacloprid 70% WS @ 7.5 gm/kg seed + two foliar application of thiomethoxam @ 3 gm/10 ltr. at ET level T3- Seed treatment with imidacloprid 70 % WS @ 7.5 gm/kg seed, raising maize or jowar as border crop, castor as a trap crop, chrysopa release and two foliar applications of thiomethoxam 5 gm in 10 ltr. of water, use of 1500 ppm neem ban
4.	**Season**	**:**	Kharif – 2011
5.	**Source of technology**	**:**	NAU
6.	**Production system thematic area**	**:**	--
7.	**Thematic area**	**:**	IPM
8.	**Performance of the Technology with performance indicators**	**:**	Refined technology gave higher BC ratio (1:5.74)
9.	**Final recommendation for micro level situation**	**:**	Use of IPM for better control of pest of cotton
10.	**Constraints identified and feedback for research**	**:**	--
11.	**Process of farmers participation and their reaction**	**:**	Appreciate the technology and ready to adopt.

Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Data on the parameter				Results of assessment	Feedback from the farmer
						No. of aphids/ leaf	No. of jassids / leaf	No. of white fly/ plant	No. of Mealybug/ plant		
1	2	3	4	5	6	7				8	9
Cotton	Irrigated	High dose of agro chemicals and imbalance use of nitrogenous fertilizers	Low productivity in cotton	5	T1 – No seed treatment and 6-7 application of imidacloprid 70% WS @ 15 ml in 10 ltr of water	12	13	77	37	--	IPM gave good control of insects on cotton
					T2- Seed treatment with imidacloprid 70% WS @ 7.5 gm/kg seed + two foliar application of thiomethoxam @ 3 gm/10 ltr. at ET level	9	12	68	32		
					T3- Seed treatment with imidacloprid 70 % WS @ 7.5 gm/kg seed, raising maize or jowar as border crop, castor as a trap crop, chrysopa release and two foliar applications of thiomethoxam 5 gm in 10 ltr. of water, use of 1500 ppm neem ban	8	10	58	23		

**** No. of farmers***

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
10	11	12	13
T1 – No seed treatment and 6-7 application of imidacloprid 70% WS @ 15 ml in 10 ltr of water	21.75	58764	1:3.63
T2- Seed treatment with imidacloprid 70% WS @ 7.5 gm/kg seed + two foliar application of thiomethoxam @ 3 gm/10 ltr. at ET level	26.45	68672	1:4.67
T3- Seed treatment with imidacloprid 70 % WS @ 7.5 gm/kg seed, raising maize or jowar as border crop, castor as a trap crop, chrysopa release and two foliar applications of thiomethoxam 5 gm in 10 ltr. of water, use of 1500 ppm neem ban	29.50	88600	1:5.74

FRONTLINE DEMONSTRATIONS

Crop/enterprise	No. of demonstrations	Area (ha)
Pulses	82	23.00
Cereals	411	148.30
Vegetable crops	41	12.00
Cotton	25	10.00
Kitchen Gardening	100	00.02
Women drudgery reduction – NAVEEN Sickle for paddy harvesting	20	--
Urea treatment to paddy straw	20	--
Total	**699**	**193.32**

PULSES

Crop	Season	Name of technology	No. of farmers	Area (ha)	Performance of technology on different parameters*						Result **
					Yield (qt./ha.)		No. of Pod / Plant		No. of Branch / Plant		
					Demon.	Local Check	Demon.	Local Check	Demon.	Local Check	
Pigeon pea	Kharif-11	New variety/ Land Configuration	38	8	15.40	10.70	630.80	458.70	13-18	5-.10	Performance of new variety and land configuration in pigeon pea gave higher yield than local variety
Moong bean	Summer -2011	New variety	20	10	13.75	10.70	50-60	30-40	10-12	6-8	New variety gave higher yield than local variety
Gram	Rabi-10-11	INM	24	5	16.25	11.55	62.35	42.75	6-9	3-5	Use of bio fertilizer in gram gave higher yield than local variety

CEREALS, HORTICULTURE AND OTHER CROPS

Crop	Season	Name of technology	No. of farmers	Area (ha)	Performance of technology on different parameters*						Result **
					Yield (qt./ha.)		Test wt.		No. of productive tiller/plant		
					Demon.	Local Check	Demon.	Local Check	Demon.	Local Check	
Sugarcane	Rabi-2010-11	New Variety	2	0.50	870	715	2.30 kg/set	1.50 kg/set	4-6	2-3	Performance of new variety and its yield is better than local variety
Maize	Rabi-2010-11	Introduction of new crop	17	4	45	35	50-60 gm/1000 seed	30-40 gm/1000 seed	3 cobs/plant	1 cobs/plant	Performance of new variety and its yield is better than local variety
Paddy – Jaya	Kharif-11	Green manuring and INM	20	5	40	48.23	32gm/1000 seed	24gm/1000 seed	15-17	7-10	Green manuring before T.P. of Paddy maintain soil health and its residual effect on Paddy gave higher grain yield
Paddy-GR-5	Kharif-11	New variety	20	5	16.23	12.75	29gm/1000 seed	19gm/1000 seed	4-7	3-5	Performance of new variety and its yield is better than local variety
Paddy-	Kharif-	ICM	20	5	61.50	48.23	33gm/1000	24gm/1000	18-20	7-10	Performance

Crop	Season	Name of technology	No. of farmers	Area (ha)	Performance of technology on different parameters*						Result **
					Yield (qt./ha.)		Test wt.		No. of productive tiller/plant		
					Demon.	Local Check	Demon.	Local Check	Demon.	Local Check	
NAUR-1	11						seed	seed			of new variety and its yield is better than local variety
Paddy-GAR-13	Kharif-11	ICM	6	1.8	58.48	45.75	31gm/1000 seed	24gm/1000 seed	15-17	7-10	Performance of new variety and its yield is better than local variety
Paddy-NAUR-1 (SRI)	Kharif-11	ICM	106	42	66.05	54.00	33gm/1000 seed	24gm/1000 seed	27-30	7-10	This technology of T.P. gave higher yield than local method and save water, seed ecofriendly
Paddy – NAUR-1	Kharif-11	ICM	200	80	61.23	52.50	33gm/1000 seed	24gm/1000 seed	18-20	7-10	This technology of T.P. gave higher yield than local method and save water, seed ecofriendly
Paddy (IPDM)	Kharif-10-11	IPDM	20	5	60.10	51.50	33gm/1000 seed	24gm/1000 seed	17-18	7-10	-

Crop	Season	Name of technology	No. of farmers	Area (ha)	Performance of technology on different parameters*						Result **
					Yield (qt./ha.)		Test wt.		No. of productive tiller/plant		
					Demon.	Local Check	Demon.	Local Check	Demon.	Local Check	
Okra	Rabi-10-11	INM	8	2.0	157.60	105.50	21 fruit/plant	12 fruit/plant	202g.	103g.fruit/plant	INM in okra gave higher yield and also maintain the quality of okra this technology control on imbalance use of fertilizer
Brinjal	Rabi-10-11	INM	8	2.0	170.70	155.30	43.25 fruit/plant	26.47 fruit/plant	2.403 fruit/plant	2.345 fruit/plant	INM gave higher yield and also maintain the quality of brinjal this technology control on imbalance use of fertilizer
Okra	Rabi-10-11	Integrated pest management.	10	3	156.15	104.03	--	--	--	--	INM gave higher yield and also maintain the quality of brinjal this technology control on

Crop	Season	Name of technology	No. of farmers	Area (ha)	Performance of technology on different parameters*						Result **
					Yield (qt./ha.)		Test wt.		No. of productive tiller/plant		
					Demon.	Local Check	Demon.	Local Check	Demon.	Local Check	
											imbalance use of fertilizer
Brinjal	Rabi-10-11	Integrated pest management.	10	3	180.48	136.80	--	--	--	--	--
Cucurbits	Summer-09-10	Integrated pest management.	5	2	102.50	81.35	--	--	--	--	--
Cotton	Kharif-11	IPM	25	10	25.53	19.70	--	--	--	--	--

