ANNUAL PROGRESS REPORT (2013-14)
(01.04.2013 to 31.03.2014)

1. GENERAL INFORMATION ABOUT THE KVK

1.1 Name and address of KVK with Phone, Fax and E-mail

Address	Telephone		E mail	Web Address
Krishi Vigyan Kendra, Junagadh Agricultural University, Targhadia, (Dist.: Rajkot) (Gujarat) - 360 003	Office (0281) 2784170	FAX (0281) 2784170	kvkrajkot@gmail.com	www.jau.in

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

Address	Telephone		E mail
	Office	FAX	
Junagadh Agricultural University, Junagadh (Gujarat)	(0285) 2672080	(0285) 2672653	dee@jau.in

1.3 **Name of the Programme Coordinator with Phone & Mobile No**.

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. B. B. Kabaria	"Ramdoot" B-17, Aalap Century, Kalawad Road, Rajkot – 360 005	09374202518	drbbkabaria@gmail.com

1.4 **Year of Sanction**: September – 2004

1.5 Staff Position (as on 31st March, 2014)

Sr. No.	Sanctioned post	Name of the incumbent	Designation	Disci-pline	Pay Scale (Rs.)	Present basic+ G.P. (Rs.)	Date of joining	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1	Programme Coordinator	Dr. B. B. Kabaria	Programme Coordinator	Agril. Ento.	37400-67000	66070/-	15-9-06	Permanent	General
2	SMS	Dr. J. B. Kathiriya	SMS (Animal. Sci)	Ani Sci.	15600-39100	21600/-	19-8-06	Permanent	General
3	SMS	Vacant	SMS (Agron.)	-					
4	SMS	Shri D. A. Saradava	SMS (Pl.Protection)	Agril. Ento.	15600-39100	31860/-	27-5-09	Permanent	General
5	SMS	Vacant	SMS (Horti.)						
6	SMS	Shri. D. P. Sanepara	SMS (Agril. Engg.)	Agri. Eng.	15600-39100	29850/-	1-6-09	Permanent	General
7	SMS	Mrs. H. H. Padsumbiya	SMS (Home Sci.)	Home Sci.	15600-39100	21600/-	17-8-06	Permanent	General
8	Programme Assistant (Training)	Shri. R. L. Vasoya	Programme Assistant (Training)	B.Sc. (Agri.)	9300-34800	21460/-	1-3-13	Permanent	General
9	Computer Programmer	Miss. R. T. Padaliya	Computer Programmer	-	9300-34800	10000/- Fix	3-1-09	Permanent	General

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
10	Farm Manager	Vacant	Farm manager	-					
11	Acc. / Sup.	Shri B.H. Joshi	Offi. Sup. Cum A/c. Officer	-	9300-34800	13500/-	11-6-08	Permanent	General *Pooled at Junagadh
12	Steno-grapher	Shri B. J. Lalkiya	Junior Steno	-	9300-34800	17190/-	01-5-07	Permanent	General
13	Driver	Shri B. K. Gondaliya	Jeep Driver-Cum Mechanic	-	5200-20200	16030/-	11-9-08	Permanent	OBC
14	Driver	Shri D. K. Makwana	Jeep Driver-Cum Mechanic	-	5200-20200	15990/-	01-7-06	Permanent	OBC
15	Supporting staff	Smt.U.G.. Zala	Supporting Staff	-	4440-7440	8910/-	16-9-04	Permanent	General
16	Supporting staff	Shri Y. B. Joshi	Supporting Staff	-	4440-7440	9710/-	2-6-09	Permanent	General

1.6 Total land with KVK (in ha):

Sr. No.	Item	Area (ha)
1	Under Buildings	1.00
2.	Under Demonstration Units	3.50
3.	Under Crops	14.00
4.	Orchard/Agro-forestry	1.00
5.	Others	0.50
	Total	**20.00**

1.7 Infrastructural Development:

A) Buildings

Sr. No	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expe-nditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	KVK	31-3-2011	550	5500000	-	-	-
2.	Farmers Hostel	KVK	31-3-2011	305	3000000	-	-	-
3.	Staff Quarters (6)	KVK	31-3-2011	400	4000000	-	-	-
4.	Poly House	RKVY	31-3-09	320	281602	-	-	-
5	Net House	RKVY	31-3-09	150	64498	-	-	-
6.	Store room	RKVY	9-2-10	70.61	454500	-	-	-
7.	Training hall	RKVY	11-2-10	190.99	1395800	-	-	-
8.	Processing unit	RKVY	11-2-10	197.31	1536400	-	-	-
9.	Implement shed	RKVY	9-2-10	77.33	297800	-	-	-
10	Farm Godown	KVK	31-3-2012	55.00	400000	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Toyota Qualis	2004	590000	236771	Working
Tata Sumo	2008	600000	194363	Working (Purchase from MP grant)
Motorcycle	2010	50000	23246	Working

C) Equipments & AV aids

Name of the equipment	Year of purchase	Number	Cost (Rs.)	Source of Funding	Present status
Generator set	2002	1	24900	KVK	Working
Color TV (Akai) with Remote	2002	1	13850	KVK	Working
Panasonic PT LC 50 LCD Project	2002	1	164368	KVK	Working
PA Audio Vision System	2002	1	20000	KVK	Working
Computer System Intel Pentium IV	2003	1	32000	KVK	Working
Computer Wipro Super Genius Desktop	2006	1	-	KVK	Working
Electronic Kelvinator Refrigerator	2006	1	10,500	KVK	Working
Solar steel digital water plant	2006	1	45000	RKVY	Working
Balaji Bio Gas Plant	2007	1	32000	RKVY	Working
Aspee Tractor Mounted Sprayer	2007	1	32000	RKVY	Working
Laptop Computer (HCL)	2008	1	47500	RKVY	Working
Air Assisted Blower type sprayer	2009	1	98750	RKVY	Working
Photo copier Machine (Richo)	2009	1	115300	RKVY	Working
LCD Projector with ceiling mount kit Model-PT-CB50NTE-2GA (Panasonic)	2009	1	92155	RKVY	Working
DVD Home theater system with Speaker (HCL)	2009	1	28000	RKVY	Working
LCD TV 22" Model- 22LG30 (L. G.)	2009	1	27287	RKVY	Working
Cotton stalk Shredder	2009	5	121000	RKVY	Working
Groundnut Digger-Tractor Operated	2009	1	78500	RKVY	Working
Cultivator cum Rotavator	2009	2	90000	RKVY	Working
Groundnut Decorticator	2009	1	95850	RKVY	Working
Multi crop Thresher	2009	1	114000	RKVY	Working
Processing Unit	2009	1	1685000	RKVY	Working
Plantar – tractor operator	2009	1	44000	RKVY	Working
Digital Camera (Nikon) P- 90 12.1	2010	1	24300	KVK	Working

1.8. Details of SAC meeting conducted on 31-12-2013

Name and Designation of Participants	Salient Recommendations	Action taken
1. Dr. N. C. Patel, Hon. Vice Chancellor, JAU, Junagadh 2. Dr. I. U. Dhruj, ADR, JAU, Junagadh 3. Dr. H. B. Gardharia, Asso. Director. of Extn. Education, JAU, Junagadh 4. Dr. K.N. Akbari, Res.Sci. (DF), MDFRS, Targhadia	OFT for Agronomy should be changed as per discussion in the SAC-meeting of KVK-Amareli.	Suggestion accepted & Implemented
	A lecture from Bank's officer regarding assistance from Bank to the farmers should be carried out during maximum training pragrammes.	Suggestion accepted & Implemented

5. Dr. J. B. Mishra, Director, DGR, Junagadh 6. Dr. G. R. Sharma, Principal, Polytechnic in Agri. Engg., Targhadia 7. Shri. B.H. Agatha, DAO, District Panchayat, Rajkot 8. Dr. S. B. Sharma, Dy. Director, NHRDF, Rajkot 9. Dr. S. K. Tiwari, STO, NHRDF, Rajkot 10. Dr. H. D. Kansagra, Deputy director of Animal Husbandry, Rajkot 11. Vegda Shital, MDT, DWDU, Rajkot 12. Dr. B. B. Kabaria, PC, KVK, Targhadia 13. Shri. L. R. Sadiya, Director ATMA (JDA), Rajkot 14. Dr. K. L. Raghvani, PC, KVK, Jamnagar 15. Dr. J. N. Nariya, PC, KVK, Nana Kanthasar 16. Dr. B. B. Kunjadiya, PC, KVK, Amreli 17. Dr. K. N. Jadav, PC, KVK, Pipalia,Dist. Rajkot 18. Miss Purviben M. Topia, Rural Youth, Madharvada 19. Smt. K. B. Topia, Farm women, Madharvada, 20. Shri. Bhabvanjibhai A. Gami Progressive Farmer, Bagthala, Tal. Morbi 21. Shri Lakhabhai A. Rathod, Progressive Farmer, Kanesara, Tal. Jasadan 22. Shri. Sureshbhai L. Detroja, Progressive Farmer, Kumbhariya, Tal. Maliya 23. Shri. Sanjaybhai A.Saradava Progressive Farmer, Bagthala, Tal. Morbi 24. Shri. A. R. Bhanderi Progressive Farmer (A.H.), Khijadia, Tal. Rajkot 25. Shri Shivlala Babubhai Patel, Progressive Farmer, Rajpar, Tal. Morbi 26. Shri. Dineshbhai B. Moliya, Progressive Farmer, Kherdi,	The No. of trainees farmers increase during off/on campus training progammes. For SMS services list of farmers should be increased up to1000.	Suggestion accepted & Implemented .
	No. of SC/ST women should be increased during training programme.	Suggestion accepted & Implemented
	FLDs should be carried out with good agricultural practices on farmer's field	Suggestion accepted & Implemented

2. DETAILS OF DISTRICT

2.1. Major farming systems/enterprises

(based on the bench mark analysis made by the KVK)

Sr. No	Farming system/enterprise
1	Groundnut – Wheat/ Cumin, Cotton – Summer Groundnut/ Pulse crop/sesame
2	Dairy product
3	Farm Waste Management specially for cotton stalk
4	Fruit and Vegetable Preservation
5	Value addition in Groundnut, Sesame Pearl millet etc.

2.2 Description of Agro-climatic Zone & major agro ecological situations

(based on soil and topography)

Sr. No	Agro-climatic Zone	Characteristics
1.	North Saurashtra Agro Climatic Zone (VI)	The total geographical area of North Saurashtra Agro Climatic Zone is 35.2 Lacs ha. Out of total area, 73.40 per cent area falls under arid and semi-arid region. The soils of this zone are shallow to moderately deep. The soils of Rajkot district is low in their availability of nitrogen while medium in phosphorus and high in available potash except the available phosphorus and potash is in medium category in adopted villages. Monsoon commences usually by the end of June and withdraws by middle of September. Average annual rainfall of districts is 624 mm while 1127 mm during 2013-14

Sr. No	Agro ecological situation	Characteristics	Taluka Covered*
1.	Situation No. 2	Medium Black Soil with 500-600 mm Rainfall	Gondal, Jamkandorna
2.	Situation No. 4	Shallow black soil with 500-600 mm Rainfall	Lodhika, Padadhari, Rajkot, Kotada sangani
3.	Situation No. 7	Residual Sandy Soils with 500-600 mm Rainfall	Morbi, Vankaner, Tankara, Maliya
4.	Situation No. 14	Hilly Soils with 500-600 mm Rainfall	Jasdan

- Jetpur, Dhoraji and Upleta Taluka falls under the South Saurashtra (VII) Agro – Climatic Zone

2.3 Soil types

Sr. No	Soil type	Characteristics	Area in ('000) ha
1.	Clay to clay loam	Medium black calcareous soil	258
2.	Sandy Clay Loam to Clayey	Well drained soil with rapid permeability	301
3.	Sandy to Sandy 10 cm, Calcareous	Well drained soils	

2.4. Area, Production and Productivity of major crops cultivated in the district (2011-12)

Sr. No	Crop	Area (ha)	Production (MT)	Productivity (Kg. /ha)
1.	Groundnut	268510	390495	1454
2.	Cotton	365441	924530	2530
4.	Sesamum	22217	9486	427
5.	Castor	16325	35141	2152
6.	Pearl Millet	4227	8974	2123
7.	Wheat	108355	395239	3648
8.	Cumin	26490	19097	721
9.	Gram	6798	11415	1679

2.5 Weather data (2013-14)

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
April – 2013	26.2	40.8	18.2	50.44
May – 2013	-	43.5	21.8	48.70
June – 2013	152.9	40.5	22.5	68.9
July – 2013	184.2	36.6	23.0	83.60
August -2013	133.2	33.1	21.5	82.00
September- 13	530.5	36.0	21.5	77.28
October- 2013	100.6	34.5	17.0	68.72
November-2013	-	34.2	12.5	52.88
December-2013	-	28.9	11.3	52.42
January – 2014	-	26.8	10.46	50.53
February – 2014	-	29.5	12.20	53.20
March – 2014	5	35.5	17.40	46.80

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

Category	Population ('000 Nos.)	Production ('000 tone)	Productivity
1	**2**	**3**	**4**
Cattle			
Cows	452	3326.90	
Buffalo	362	5284.70	
Sheep	263.40	266.81(Production of wool)	
Goats	197	231.24	
Pigs	1		
Crossbred			
Indigenous			
Rabbits			
Poultry			**(Production of eggs in Lakh Nos.)**
Hens			
Desi	7.8	3.92	
Improved	13.4	32.52	
Ducks			
Others			
Horse and Camel			
Dogs	9		

2.7 Details of Operational area / Villages

Sr. No.	Taluka	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1	Jasdan	Cluster I	Jasapar	*Groundnut, Cotton, Sesamum, Green gram, Black Gram. Wheat, Cumin, Chickpea, Garlic, Onion. * Enterprises are dairy business, Vermi composting, preparation of roasted groundnut and chikki from groundnut seed	Heavy infestation of sucking pest in cotton , leaf blight disease in sesamum and Stem rot disease in groundnut, Saline underground water, Black sticky soil & poor drainage of soil, Long inter-calving period in Buffalo, Nutritional deficiency in animal feed and fodder, Less area under Horticultural crops	* IPM and INM in major crops of this area * Increase drainage of soil * Use of gypsum in soil * Green manuring with dencha, sun hemp * Reducing the inter-calving period in Buffalo * Motivate the farmers for arid Horticultural crops. * Efficient use of irrigation water in salt affected soil * To create the awareness for grading, processing and marketing (value addition)
			Jivapar			
			Jungvad			
			Panchvada			
			Gundala			
2	Morbi	Cluster II	Chachapar			
			Rajpar			
			Khanpar			
			Nani-Vavdi			
			Bagathala			
3	Maliya	Cluster III	Vejalpar			
			Sarvad			
			Manaba			
			Kumbhariya			
			Khirai			

2.8 Priority thrust areas

Crop/Enterprise	Thrust area
Groundnut, Sesamum, Cotton, Cumin, etc	Increasing the productivity of the major crops by adopting the recommendation of dry farming technologies and to create awareness for value addition.
Water conservation	*In situ* soil moisture conservation and rainwater harvesting.
Cotton	Motivating cotton growers to adopt IPM and INM practices for reducing the cost of production. Use cotton stalk Shredder/Rotavator/Mobile chopper for organic manure.
Arid Fruits	Promoting the arid horticulture.
Livestock prod.	Enhancing productivity of milch animals by proper feeding and breeding management.
women empowerment	Providing self employment through skill oriented income generating activities
Agriculture	Developing interest among youth for agriculture as a profession.
Horticulture	Value addition in agriculture produces through proper grading, processing, marketing and information technology.
PHT	Minimizing the post harvest losses and to create the awareness for proper storage.
Income generating activities	Self employment among rural youth and skill oriented income generating activities.
Nutrition management	Care and importance of nutrition in children & pregnant women.

3. TECHNICAL ACHIEVEMENTS

3.A Details of target and achievements of mandatory activities by KVK during 2013-14

OFT				FLD			
1				*2*			
Number of OFTs		Number of Farmers		Number of FLDs (Area in ha.)		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
5	**5**	**17**	**17**	**38.0**	**46.0**	**135**	**155**

Training (including sponsored, vocational and other trainings carried out under Rainwater Harvesting Unit)					Extension Activities			
3					*4*			
Number of Courses			Number of Participants		Number of activities		Number of Participants	
Clientele	**Targets**	**Achievement**	**T**	**A**	**T**	**A**	**T**	**A**
Farmers	82	64	2050	1761	-	-	-	-
Rural youth	2	2	50	52	-	-	-	-
Extn. Functionaries	4	2	100	94	-	-	-	-
Sponsored	5	23	125	865				
Total	**93**	**91**	**2325**	**2772**	**-**	**318**	**-**	**12210**

Seed Production (Qtl.)		Planting material (Nos.)	
5		*6*	
Target	**Achievement**	**Target**	**Achievement**
-	146.70	**-**	**-**

3.B Abstract of interventions undertaken

S. N.	Thrust area	Crop/ Enter-prise	Identified Problem	Interventions					
				Title of OFT if any	Title of FLD if any	Title of Training if any	Title of training for ext. personnel if any	Extension activi-ties	Supply of seeds, planting materials etc.
1	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***
1	Dairy Management	Buffalo	Long inter calving period	Assessment of Fertility improvement in Buffalo	-	Optimizing reproductive efficiency & to reduce age of 1st calving (AFC)	-	Group meeting	Mineral Mixture + deworming tablets + Bio- Heat tablets.
2	Increase the productivity of cotton	Cash crop	Imbalance fertilization in cotton	Low yield of cotton	-	Balance fertilization in cotton	-	Field day/ Kishan gosti	Fertilizers specially micro nutrient
3	Increase the productivity of cotton	Cash crop	incidence of sucking pest in cotton	Managemen t of sucking pests in cotton	-	IPM in cotton	-	Group Meet./ Field day	Pesticides Specially botanicals and bio.

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
4	Increase the productivity of groundnut	Oil seeds	Low moisture content due to rain fed farming	Low yield of Groundnut due to improper tillage practice	-	Soil moisture conservation	-	Group meeting	Recomm-ended practices for watershed manage-ment
5	Women health care	Home science	Waste time and fuel	Comparison of solar cooker with traditional cooking system	-	Preparation of bakery products with the help of Solar Cooker	-	Group Meeting	-

3.1 Achievements on technologies assessed and refined

A.1 Abstract on the number of technologies <u>assessed</u> in respect of crops

Thematic areas	**Cereals**	**Oilseeds**	**Pulses**	**Commercial Crops**	**Vege-tables**	**Fruits**	**Flower**	**Plantation crops**	**Other then crops**	**TOTAL**
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
Varietal Evaluation										
Seed / Plant production										
Weed Management.										
Integrated Crop Manag.										
Integrated Nutrient Management				**1**						**1**
Integrated Farming System										
Mushroom cultivation										
Drudgery reduction										
Farm machineries										
Value addition										
Integrated Pest Management				**1**						**1**
Integrated Disease Management										
Resource conservation technology		**1**								**1**
Small Scale income generating enterprises										
Home Science									**1**	**1**
TOTAL		**1**		**2**					**1**	**4**

A.2 Abstract on the number of technologies refined in respect of crops

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vege-tables	Fruits	Flower	Plantation crops	Other then crops	TOTAL
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
Varietal Evaluation										
Seed / Plant production										
Weed Management										
Integrated Crop Manage.										
Integrated Nutrient Management				**1**						**1**
Integrated Farming System										
Mushroom cultivation										
Drudgery reduction										
Farm machineries										
Value addition										
Integrated Pest Management				**1**						**1**
Integrated Disease Management										
Resource conservation technology		**1**								**1**
Home Science									**1**	**1**
TOTAL		**1**		**2**					**1**	**4**

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

Thematic areas	Cattle	Poultry	Piggery	Rabbitary	Fisheries	TOTAL
Evaluation of Breeds	-	-	-	-	-	-
Nutrition Management	-	-	-	-	-	-
Disease of Management	-	-	-	-	-	-
Value Addition	-	-	-	-	-	-
Production and Management	1	-	-	-	-	1
Feed and Fodder	-	-	-	-	-	-
Small Scale income generating enterprises	-	-	-	-	-	-
TOTAL	**1**	-	-	-	-	**1**

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

Thematic areas	Cattle	Poultry	Piggery	Rabbitary	Fisheries	TOTAL
Evaluation of Breeds	-	-	-	-	-	-
Nutrition Management	-	-	-	-	-	-
Disease of Management	-	-	-	-	-	-
Value Addition	-	-	-	-	-	-
Production and Management	1	-	-	-	-	1
Feed and Fodder	-	-	-	-	-	-
Small Scale income generating enterprises	-	-	-	-	-	-
TOTAL	**1**	-	-	-	-	**1**

B. DETAILS OF EACH ON FARM TRIAL (OFT)

a. Technology assessment /Refinement

OFT – 1

1) Title of technology assessed/Refined: **Low yield of cotton**
2) Problem definition : low yield of cotton due to Imbalance fertilization in cotton
3) Details of technologies selected for assessment/refinement :
   T1. Dose of fertilizer 125 kg DAP & 125 kg Urea /ha (Farmer's practices)
   T2. Dose of fertilizer (160-0-0 NPK kg / ha) in four split in which second split in
   form of Ammonium Sulphate (Recommended)
   T3. T2 + 50 kg P2O5 ha-1 through DAP + 50 kg K2O ha-1 through MOP as a basal dose(intervention)
   T4. T3 + and 25 kg MgSO4 ha-1 + 10 kg ZnSO4 as a basal dose. (intervention)
4) Source of technology : JAU
5) Production system : Balance fertilization in cotton
6) Thematic area : Balance fertilization in cotton
7) Performance of the technology with performance indicators :

Farmer No	Name of the farmer	Name of the Village	Yield (kg/ha)			
			T-1	T-2	T-3	T-4
1	K. B. Kaila	Vejalpar	2750	2500	2940	3000
2	KVK -Farm	Targhadia	2200	2010	2180	2240
Average			**2475**	**2255**	**2560**	**2620**

8) Final Recommendation for micro level situation: Recommended dose of fertilizer(160-0-0) in four split in which second split in form of Ammonium Sulphate+ 50 kg P2O5 ha-1 through DAP + 50 kg K2O ha-1 through MOP as a basal dose.+ 25 kg MgSO4 ha-1 + 10 kg $ZnSO_4$ as a basal dose.

9) Constrains identified and feedback for research :
   - ✓ Unbalance fertilization
   - ✓ Problems of sucking pest
   - ✓ Lack of knowledge of fertilization
   - ✓ Less use of organic manures in soil

10) Process of farmers participation and their reaction : Good

11) Results of on farm trials

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No of trials	Technology assessed	Parameters of assessment
1	*2*	*3*	*4*	*5*	*6*	*7*
Cotton	Irrigated	low yield of cotton due to Imbalance fertilization in cotton	Low yield of cotton	2	Balance fertilization	Yield

Data on the parameter	Results of assessments	Feedback from the farmers	Technology assessed/refined	Production per unit
8	*9*	*10*	*11*	*12*
Acc. to parameter 7	18.18 percent higher yield obtained in intervention i.e. Recommended dose of fertilizer(160-0-0) in four split in which second split in form of Ammonium Sulphate+ 50 kg P_2O_5 ha-1 through DAP + 50 kg K_2O ha-1 through MOP as a basal dose.+ 25 kg $MgSO_4$ ha-1 + 10 kg $ZnSO_4$ as a basal dose.	High yield obtain in Intervention	Dose of fertilizer (160-0-0 NPK kg / ha) in four split in which second split in form of Ammonium Sulphate	26.20 q/ha

Net return (Profit) in Rs/Unit	**BC Ratio**
13	*14*
T-1 : 83450	3.07
T-2:78208	3.24
T-3:91155	3.47
T-4:93180	3.46

OFT – 2

1) Title of technology assessed/Refined : **Management of sucking pests in cotton**.
2) Problem definition
   - ✓ No adoption of recommended practices
   - ✓ Injudicious use of insecticide
3) Details of technologies selected for assessment/refinement :
   T1. Continuous spraying of chemical pesticides. (Farmers practice)
   T2. IPM : alternate spraying of chemical and bio pesticide and intercropping of maize/ cow pea with cotton 1:10 Row (Recommended practice)
   T3. Spraying of chemical pesticide @ half does of recommendation with bio pesticide i.e. Azadirachtin 1500 ppm or verticillium lecanii and growing of maize / cowpea as mix crop with cotton. (Intervention)
4) Source of technology: JAU, Junagadh
5) Production system and thematic area : Integrated Pest Management
6) Thematic area : Integrated Pest Management
7) Performance of the technology with performance indicators :

Name of the farmer/ Village	**Data on the performance indicators of the technology assessed/refined**																				
	Technology option 1							**Technology option 2**							**Technology option 3**						
	Indicator 1	Indicator 2	Indicator 3	Indicator 4	Indicator 5	Indicator 6	Indicator 7	Indicator 1	Indicator 2	Indicator 3	Indicator 4	Indicator 5	Indicator 6	Indicator 7	Indicator 1	Indicator 2	Indicator 3	Indicator 4	Indicator 5	Indicator 6	Indicator 7
KVK Farm Targhadia	2105	4.4	12.2	2.1	4.6	0.5	0.9	2195	4.0	11.2	2.3	4.0	0.8	1.4	2375	3.3	8.8	1.2	3.2	0.9	1.6

Indicator 1 : yield of cotton in Kg/ha , Indicator 2 : --No. of jassid 3 leaves/plant,
Indicator 3 : - No. of Thrips / 3 leaves / plant , Indicator 4 : No. of white fly / 3 leaves/plant
Indicator 5 : - No. of Aphid / 3 leaves / plant , Indicator 6 : No. of Coccinellids / plant
Indicator 7 : - No. of Crysoperlla / plant

8) Final recommendation from micro level situation: Alternate treatment one and two
9) Constrains identified and feedback for research :
   - ✓ No knowledge about the use of particular pesticide for the control of sucking pests, resulted the development of resistance in the pest.

- ✓ Continuous use of chemical pesticide
- ✓ Farmer spray insecticide as per instructions given by local pesticides retailer.
- ✓ Farmer are not aware with bio pesticide.

10) Process of farmers participation and their reaction: Satisfactory

11) Results of on farm trials

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No of trials	Technology assessed	Parameters of assessment
1	*2*	*3*	*4*	*5*	*6*	*7*
Cash crop	Rainfed farming	incidence of sucking pest in cotton	Management of sucking pests in cotton	1	Management of sucking pests in cotton	• Pest population • Yield of cotton

Data on the parameter	Results of assessments	Feedback from the farmers	Technology assessed/refined	*Production per unit
8	*9*	*10*	*11*	*12*
Acc. to parameter 7	12.83 percent higher yield obtained in intervention due to lower population of sucking pest.	High yield obtain in Intervention Higher population of natural enemies was observed in innovative practice.	Spraying of chemical pesticide @ half does of rec**o**mmendation with bio pesticide i.e. Azadirachtin 1500 ppm or verticillium lecanii and growing of maize/ cowpea as mix crop with cotton.	23.75 q/ha.

Net return (Profit) in Rs/ha.	**BC Ratio**
13	*14*
T-1 : 68595	2.87
T-2:72950	3.0
T-3:81030	3.15

OFT –3

1) Title of on-farm trials: **Low yield in groundnut due to improper tillage practice**.

2) Problem definition:
- ✓ Shallow ploughing
- ✓ Lack of knowledge about soil moisture conservation and its importance.
- ✓ Lack of knowledge regarding proper tillage practice.