Details of FLD – Discipline – Home Science:

F. . **Result of Front Line Demonstration on Kitchen Gardening:**

No. of Farm women: 50 **Area: 1 Guntha/demo.** **Season:- Rabi:2010-11**

Name of Enterprise	No. of Demo	Crop yield (Kg)													Total Prod-uction	Average rate (Rs/kg)	Gross return (Rs.)	
		Carrot	Radish	Long Brinjal	Bitroot	Coriander	Muskmelon	Cauliflower	Cucumber	Chilli	Brinjal gota	Cabbage	Palak	Cowpea			Before FLD	After FLD
Kitchen Garden	50	4.51	4.14	20.99	2.40	2.52	10.19	3.48	4.22	10.03	23.24	3.45	2.30	8.18	99.65	30	not done kitchen garden	2989=50, along with domestic consumption

Farm women Reaction:

S. No	Feed Back
1	Before Demonstration, farm women were not growing vegetable crops in their backyard but after demonstration they are growing different vegetable crops through kitchen gardening in scientific way.
2	Kitchen gardening gives continuous supply of fresh vegetables at lower cost which gives daily nutritious diet.
3	In kitchen gardening, farm women are not applying any agrochemicals so they produce organic vegetables.
4	We are utilized maximum backyard space and waste water.
5	Income is generated by selling extra vegetables grown in kitchen garden.
6	Farm women are attracted towards hybrid vegetables.

(2) Result of Front Line Demonstration on Kitchen Gardening (Discipline-Home Science):

No. of Demonstration: 50

No. of Farm women: 50 **Area: 1 Guntha/demo.** **Season:- Kharif: 2011**

Name of Enterprise	Average Crop yield (Kg.)									
	Okra	Cow pea	Tur	Cluster bean	Bottle gourd	Bitter gourd	Sponge gourd	Ridge gourd	Cabbage	Cauliflower
1	2	3	4	5	6	7	8	9	10	11
Kitchen Garden	16.6	8.2	9.4	3.9	11.3	4.0	5.3	5.5	3.5	3.8

Average Crop yield (Kg.)							Total Production	Average rate (/Kg)	Gross return ()	
Palakh	Cucumber	Brinjal	Tomato	Ginger	Chilli	Turmeric			Before FLD	After FLD
12	13	14	15	16	17	18	19	20	21	22
2.6	4.3	21.4	17.9	2.1	9.3	1.8	130.9	30	960.00	3927.00 along with domestic consumption

Farm women Reaction:

S. No	Feed Back
1	Before Demonstration, farm women were growing only two or three vegetable crops in their backyard but after demonstration they are growing different vegetable crops through kitchen gardening in scientific way.
2	Kitchen gardening gives continuous supply of fresh vegetables at lower cost which gives daily nutritious diet.
3	In kitchen gardening, farm women are not applying any agrochemicals so they produce organic vegetables.
4	We are utilized maximum backyard space and waste water.
5	Income is generated by selling extra vegetables grown in kitchen garden.
6	Farm women are attracted towards hybrid vegetables.

(3) Result of FLD on Introduction of improved NAVEEN sickle for paddy harvesting:

Thematic area: Women drudgery reduction technology

Crop	Season & Year	No. of Demonstration	Field capacity per labour (ha/h)		Increase in field capacity (%)	Labour requirement (man-h / ha)		Economics		
			Harvesting by NAVEEN sickle	Harvesting by local sickle		Demon	Local check	Cost of operation * ₹/ ha / day		Saving cost (%)
								Demon	Local check	
Paddy	Kharif 2011	20	0.0078	0.0061	27.86	128	164	1600	2100	31.25

***Cost of operation is calculated as per Govt. rules.

****NAVEEN sickle is recommended by CIAE, Bhopal.

Technical feedback:

4. Improved NAVEEN sickle reduces women drudgery in terms of time, efficiency and physical hazards (finger injuries, hand grip, muscle stress etc.)
5. During paddy harvesting, field capacity per farm woman is increased up to 27.86% by using NAVEEN sickle as compared to local sickle.
6. NAVEEN sickle saves 28.12% labour and 31.25% cost of operation as compared to local sickle.

Farm women's reaction:

3. NAVEEN sickle increases working efficiency in short period of time, i.e. it is cost saving and time saving.
4. NAVEEN sickle reduces fatigue, muscle stress, wrist pain and pain in shoulders as compared to local sickle.

d. Details of FLD – Animal Science:

Urea treatment to paddy straw

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No.of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
					Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Buffalo	Nutrition management	Urea treatment to paddy straw	20	20	Avg. milk yield lit per day	Avg. milk yield lit per day	18.86%	----	---	98	186.52	88.52	1:1.90	90	156.92	66.92	1:1.74
					5.829 (32 Rs/lit)	4.904(32 Rs/lit)											

Farmers Reaction:

S. No	Feed Back
1	Use of Urea treatment make the paddy straw more palatable to the animals
2	Urea treated paddy straw increase milk production of buffaloes.

Training (including Vocational, Sponsored and FLD Training)

Thematic area	No. of courses	Participants								
		others			SC/ST			Grand Total		
		M	F	T	M	F	T	M	F	T
(A) Farmers & Farm Women										
I Crop Production										
Integrated Crop Management	10	0	0	0	347	380	727	347	380	727
II Horticulture										
a) Vegetable Crops										
Off season veg. cultivation	5	0	0	0	168	65	233	168	65	233
ICM	1	0	0	0	25	2	27	25	2	27
b) Fruits										
Layout and Management of Orchards	1	0	0	0	19	21	40	19	21	40
Management of young plants/orchards	1	0	0	0	26	9	35	26	9	35
III Soil Health and Fertility Management										
Integrated Nutrient Management	6	0	0	0	161	73	234	161	73	234
IV Livestock Production and Management										
Dairy Management	3	0	0	0	90	34	124	90	34	124
Feed Management	2	0	0	0	16	31	47	16	31	47
Disease Management	5	0	0	0	47	104	151	47	104	151
Poultry Management	1	0	0	0	22	20	42	22	20	42
V Home Science/Women empowerment										
Women & Child care	7	0	0	0	0	188	188	0	188	188
Location specific drudgery reduction technology	1	0	0	0	0	20	20	0	20	20
Household food security by Kitchen gardening and nutritional gardening	1	0	0	0	0	50	50	0	50	50
Designing & development for high nutrient efficiency diet	3	0	0	0	0	74	74	0	74	74
Design and development of	1	0	0	0	0	30	30	0	30	30

Thematic area	No. of courses	Participants								
		others			SC/ST			Grand Total		
		M	F	T	M	F	T	M	F	T
low/minimum cost diet										
Minimization of nutrient loss in processing	2	0	0	0	0	38	38	0	38	38
VII Plant Protection										
Integrated Pest Management	4	26	0	26	67	119	186	93	119	212
Integrated Pest Disease Management	1	0	0	0	13	10	23	13	10	23
X Capacity Building and Group Dynamics										
Leadership Development	1	0	0	0	0	31	31	0	31	31
Entrepreneurial development of farmers/youths	4	0	0	0	61	58	119	61	58	119
Formation and Management of SHGs	3	0	0	0	0	65	65	0	65	65
TOTAL (A)	**63**	**26**	**0**	**26**	**1062**	**1422**	**2484**	**1088**	**1422**	**2510**
(B) RURAL YOUTH										
Integrated Crop Management	6	0	0	0	196	50	246	196	50	246
Integrated Nutrient Management	1	0	0	0	18	2	20	18	2	20
Protected cultivation of vegetable crops	1	0	0	0	25	0	25	25	0	25
Dairying	5	0	0	0	71	48	119	71	48	119
Disease management	1	0	0	0	26	0	26	26	0	26
Capacity building for ICT application	1	0	0	0	30	0	30	30	0	30
Designing and development for high nutrient efficiency diet	1	0	0	0	0	20	20	0	20	20
Integrated Pest Management	1	0	0	0	18	13	31	18	13	31
Bee keeping	1	0	0	0	22	15	37	22	15	37
TOTAL (B)	**18**	**0**	**0**	**0**	**406**	**148**	**554**	**406**	**148**	**554**
(C) Extension Personnel										

Thematic area	No. of courses	Participants								
		others			SC/ST			Grand Total		
		M	F	T	M	F	T	M	F	T
Integrated Nutrient Management	1	7	0	7	30	5	35	37	5	42
Protected cultivation technology	1	0	0	0	5	25	30	5	25	30
Women and Child care	1	0	9	9	0	26	26	0	35	35
Capacity building for ICT application	2	14	1	15	32	0	32	46	1	47
Leadership Development	1	0	0	0	36	3	39	36	3	39
TOTAL (C)	**6**	**21**	**10**	**31**	**103**	**59**	**162**	**124**	**69**	**193**
GRAND TOTAL	**87**	**47**	**10**	**57**	**1571**	**1629**	**3200**	**1618**	**1639**	**3257**

Note: Details of above training programmes given in the proforma as Annexure-II

(D) Vocational training programmes for Rural Youth

Crop / Enterprise	Date	Training title*	Identified Thrust Area	Duration (days)	No. of Participants			Self employed after training			Number of persons employed else where
					Male	Female	Total	Type of units	Number of units	Number of persons employed	
Home Science	15-16/2/2012	Value addition in fruits & vegetables	Value addition	2	0	21	21	-- Work in progress --			
	21-22/2/2012	Preparation of masala	Income generation activities for empowerment of rural women	2	0	27	27	-- Work in progress --			
Agronomy	3/3/2012	Vermicomposting	Integrated Nutrient Management	1	3	23	26	-- Work in progress --			

Extension activities

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)		
				M	F	T	M	F	T	M	F	T	M	F	T
1	Krishi Mela	-	1	18,000	36,000	54,000	34,000	1,12,000	1,46,000	48	8	56	**52048**	**148008**	**200056**
2	Field Day	For FLD	7	0	0	0	137	98	235	6	1	7	**143**	**99**	**242**
3	Farmers' Day	For paddy	1	0	0	0	240	960	1200	6	1	7	**246**	**961**	**1207**
4	Khedut Shibir	Cereals, Pulses, Vege., other crops	8	0	0	0	3473	5796	9269	6	1	7	**3479**	**5797**	**9276**
5	Mahila Shibir	Health & Nutrition, SHG, Women empowerment	3	3	1	4	07	1101	1108	6	1	7	**16**	**1103**	**1119**
6	Agril. Exhibition	Krishi Mela, Khedut din, Krishi Mahotsav	9	255	120	375	64717	100916	165633	6	1	7	**64978**	**101037**	**166015**
7	Crop Symposium	Paddy crop(SRI) & Export oriented Okra	11	768	0	768	5841	13206	19047	6	1	7	**6615**	**13207**	**19822**
8	Pashupalan Shibir	-	3	0	0	0	453	501	954	5	0	5	**458**	**501**	**959**
9	Scientist visit to Farmers' Field	-	59	13	0	13	199	171	370	6	1	7	**218**	**172**	**390**
10	Farmers Visit to KVK	-	125	16	83	99	382	532	914	6	1	7	**404**	**616**	**1020**
11	Telephone Helpline	-	32	10	0	10	299	95	394	6	1	7	**315**	**96**	**411**
12	Guidance through letter	-	1	0	0	0	1	0	1	1	0	1	**2**	**0**	**2**
13	Celebration of	Agriculture,	1	0	0	0	0	50	50	1	1	2	**1**	**51**	**52**

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)		
				M	F	T	M	F	T	M	F	T	M	F	T
	Women in Agril. Day	Nutrition & Health 03/12/11													
14	Celebration of International Women's Day	Women Empowerment 21/3/12	1	0	0	0	223	2372	2595	2	1	3	**225**	**2373**	**2598**
15	Parthenium Awareness Week – 2010 programme	(8-13/9/2011)	1	227	0	227	0	0	0	5	0	5	**232**	**0**	**232**
16	Soil & Water Sample analyzed	-	1824/11	0	0	0	1835	0	1835	1	0	1	**1836**	**0**	**1836**
17	Sample diagnosed in PHC	-	36	0	0	0	48	1	49	3	0	3	**51**	**1**	**52**
18	Kishan Gosthi	-	6	50	0	50	52	11	63	5	0	5	**107**	**11**	**118**
19	Ex-trainee sammelan	-	2	0	0	0	3	34	37	1	1	2	**4**	**35**	**39**
20	Formation of New SHG	For women empowerment	1	0	0	0	0	10	10	0	1	1	**0**	**11**	**11**
21	SHG Meeting	For activation of new & exsisting SHGs	6	0	0	0	0	111	111	0	1	1	**0**	**112**	**112**
22	Farmers-Farm Women Meeting	-	5	178	0	178	89	90	179	3	1	4	**270**	**91**	**361**
23	Guest Lecture	FTC & ATMA,KAPP	24	139	25	164	1738	10149	11887	6	1	7	**1883**	**10175**	**12058**
24	Film Show	SHG, Pashupalan, Agriculture	15	0	9	9	225	468	693	5	1	6	**230**	**478**	**708**
25	Diagnostic Visit	-	25	4	0	4	30	24	54	5	0	5	**39**	**24**	**63**
26	Field Visit	-	25	3	0	3	242	342	584	6	1	7	**251**	**343**	**594**

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)		
				M	F	T	M	F	T	M	F	T	M	F	T
27	FLD Meeting	-	4	0	0	0	0	90	90	0	1	1	**0**	**91**	**91**
28	FLD visit	-	21	18	0	18	96	92	188	5	1	6	**119**	**93**	**212**
29	Krishi Mahotsav	--	1	28	0	28	4610	3682	8292	6	1	7	**4644**	**3683**	**8327**
30	Night camp	-	4	0	0	0	98	75	173	3	0	3	**101**	**75**	**176**
31	Method Demonstration	Paddy weeder & Bio-fertilizer, Preparation of vermicompost and masalas	18	0	0	0	347	274	621	6	1	7	**353**	**275**	**628**
32	Popular Articles	-	12	0	0	0	0	0	0	4	1	5	**4**	**1**	**5**
33	Newspaper Coverage	-	48	0	0	0	0	0	0	6	1	7	**6**	**1**	**7**
34	TV Telecast	-	1	0	0	0	0	0	0	1	0	1	**1**	**0**	**1**
35	Book published	-	6	0	0	0	0	0	0	3	0	3	**3**	**0**	**3**
36	Folder Prepared	-	25	0	0	0	0	0	0	6	1	7	**6**	**1**	**7**
37	Extension literature distributed	-	25	0	0	0	3323	2216	5539	6	1	7	**3329**	**2217**	**5546**
38	Research Paper published	-	23	0	0	0	0	0	0	3	0	3	**3**	**0**	**3**
39	Farmers-Scientists Interaction	-	3	0	0	0	55	8	63	3	0	3	**58**	**8**	**66**
40	Orientation Programme attended	HRD	1	0	0	0	0	0	0	1	1	2	**1**	**1**	**2**
41	Seminar/Conference/workshop/meeting attended	-	14	0	0	0	0	0	0	6	1	7	**6**	**1**	**7**

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)		
				M	F	T	M	F	T	M	F	T	M	F	T
42	Guidance to RAWE/BRS students	-	4	8	0	8	0	4	4	1	1	2	**9**	**5**	**14**
43	Suscribtion to Krishi Govidhya Magazine	-	1	0	0	0	1	0	1	0	1	1	**1**	**1**	**2**
Grand Total			**2443/11**	**19720**	**36238**	**55958**	**122764**	**255479**	**378243**	**211**	**38**	**249**	**142695**	**291755**	**434450**

Production and supply of quality seed and planting material

SEED MATERIALS

Major group/class	Crop	Variety	Quantity (qtl.)	Value (Rs.)	Provided to No. of Farmers
CEREALS	Paddy	Gurjari	110	250000	400
		IR-28	40	75000	130
Pulses	Moong	Pusa Vishal	3.60	14400	180
	Groundnut	GG-2	6.90	22816	40
	Gram	GG-2	1.20	3000	8
Sugarcane	Sugarcane	Co-5071	220	51700	11