3) Details of technologies selected for assessment/refinement :
- T1. Shallow ploughing with 5-6 interculturing (Farmer method)
- T2. Deep ploughing with 2-3 interculturing (Recommendation)
- T3. Medium deep ploughing with 3-4 interculturing (Intervention)

4) Source of technology : JAU, Junagadh

5) Production system and thematic area : Resource conservation technology

6) Thematic area : Resource conservation technology

7) Performance of the technology with performance indicators :

Farmer No.	**Name of the farmer**	**Name of the Village**	**Data on the performance indicators of the technology assessed/refined**					
			Technology option 1		**Technology option 2**		**Technology option 3**	
			Indicator 1 (kg/ha)	Indicator 2 (%)	Indicator 1 (kg/ha)	Indicator 2 (%)	Indicator 1 (kg/ha)	Indicator 2 (%)
1	K.P. Damsiya	Jasapar	1530	22.50	1820	24.70	1680	23.60
2	K.D. Marvaniya	Rajpar	1360	21.00	1650	23.50	1530	22.20
3	KVK Farm	Targhadia	1460	22.00	1720	24.40	1620	23.50
	Average		**1450**	**21.50**	**1730**	**24.20**	**1610**	**23.10**

Indicator 1 : Yield of groundnut (kg/ha), Indicator 2 : Soil moisture content (%)

8) Final recommendation for micro level situation - Deep ploughing with 2-3 times interculturing

9) Constraints identified and feedback for research ; --

10) Process of farmer's participation and their reaction : Farmers aware about benefit of deep ploughing

11) Results of on farm trials :

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No of trials	Technology assessed	Parameters of assessment
1	*2*	*3*	*4*	*5*	*6*	*7*
Oilseed	Rainfed farming	Low yield of groundnut in rain fed agriculture	Low yield of groundnut due to improper tillage practice	3	Proper tillage practice for soil moisture conservation and higher yield	✓ Yield of groundnut ✓ Moisture percent

Data on the parameter	Results of assessments	Feedback from the farmers	Technology assessed/refined	*Production per unit
8	*9*	*10*	*11*	*12*
Acc. to parameter 7	19.3 % higher pod yield of groundnut was obtained in deep ploughing as compare to shallow ploughing in groundnut crop.	In deep and medium deep ploughing higher yield can be obtained due to higher soil moisture conservation as compare to shallow ploughing in groundnut cultivation.	Deep ploughing with 2-3 interculturing.	17.30 q/ha

Net return (Profit) in Rs/Unit	**BC Ratio**
13	*14*
T1 : 28920	1.90
T2 : 41080	2.30
T3 : 36160	2.15

OFT –4

1) Title of technology assessed/Refined **: Comparison of solar Cooker with traditional cooking system**

MANGO MURBBA

Sr. No.	Observation	Traditional Method	Sunlight Heat	Solar Cooker
1	Time Consumption	1.45 hrs.	35.15 hrs.	4.15 hrs.
2	Fuel Consumption	160 g. gas	-	-
3	Cost Saving	-	7.56 %	8.03 %
4	Organo laptic test			
a	Taste/ sweetness	5	6	6.1
b	Texture	5.6	6.1	6.4
c	Overall Acceptance	-	-	√

OFT - 5

1) Title of technology assessed/Refined: **Assessment of Fertility improvement in Buffalo**
2) Problem definition : Long inter calving period
3) Details of technologies selected for assessment/refinement:
   - ✓ Farmer's practices
   - ✓ Treated by "OVSYNCH" protocol as per NDRI Karnal (Recommended Practice)
   - ✓ Treated with Mineral Mixture + deworming tablets + Heat inducing tablets. (Intervention)
4) Source of technology: JAU
5) Production system and thematic area : Dairy Management
6) Thematic area : Dairy Management
7) Performance of the technology with performance indicators:

Farmer No	Name of the farmer	Name of the Village	Data on the performance indicators of the technology assessed/refined					
			Technology option 1		Technology option 2		Technology option 3	
			Indicator 1 in month	Indicator 2 in No.	Indicator 1 in month	Indicator 2 in No.	Indicator 1 in month	Indicator 2 in No.
1	Farmers method	Bagathala	33%	33%				
2	R. R. Jivani	Khanpar			67%	50%		
3	M. R. Jivani	Khanpar						
4	M. B. Amrutiya	Khanpar						
5	H. R. Tadhani	Jivapar						
6	M. S. Jivani	Khanpar						
7	Naklang Gaushala	Bagathada						
8	K. T. Matvania	Rajpar					83%	80%
9	R. T. Marvania	Rajpar						
10	P. K. Vadgadiya	Rajpar						
11	P. T. Detroja	Bagathada						
12	B. A. Vadgadiya	Bagathada						
13	P. M. Bodar	Jivapar						

Indicator 1 : Occurrence of heat, Indicator 2 : conception rate

8) Final recommendation for micro level situation : Treated with “OVSYNCH” protocol with Mineral Mixture + deworming tablets + Heat inducing tablets.
9) Constrains identified and feedback for research :
   - ✓ Imbalance feeding
   - ✓ Weak estrous
   - ✓ Poor management of heifers

10) <u>Results of on farm trials</u>

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No of trials	Technology assessed	Parameters of assessment
1	*2*	*3*	*4*	*5*	*6*	*7*
Livestock	Rainfed farming	Long inter calving period	Assessment of Fertility improvement in Buffalo	3	Assessment of Fertility improvement in Buffalo	• Occurrence of heat • Conception rate

Data on the parameter	Results of assessments	Feedback from the farmers	Technology assessed/refined	Production per unit
8	*9*	*10*	*11*	*12*
Acc. to parameter 7	Animal should be treated with “OVSYNCH” protocol with Mineral Mixture + deworming tablets + Heat inducing tablets.	-	Animal should be treated with “OVSYNCH” protocol with Mineral Mixture + deworming tablets + Heat inducing tablets.	-

3.2 Achievements of Front Line Demonstrations

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

List of technologies demonstrated during previous year and popularized during *Kharif* 2013-14 & *Rabi* 2012-13 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 villa.	No.of farmer	Area in ha
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	Groundnut	Disease management	IDM	Management of major disease of groundnut	7	10	4.0
2	Groundnut	Varietal evaluation	Variety (GG-5)	To test yield potentiality of newly released groundnut variety	9	10	4.0
3	Sesamum	Varietal evaluation	Variety (GT-3)	To test yield potentiality of newly released sesamum variety	5	10	4.0
4	Cotton	Crop Production	INM (Bt. Cotton)	To reduce the reddening in cotton and soil sustainability	6	10	4.0
5	Green gram	Crop Production	Inter cropping Cotton+green gram (GM-4)	Green gram as a inter crop for minimizing risk factor	2	5	2.0
6	Green gram	Varietal evaluation	Variety (GM-4)	To test yield potentiality of newly released Green gram variety	7	20	8.0
7	Cluster bean (Gum guvar)	Crop diversification	Variety (G-1)	To introduce new crop as a cluster bean (Gum guvar)	6	10	4.0
8	Gram	Varietal evaluation	Variety (GJG-3)	To test yield potentiality of newly released Gram variety	4	5	2.0
9	Wheat	Quality Production	Variety (GW-496)	Quality production of Wheat through management of disease	3	10	4.0
10	Cumin	Varietal evaluation	Variety (GC-4)	To test yield potentiality of newly released Cumin variety	5	10	4.0
11	Livestock	Nutrient Manage-ment	Mineral Mixture Powder	To balance the deficiency of minerals in animal feed	5	10	-
12	Livestock	Disease Manage-ment	Vetcolyte	To minimize the metabolic diseases in cattle	7	20	-
13	Oat	Fodder Manage-ment	Variety (Kent)	To introduce new fodder crop as an Oat (Kent)	7	20	2.0
14	Solar energy	Solar energy	solar cooker	To Introduce solar cooker in rural area	10	10	-

b. Details of FLDs implemented

Oilseeds

Sr. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for short-fall
					Propo-sed	Actual	SC/ ST	Others	Total	
1	Groundnut	Disease management	IDM	Kharif - 13	4.0	4.0	-	10	10	-
2	Groundnut (GG-5)	Varietal evaluation	New variety	Kharif - 13	4.0	4.0	-	10	10	-
3	Sesamum (GT-3)	Varietal evaluation	New variety	Kharif – 13	4.0	4.0	2	8	10	-

Pulses

Sr. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for short-fall
					Propo-sed	Actual	SC/ ST	Others	Total	
1	Green gram (GM-4)	Crop production	Inter cropping	Kharif - 13	2.0	2.0	-	5	5	-
2	Green gram (GM-4)	Varietal evaluation	New variety	Kharif - 13	-	8.0	1	19	20	-
3	Gram (GJG-3)	Varietal evaluation	New variety	Rabi-12	2.0	2.0	1	4	5	-

Others

Sr. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for short-fall
					Propo-sed	Actual	SC/ ST	Others	Total	
1	Cotton	Crop Production	INM	Kharif - 13	4.0	4.0	-	10	10	-
2	Cluster bean (Gum guvar)	Crop diversification	Variety (G-1)	Kharif - 13	4.0	4.0	1	9	10	-
3	Livestock	Nutrient Manage-ment	Mineral Mixture Powder	-	-	-	1	9	10	-
4	Livestock	Disease Manage-ment	Vetcolyte	-	-	-	2	18	20	-
5	Oat	Fodder Manage-ment	Variety (Kent)	Rabi-13	2.0	2.0	2	18	20	-
6	Solar energy	Solar energy	solar cooker	-	-	-	-	10	10	-

Commercial crops (Cumin & Wheat)

Sr. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for short-fall
					Propo-sed	Actual	SC/ ST	Others	Total	
1	Wheat (GW-496)	Quality Production	New variety	Rabi - 12	4.0	4.0	-	10	10	-
2	Cumin (GC-4)	Varietal evaluation	New variety	Rabi - 12	4.0	4.0	-	10	10	-

Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P	K					
1	2	3	4	5	6	7	8	9	10	11	12
Groundnut	*Kharif*	RF	M. B.	L	M	H	Wheat/ Cumin	18/6/13	26/10/13	1127.6	40
Groundnut	*Kharif*	RF	M. B.	L	M	H	-"-	22/6/13	20/10/13	1127.6	40
Sesamum	*Kharif*	RF	M. B.	L	M	H	-"-	21/6/13	7/10/13	1127.6	40
Cotton	*Kharif*	Irrigated	M. B.	L	M	H	-"-	20/6/13	-	1127.6	40

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
Green gram	*Kharif*	RF	M. B.	L	M	H	-"-	15/6/13	8/9/13	1127.6	40
Cluster bean (Gum guvar)	*Kharif*	RF	M. B.	L	M	H	-"-	20/6/13	15/11/13	1127.6	40
Gram	*Rabi*	Irrigated	M. B.	L	M	H	Cotton/ G'nut	15/11/12	15/2/13	-	-
Wheat	*Rabi*	Irrigated	M. B.	L	M	H	-"-	20/11/12	10/3/13	-	-
Cumin	*Rabi*	Irrigated	M. B.	L	M	H	-"-	18/11/12	3/3/13	-	-
Oat	*Rabi*	Irrigated	M. B.	L	M	H	Cotton	12/11/12	-	-	-

M. B. – Medium Black

Performance of FLD

Sr. No.	Crop	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)/ No.	Demo. Yield Qtl/ha			Yield of local Check Qtl./ha	Increase in yield (%)
						H	L	A		
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
1	Groundnut	IDM	GG-20	10	4.0	33.75	13.75	28.19	24.70	10.2
2	Groundnut	Variety	GG-5	10	4.0	37.50	7.50	22.36	21.17	18.5
3	Sesamum	Variety	GT-3	10	4.0	8.75	4.80	6.90	6.03	8.7
4	Cotton	INM	Bt. Cotton	10	4.0	36.5	24.5	31.63	29.44	7.44
5	Green gram	Inter cropping	GM-4	5	2.0	2.7	1.85	2.42	2.18	11.01
6	Green gram	Variety	GM-4	20	8.0	12.5	6.25	8.62	8	7.75
7	Cluster bean (Gum guvar)	Crop diversification	G-1	10	4.0	11.25	3.75	8.28	-	-
8	Gram	Variety	GG-3	5	2.0	18.25	15.50	17.05	15.65	8.95
9	Wheat	Quality prod.	GW-496	10	4.0	50.50	45.50	48.37	44.25	9.56
10	Cumin	Variety	GC-4	10	4.0	10.75	7.50	8.82	8.05	9.56
11	Livestock	Vetcolyte	-	20	-	1752	1345	1580	1475	7.12
12	Livestock	To fulfill the mineral req. of Animals	Mineral Mixture	10	10	Average milk production 1550 kg./lact. (310 days)			Ave. milk production 1475 kg./lact. (310 days)	5.06
13	Oat	Variety (Kent)	Kent	20	2.0	600	380	490	-	-
14	Solar energy	solar cooker	Box type solar cooker	10	-	-			-	-

Economic Impact (continuation of previous table)

S.N.	Crop/Enterprise	Ave. Cost of cultivation (Rs./ha)		Ave. Gross Return (Rs./ha)		Ave. Net Return (Profit) (Rs./ha)		Benefit-Cost Ratio (Gross Return / Gross Cost	
		Demo	Local Check	Demo.	Local Check	Demo.	Local Check	Demo.	Local Check
12	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*
1	Groundnut (IDM)	44615	41800	113298	98895	68683	57095	2.53	2.36
2	Groundnut	36415	36415	80049	75789	43628	39374	2.19	2.10
3	Sesamum	20580	20580	82800	72360	62220	51780	4.02	3.52
4	Cotton	63175	61100	170802	97876	107627	36776	2.70	1.60
5	Green gram (in cotton intercrop)	18330	18445	34230	31850	15900	13405	1.87	1.73

12	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*
6	Green gram	18408	18503	34480	32000	16072	13497	1.87	1.72
7	Cluster bean (Gum guvar)	29411	-	33080	-	3669	-	1.12	-
8	Gram	19400	18400	55142	50862	35472	32462	2.84	2.76
9	Wheat	27388	26763	96740	88300	69352	61537	3.53	3.30
10	Cumin	25837	27375	97020	88550	71183	61175	3.75	3.23
11	Livestock	35350	34200	51450	48300	16100	14100	1.46	1.41
12	Livestock	35400	35300	52160	49600	16760	14300	1.47	1.41
13	Oat	10250	-	125500	-	115250	-	3.6	-
14	Solar cooker	-	-	-	-	-	-	-	-

Analytical review of component demonstrations

Crop	Season	Component	Farming situation	Average yield (Demo.) (q/ha)	Average yield (Local check) (q/ha)	Percentage increase in productivity over local check
Groundnut	*Kharif*	IDM	Rainfed	28.19	24.70	10.2
Groundnut	*Kharif*	Variety/Seed	Rainfed	22.36	21.17	18.5
Sesamum	*Kharif*	Variety/Seed	Rainfed	6.90	6.03	8.7
Cotton	*Kharif*	INM	Irrigated	31.63	29.44	7.44
Green gram	*Kharif*	Inter cropping	Rainfed	2.42	2.18	11.01
Green gram	*Kharif*	Variety/Seed	Rainfed	8.62	8.0	7.85
Cluster bean (Gum guvar)	*Kharif*	Variety/Seed	Rainfed	8.28	7.8	6.15
Gram	Rabi	Variety/Seed	Irrigated	17.05	15.65	8.95
Wheat	Rabi	Variety/Seed	Irrigated	48.37	44.25	9.56
Cumin	Rabi	Variety/Seed	Irrigated	8.82	8.05	9.56
Oat	Rabi	Variety/Seed	Irrigated	4.90	-	-

FLDs on Solar cooker Results

Detail	With Conventional cooking / Member/month		With Solar cooking / member/ month		Saving/ member/ month	
	Energy	Cost (Rs)	Energy	Cost (Rs)	Energy	Cost (Rs)
Fire Wood	11 kg	44	5.5 kg	22	5.5 kg	22
Kerosene	2 lit.	65	1 lit.	32	1 lit.	33
LPG Cylinder	2.96 kg	84	1.76 kg	50	1.18 kg	34

Technical Feedback on the demonstrated technologies

Sr. No.	Feed Back
1	To enhance the farmers to use recently developed certified varieties of different crops.
2	Proper use of fertilizers, Irrigation, insecticides and fungicide as per recommendation to reduce the production cost.
3	Late maturity Cluster bean (Gum guvar) variety G-1 is not suitable in *kharif*

Farmers' reactions on specific technologies

Sr. No.	Feed Back
1	Cumin variety GC-4 is high yielding but gradually loosing wilt resistant character
2	Bunch type groundnut variety is suitable for rain fed area.
3	Application of *Trichoderma* is very useful for minimizing the stem rot disease in groundnut. (Application at the time of sowing with 500 kg castor cake/ha.)
4	Wheat variety GW-366 is high yielding but poor grain quality (Black spot on grain)
5	Reddening in cotton
6	Heavy infestation of thrips in crops like garlic, onion, cotton, groundnut, castor, cumin and coriander
7	Heavy infestation of mealy bug in cotton, groundnut, custard apple, mango and ber.
8	Late and poor germination was observed in cumin variety GC-4
9	Heavy infestation of mite in garlic, chilly, brinjal, okra, cotton and groundnut
10	Research needed for control of insect-pests and diseases in organic farming
11	Problem of leaf curling in chilly.
12	White grub problem in groundnut
13	Wilting in chilly, cotton and water melon
14	Problem of repeat breeding in cattle & buffaloes.