SUMMARY

Sr. No.	Major group/class	Quantity (qtl.)	Value (Rs.)	Provided to No. of Farmers
CEREALS	paddy-Gurjari	110	250000	400
	Paddy-IR-28	40	75000	130
Pulses	Moong- Pusa Vishal	3.60	14400	180
	Groundnut- GG-2	6.90	22816	40
	Gram- GG-2	1.20	3000	8
Sugarcane	Sugarcane- Co-5071	220	51700	11
	TOTAL	**381.70**	**416916**	**769**

PLANTING MATERIALS

Major group/class	Crop	Variety	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
FRUITS	Mango	Kesar	--	--	--
	Mango	Dasheri	--	--	--

SUMMARY

Sl. No.	Major group/class	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
1	FRUITS – MANGO	--	--	--
	TOTAL	**--**	**--**	**--**

PUBLICATIONS

Type of Publication	No. of Items/topics	Number copies
News Letter	-	-
Technical reports	MPR, QPR, SAC report, FLD report, AAP, APR, MER, AGRESCO, ZREAC report, QRT report	-
Technical bulletins	-	-
Popular articles	List of articles given in Annexure – III	-
Extension literature	25	15000
Research Paper	23	--
Book Published	6	600
DVD released	2	2

SOIL AND WATER TESTING

Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized
Soil Samples	1824	1824	58	364800
Water Samples	11	11	11	550
Total	**1835**	**1835**	**69**	**365350**

SUCCESS STORIES

1. **System of Rice Intensification – Success Story of farmer**
2. **Self sufficiency in Paddy seed through Seed Village Programme**
3. **Boost production of Paddy from a New Variety NAUR-1**
4. **Yellow sticky trap – An important tool for okra pest management**

Case Studies

1. **Entrepreneurship development of tribal women Self Help Group through preparation of Masala**

Impact Studies

1. **Increasing area and productivity of Paddy in tribal belt of South Gujarat**
2. **Money-making Animal Husbandry by Guidance of KVK Tapi in Tribal dominated village**
3. **Constraints and Remedies for implementation of Feeding – Rumen Bypass Fat in Dairy Animals of South Gujarat**
4. **Effect of Urea Treated Paddy straw Along With Mineral Mixture On Milk Yield and Economics of HF Cow**
5. **Impact of Training Programme of Breeding, Feeding and Management of Animal Husbandry on Socio economic facets of farm women**
6. **Impact on livelihood security of the farmers**
7. **Impact on skill development of farmers**

Annexure – I

Proceeding of Eighth Scientific Advisory Committee Meeting of Krishi Vigyan Kendra, NAU, Vyara held on 09/08/2011 at 10:00 am at Training Hall (RKVY), KVK, NAU, Vyara

- **List of the members remained present in the meeting :**

Sr. No.	Name	Members/ Invitees	Designation
1	Dr. A. R. Pathak	Chairman	Vice Chancellor, Navsari Agricultural University, Navsari
2	Dr. M. S. Purohit	Member	Director of Extension Education, Navsari Agricultural University, Navsari
3	Dr. R. P. Rohilla	Member	Representative, Hon. Zonal Project Director, Zone-VI, ICAR, Jodhpur Rajasthan
4	Dr. B. N. Patel	Member	Representative, Directorate of Research, Navsari Agricultural University, Navsari
5	Dr. V. J. Zinzala	Member	District Agriculture Officer, Department of Agriculture, District Panchayat, Vyara, Tapi
6	Mr. Abhesingbhai M.Chaudhari	Member (Co-Op)	Chairman, A.P. M. C., Market Yard, Vyara, Dist. Tapi
7	Dr. D. C. Chaudhari	Member	Deputy Director of Animal Husbandry, District Panchayat, Tapi
8	Mr.K.V. Tandel	Member	Assistant Director (Fisheries), Near CRPF Campus, Ukai, Dist. Tapi
9	Mr. N. G. Gamit	Member	Deputy Director of Agriculture(Training), Farmers Training Centre, Vyara
10	Mr. Kamrajbhai M. Chaudhary.	Member	Assistant Director, (G.L.D.C.) Parsiwad, Vyara, Dist. Tapi
11	Mr. S.C. Dave	Member	Representative, Joint Directorate of Agriculture, Lal Banglow, Athwalines, Surat
12	Mr. Dharmesh R. Parmar	Member	Dy. Commissionor of industry & GM.,DIC, Vyara
13	Mr. R. M. Patel	Member	Depo Incharge,

			GSFC, Market Yard, Vyara, Dist. Tapi
14	Mr. B. J. Savaliya	Member	Kendra Incharge, GNFC, Market Yard, Vyara, Dist. Tapi
15	Mr. D. T. Desai	Member (Trader)	Patidar Agro Centre, Vyara, Dist. Tapi
16	Mr. Ganpatbhai D. Gamit	Member	Chairman, Gram Seva Samaj, Vyara
17	Dr.H.B. Kharecha	Member (NGO)	Gramin Vikas Trust, Moti Bhamti, Ta. Vansda
18	Revaben Ranjitbhai Chaudhari	Member	Leader, Sakhi Mandal, Ghodchit,Ta. Songadh,Dist. Tapi
19	Mr. Vipinbhai Chaudhari	Member	Secretary,Co-Operative Mandli, Vanskui, Ta- Vyara.
20	Mr. Nilesh Patel	Member (Trader)	Krushi Agro Chemicals, 26, Mahendra Park, Nr. Satyadev Plaza, Jahangirpur, Surat
21	Mr. Narayan Lachheta	Invetee	Synzenta India Ltd, Surat Region
22	Smt. Revaben Ranjitbhai	Invetee	Member, Farm Science Club, KVK, Village, Godhchit, Ta- Songadh.
23	Mr. Madhubhai J. Chaudhari	Member	Project Co-ordinator, Food, Fat and Fertilizer co., Vyara
24	Smt.Induben Ramanbhai Gamit	Member	SHG, Leader, Tribal innovative woman and Member, KVK SHG, Kapura,Vyara, Dist. Tapi
25	Smt.Kapilaben Premchand gamit	Member	SHG, Leader, Tribal innovative woman and Member, KVK SHG, Kapura,Vyara, Dist. Tapi
26	Smt.Shakuntalaben J. Gamit	Invetee	Small Tribal farmer representative, Bhararda village, Ta- Songadh
27	Smt.Nanduben Chhanabhai Kotwaliya	Member	Small Tribal farmer (Kotwaliya)representative, Jharali village, Ta- Songadh
28	Smt.Babliben Ramsingh Kotwaliya	Member	Small Tribal farmer (Kotwaliya)representative, Jharali village, Ta- Songadh
29	Smt.Raytaben Rameshbhai Gamit	Member	Small Tribal farmer representative, Bhararda village, Ta- Songadh
30	Smt.Jyotiben rameshbhai Gamit	Member	Tribal Youth, lady representative, Hangati Mahila

			Mandal,Mandal village, Ta-Songadh
31	Dr. Ramkumar Singh	Member (Farm Mechinery)	Managing Trusty, Suruchi Vasahat, Bardoli
32	Smt. Ramaben R.Singh	Invetee (Farm Mechinery)	Managing Trusty, Suruchi Vasahat, Bardoli
33	Mr. Ravibhai R. Patel	Member	Representative, Chairman, Nizar taluka kharid-vechan sangh ltd., Nizar, Ta. Nizar, Dist. Tapi
34	Mr. Jayesh Udhdhavbhai Patel	Member	Progressive Young Farmer, At. Mubarakpur, Ta. Nizar, Dist. Tapi
35	Mr. Ajitbhai Nathubhai Chauudhary	Member	Secretary, Co-operative Mandli, Kelkui, Ta- Vyara.
36	Mr. Rangji Ukabhai Gamit	Member	Tribal innovator, Gunkhadi, Ta-Songadh.
37	Kiran Devjibhai Gamit	Member	Tribal innovative farm Woman, Gunkhadi, Ta- Songadh.
38	Dr. N. M. Chauhan	Member (Secretary)	Programme Coordinator, Member Secretary, K.V.K.,Vyara, Dist. Tapi
39	Father Fransis	Invitee	Mandal, Ta. Songadh
40	Mr. Bhupendra Desai	Invitee	Co-operative Leader, Valod
41	Mr. Balvantbhai G. Ahir	Invitee	Social worker, Buhari

- **List of members who could not remain present in meeting :**

Sr. No.	Designation	Members/ Invitees
1	Director, District Rural Development Agency, Vyara, Dist. Tapi	Member
2	Deputy Director of Horticulture, Farmers Training Centre, Panwadi, Vyara	Member
3	Branch Manager, Gujarat State Seed Corporation, Apna Bazar, Vyara, Dist. Tapi	Member
4	Deputy Director of Agriculture (Ext.), Lal Banglow, Athwalines, Surat	Member
5	Project Administrator, Integrated Tribal Development Project, Songadh, Dist. Tapi	Member
6	Executive Engineer, Ukai Kakrapar Irrigation Project, Tapi	Member
7	Range Forest Officer, Vyara Range, Dist. Tapi	Member
8	Social Welfare Officer, Market Yard, Vyara, Dist Tapi	Member

9	Lead Bank Officer, Regional Officer, B.O.B., Dutch Garden, Surat	Member
10	Programme Director, Prasarbharti, Bhatar Road, Surat	Member
11	District Registrar, A.P.M.C. office, Market Yard, Vyara	Member

****One meting was held at Gandhinagar on the same date, hence the above members could not attended the SAC Meet.**

The Eighth Scientific Advisory Committee Meeting of Krishi Vigyan Kendra, NAU, Vyara was structured to review the progress made by KVK from 19/08/2010 to August-2011, (up to **06/08/2011**) and to discuss the action plan for the next year (**i.e. April-2011 to March-2012**) at training hall of RKVY, KVK, Vyara on **9th August, 2011**. The meeting was inaugurated by Dr. A. R. Pathak, Honorable Vice Chancellor, NAU, Navsari. Dr. N. M. Chauhan, Member Secretary & Programme Co-ordinator, Krishi Vigyan Kendra, NAU, Vyara welcomed dignitaries, committee members, farmers and invitees. Dr. N. M. Chauhan, Programme Co-ordinator, KVK has made a sound presentation on Annual Progress Report of the last year along with impact studies, success stories, case studies and publications. The presentation was appreciated by house. The Action Plan for the next year was also presented by Dr. Chauhan including all mandatory activities keeping in mind the need based, area specific and demand based extension activities were also incorporated. The suggestions along with feedback from farmers/farm women, GOs, NGOs and co-operative sectors was accepted and approved by the House. The overall discussion made during the meet was really unique, distinctive, productive and resultant. The remarkable suggestions and feedback emerged out from each and every member inside the house. It was a good sign for future betterment of this KVK. During discussion, Dr. M. S. Purohit, Director of Extension Education, NAU, Navsari gave good suggestions about OFTs and advised for use of Neem Seed Kernel extract as the better source of insect control rather than *Naffatia, the locally used herbal plant extractor.* Dr. B. N. Patel, Associate Director of Research, NAU, Navsari also suggested about the water harvesting structure. Dr. R. P. Rohilla, Senior Scientist, ZPD Unit, Jodhpur gave few good suggestions for further betterment of this KVK. He was also impressed by the

progress made by this KVK in each and every mandatory works, extension activities, impact studies, success stories, case studies and publications of this KVK. He blessed and expressed his all of good wishes for the “National Best KVK Award” to this KVK in next year. During the meeting two books published by KVK Vyara were released by the dignitaries. Honorable Vice Chancellor, Dr. A. R. Pathak in his concluding remarks congratulated Programme Co-ordinator and his team of scientists for colourful, result oriented TOT activities made by KVK, Tapi and suggested to make Bench mark survey before adopting the new villages and after three years, the overall impact studies should be conducted. Vote of thanks was presented by Dr. J. H. Rathod, Subject Matter Specialist (Plant Protection), KVK, NAU, Vyara. The SAC Meet was in actuality a unique in healthy and constructive environment, which would be resulted in real road map of KVK as a **“Real knowledge and Resource Centre”** for KVK District.

8.1 Approval of minutes of Seventh Scientific Advisory Committee.

The action taken on the minutes of Seventh Scientific Advisory Committee Meeting of KVK, Vyara held on 17th August, 2010 was presented by Programme Co-ordinator was approved by the house.

8.2 Progress made by KVK during August-2010 (from 19/08/2010) to August 2011 (up to 06/08/2011).

Programme Co-ordinator, KVK, NAU, Vyara presented the report on progress made by KVK, Vyara for the period of August-2010 to August-2011 (**from 19/08/2010 up to 06/08/2011**). Following suggestions were made by the house.

8.2.1 District Profile should be updated.

8.2.2 More emphasizes to be given on Seed village concept for Paddy.

8.2.3 Success stories should be published in English and local language.

8.2.4 More emphasizes to be given on Farm Mechanization.

8.2.5 Trainings on Soybean value addition are included in Action Plan.

8.3 Action plan for the period of April-2011 to March-2012.

Discussion was made on the Action Plan for the period of April-2011 to March-2012 presented by Programme Co-ordinator, KVK, NAU, Vyara which was approved with following suggestions.

8.3.1 Effort should be made to popularize the mango variety like Sonpari & Vanlakshmi.

8.3.2 More attempts should be done for IPM in Okra.

8.3.3 Training on primary processing of ginger and turmeric should be conducted.

8.3.4 Effort should be made to improve the farm implements made by Suruchi, Bardoli.

8.3.5 FLD on organic farming should be conducted.

8.3.6 Training on value addition in soybean should be conducted.

8.3.7 Training / FLD should be conducted on Honey-bee.

8.3.8 Farm-trials on *ratooning* in cotton should be conducted at Nizar, farmer's field.

Annexure – II

Details of Training programmes:

Date	Clientele	Title of the training programme	Discipline	Thematic area	Durat-ion in days	Venue (Off / On Campus)	Number of other participants			Number of SC/ST			Total number of participangs		
							M	F	T	M	F	T	M	F	T
20/5/2011	P.F.	INM in okra	Horticulture	INM	1	OFF	0	0	0	55	4	59	55	4	59
21/5/2011	R.Y.	Scientific cultivation of Paddy (FLD training)	Agronomy	ICM	1	OFF	0	0	0	42	6	48	42	6	48
6/6/2011	P.F.	Scientific cultivation of okra	Horticulture	ICM	1	OFF	0	0	0	25	2	27	25	2	27
6/6/2011	F.W.	Scientific cultivation of kharif crops	Agronomy	INM	1	ON	0	0	0	9	12	21	9	12	21
7/6/2011	P.F.	Scientific cultivation of Paddy & tur	Agronomy	ICM	1	ON	0	0	0	10	7	17	10	7	17
8/6/2011	P.F.	Pest management in paddy cultivation	Plant Protection	IPM	1	OFF	0	0	0	12	14	26	12	14	26
9/6/2011	R.Y.	Scientific cultivation of kharif crops	Agronomy	INM	1	ON	0	0	0	18	2	20	18	2	20
10/6/2011	P.F.	Scientific cultivation of Paddy crop	Agronomy	ICM	1	ON	0	0	0	89	161	250	89	161	250
10/6/2011	P.F.	Scientific cultivation of vegetable crops	Horticulture	INM	1	OFF	0	0	0	35	24	59	35	24	59
13/6/2011	F.W.	SRI technology in paddy	Agronomy	ICM	1	OFF	0	0	0	9	40	49	9	40	49
14/6/2011	F.W.	SRI technology in paddy	Agronomy	ICM	1	OFF	0	0	0	39	43	82	39	43	82
15/6/2011	R.Y.	SRI technology in paddy	Agronomy	ICM	1	OFF	0	0	0	15	35	50	15	35	50
16/6/2011	P.F.	Scientific cultivation of Paddy crop	Agronomy	ICM	1	ON	0	0	0	11	8	19	11	8	19
23/6/2011	P.F.	Artificial Insemination & its importance	Animal Science	Dairy Management	1	OFF	0	0	0	40	25	65	40	25	65
30/6/2011	P.F.	Scientific cultivation of mango and	Horticulture	Management of young	1	ON	0	0	0	26	9	35	26	9	35