Extension and Training activities under FLD

Sr. No.	Activity	No. of activities organized	Date	Number of participants	Remarks
1	Farmers Training	5	-	203	-
2	Media coverage	3	-	-	-
3	Kisan Ghosthi	4	-	56	-
4	Field day	4	-	145	-
	TOTAL	**16**		**404**	

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
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
(A) Farmers & Farm Women										
I Crop Production										
Integrated Crop Management	2	54		54			0	54	0	54
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops	1	18		18			0	18	0	18
Grading and standardization	1	12		12			0	12	0	12
b) Fruits										
Plant propagation techniques	1	28	7	35			0	28	7	35

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
III Soil Health and Fertility Management										
Production and use of organic inputs	1	16		16	2		2	18	0	18
Soil and Water Testing	1	20		20			0	20	0	20
IV Livestock Production and Management										
Dairy Management	2	24	29	53			0	24	29	53
Disease Management	1	18		18			0	18	0	18
Feed management	2	2	36	38		1	1	2	37	39
V Home Science/Women empowerment										
Designing and development for high nutrient efficiency diet	1		26	26		3	3	0	29	29
Value addition	1		25	25			0	0	25	25
Women and child care	1		28	28		1	1	0	29	29
VI Agril. Engineering										
Installation and maintenance of micro irrigation systems	2	43		43	3		3	46	0	46
Use of Plastics in farming practices	1	42		42	6		6	48	0	48
Repair and maintenance of farm machinery and implements	1	27		27			0	27	0	27
VII Plant Protection										
Integrated Pest Management	2	41		41			0	41	0	41
Integrated Disease Management	3	69		69			0	69	0	69
TOTAL	**24**	**414**	**151**	**565**	**11**	**5**	**16**	**425**	**156**	**581**
(B) RURAL YOUTH										
(C) Extension Personnel										
Integrated Pest Management	1	43		43	2		2	45	0	45
Technique for artificial insemination	1	45		45	4		4	49	0	49
TOTAL	**2**	**88**	**0**	**88**	**6**	**0**	**6**	**94**	**0**	**94**
Grand Total	**26**	**502**	**151**	**653**	**17**	**5**	**22**	**519**	**156**	**675**

B) Off Campus

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
(A) Farmers & Farm Women										
I Crop Production										
Weed Management	1	24		24			0	24	0	24
Water management	2	47		47			0	47	0	47
Seed Production	1	23		23				23		23

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops	1	24		24			0	24	0	24
Protective cultivation (Green Houses, Shade Net etc.)	1	24		24			0	24	0	24
b) Fruits										
Micro irrigation systems of orchards	1	4	13	17			0	4	13	17
c) Spices										
Production and Management technology	1	34		34			0	34	0	34
III Soil Health and Fertility Management										
Soil fertility management	1	23		23	1		1	24	0	24
Integrated Nutrient Management	1	35	14	49	4		4	39	14	53
Production and use of organic inputs	2	41	0	41	2	0	2	43	0	43
IV Livestock Production and Management										
Dairy Management	2	57		57			0	57	0	57
Poultry Management	1	26		26			0	26	0	26
Disease Management	2	50	36	86		4	4	50	40	90
Feed management	2	55	2	57			0	55	2	57
V Home Science/Women empowerment										
Minimization of nutrient loss in processing	1		25	25			0	0	25	25
Value addition	3		74	74		1	1	0	75	75
Income generation activities for empowerment of rural Women	1		23	23			0	0	23	23
Rural Crafts	1		19	19			0	0	19	19
VI Agril. Engineering										
Installation and maintenance of MIS	1	23		23	4		4	27	0	27
Use of Plastics in farming practices	1	46		46			0	46	0	46
Production of small tools and implements	1	28		28			0	28	0	28
Repair and maintenance of farm machinery and implements	2	54		54	2		2	56	0	56
Post Harvest Technology	2	92	0	92	4	0	4	96	0	96

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
VII Plant Protection										
Integrated Pest Management	4	112	0	112	14	0	14	126	0	126
Integrated Disease Management	2	55		55			0	55	0	55
Bio-control of pests and diseases	1	32		32			0	32	0	32
Production of bio control agents and bio pesticides	1	29		29			0	29	0	29
TOTAL	**40**	**891**	**206**	**1097**	**31**	**5**	**36**	**922**	**211**	**1133**
(B) RURAL YOUTH										
Seed Production	1	25		25	2		2	27		27
Vermiculture Production	1	23		23	2		2	25		25
Total	**2**	**48**		**48**	**4**		**4**	**52**		**52**
Grand Total	**42**	**939**	**206**	**1145**	**35**	**5**	**40**	**974**	**211**	**1185**

C) Consolidated table (ON and OFF Campus)

Thematic area	**No. of courses**	**Participants**								
		Others			**SC/ST**			**Grand Total**		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
(A) Farmers & Farm Women										
I Crop Production										
Weed Management	1	24	0	24	0	0	0	24	0	24
Water management	2	47	0	47	0	0	0	47	0	47
Seed production	1	23	0	23	0	0	0	23	0	23
Integrated Crop Management	2	54	0	54	0	0	0	54	0	54
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops	2	42	0	42	0	0	0	42	0	42
Grading and standardization	1	12	0	12	0	0	0	12	0	12
Protective cultivation (Green Houses, Shade Net etc.)	1	24	0	24	0	0	0	24	0	24
b) Fruits										
Micro irrigation systems of orchards	1	4	13	17	0	0	0	4	13	17
Plant propagation techniques	1	28	7	35	0	0	0	28	7	35
f) Spices										
Production and Management Technology	1	34	0	34	0	0	0	34	0	34
III Soil Health and Fertility Management										
Soil fertility manag.	1	23	0	23	1	0	1	24	0	24
Integrated Nutrient Management	1	35	14	49	4	0	4	39	14	53
Production and use of organic inputs	3	57	0	57	4	0	4	61	0	61
Soil and Water Testing	1	20	0	20	0	0	0	20	0	20

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
IV Livestock Production and Management										
Dairy Management	4	81	29	110	0	0	0	81	29	110
Poultry Management	1	26	0	26	0	0	0	26	0	26
Disease Management	3	68	36	104	0	4	4	68	40	108
Feed management	4	57	38	95	0	1	1	57	39	96
V Home Science/Women empowerment										
Designing and development for high nutrient efficiency diet	1	0	26	26	0	3	3	0	29	29
Minimization of nutrient loss in processing	1	0	25	25	0	0	0	0	25	25
Value addition	4	0	99	99	0	1	1	0	100	100
Income generation activities for empowerment of rural Women	1	0	23	23	0	0	0	0	23	23
Rural Crafts	1	0	19	19	0	0	0	0	19	19
Women and child care	1	0	28	28	0	1	1	0	29	29
VI Agril. Engineering										
Installation and maintenance of micro irrigation systems	3	66	0	66	7	0	7	73	0	73
Use of Plastics in farming practices	2	88	0	88	6	0	6	94	0	94
Production of small tools and implements	1	28	0	28	0	0	0	28	0	28
Repair and maintenance of farm machinery and implements	3	81	0	81	2	0	2	83	0	83
Post Harvest Technology	2	92	0	92	4	0	4	96	0	96
VII Plant Protection										
Integrated Pest Management	6	153	0	153	14	0	14	167	0	167
Integrated Disease Management	5	124	0	124	0	0	0	124	0	124
Bio-control of pests and diseases	1	32	0	32	0	0	0	32	0	32
Production of bio control agents and bio pesticides	1	29	0	29	0	0	0	29	0	29
TOTAL	**64**	**1352**	**357**	**1709**	**42**	**10**	**52**	**1394**	**367**	**1761**
(B) Rural Youth										
Seed Production	1	25		25	2		2	27		27
Vermiculture Production	1	23		23	2		2	25		25
Total	**2**	**48**		**48**	**4**		**4**	**52**		**52**
(C) Extension Personnel										
Integrated Pest Management	1	43	0	43	2	0	2	45	0	45
Technique for artificial insemination	1	45		45	4		4	49	0	49
TOTAL	**2**	**88**	**0**	**88**	**6**	**0**	**6**	**94**	**0**	**94**
Grand Total	**68**	**1488**	**357**	**1845**	**52**	**10**	**62**	**1540**	**367**	**1907**

(D) Vocational training programmes for Rural Youth : Nil

E) Sponsored Training Programmes :

Sr. No	Date	Title	Duration (days)	Client (PF/RY/EF)	No. of courses	No. of Participants									Sponsoring Agency
						Others			SC/ST			Total			
						M	F	T	M	F	T	M	F	T	
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
1	16/4/13	Nursery Management of Horticulture crops	1	PF	1	45	2	47	4	0	4	49	2	51	ATMA
2	17/4/13	Scientific dairy farming	1	PF	1	30	2	32	5	2	7	35	4	39	ATMA
3	25-26/4/13	Cotton Production Technology	2	EF	1	51	1	52	8	0	8	59	1	60	BCI Cotton
4	29-30/4/13	Top dressing management in cotton	2	EF	1	22	2	24	9	1	10	31	3	34	REEL Cotton
5	29/4/13 to 1/5/13	Fertilizers management in cotton	3	PF	1	29	1	30	2	0	2	31	1	32	ATMA
6	15-16/7/13	Role of bio pesticides for the insect pest management	2	EF	1	50	5	55	10	3	13	60	8	68	BCI Cotton
7	18-19/7/13	Rain water harvesting and their efficient use for crop production	2	EF	1	32	3	35	10	4	14	42	7	49	REEL Cotton
8	1/8/13	Integrated Pest Management	1	PF	1	21	5	26	3	0	3	24	5	29	ATMA
9	6/8/13	High-tech Agri.-Green house	1	PF	1	0	0	0	28	0	28	28	0	28	ATMA
10	12/8/13 to 14/8/13	High-tech Agri.-Green house	3	PF	1	22	0	22	8	0	8	30	0	30	ATMA
11	14/8/13	Crop contingency planning	1	EF	1	32	0	32	13	0	13	45	0	45	Dept. of Agril. Rajkot
12	7/9/13	Crop contingency planning & increase yield under dry land are	1	PF	1	12	0	12	3	0	3	15	0	15	ATMA
13	8/10/13	Disease Management in Livestock	1	PF	1	22	0	22	3	0	3	25	0	25	ATMA
14	8/10/13	Watershed management	1	PF	1	20	5	25	5	0	5	25	5	30	DWDU-Rajkot
15	14/10/13 to 16/10/14	Production of quality animal products	3	PF	1	28	0	28	4	0	4	32	0	32	ATMA
16	17-18/10/13	Training & awareness programme on post harvest technology for progressive farmers	2	PF	1	38	0	38	7	0	7	45	0	45	Central warehousing corporation

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
17	4/12/13	Value addition in Agri. crops	1	PF	1	14	0	14	2	0	2	16	0	16	ATMA
18	9/12/13	Scientific dairy farming	1	PF	1	54	0	54	7	0	7	61	0	61	ATMA
19	11/12/13	Fruits and vegetables preservation	1	PF	1	30	0	30	12	0	12	42	0	42	ATMA
20	11-12/12/13	Nursery management	2	PF	1	12	0	12	4	0	4	16	0	16	ATMA
21	18/12/13	Integrated Disease Management	1	PF	1	33	0	33	4	0	4	37	0	37	ATMA
22	22/1/14	Bio-control of pests and diseases	1	PF	1	20	0	20	2	0	2	22	0	22	ATMA
23	15/2/14	Techniques and management of A. I.	1	EF	1	54	0	54	5	0	5	59	0	59	Gopal Dairy Rajkot
Total					**23**	**671**	**26**	**697**	**158**	**10**	**168**	**829**	**36**	**865**	