		orchard management		plants/orchard												
1/7/2011	F.W.	Health and Nutrition for pregnant & lactating women and children	Home Science	Women and Child Care	1	ON	0	0	0	0	49	49	0	49	49
4/7/2011	F.W.	Marketing of Agril.products	Extension Education	Enterpreneurial development of farmers/youths	1	OFF	0	0	0	0	32	32	0	32	32
4/7/2011	F.W.	Anemia and its management	Home Science	Women and Child Care	1	OFF	0	0	0	0	38	38	0	38	38
5/7/2011	F.W.	Nutritional deficiency diseases in children and preparation of low cost nutritious diet for children	Home Science	Design and development of low/minimum cost diet	1	ON	0	0	0	0	30	30	0	30	30
7/7/2011	F.W.	Urea treatment & its importance	Animal Science	Feed Management	1	OFF	0	0	0	0	20	20	0	20	20
7/7/2011	F.W.	Different methods of cooking foods	Home Science	Minimization of nutrient loss in processing	1	OFF	0	0	0	0	20	20	0	20	20
8/7/2011	P.F.	IPDM in paddy	Plant Protection	IPDM	1	OFF	0	0	0	13	10	23	13	10	23
11/7/2011	F.W.	Deworming and its benefit	Animal Science	Disease Management	1	OFF	0	0	0	0	20	20	0	20	20
11/7/2011	F.W.	Skill of leader	Extension Education	Leadership Development	1	OFF	0	0	0	0	31	31	0	31	31
13/7/2011	F.W.	Kitchen gardening/nutrition gardening	Home Science	Household food security by kitchen gardening/ nutrition gardening	1	ON	0	0	0	0	50	50	0	50	50
16/7/2011	F.W.	Nutrition for mother and child	Home Science	Women & Child care	1	OFF	0	0	0	0	20	20	0	20	20
16/7/2011	F.W.	Marketing of	Extension	Enterpreneurial	1	OFF	0	0	0	0	26	26	0	26	26

		Agril.products	Education	development of farmers/youths											
18/7/2011	F.W.	Nutritional deficiency diseases in children and preparation of ORS for preventing diarrhoea	Home Science	Women and child care	1	OFF	0	0	0	0	23	23	0	23	23
18/7/2011	F.W.	Vaccination and its importance in livestock production	Animal Science	Disease Management	1	OFF	0	0	0	0	39	39	0	39	39
20/7/2011	P.F.	IPM in paddy	Plant Protection	IPM	1	OFF	26	0	26	0	0	0	26	0	26
12/7/2011	F.W.	Vegetable cultivation practices	Horticulture	Off-season vegetable cultivation	1	OFF	0	0	0	20	34	54	20	34	54
21/7/2011	P.F.	Use of bio-fertilizer in cereals and pulse crops	Agronomy	INM	1	OFF	0	0	0	15	13	28	15	13	28
25/7/2011	R.Y.	Scientific cultivation of kharif crops	Agronomy	INM	1	OFF	0	0	0	28	09	37	28	09	37
26/7/2011	P.F.	Profitable poultry management and management alongwith dairy animal management	Animal Science	Poultry Management	1	OFF	0	0	0	22	20	42	22	20	42
28/7/2011	R.Y.	Important infectious diseases and its prevention and control	Animal Science	Disease Management	1	ON	0	0	0	26	0	26	26	0	26
2/8/2011	F.W.	Mango plantation technique	Horticulture	Orchard management	1	OFF	0	0	0	19	21	40	19	21	40
18/8/2011	F.W.	IPDM in paddy	Plant Protection	IPM	1	OFF	0	0	0	08	105	113	08	105	113
2/9/2011	P.F.	Feed management in dairy animals	Animal Science	Feed Management	1	ON	0	0	0	16	11	27	16	11	27
2/9/2011	F.W.	Preparation of	Home	Designing &	1	ON	0	0	0	0	25	25	0	25	25

		protein rich diet from locally available food material	Science	development for high nutrient efficiency diet												
7/9/2011	F.W.	Animal Health Management	Animal Science	Disease Management	1	ON	0	0	0	12	23	35	12	23	35
9/9/2011	F.W.	Formation and Management of SHGs	Home Science	Formation and Management of SHGs	1	ON	0	0	0	0	20	20	0	20	20
13/9/2011	E.F.	Leadership Development	Extension Education	Leadership Development	1	ON	0	0	0	36	3	39	36	3	39
14/9/2011	P.F.	Artificial Insemination (A.I.) & its importance in dairy animals	Animal Science	Dairy Management	1	ON	0	0	0	18	9	27	18	9	27
14/9/2011	P.F.	IPM in paddy	Plant Protection	Integrated Pest Management	1	ON	0	0	0	47	0	47	47	0	47
15/9/2011	R.Y.	Housing of dairy animals	Animal Sciecne	Dairying	1	ON	0	0	0	15	16	31	15	16	31
15/9/2011	R.Y.	Production technology of cash & pulse crops	Agronomy	Integrated Crop Management	1	ON	0	0	0	51	0	51	51	0	51
19-20/9/2011	E.F.	Health & nutrition for mother &child	Home Science	women and Child Care	2	ON	0	9	9	0	26	26	0	35	35
22/9/2011	P.F.	Kheduto udhyog sahasik bano	Extension Education	Enterpreneurial development of farmers/youths	1	ON	0	0	0	31	0	31	31	0	31
23/9/2011	P.F.	Farm mechanization and SRI technology in paddy	Agronomy	Integrated Crop Management	1	ON	0	0	0	60	0	60	60	0	60
7/10/2011	F.W.	Different methods of cooking foods	Home Science	Minimization of nutrient loss in processing	1	OFF	0	0	0	0	18	18	0	18	18
10/10/2011	F.W.	Drudgery reduction technology of improved Naveen sickle for paddy	Home Science	Location specific drudgery reduction	1	ON	0	0	0	0	20	20	0	20	20

		harvesting		technology											
2/11/2011	P.F.	Scientific cultivation of gram	Agronomy	Integrated Nutrient Management	1	ON	0	0	0	23	9	32	23	9	32
9/11/2011	R.Y.	Clean Milk Production	Animal Science	Dairying	1	OFF	0	0	0	2	19	21	2	19	21
16/11/2011	R.Y.	Housing of animal	Animal Science	Dairying	1	OFF	0	0	0	25	0	25	25	0	25
18/11/2011	R.Y.	Plant protection in wheat and gram	Plant Protection	Integrated Pest Management	1	OFF	0	0	0	18	13	31	18	13	31
25/11/2011	F.W.	Vegetable production technology	Horticulture	Off-season Vegetable Cultivation	1	OFF	0	0	0	12	28	40	12	28	40
29/11/2011	R.Y.	Housing of dairy animal	Animal Science	Dairying	1	OFF	0	0	0	12	10	22	12	10	22
29/11/2011	F.W.	Anemia & its management	Home Science	Women & child care	1	OFF	0	0	0	0	21	21	0	21	21
30/11/2011	P.F.	Vegetable production technology	Horticulture	Off-season Vegetable Cultivation	1	ON	0	0	0	27	3	30	27	3	30
1/12/2011	F.W.	Importance of fruits & vegetables in daily diet	Home Science	Women & child care	1	OFF	0	0	0	0	21	21	0	21	21
1/12/2011	P.F.	A.I. & its importance in dairy animals	Animal Science	Dairy Management	1	OFF	0	0	0	32	0	32	32	0	32
2/12/2011	F.W.	Preparation of iron rich diet from locally available food material	Home Science	Designing & development for high nutrient efficiency diet	1	OFF	0	0	0	0	20	20	0	20	20
2/12/2011	F.W.	Deworming and its benefit	Animal Science	Disease Management	1	OFF	0	0	0	0	20	20	0	20	20
2/12/2011	P.F.	Scientific cultivation of veg. production	Horticulture	Off-season Veg. Production technique	1	OFF	0	0	0	20	0	20	20	0	20
8/12/2011	P.F.	Deworming & its	Animal	Disease	1	ON	0	0	0	35	2	37	35	2	37