3.4. Extension Activities (including activities of FLD programmes)

Sr. 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	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
	Field Day	12/9/13	1	28	2	30	0	0	0	0	0	0	28	2	30
		22/10/13	1	34	0	34	0	0	0	0	0	0	34	0	34
		22/1/14	1	56	0	56	0	0	0	0	0	0	56	0	56
		28/1/14	1	25	**0**	**25**	0	0	0	0	0	0	25	**0**	**25**
	Total		**4**	**143**	**2**	**145**	0	0	0	0	0	0	**143**	**2**	**145**
2	Kisan Mela (P) Kisan Mela	22/4/13	1	850	148	998	128	56	184	18	10	28	996	214	1210
		21/1/14 to 24/1/14	1	225880	175584	401464	30541	24587	105128	245	85	330	306666	200256	506922
		2/2/14 to 2/3/14	1	425	24	449	32	12	44	54	5	59	511	41	552
	Total		**3**	227155	175756	402911	30701	24655	105356	317	100	417	308173	200511	508684
3	Kisan Ghosthi	24/4/13	1	14		14	0	0	0	0	0	0			14
		23/5/13	1	12		12	0	0	0	0	0	0			12
		2/6/13	1	18		18	0	0	0	0	0	0			18
		24/6/13	1	13		13	0	0	0	0	0	0			13
		1/8/13	1	12		12	0	0	0	0	0	0			12
		15/10/13	1	11		11	0	0	0	0	0	0			11
	Total		**6**	**80**		**80**	0	0	0	0	0	0			**80**
4	Exhibition		1	510	50	560	0	0	0	0	0	0	510	50	560
5	Film Show	4/4/13	1	12	1	13	0	0	0	0	0	0	12	1	13
		12/4/13	1	8	2	10	0	0	0	0	0	0	8	2	10
		2/5/13	1	18	4	22	0	0	0	0	0	0	18	4	22
		23/5/13	1	19	1	20	0	0	0	0	0	0	19	1	20
		28/5/13	1	24	2	26	0	0	0	0	0	0	24	2	26
		6/6/13	1	22	3	25	0	0	0	0	0	0	22	3	25
		25/6/13	1	11	2	13	0	0	0	0	0	0	11	2	13
		12/7/13	1	21	3	24	0	0	0	0	0	0	21	3	24
		29/7/13	1	33	2	35	0	0	0	0	0	0	33	2	35
		14/8/13	1	29	6	35	0	0	0	0	0	0	29	6	35
		28/8/13	1	18	0	18	0	0	0	0	0	0	18	0	18
		9/9/13	1	35	4	39	0	0	0	0	0	0	35	4	39

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
		19/9/13	1	21	2	23	0	0	0	0	0	0	21	2	23
		12/10/13	1	17	4	21	0	0	0	0	0	0	17	4	21
		22/10/13	1	10	1	11	0	0	0	0	0	0	10	1	11
		11/11/13	1	9	2	11	0	0	0	0	0	0	9	2	11
		22/11/13	1	10	3	13	0	0	0	0	0	0	10	3	13
		14/12/13	1	10	2	12	0	0	0	0	0	0	10	2	12
		8/1/14	1	16	2	18	0	0	0	0	0	0	16	2	18
		14/2/14	1	21	3	24	0	0	0	0	0	0	21	3	24
		26/2/14	1	13	2	15	0	0	0	0	0	0	13	2	15
		26/2/14	1	12	0	12	0	0	0	0	0	0	12	0	12
		2/3/14	1	9	2	11	0	0	0	0	0	0	9	2	11
		18/3/14	1	8	1	9	0	0	0	0	0	0	8	1	9
	Total		**24**	**406**	**54**	**460**	**0**	**0**	**0**	**0**	**0**	**0**	**406**	**54**	**460**
6	Method Demonstra-tions	-	13	180	23	203	0	0	0	0	0	0	180	23	203
7	Farmers Seminar	12/5/13	1	58	0	58	0	0	0	0	0	0	58	0	58
		28/6/13	1	65		65	0	0	0	0	0	0	65		65
		Total	**2**	**123**	**0**	**123**	0	0	0	0	0	0	**123**	**0**	**123**
8	Workshop						0	0	0	0	0	0	0	0	
9	Group meetings	14/6/13	1	8	0	8	0	0	0	0	0	0	0	0	8
		12/7/13	1	12	0	12	0	0	0	0	0	0	0	0	12
		18/8/13	1	9	0	9	0	0	0	0	0	0	0	0	9
		25/9/13	1	7	0	7	0	0	0	0	0	0	0	0	7
		22/10/13	1	12	0	12	0	0	0	0	0	0	0	0	12
		20/11/13	1	13	0	13	0	0	0	0	0	0	0	0	13
		12/2/14	1	12	0	12	0	0	0	0	0	0	0	0	12
	Total		**7**	**73**	**0**	**73**	0	0	0	0	0	0	0	0	**73**
10	Lectures delivered as resource persons	11/4/13	1	26	14	40	0	0	0	0	0	0	26	14	40
		24/4/13	1	58	25	83	0	0	0	0	0	0	58	25	83
		3/5/13	1	47	10	57	0	0	0	0	0	0	47	10	57
		22/5/13	1	35	0	35	0	0	0	0	0	0	35	0	35
		6/6/13	1	38	22	60	0	0	0	0	0	0	38	22	60
		18/6/13	1	98	25	123	0	0	0	0	0	0	98	25	123
		22/7/13	1	56	25	81	0	0	0	0	0	0	56	25	81
		30/7/13	1	32	66	98	0	0	0	0	0	0	32	66	98
		20/8/13	1	42	25	67	0	0	0	0	0	0	42	25	67
		28/8/13	1	58	38	96	0	0	0	0	0	0	58	38	96
		2/9/13	1	35	64	99	0	0	0	0	0	0	35	64	99
		14/9/13	1	57	58	115	0	0	0	0	0	0	57	58	115
		12/10/13	1	24	64	88	0	0	0	0	0	0	24	64	88
		22/10/13	1	42	28	70	0	0	0	0	0	0	42	28	70
		14/11/13	1	36	60	96	0	0	0	0	0	0	36	60	96
		26/11/13	1	35	36	71	0	0	0	0	0	0	35	36	71
		12/12/13	1	68	54	122	0	0	0	0	0	0	68	54	122
		28/12/13	1	78	48	126	0	0	0	0	0	0	78	48	126
		2/2/14	1	76	49	125	0	0	0	0	0	0	76	49	125
		22/2/14	1	46	42	88	0	0	0	0	0	0	46	42	88
	Total		**20**	**987**	**753**	**1740**	0	0	0	0	0	0	**987**	**753**	**1740**
11	Newspaper coverage		5	0	0	0	0	0	0	0	0	0	0	0	5
12	Radio talks	24/4/13	1	-	-	-	-	-	-	-	-	-	-	-	1
		12/5/13	1	-	-	-	-	-	-	-	-	-	-	-	1
		28/6/13	1	-	-	-	-	-	-	-	-	-	-	-	1
		30/7/13	1	-	-	-	-	-	-	-	-	-	-	-	1
		2/8/13	1	-	-	-	-	-	-	-	-	-	-	-	1
		25/9/13	1	-	-	-	-	-	-	-	-	-	-	-	1
		8/10/13	1	-	-	-	-	-	-	-	-	-	-	-	1
	Total		**7**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**7**

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
13	TV talks	8/5/13	1	-	-	-	-	-	-	-	-	-	-	-	1
		20/5/13	1	-	-	-	-	-	-	-	-	-	-	-	1
		19/6/13	1	-	-	-	-	-	-	-	-	-	-	-	1
		25/7/13	1	-	-	-	-	-	-	-	-	-	-	-	1
		4/9/13	1	-	-	-	-	-	-	-	-	-	-	-	1
		4/9/13	1	-	-	-	-	-	-	-	-	-	-	-	1
		21/10/13	1	-	-	-	-	-	-	-	-	-	-	-	1
		18/12/13	1	-	-	-	-	-	-	-	-	-	-	-	1
	Total		8	-	-	-	-	-	-	-	-	-	-	-	8
14	Popular articles		25	-	-	-	-	-	-	-	-	-	-	-	25
15	Extension Literature			-	-	-	-	-	-	-	-	-	-	-	
16	Advisory Services		12	-	-	-	-	-	-	-	-	-	-	-	12
17	Scientific visit to farmers field		43	140	7	147	0	0	0	0	0	0	140	7	147
	Total		**43**	**140**	**7**	**147**	0	0	0	0	0	0	**140**	**7**	**147**
18	Farmers visit to KVK	Apr-13	8	31	97	128	0	3	3	2	0	2	33	100	133
		May-13	9	130	7	137	4	0	4	3	0	3	137	7	144
		Jun-13	8	169	30	199	7		7	4	1	5	180	31	211
		Jul-13	36	133	21	154	27	3	30	12	5	17	172	29	201
		Aug-13	22	161	5	166	30	0	30	8	2	10	199	7	206
		Sep-13	13	386	18	404	89	7	96	12	2	14	487	27	514
		Oct-13	11	150	31	181	12	3	15	2	1	3	164	35	199
		Nov-13	8	75	14	89	5	4	9	1	1	2	81	19	100
		Dec-13	20	172	**21**	193	**72**	**16**	88	**12**	**9**	21	256	46	302
		Jan-14	10	150	30	180	15	12	27	2	3	5	167	45	212
		Feb-14	7	80	120	200	12	9	21	2	0	2	94	129	223
		Mar-14	7	7	0	7	0	0	0	0	0	0	7	0	7
	Total		**159**	**1644**	**394**	**2038**	**273**	**57**	**330**	**60**	**24**	**84**	**1977**	**475**	**2452**
19	Diagnostic visits	14/3/14	1	16	0	16	0	0	0	0		0	16	0	16
20	Exposure visits	2/1/14	1	42	10	52	2	1	3	0	0	0	44	11	**55**
21	Ex-trainees Sammelan														
22	Soil health Camp		1	1450	0	1450	483	0	483	0	0	0	1933	0	1933
23	Animal Health Camp	16/7/13	1	68		68							68		68
		12/8/13	1	46	10	56	0	0	0	0	0	0	46	10	56
		13/8/13	1	63	3	66	0	0	0	0	0	0	63	3	66
		16/8/13	1	78		78	0	0	0	0	0	0	78		78
		16/8/13	1	39		39	0	0	0	0	0	0	39		39
		20/9/13	1	62		62	0	0	0	0	0	0	62		62
		24/9/13	1	45		45	0	0	0	0	0	0	45		45
		4/10/13	1	68		68	0	0	0	0	0	0	68		68
		23/11/13	1	85		85	0	0	0	0	0	0	85		85
		29/11/13	1	69		69	0	0	0	0	0	0	69		69
	Total		**10**	**623**	**13**	**636**	0	0	0	0	0	0	**623**	**13**	**636**
24	Agri mobile clinic	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	Soil test campaigns	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	Farm Science Club Conveners meet	-	-	-	-	-	-	-	-	-	-	-	-	-	-

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
27	Self Help Group Conveners meetings		2	0	36	36	0	0	0	0	0	0	0	36	36
28	Mahila Mandals Conveners meetings		1	0	28	28	0	0	0	0	0	0	0	28	28
29	Celebration of Van Mahotsav	16/10/13	1	42	0	42	3	0	3	0	0	0	45	0	45
30	Celebration of Technology week	19/8/13 to 23/8/13	1	360	31	391	107	3	110	46	3	49	513	37	550
31	Celebration of parthenium Week	14/8/13	1									45	0	45	45
32	Celebration of Krushi Mahotsav-2013	6/6/13 to 10/6/13	5												
33	Telephon help line														3361
	Grand Total		**358**	**233972**	**177157**	**411131**	**81569**	**24716**	**106285**	**423**	**127**	**595**	**315813**	**202045**	**521424**

Celebration of Technology week

Number of Technology weeks celebrated	Types of Activities	No. of Activities	Numaber of Participants	Related crop/livestock technology
	Gosthies			
	Lectures organised	18	550	5
	Exhibition	1	550	1
	Film show	3	324	2
	Fair			
	Farm Visit	9	550	12
	Diagnostic Practicals	5	550	5
	Distribution of Literature (No.)	5	1254	5
	Distribution of Seed (q)			
	Distribution of Planting materials (No.)			
	Bio Product distribution (Kg)	5	1800	1
	Bio Fertilizers (q)			
	Distribution of fingerlings			
	Distribution of Livestock specimen (No.)			
	Total number of farmers visited the technology week		550	

KISAN MOBILE ADVISORY:

No. of Farmers registered : 7000

Details of SMSs

Content Category	No. of Messages	No. of Farmers	Feed back of farmers if any	
Crop Production				
Crop Protection	3	7014		
Livestock & Fisheries Advisory	6	31173		
Weather Advisory	256	27077		
Total	**265**	**65264**		

INTERVENTIONS ON DROUGHT MITIGATION

Introduction of alternate crops/varieties

State	Crops/cultivars	Area (ha)	Number of beneficiaries
Gujarat	Groundnut(GG-5)	12	30
	Groundnut(GJG-31)	6.4	32
	Cluster bean (GG-2)	10	25
	Green gram (GM-4)	10	25
	Sesame (GT-3)	10	50

Major area coverage under alternate crops/varieties

Crops	Area (ha)	Number of beneficiaries
Oilseeds	28.4	112
Pulses	20	50
Total	**48.4**	**162**

Farmers-scientists interaction on livestock management

State	Livestock components	Number of interactions	No.of participants
Gujarat	Farmer's meeting	5	132
	Farmers Seminar	1	58
	Group meetings	3	165
Total		**9**	**355**

Animal health camps organised

State	Number of camps	No.of animals	No.of farmers
Gujarat	9	652	555
Total	**9**	**652**	**555**

Seed distribution in drought hit states

State	Crops	Quantity (qtl)	Coverage of area (ha)	Number of farmers
Gujarat	Groundnut(TG-37A)	40.00	40.0	200
	Sesame (GT-3)	2.90	58.0	290
	Chick pea	25.00	40.0	**200**
	Wheat (GW-496)	144.80	144.8	**724**
	Cuymin (GC-4)	30.00	200.0	**1000**
Total		**242.70**	**482.8**	**2414**

Large scale adoption of resource conservation technologies

State	Crops/cultivars and gist of resource conservation technologies introduced	Area (ha)	Number of farmers
Gujarat	Adoption of Trichoderma culture powder for the management of stem rot disease in groundnut	174532	43633
	Adoption of *Bt*. cotton varieties.	328897	82224
	Farmers prefers to sow semi spreading and	214808	53702

	high yielding variety of groundnut i.e. GG-20.		
	Most of the farmers adopt new variety of cumin (GC-4) which is resistant to wilt disease	22517	5629
	Intercropping/mix cropping in groundnut and cotton was adopted for minimize the risk factor in dry land agriculture with preservation of natural enemies	26851	6713
	Farmers are ready to use of rotavator/ cotton shredder/ mobile chopper for increasing the organic matter in soil particularly in cotton system.	174532	43633

Awareness campaign

KVK	Meetings		Gosthies		Field days		Farmers fair		Exhibition		Film show	
	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers
	7	73	6	80	4	145	1	500	1	480	24	460
Total	**7**	**73**	**6**	**80**	**4**	**145**	**1**	**500**	**1**	**480**	**24**	**460**