		benefits	Science	Management											
9/12/2011	E.F.	Use of ICT in agriculture	Extension Education	Capacity building for ICT application	1	ON	0	0	0	25	0	25	25	0	25
9/12/2011	F.W.	Book keeping system in Self Help Groups	Home Science	Formation & management of SHGs	1	ON	0	0	0	0	16	16	0	16	16
15/12/2011	R.Y.	Awareness about use of ICT in agriculture	Extension Education	Capacity building for ICT application	1	ON	0	0	0	30	0	30	30	0	30
19/12/2011	F.W.	Preparation of protein rich diet from locally available food material for preschool children	Home Science	Design & development for high nutrient efficiency diet	1	OFF	0	0	0	0	29	29	0	29	29
20/12/2011	R.Y.	Urea treatments & its importance	Animal Science	Dairying	1	ON	0	0	0	17	3	20	17	3	20
16/12/2011	R.Y.	Rabi crop cultivation	Agronomy	ICM	1	ON	0	0	0	25	0	25	25	0	25
22/12/2011	R.Y.	Honey Bee	Plant Protection	Bee keeping	1	OFF	0	0	0	22	15	37	22	15	37
3/1/2012	E.F.	Usefulness of ICT in agriculture	Extension Education	Capacity building for ICT application	1	ON	14	1	15	7	0	7	21	1	22
6/1/2012	P.F.	Scientific cultivation of groundnut	Agronomy	Integrated Nutrient Management	1	ON	0	0	0	24	11	35	24	11	35
4/2/2012	F.W.	Formation and Management of SHGs	Home Science	Formation and Management of SHGs	1	ON	0	0	0	0	32	32	0	32	32
6/2/2012	F.W.	Marketing of Agril. products	Extension Education	Enterpreneurial development of farmers	1	ON	0	0	0	0	30	30	0	30	30
13/2/2012	P.F.	Cultivation practices of moongbean	Agronomy	Integrated Crop Management	1	ON	0	0	0	21	24	35	21	14	35

14/2/2012	R.Y.	Scientific cultivaion of rabi crops	Agronomy	Integrated Crop Management	1	ON	0	0	0	35	0	35	35	0	35
15-16/2/2012	F.W.	Value addition in fruits & vegetables (Vocational Training)	Home Science	Value addition	2	OFF	0	0	0	0	21	21	0	21	21
21-22/2/2012	F.W.	Preparation of masala (Vocational Training)	Home Science	Income generation activities for empowerment of rural women	2	ON	0	0	0	0	27	27	0	27	27
27/2/2012	R.Y.	Scientific vegetable production technology	Horticulture	Proctected cultivation of vegetable crops	1	ON	0	0	0	25	0	25	25	0	25
29/2/2012	F.W.	Nutritional deficiency diseases in children and preparation of ORS to prevent dehydration	Home Science	Women & Child Care	1	OFF	0	0	0	0	16	16	0	16	16
2/3/2012	E.F.	Off season vegetables production technology	Horticulture	Protected cultivation technology	1	ON	0	0	0	5	25	30	5	25	30
3/3/2012	R.Y.	Vermicomposting (Vocational training)	Agronomy	Integrated Nutrient Management	1	ON	0	0	0	3	23	26	3	23	26
5/3/2012	R.Y.	Preparation of iron rich diet for adolescent girls to prevent anemia	Home Science	Design & development for high nutrient efficiency diet	1	ON	0	0	0	0	20	20	0	20	20
5/3/2012	E.F.	Development & implementation of project on farmers field	Agronomy	Integrated Nutrient Management	1	ON	7	0	7	30	5	35	37	5	42
6/3/2012	P.F.	Scientific cultivation of moong & maize	Agronomy	Integrated Crop Management	1	OFF	0	0	0	39	6	45	39	6	45
14/3/2012	P.F.	Scientific vegetable cultivation practices	Horticulture	Off-season Veg.	1	ON	0	0	0	89	0	89	89	0	89

		of the district		Production technique												
12-13/3/2012	P.F.	Increasing production technology	Agronomy	Integrated Crop Management	2	OFF	0	0	0	43	99	142	43	99	142
28/3/2012	P.F.	Scientific cultivation of moong (FLD training)	Agronomy	Integrated Crop Management	1	OFF	0	0	0	26	2	28	26	2	28

Annexure - III

- **List of Popular Articles**

1	**Dr. N.M.Chauhan and Shri B.M.Tandel. (2011).** NIKASLAKSHI BHINDANI KHETI
2	**Arti N. Soni (2011).** SHIVANKAM DWARA AADIVASI MAHILAO UDHYOGSAHASIKTA VIKAS
3	**Arti N. Soni (2011).** GRAMYA MAHILAO DWARA UDHYOG THAKI AARTHIK AAVAK DWARA SASHATIKARAN
4	**Dr. N.M.Chauhan and Shri B.M.Tandel. (2011)**. BHINDANI NIKAS DWARA VIDESHI HUNDIYAMAN
5	**Dr. J.K.Raval and Dr. N.M.Chauhan (2011).** IMU FARMING- NAFAKARAK VYAVSAY
6	**Dr. J.K.Raval and Dr. N.M.Chauhan (2011).** IMU FARMING VISHE JAGRUTI KELAVAVA MATE
7	**Dr. N.M.Chauhan and Dr. J.J.Pastagia (2011).** SANKALIT ROG NIYANTRAN VADE PAK SANRAKSHAN
8	**Dr. J.K.Rawal and Dr. N.M.Chauhan (2011).** PASHUPALANNE SAFAL BANAVAVA AATLU JAROOR KARVU JOEA
9	**Dr. N. M. Chauhan (2011).** INFORMATION COMMUNICATION TECHNOLOGYNU MAHATVA
10	**Dr. J.K.Raval and Dr. N.M.Chauhan (2011).** IMU FARMING- NAFAKARAK VYAVSAY
11	**Dr. C.D.Pandya (2012).** JAIVIK KHATARO ANE TENO UPAYOG KARVANI VIVIDHA RITO
12	**Arti N.Soni (2012).** BAL KALYAN MATE AAROGYALAKSHI YOJNAO

Annexure – IV
District Profile

1. General census

Information regarding District villages and Population

Taluka	No. of villages	Population (2001)				
		Male	Female	Total	SC	ST
Vyara	149	125082	124724	249810	2629	211611
Valod	40	441333	42994	87127	953	64112
Nizar	87	52098	53287	105385	1878	83843
Uchchal	68	36125	36827	73042	193	71084
Songadh	177	101335	101335	204270	2732	170464
Total	**521**	**358863**	**359167**	**719634**	**8385**	**601114**

2. Agricultural and allied census

-Classification of Land

Taluka	Forest	Uncultivated	Total cultivated	Irrigated Area	Unirrigated	Fallow land	Pasture	Total geographical area	Cultivated land (%)
Vyara	18495	2210	54225	22858 (42.15)	31367	220	1575	81260	66.73
Valod	0	239	17978	16383 (91.13)	1595	282	421	20228	88.88
Nizar	332	16151	21561	10181 (47.22)	11380	61	1587	40079	53.8
Uchchal	23447	23325	8468	1937 (22.87)	6531	33	356	66500	12.73
Songadh	31751	3726	61891	12037 (19.45)	49854	29	4969	135404	45.71
Total	**74025**	**45651**	**164123**	**63396 (38.63)**	**112974**	**625**	**8908**	**343471**	**47.78**

Area under fruit crops, vegetables and spices & condiments :