3.5 Production and supply of Technological products 2013-14

SEED MATERIALS

Sr. No.	Crop	Variety	Quantity (Kg)	Value (Rs.)	Provided to No. of Farmers
CEREALS	-	-	-	-	-
OILSEEDS	Groundnut (Breeder)	GG-5	4795	407700	-
	Groundnut (Breeder)	GJG-31	2730	218700	-
	Groundnut (Breeder)	GJG-9	1310	112500	-
	Groundnut (Mega seed)	GG-20	610	31800	
	Groundnut (Breeder)	GG-20	2835	218700	-
PULSES	Black Gram (Mega seed)	G-1	250	16250	-
CASH CROP	Cotton (*Bt.*)	Bt.	2140	107000	-
		Total	**14670**	**1112650**	

SUMMARY

Sr. No.	Crop	Quantity (qtl.)	Value (Rs.)	Provided to No. of Farmers
1	CEREALS	-	-	-
2	OILSEEDS	122.80	989400	-
3	PULSES	2.50	16250	-
4	CASH CROP	21.40	107000	-
TOTAL		**146.70**	**1112650**	

PLANTING MATERIALS: Nil

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

BIO PRODUCTS

Major group/class	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			No	(kg)		
BIOAGENTS						
BIOFERTILIZERS						
BIO PESTICIDES	Savaj	*Trichoderma*	**3500 Kg.**		**245000/-**	**750**

SUMMERY

Sl. No.	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			(Nos)	(kg)		
1	BIOAGENTS					
2	BIO FERTILIZERS					
3	BIO PESTICIDE	*Trichoderma*	**3500 Kg.**		**245000/-**	**750**
	TOTAL					

ORGANIC MANURE

Major group/class	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			No	(kg)		
VERMI COMPOST	Vermi compost	**-**	700Kg.		-	Used in plantation at KVK farm

LIVESTOCK: Nil

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

3.6. Literature Developed/Published

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

(B) Literature developed/published

Item	Title	Authors name	Number
1	**2**	**3**	**4**
Research papers	Efficacy of different insecticides against the thrips infesting summer green gram	D.M.Damasia, B. R. Raghvani, Dr.J.B.Kathiriya and Dr.B.B.Kabaria	Pestology : 37(7):17-21, July-2013
	Influence of climate factors on population dynamics of sucking pests and its natural enemies on OKRA	D.M.Damasia, B. R. Raghvani, Dr.J.B.Kathiriya and Dr.B.B.Kabaria	Pestology : 37(7):42-46, July-2013
	Role of rural women in dairy farming of Rajkot district	Dr.J.B.Kathiriya, D.M.Damasia and Dr.B.B.Kabaria	Tamilnadu J. Veterinary & Animal Sciences 9(4) 239-247, July- August-2013

1	*2*	*3*	*4*
	Estimation of yield losses due to major sucking pests of Bt cotton. (2014)	M. k. Ghelani, B.B. Kabaria V.N. Patel S. V. Undhad and S. K. Chhodavadia	Pestology 38(1) 33-34
Abstract	Sarveillance of insect pests, major disectes and natural enemies on Bt.Cotton under natural condition, National Seminar on „Technology for Development and production of Rainfed cotton" 24-25th Oct,2013	Shri D.V.Muchadiya Dr.B.B.Kabaria and Shri.D.A.Sardava	Paper presented in National Seminar on technology for development and production of rainfed cotton held on 24-25th October-2013, RCRS,Bharuch
	Training needs of dairy farming women and constrints faced by rural women A case study of Gujarat	J.B.Kathiriya, H.A.Manvar, D.P.Sanepara, D.A.Sardava and B.B.Kabaria	Paper presented in National Seminar on"New dimensioned approaches for livestock productivity and profitability enhancement under Era of Climate change, 28-30,January 2014,AAU,Anand
	Role of dairy farming women in Rajkot district of Gujarat	J.B.Kathiriya, H.A.Manvar, D.P.Sanepara, D.A.Sardava and B.B.Kabaria	Paper presented in National Seminar on Women Farmer. 4-6th ,Ferbruary, 2014, JAU-Junagadh
Technical reports	Monthly Progress Report Quarterly Progress Report Moniterable Quarterly Progress Report Annual Progress Report of different projects	Krishi Vigyan Kendra, Targhadia	8
News letters	-	-	-
Technical bulletins	-	-	-
Popular articles	Pasuo ma vayrasthi thta rogo	Dr.J.B.Kathiriya, Dr.H.N.Sudani and Dr.B.B.Kabaria	Krushi Govidhya, 65(12):33-36
	Paryavanma jantunasak davaothi thtu pradusan ane tene rokvana upayo,	Shri.D.A.Sardava , Dr.B.B.Kabaria and Shri D.V.Muchadiya	Somnath sandesh, 9(97):1
	Vaiganic dhabe ardas pasupalan karvana chhavi rup mudao	Dr.J.B.Kathiriya	Taza maza, 1(09):5-7
	Gramiyksaye posansham aharnu ayojan,	Miss H.A.Manvar and Dr.J.B.Kathiriya	Taza maza, 1(09):24-26
	Pasuoma vayrasthi thta rogonu vaignanik padhdhatithi niyntran karo,	Dr.J.B.Kathiriya, Dr.H.N.Sudani and Dr.B.B.Kabaria	Champion Agro word,4(7):34-35
	Pasu palanma shudha sanvardhan ane rasikaranna fayda,	Dr.J.B.Kathiriya,	Taza maza, 1(10):5-6
	Khorakma masalani mahta ane gharghathu banavat,	Miss H.A.Manvar	Taza maza, 1(10):26-28
	Magfalima vadhu Utapadan mate sansodhan aadharit bhalamano,	Shri.D.A.Sardava, Dr.D.R.Padamani,Shri D.P.Sanepara and Dr.B.B.Kabaria	Champion Agro word,4(8):14-15

1	*2*	*3*	*4*
	Vividh Pardusanothi pashu aarogaypar thati mathi asro ane tena Upayo,	Dr.J.B.Kathiriya, Shri D. M. Damsia and Dr.B.B.Kabaria	Taza maza, 1(11):26-27
	Pashu aoma garbh dharanni samsiya ane tena Ukel,	Dr.J.B.Kathiriya, Shri D. M. Damsia , Dr.B.B.Kabaria and Miss H.A.Manvar,	Taza maza, 1(12):26-27
	Magfalina Vadhu Utpadan mate Sansodhan Aadharit Bhalamano,	Dr.D.R.Padamani, Shri.D.A.Sardava,Shri D.P.Sanepara and Dr.B.B.Kabaria	Krushi Karma,2(8):20-23
	Magfalinu Vadhu Utpadan Melvavani Chaviao,	Shri.D.A.Sardava, Shri D.P.Sanepara,	Kanabi Darshan, 2(4-5) : 7-9
	Kapasnu Vadhu Utpadan Melvavani Chaviao,	Dr.B.B.Kabaria Shri.D.A.Sardava	Kanabi Darshan, 2(4-5) : 13-15
	Bij Mavjatnu Mahtav,	Shri.D.A.Sardava, Dr.B.B.Kabaria, Shri N.K.Pokiya and Shri M.H.Ghadia	Kanabi Darshan, 2(4-5) : 33-35
	Jaminna Pruthakar mate Namuno Levani Reet ane teni Upayogita	Shri.D.A.Sardava, Shri D. P. Sanepara, Dr.B.B.Kabaria, Shri N.K.Pokiya and Shri M.H.Ghadia	, Kanabi Darshan, 2(4-5) : 36-38
	Kheti Kshetre Mahilaaono Falo,	Miss H.A.Manvar, Dr.J.B.Kathiriya, Shri D. M. Damsia and Dr.B.B.Kabaria,	Kanabi Darshan, 2(4-5) : 49-50
	Sakbhaji Pakoma Mulay Vrudhi,	Miss H.A.Manvar and Dr.B.B.Kabaria,	Kanabi Darshan, 2(4-5) : 54-56
	Pashuaoma Paramparagat Aaoshdhiy Sarvar,	Dr.J.B.Kathiriya, Miss H.A.Manvar and Dr.B.B.Kabaria,	Champion Agro word,4(11):40-42
	Chomasama Dudhal Pashuaoni Yogay Mavjat Karo,	Dr.J.B.Kathiriya, Dr.N.D.Polara and Dr.B.B.Kabaria,	Somanath Sandesh, 6(9):1
	Ringani, Marchi ane Tametani Jivato, Presant in	Dr.V.N.Patel, Dr.M.A.Achary, Dr.B.B.Kabaria and Shri.D.A.Sardava	Suvenuer on National Seminar, 20 September,2013 : 115-119
	Sagrbha ane Viyajan Pashuaoni Mavjat,	Dr.J.B.Kathiriya, Miss H.A.Manvar and Dr.B.B.Kabaria,	Champion Agro word,5(2):34-35
	Jivat niyantran mateno Sachot Drashtikon	Dr. B.B. Kabaria, D.A.Saradava	Ek Prayash, 2(18):12-18, March-2014
	Ghauna Paralni Urea Prakriya	Dr.J.B.Kathiriya, and Dr.B.B. Kabaria	Champion Agro word,5(5):28-29,March-2014
	Sankalit Jivat Niyantran	Dr.B.B.Kabaria,	Krushi Suveniyar (2014) Khodaldham Kagvad, 39-42
	Pashupalan ane teni Mavjat	Dr. J. B. Kathiriya	Krushi Suveniyar (2014) Khodaldham Kagvad, 45-47
TOTAL	**25**		
Extension literature	-	-	-

(C) Details of Electronic Media Produced : - Nil –

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

3.7 Success stories/Case studies, if any

Success Story : 1

Name of Farmer	:	Ashokbhai Bhanderi
Address	:	Khijadia
Taluka	:	Rajkot
Dist.	:	Rajkot
Contact Number	:	9909993935
Age	:	38 years
Education	:	12th Pass
Land holding	:	8 acre
Crops grown	:	Groundnut, Cotton, & Fodder crops
Livestock	:	Cow : 3 Buffalo : 30 (Banni & Mahesani breeds)

1. Entrepreneurship Development through Dairy farming in Rajkot District

Special recognition :

Farmer of Khijadia village comes in contact with KVK Rajkot for getting more return from his traditional cultivation. He inspired by KVK, Targhadia to established a modern scientific dairy farming unit in his farm ie; Giriraj Farm. He was provided all the scientific information regarding housing, breeding, feeding and scientific management of a dairy farm. The farmer was convinced through the information provided by the scientists of KVK and started a Dairy unit in 2011 with 12 animals and now a days, he is bearing total 36 animals in his farm. He is supplying clean raw milk directly to consumer through a milk van and though he is getting more return as compare to other dairy farmers. The surplus stock of milk provided to penda makers, which is the major sweet in this area.

He earned the gross income of Rs.6 lac with the net profit of 4.2 lac through his dairy unit. The income is quite higher as compared to the income from traditional dairy units. Hence by observing this scientific practices for management of dairy farm, a number of farmers (10) has been started to manage their farm by this way and these technology disseminated as horizontal way.

Success Story : 2

Name of farmer : Bhagvanjibhai Amarshibhai Gami
Address : Bagathala
Taluka : Morbi
District : Morbi
Contact number : 9428790766
Age : 48 years
Education :12 science
Land holding : 8 acres
Crops grown : Cotton and castor
Training : (i) KVK Targhadia
(ii) ATMA-Rajkot
(iii) WALMI-Anand

2. Successful B.t.Cotton Production In Rainfed farming

Special Recognition :

Bhagvanjibhai is a progressive farmer of Rajkot District being a members of SAC (KVK) and ATMA group (cotton). He adopting improved technology of integrated farming for higher productivity of Bt.cotton in rainfed condition and saline black sticky soil. viz; by applying castor cake 500 kg/ha as organic manure and incorporate cotton stalk by rotavator to improve soil physical condition, timely interculturing practices and optimum use of chemical fertilizer and pesticide.

Practical utility of innovation

By doing and learning Bhagvanjibhai adopting different rainfed practice with scientific approach in Bt. Cotton crop, higher yield can be obtained. He produced cotton yield of 2100 kg/ha, 1180 kg/ha and 2600 kg/ha (expected) in the years of 2011-12, 2012-13 and 2013-14 respectively.

Success Story : 3

Name of Farmer : Jayantibhai Lunagaria

Address	:	Sarapdad
Taluka	:	Padadhari
Dist	:	Rajkot
Contact Number	:	9725334921
Age	:	38 years
Education	:	12th Pass
Land holding	:	6 acre
Crops grown	:	Groundnut, Cotton, Gram & Wheat
Livestock	:	Gir Cow : 1 Gir Bullock : 2 Jafrabadi buffalo : 1

3. Quality Wheat (GW-366) Production

Special recognition :

Jayantibhai wanted to do something different from traditional production. Under the guidance of KVK Rajkot, he produced quality wheat. He got considerable boost more income through this quality wheat production.

Jayantibhai is a medium land holding farmer of Sarapdad village. The main problem in the area is poor quality wheat production i.e black tip on kernel which resulted in low price of produce. He came in contact with KVK, Rajkot. He also attended on campus as well as off campus training organized by KVK. He was inspired in trainings to produce wheat with improved techniques.

He cultivated wheat in 2 ha. of land with all recommended practices of Junagadh Agricultural University and also he sprayed mencozeb (Dithane -M-45 @26gm/10 lit) at milky stage of wheat with 2 per cent urea. He produced 5200 kg/ha wheat with best quality. He sold the wheat at Rs.1400/quintal with a net profit of Rs. 18000/. The average selling rate is about Rs.1200/quintal

Jayantibhai Says "There is no age for learning, one can learn at any age"

Success Story : 4

Name of Farmer	:	Govindbhai Pachabhai Undhad
Address	:	Khorana
Taluka	:	Rajkot
Dist.	:	Rajkot
Contact Number	:	9974344119
Age	:	52 years
Education	:	8th Pass
Land holding	:	18 acre
Crops grown	:	Groundnut, Cotton, Onion, & Chilly
Livestock	:	Gir Cow : 3

4. Use of cotton shedder and decomposting of cotton stalk

Special recognition :

He is a progressive farmer of Rajkot district. He inspired from Krishi Vigyan Kendra, Juangadh Agricultural University, Targhadia (Rajkot) by demonstration of decomposting of cotton stalk through cutting of cotton stalk into shedder. In Saurashtra region most of the cotton growers fire the cotton stalk after completion of season. KVK Rajkot motivated the farmers to start decomposting of cotton stalk by cutting it into small pieces and than decompost it by using decomposer bacteria like *Cylitic.* for maintain soil health and sustainability. Govindbhai Pachabhai Undhad started it from this year and has produced 20 tonnes of high quality organic manure from cotton stalk decomposition. More than 35 farmers of surrounding villages of Khorana are adopted this practices by seeing and beliving during this year and at present it spread up horizontally.

Success Story : 5

Name of Farmer	:	Raghvendrashihji C. Jadeja
Address	:	Bhadva
Taluka	:	Kotda Sangani
Dist.	:	Rajkot
Contact Number	:	9427729201
Age	:	60 years
Education	:	S.S.C.
Land holding	:	36 acre
Crops grown	:	Groundnut, Cotton, Gram, Sugarcane & Anola
Livestock	:	Gir Cow : 25 Gir Bullock : 4

5. Vermi compost production

Special recognition :

Shri Raghvendrashinhji Jadeja is a progressive, dynamic and innovative farmer. He is a graduate and regular visitor of KVK at Targhadia. He is having 40 ha. of land and 29 animals with 25 pure Gir cows. He was preparing Farm Yard Manure by traditional method. He had attended training programmes on "Organic residues management" as well as "preparation of vermi compost" arranged under KVK as on campus training programme. He prepared vermi pits for composting after getting the guidance from the scientists of KVK. At present, he prepares 2000 kg. of vermi compost per month and selling the vermi compost at the rate of Rs. 5 per kg. and getting Rs. 10000 per month. Neighboring farmers are also approaching him for preparation of vermi compost and some are already started the vermi composting on their farm to fulfill their own requirement.

Impact of new technology:

By preparing the vermi composting, the farmers can improve soil health and can also earn money by adopting this as a secondary agriculture business.

Success Story : 6

Name of Farmer :

Hareshbhai Mohanbhai Sayparia

Address	:	Rataiya
Taluka	:	Lodhika
Dist.	:	Rajkot
Contact Number	:	9724371007
Age	:	35 years
Education	:	12th Pass
Land holding	:	5 acre
Crops grown	:	Groundnut, Cotton, Wheat, Gram & Coriander
Livestock	:	Gir Cow : 1 Gir Bullock : 2 Jafrabadi buffalo : 2

6. Use of rotavator for composting of wheat and cotton stalk by incorporating in soil after harvesting

Special recognition :

Hareshbhai is a progressive farmer of Rajkot district. He inspired from Krishi Vigyan Kendra, Juangadh Agricultural University, Targhadia (Rajkot) by training and demonstration to use of rotavator for in situ composting of wheat straw and cotton stalk by incorporating in soil after harvesting. In Saurashtra region, most of the wheat and cotton growers burn the wheat straw and cotton stalk after harvesting. KVK Rajkot motivated the farmers to use of rotavator for in situ composting of wheat straw and cotton stalk to maintain soil health. Haresh Mohanbhai Sayparia started this practice from 2007 During this year, more than 40 farmers of surrounding villages of Rataiya has adopted this practices through the innovation of this farmer and at present it spread up horizontally in different villages of Rajkot district by seeing and believing.

Success Story : 7

Name of Farmer :
Mansukhbhai Bhadabhai Pambhar
Address : Kerala
Taluka : Padadhari
Dist. : Rajkot
Contact Number : 9979931173
Age : 43 years
Education : 10th Pass
Land holding : 3 acre
Crops grown : Groundnut, Cotton, Cumin, Wheat & Gram
Livestock : Gir Cow : 1
Bullock : 2
Jafrabadi buffalo : 1

7. An effective approach for the management of groundnut stem rot

Special recognition :

Cotton and groundnut are the major crops of this region. Farmers are growing high yielding groundnut variety GG-20 but main construnt of growing groundnut GG-20 is stem rot. Mansukhbhai coming in contact with KVK since last three years. He took interest to use Trichoderma in groundnut. We advice him to use Trichoderma @ 2.5kg/acre with castor cake @300kg/ha. He adopt this practice from Kharif-2010 he got significant result. He also use Trachoderma in Kharif 2011 also, harvest pod yield of groundnut 2120kg/ha an average yield (Village) 1900kg/ha.

As result of front line demonstration by KVK scientist an active role of Mr. Mansukhbhai, other farmer of the village are also convinced to adopt scientific technology for higher groundnut production.

Impact :- With the use of Trichoderma in groundnut farmer can be manage stem rot and obtained additional yield.

Advantages:

Mr. Mansukhbhai of Kerala village harvested 15.85 % higher groundnut pod yield

Treatments	Yield (q/ha)	Yield increase (%)
Control	20.50	--
Seed treatment and soil application of trichoderma	23.75	15.85

3.8 Give details of innovative methodology or innovative technology of Transfer of

Technology developed and used during the year

- Use of cow urine, butter milk, bajra flour etc for insect pest and disease management.
- Use of small or wrinkle seeds of groundnut for sowing purpose.
- Farmers grow maize as a mixed crop in groundnut and inter crop in cotton.
- Cotton Stalk Shredder
- Wheel Hoe
- Cotton Stalk Puller
- Tractor mounted spryer
- Chaff Cutter for Minimizing the Animal Fodder Waste
- IPM in Cotton-Use of Trap crop, Pheromone trap, etc.
- Minimizing the chemical Fertilizer and Maximizing organic manure.
- Value addition in different agriculture crops.

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	Groundnut	Farmers maintain a set furrow system and apply manure and fertilizer every year in the same furrow.	To get residual effect of manure and fertilizer in succeeding crop
2	Groundnut	Some farmers near the river bed, apply sand in the set furrow for increasing infiltration rate of the soil	To reduce the water Logging condition in the field
3	Kharif crops	Farmer apply supplementary irrigation to the crops during moisture stress condition	For life saving irrigation to minimize the risk of crop failure
4	Cotton	Farmers grow Maize after 3-4 rows of cotton	To increase the natural enemies and fodder purpose
5	Cotton	After heavy rain, farmer apply irrigation to balance the salt concentration at top of soil	To balance the salt concentration
6	Groundnut	Farmers grow maize as mix crop in groundnut	To increase natural enemies & fodder purpose

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

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

3.11 Field activities

i. Number of villages adopted : 15
ii. No. of farm families selected : 250
iii. No. of survey/PRA conducted : -

3.12. Activities of Soil and Water Testing Laboratory

1. Status of establishment of lab : Working
2. Year of establishment : 2007-08
3. List of equipments purchased with amount :

Sr. No	Name of the Equipment *	Qty.	Cost
	-		
Total			

* All the necessary chemicals and equipments purchased

3.13 Details of samples analyzed so far

:

Details	No. of Samples	No. of Farmers	No. of Villages	Amount realize (Rs.)
Soil Samples	2725	2725	187	136250
Water Samples	2725	2725	125	136250
Plant Samples	-		-	-
Petiole Samples	-	-	-	-
Total	**5450**	**5450**	**312**	**272500/-**

4. 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)
Cumin Variety (GC-4)	232	84	30000	45000
Improved variety of Gram (GG-3)	157	72	27500	35000
Wheat variety (GW-496, 366)	268	52	32500	37500
Use of Trichoderma culture powder for the control of stem rot in groundnut	347	57	28125	31500

4.2. Cases of Large scale adoption

- ✓ Adoption of *Trichoderma* culture powder for the management of stem rot disease in groundnut
- ✓ Adoption of *Bt*. cotton varieties with INM and IPM concepts.
- ✓ Farmers prefers to sow semi spreading and high yielding variety of groundnut i.e. GG-20
- ✓ Most of the farmers adopt new variety of cumin (GC-4) which is resistant to wilt disease
- ✓ Intercropping/mix cropping in groundnut and cotton was adopted for minimize the risk factor in dry land agriculture with preservation of natural enemies.
- ✓ Farmers are ready to use of rotavator/ cotton shredder/ mobile chopper for increasing the organic matter in soil particularly in Bt. Cotton cropping system.

4.3. Details of Impact analysis of KVK Activities carried out during the reporting period :- Nil

5.0 LINKAGES

5.1 Functional linkage with different organizations

Sr. No.	Name of organization	Nature of linkage
1.	Dy. Director of Agriculture.	Most of the Organizations are members of Scientific Advisory Committee (SAC) of KVK and have linkage with different activities of KVK viz., Training Programme, Khedut Sibir, Farmers day, Animal treatment Camp, Farmers fair, Film Show, Ex-training meeting and Soil health card etc.
2.	Dy. Director of Agril. Extension (FTC)	
3.	Dy. Director of Horticulture	
4.	Dy. Director of Animal Husbandry	
5.	Dy. Director of Soil Conservation	
6.	Dy. Director of Social Forestry	
7.	Jilla Udhyong Kendra	
8.	Milk Co-Operative Society (Gopal Dairy)	
9.	Bank of Baroda	
10.	National Bank for Agriculture & Rural Development NABARD)	
11.	NHRDF	
12.	Doordarshan Kendra	
13.	All India Radio	
14.	WALMI	
15.	Dy. Director of District Rural Development Agency(DRDA)	
16.	ATMA	
17.	Dy. Director of GLDC	
18.	Project Director, District Watershed Development Unit	
19.	GGRC	

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

Sr.No.	Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
1	Agricultural technology information centre (ATIC) – BH 101572-02	Sept-2004	Govt. of Gujarat	2,00,000
2	National Information System for Pest Management (Bt Cotton) – BH 2043	March-2007	NCIPM- New Delhi	5,00,984
3	Popularization of MIS in SSNNL Maliya branch sub canal – BH 18005-03	Jun.-2010	SSNNL, Gandhinagar	2,29,535
4	National Initiative on climate Resilient Agriculture (NICRA) – BH 2704-47	March-2010	CRIDA, Hyderabad	8,02,106
5	Seed Village BH- 18018-08	March-2010	ICAR-New Delhi	15,00,000
6	Protection of plant varieties and farmers' rights act BH 2043-01	October-2013	ICAR-New Delhi	80,000

5.3 Details of linkage with ATMA

a) Is ATMA implemented in your district : **Yes**

Sr.No.	Programme	Nature of linkage	Remarks
1	Farmers meeting(8)	Linkage with different activities viz., Training Programme, Khedut Sibir, Farmers meeting, Farmers fair, Film Show etc.	-
2	Training (15)		-
3	Farmer fair (1)		-
4	Lecture delivered (39)		-

5.4 Give details of programmes implemented under National Horticultural Mission

Sr.No.	Programme	Nature of linkage	Constraints if any
-			

5.5 Nature of linkage with National Fisheries Development Board

S. No.	Programme	Nature of linkage	Remarks
-			

6. PERFORMANCE OF INFRASTRUCTURE IN KVK

6.1 Performance of demonstration units (other than instructional farm)

Sr. No.	Demo Unit	Year of estt.	Area	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross Income	
1	Water Harvest Structure	2001	40x 30x 15 mt	-	-	-	-	-	-
2	Arid Horticulture	-	-	Guj. Aonla -1	Fruit	60 kg	-	900	-
3	Soil Testing Lab	2006	-	-	-	-	710000	2,72,500	-
4	Bio Gas Plant	2006	-	-	-	-	42000	-	-
5	Tractor mounted sprayer	2007	-	-	-	-	43000	-	-
6	Dibbler	2007	-	-	-	-	900	-	-
7	Cotton Stalk Shredder	2007	-	-	-	-	43000	-	-
8	Cotton Stalk Puller	2007	-	-	-	-	1200	-	-
9	Wheel Hoe	2007	-	-	-	-	1260	-	-
10	Veterinary mobile unit	2008	-	-	-	-	600000	-	-
11	Processing unit	2009					1685000		

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	
Cereals : nil									
Pulses									
Black Gram (Mega seed)	17/6/13	09/10/13	0.75	GU-1	Seed	250	-	16250	-
					Fodder	600	-	7500	-
Oilseeds									-
Groundnut (Breeder)	18/6/13	20/11/13	5.21	GG-5	Pod	4795	-	407700	-
					Fodder	8450	-	61500	-
Groundnut (Breeder)	20/6/13	20/11/13	2.0	GJG-31	Pod	2730	-	218700	-
					Fodder	3400	-	19000	-
Groundnut (Breeder)	19/6/13	20/11/13	1.09	GJG-9	Pod	1310	-	112500	-
					Fodder	2000	-	17100	-
Groundnut (Breeder)	19/6/13	20/11/13	3.44	GG-20	Pod	2835	-	218700	-
					Fodder	7500	-	49500	-
Groundnut (Mega seed)	19/6/13	20/11/13	0.65	GG-20	Pod	610	-	31800	-
					Fodder	1700	-	12500	-
Cotton	20/6/13	01/03/14	0.85	*Bt.*	Seed cot	2140	-	107000	-

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

Sr. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
- NIL -					

6.4 Performance of instructional farm (livestock and fisheries production)

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

6.5 Rainwater Harvesting

Training programmes conducted by using Rainwater Harvesting Demonstration Unit

Title of the training course	Client (PF/RY /EF)	No. of Courses	No. of Participants including SC/ST			No. of SC/STParticipants		
			Male	Female	Total	Male	Female	Total
Rain water harvesting and their efficient use for crop production	PF.	2	53	-	53	-	-	-

6.6 Utilization of hostel facilities: Accommodation available (No. of beds) : 20

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
KVK Hostel is utilized by student of Polytechnic college of Agril. Engg., JAU, Targhadia			

7. FINANCIAL PERFORMANCE

7.1 Details of KVK Bank accounts

Bank account	Name of the bank	Location	Account Number
With Host Institute	SBI	Junagadh	-
With KVK	SBI	Rajkot	10353003175

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

Item	Released by ICAR		Expenditure		Unspent balance as on 1st April 2014
	Kharif 2013-14	Rabi 2013–14	Kharif 2013-14	Rabi 2013-14	
Inputs					
Extension activities					
TA/DA/POL etc.					
TOTAL					

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

Item	Released by ICAR		Expenditure		Unspent balance as on 1st April 2014
	Kharif 2013-14	Rabi 2013–14	Kharif 2013-14	Rabi 2013-14	
Inputs					
Extension activities					
TA/DA/POL etc.					
TOTAL					

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

Item	Released by ICAR	Expenditure	Unspent balance as on 1st April 2014
	Kharif 2013-14	Kharif 2013-14	
Inputs			
Extension activities			
TA/DA/POL etc.			
TOTAL			

7.5 Utilization of KVK funds during the year 2013 – 14 (Rs in Lakh)

S.N.	Particulars	Sanctioned	Released	Expenditure
1	2	3	4	5
A. Recurring Contingencies				
1	**Pay & Allowances**	75.00	75.00	73.02
2	**Traveling allowances**	3.00	01.25	01.15
3				**Contingencies**
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	4.20	4.20	3.81
B	POL, repair of vehicles, tractor and equipments			
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	7.80	7.80	6.82
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)			
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			
	TOTAL Contingencies	**12.00**	**12.00**	**10.63**
	TOTAL (A)	**90.00**	**88.25**	**84.80**
B. Non-Recurring Contingencies				
1	**Equipments & Furniture** **a)** Furniture for office building & farmers hostel	-	-	-
	b) EPBAX system with accessories	-	-	-
	c) Plant Helth Diagnostic facility	-	-	-
	Total	-	-	-
2	**Works**	-	-	-
3	**Library** (Purchase of assets like books & journals)	-	-	-
4	**Vehicle**	-	-	-
	TOTAL (B)	**-**	**-**	**-**
C. REVOLVING FUND		-	-	-
	GRAND TOTAL (A+B+C)	**90.00**	**88.25**	**84.80**

7.6 Status of revolving fund (Rs.) 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 2011 to March 2012	949811	1012035	1092908	868938
April 2012 to March 2013	868938	502453	783835	587556
April 2013 to March 2014	1028865	663480	689107	1003238

8.0 PLEASE INCLUDE INFORMATION WHICH HAS NOT BEEN REFLECTED ABOVE (write in detail).

8.1 Constraints

(a) Administrative

1. Transportation vehicle is prime need for farmers, farm women and rural youth specially during training programme and hence mini-bus should be required.