Crop	Area (Ha.)
Fruit crops	1378
Vegetables	1785
Spices & condiments	2080

3. **Agro climatic zone** **:** As per Table no. 2.2.1
4. **Agro eco system** **:** As per Table no. 2.2.2
5. **Major and micro-farming systems** **:** As per Table no. 2.1
6. **Major production systems like rice based (rice-rice, rice-green gram, etc.), cotton based, etc. :**
   Rice – Gram, Rice – Groundnut, Rice – Sugarcane, Rice – Okra, Rice – Brinjal, Rice + Pigeon pea + Sorghum
   Cotton – Wheat, Soybean – Gram, Soybean – Wheat, Soybean – Okra, Sugarcane – Green Gram
7. **Major agriculture and allied enterprises :**
   Sugar factory, Rice based industry, Groundnut based factory, Dairy industries, Cold storage

Annexure – V

Agro-ecosystem analysis of the focus / target area

1. **Names of villages, focus area, target area etc. :** As per Table no. 2.6
2. **Survey methods used (survey by questionnaire, PRA, RRA, etc.) :** PRA
3. **Various techniques used and brief documentation of process involved in applying the techniques used like release transect, resource map, etc.**
   Various techniques used are given below:
   Social Map: It seeks to explore the spatial dimensions of people's realities. The focus here is on the depiction of habitation pattern and the nature of housing, social infrastructure: roads, drainage system, schools, drinking water facilities etc. It develops a comprehensive understanding of the physical and social aspects of village life. It is made by local people and not by experts. It is not drawn to scale. It depicts what the local people believe to be relevant and important for them. Thus it reflects their perception of the social dimensions of their reality with a high degree of authenticity.

Resource Map: It focuses on the natural resources in the locality and depicts land, hills, rivers, fields, vegetation etc. It is not drawn to scale and not done by the experts but by the local people. The resource map drawn by the local people is considered to be accurate and detailed because the local people have in-depth knowledge about their surroundings.

Mobility Map: It explore the movement pattern of an individual, a group or a community. The focus is on where people go and for what. It reflects the people's perception of movement patterns and reasons thereof.

Time line : It is used to explore the temporal dimensions from a historical perspective. It captures the chronology of events as recalled by local people. It is drawn as a sequential aggregate of past events. The important points is that it is not the history as such but the events of past as perceived and recalled by the local people themselves.

Venn diagram: It is used to study institutional relationship and is sometimes also referred to as institutional diagram. It is however popularly known as "Chapati diagram" as it uses circles of various sizes to represent institutions or individuals. The bigger the circle, the more important is the institute/individual as perceived by the local people.

Pair-wise Ranking Method: It helps in arriving at people's priorities and preferences. In this method, two items, attributes, factors etc, are compared at a time. This process of comparing of two at a time is carried on till each item has been compared with the other. The frequency of how many times each of the items have been preferred is ascertained. This frequency gives an idea of preferences of the people.

4. **Analysis and conclusions : --**
5. **List of location specific problems and brief description of frequency and extent/ intensity/severity of each problem :** As per Table no. 2.7
6. **Matrix ranking of problems**

   Matrix Ranking : It makes the comparision of various of various items on the basis of different criteria. It helps in arriving at a comparative understanding of the items, based on certain characteristics or criteria and thereby making an informed choice.
7. **List of location specific thrust areas :** As per Table no. 2.8
8. **List of location specific technology needs for OFT and FLD :** As per Table no. 3.B
9. **Matrix ranking of technologies : --**
10. **List of location specific training needs :** As per Annexure - II

Annexure - VI

TECHNOLOGY INVENTORY AND ACTIVITY CHART- III

Include

1. Name 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.

Sr. No.	Technology	Crop/enterprise	Year of release or recommendation of technology	Source of technology	Reference/ citation
1	Irrigation Management	Gram	--	NAU, Navsari	-
2	SRI	Paddy	--	NAU, Navsari	-
3	IPM	cotton	--	NAU, Navsari	-
4	Nutrition Management	Animal Science	-	Text book of Animal Husbandary- G.C.Benerji	-
5	Nutrition Management	Home Science	-	A text book of "Nutritive value of Indian foods" by National Institute of Nutrition, Hyderabad	-

3. Activity Chart

Crop/ Enterprise	Problem	Cause	Solution	Activity	Reference of technology
Cotton	Low productivity of cotton under rainfed black soil	1. Imbalance use of fertilizer application 2. Pest and disease occurrence	1. Application of RD of fertilizer 2. IPM	1. Conduct component FLD to demonstrate on farmers field on RD of fertilizer 2. Training, awareness	Main cotton research station, NAU., Surat

				and FLD programme on IPM of cotton.	
Gram	Low productivity	Use of local variety and not applied use of irrigation at critical stages	1.Introduce new variety 2.use of Bio fertilizer and RD of fertilizer	Conducted FLD and training , awareness programme	Director of Research and Pulse research station NAU, Navsari
Paddy	Low productivity	They are not sowing of Green manure before TP of planting	Balance use of fertilizer	1.Introduce Green manure and conducted FLD and training programme on Paddy 2. Use of RD of ferilizer 3. Use of improved variety	Director of Research,m Rice Research Station,NAU, Vyara
Home Science	Mal nutrition in women and children, women drudgery, poor economic condition of tribal farmers	Lack of knowledge about health and nutrition, poor economic status, inadequate intake of friuts and vegetables	Use of balance diet from locally available food materials, introduction of kitchen garden, fruits & vegetables preservation,use of NAVEEN sickle, women empowerment	Conducted FLD,OFT, training , awareness programme, In service training, Mahila shibir, vocational training *etc.*	Recommended by WHO and A text book of “Nutritive value of Indian foods” by National Institute of Nutrition, Hyderabad, CIAE, Bhopal
Animal Science	Poor animal nutrition and low productivity of milk	Inefficient use of dry fodder and poor knowledge of scientific animal feeding practices	Application of urea treatment to paddy straw and use of mineral mixture in animal feeding	Conducted FLD on urea treatment to paddy straw and use of mineral mixture in animal feeding, awareness programme.	Text book of Animal Husbandary-G.C.Benerji

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

Crop	Name of technology	Recommended by Whom	Reason of selection	Characteristics of variety.
Pigeon pea (Kharif)	Introduction of new variety, Land configuration	Research Scientist, Pulses Crop, Navsari	Use Local variety which give low yield & susceptible to wilt.	**Vaishali** Seed are white & red, more branches in plant, pod number high, tolerant to wilt, SMD, phytophtera and maturity days 150-160.
Gram (Rabi)	Irrigation Management	Research Scientist, Pulses Crop, Navsari	Giving life saving irrigation at critical stages and Phosphatic fertilizers as basal dose gave more number of Branch, Pods and increased seed yield than traditional method.	**GG-2** Bold size seeds with reddish colure also suitable for dalia. It is god variety for inter culturing with sugarcane.
Paddy (TP)	SRI	Research Sct. NARP, NAU, Navsari	The SRI technology of paddy had required less seed rate and gave more number of tillers, filled grain and increased seed yield than traditional method.	**NAUR-1** (Midlate maturing-120 day) Medium grain, good cooking quality, Tolerant to grain discoloration, blight, blast & hoppers, stem borer and high yielding compared to hybrid.
Cotton	Production Technology	NAU, Navsari	No Use of KNo_3 , No proper Weed management, flat sowing and improper spacing	--
Home Science	Use of iron rich diet to prevent anemia	A text book of "Nutritive value of Indian foods" by National Institute of Nutrition, Hyderabad	Daily use of iron rich diet (100gm roasted Bengal gram + 100gm roasted Rice flakes) and one iron tablet with existing dietary pattern increased Hb level and body weight.	--
Animal Science	Nutrition Management	Text book of Animal Husbandary-G.C.Benerji	Paddy straw treated with 4% urea and 35 gm mineral mixture feeding daily gaves higher milk production.	--
Brinjal	INM	Vegetable Research Unit, NAU, Navsari	Imbalance use of fertilizer & not using FYM.	--
Okra	INM	Vegetable Research Unit, NAU, Navsari	Imbalance use of fertilizer & not using FYM.	--