(b) Financial

1. Budget allotment is not sufficient specially for non-recurring items.
2. There is confusion in delegation of power for revalidation of unspent balance.
3. Provision of special grant for farm development is necessary in budget allotment specially for compound wall, cement road etc.

(c) Technical

1. Supporting staff for farm manager and soil and water testing lab is necessary and hence one Farm assistant and lab assistant should be required

Annexure I

Minutes of the 11th Scientific Advisory Committee (SAC) Meeting held on 31st December, 2013 at Krishi Vigyan Kendra, JAU,Targhadia, (Rajkot)

The eleventh Scientific Advisory Committee meeting was held in the KVK training hall of Krishi Vigyan Kendra, Junagadh Agricultural University, Targhadia on 31st December 2013.The meeting was chaired by Dr. N. C. Patel, Honorable Vice Chancellor, Junagadh Agricultural University, Junagadh.

The Following members were remained present in the meeting.

Sr. No.	Name & Designation	Position	Sr. No.	Name& Designation	Position
1	**2**	**3**	**4**	**5**	**6**
1	Dr. N. C. Patel, Honorable Vice Chancellor, JAU, Junagadh.	Chairmen	17	Vegda Shital, MDT, DWDU, Rajkot	Member
2	Dr. I. U. Dhruj, ADR, JAU, Junagadh	Member	18	Shri. L. R. Sadiya, Director ATMA (JDA), Rajkot	Member
3	Dr. H. B. Gardharia, ADEE, JAU, Junagadh	Member	19	Dr. K. L. Raghvani, PC, KVK, Jamnagar	Member
4	Dr. J. B. Mishra, Director, Directorate of Groundnut Research, ICAR, Junagadh	Member	20	Dr. J. N. Nariya, PC, KVK, Nana Kanthasar	Member
5	Dr. K.N. Akbari, RS (DFRS), Targhadia	Member	21	Dr. B. B. Kunjadiya, PC, KVK, Amreli	Member
6	Dr. G. R. Sharma, Principal, Polytechnic in Agri. Engg., Targhadia	Member	22	Dr. K. N. Jadav, PC, KVK, Pipalia, Dist. Rajkot	Member
7	Shri. P. R. Sakarwadia, ACF, SRDU, Rajkot	Member	23	Smt. B. R. Topia, Farm women, Madharvada, Tal. Rajkot	Member
8	Shri. B.H. Agatha, DAO, District Panchayat, Rajkot	Member	24	Smt. K. B. Topia, Farm women, Madharvada, Tal. Rajkot	Member
9	Dr. S. B. Sharma, Dy. Director, NHRDF, Rajkot	Member	25	Shri. Bhabvanjibhai A. Gami Progressive Farmer, Bagthala, Tal. Morbi	Member
10	Dr. S. K. Tiwari, STO, NHRDF, Rajkot	Invitee Member	26	Shri Lakhabhai A. Rathod, Progressive Farmer, Kanesara, Tal. Jasadan	Member
11	Shri. Devesh Parmar, DDM, NABARD, Rajkot	Member	27	Shri. Sureshbhai L. Detroja, Progressive Farmer, Kumbhariya,	Invitee Member
12	Dr. H. D. Kansagra, Deputy director of Animal Husbandry, District Panchayat, Rajkot	Member	28	Shri. Sanjaybhai A. Saradava Progressive Farmer, Bagthala, Tal. Morbi	Invitee Member

1	*2*	*3*	*4*	*5*	*6*
13	Shri K. V. Chavda , All India Radio, Rajkot	Member	29	Shri. A. R. Bhanderi Progressive Farmer (A.H.), Khijadia, Tal. Rajkot	Invitee Member
14	Dr. M. D. Pethani, Senior Assistant manager, Gopal Dairy, Rajkot	Member	30	Shri Shivlala Babubhai Patel, Progressive Farmer, Rajpar, Tal. Morbi	Invitee Member
15	Dr. M. B. Thesiya, Veterinary officer Gopal Dairy, Rajkot	Invitee Member	31	Shri. Dineshbhai B. Moliya, Progressive Farmer, Kherdi, Tal. Rajkot	Invitee Member
16	Sharmeen Ahmad, TE, DWDU, Rajkot	Member	32	Dr. B. B. Kabaria, PC, KVK, Targhadia	Member Secretary

In the beginning, Dr. K. N. Akabari, Research Scientist, Dry Farming Research Station, Targhadia warmly welcomed Chairman of the Committee Dr. N. C. Patel, Honorable Vice Chancellor, Junagadh Agricultural University, Junagadh, Dr. J. B. Mishra, Director, Directorate of Groundnut Research, Junagadh, Dr. I. U. Dhruj, Associate Directorate of Research, JAU, Junagadh, Dr. H. B. Gardharia, ADEE, JAU, Junagadh, and all the SAC members, Progressive farmers and farm women of the cluster villages and scientists of this centre.

Dr. N. C. Patel, Honorable Vice Chancellor, Junagadh Agricultural University, Junagadh inaugurated the meeting by lighting the lamp. Chairman of the meeting and all the members of SAC meeting were also welcomed with flowers.

Dr. B. B. Kabaria, PC, KVK, Targhadia presented the action taken report for 10th SAC meeting which was held on the 10th April, 2013. He also presented the annual progress report of the year 2013 (April to December 2013) and action plan for the Year 2014-15 (April-2014 to March.-2015) including training achievements, different extension activities, results of the FLDs and OFTs etc. conducted by this center during the year 2013.

The following suggestions were made by the SAC members during the meeting.

- OFT for Agronomy should be changed as per discussion in the SAC-meeting of KVK-Amreli.
- A lecture form Bank's officer regarding assistance from Bank to the farmers should be carried out during maximum training programmes.
- The No. of trainees during off/on campus training programme for farmers should be increased.
- For SMS services list of farmers should be increased up to 1000.
- No. of SC/ST women should be increased during training programme.
- FLDs should be carried out with good agricultural practices on farmer's field.

Dr. I.U. Dhruj, ADR, Junagadh, appreciated the work done by KVK-Targhadia through team work. Emphasis should also be given on water harvesting and watershed management.

Dr. H. B. Gardharia, ADEE, Junagadh mentioned that the successive FLD farmers should be highlighted through success stories or prepared a video film and visualized during the training programme.

Dr. N. C. Patel, Honorable Vice Chancellor, Junagadh Agricultural University, Junagadh appreciated the work done by the center. He also mentioned that experts of different disciplines from KVK-Targhadia should help to KVK-Pipaliya when ever support needed.

Finally, the meeting was concluded by performing the vote of thanks by Dr. B. B. Kabaria, PC, KVK, Targhadia.

Annexure II

District Profile - I

General census : 31.70 lac

Agricultural and allied census: 16.48 lac

Agro-climatic zones: North Saurashtra Agro climatic Zone-VI

Agro-ecosystems:

Sr. No	Agro ecological situation	Characteristics	Taluka Covered*
1.	Medium Black Soil with 500-600 mm Rainfall (Situation No. 2)	Shallow black to medium black moderately deep up to 30-80 cm.	Gondal, Jamkandorna
2.	Shallow black soil with 500-600 mm Rainfall (Situation No. 4)		Lodhika, Padadhari, Rajkot, Kotada sangani
3.	Residual Sandy Soils with 500-600 mm Rainfall (Situation No. 7)	Sandy and Saline	Morbi, Vankaner, Tankara, Maliya
4.	Hilly Soils with 500-600 mm Rainfall (Situation No. 14)	Hilly	Jasdan

*Jetpur, Dhoraji and Upleta Taluka falls under the South Saurashtra (VII) Agro – Climatic Zone.

Major and micro-farming systems

- Cotton-Cumin, Groundnut-Vegetable, Groundnut-Flower, Forage-Flower

Major production systems : Cotton and Groundnut base

- **The major crop sequences/rotations followed**

1. Groundnut : Groundnut – Groundnut, Groundnut –Wheat/Cumin/chick pea /vegetable/fodder crops. Groundnut – Cotton, Groundnut – sesamum,
2. Cotton : Cotton–Cotton/wheat/summer groundnut/summer sesamum/mung

Major intercropping systems followed in the area are: groundnut+ castor (3:1) groundnut + pigeon pea (3:1), groundnut+sesamum (6:3), pearl millet + pigeon pea (2:1), sorghum + pigeon pea(1:1) and cotton + green gram /black gram/groundnut in paired row system.

Major agriculture and allied enterprises:

- Agriculture-Animal Husbandury
- Agriculture-Fisheries
- Agriculture + Arid Horticulture

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

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

Sr. No.	Taluka	Name of the village	Focus area	Target area
1.	Jasdan	Jasapar	Heavy infestation of sucking pest and reddening of cotton , Stem rot disease in groundnut, Infertility problems in cattle, Mineral deficiency in animal fodder and Long inter-calving period in Buffalo	- IPM and INM in major crops of this area - Use of Trichoderma for management of Stem rot disease in groundnut - Reducing the inter- calving period in Buffalo - To create the awareness for grading, processing and marketing (value addition)
		Jivapar		
		Jungvad		
		Panchvada		
		Gundala		
2.	Morbi	Chachapar		
		Rajpar		
		Khanpar		
		Nani-Vavdi	Saline underground water, Black sticky soil & poor drainage of soil, Long inter-calving period in Buffalo, Nutritional deficiency in animal feed and fodder, Heavy infestation of sucking pest in cotton, Less area under Horticultural crops	* Increase drainage of soil * Use of gypsum in soil * Green manuring with dencha, sunhemp * Efficient use of irrigation water in salt affected soil * Reducing the inter- calving period in Buffalo * Motivate the farmers for arid Horticultural crops. * To create the awareness for grading, processing and marketing (value addition)
		Bagathala		
3.	Maliya	Vejalpar		
		Sarvad		
		Manaba		
		Kumbhariya		
		Khirai		

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. : Resource map
4. Analysis and conclusions: Majority of farmers dose not aware with INM, IPM,efficient use of water, scientific management of animals and processing of agricultural products.

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

Sr. No.	location specific problems	brief description of frequency	extent/ intensity/ severity of each problem	Matrix ranking of problems
1.	Heavy infestation of sucking pest in Cotton	Trips: at the time of dry spell	Heavy infestation	Regularly
		Jassid: month of September	Heavy infestation	Regularly
		White fly: Oct.-Nov.	Moderate infestation	Occasionally
2.	Reddening of cotton	In the month of September and water stagnation condition	Moderate infestation	Regularly
3.	Stem rot disease in groundnut	After one month of showing of groundnut	Moderate infestation	Sporadically
		Severity increased during dry spell.	Heavy infestation	Frequently
4.	Infertility problems in cattle	Due to silent heat in cattle	Moderate infestation	Regularly
5.	Long inter-calving period in Buffalo	Mostly in Jafrabadi buffaloes	Moderate infestation	Regularly

7. 8. & 9. List of location specific thrust areas

Sr. No.	Taluka	Name of the village	Thrust area	List of location specific technology needs for OFT and FLD	Matrix ranking of technologies
1.	Jasdan Morbi	Jasapar Jivapar Jungvad Panchvada Gundala Chachapar Rajpar Khanpar	INM in major crops of this area	INM in Bt. Cotton for overcome the reddening pro	Regularly
			IPM in major crops of this area	Inter cropping of Maize to attract bio agent for conservation	Regularly
			IDM in Groundnut	Use of Trichoderma for management of Stem rot disease in groundnut	Occasionally
			Reducing the inter-calving period in Buffal	OVYSYNC Protocol given by NDRI-Karnal	Regularly
			To create the awareness for grading, processing and marketing (value addition)	Demonstration of implements at village level	Regularly
2.	Morbi	Nani-Vavdi Bagathala	Water lodging condition of soil	To add the organic matter in soil	Regularly
3.	Maliya	Vejalpar Sarvad Manaba Kumbhariya Khirai	Black-sticky saline soil	Use of gypsum in soil	Occasionally
			Less are under horticulture crops	Motivate the farmers for arid Horticultural crops.	Regularly

10.List of location specific training need

1	Quality improvement of roughages by Urea treatment
2	Rain water harvesting and their efficient use for crop production
3	Importance of drip irrigation in horticultural crops.
4	Selection, maintenance and use of improved farm implements and machinery
5	Importance of fertilizer management in cotton and groundnut crops
6	Management of reproductive and metabolic disorders in animals
7	Emerging insect pests & disease of Bt.cotton & their management
8	Cultivation of vegetable & flower in green house.
9	Insitu moisture conservation practices in dry land agriculture
10	Value addition in agricultural crops
11	Management of salt affected soil
12.	Home level processing of agricultural produces
13.	Stem rot management in Groundnut
14.	To increase the organic matter in soil by use of mobile chopper and rotavetor
15.	Role of micronutrient for soil sustainability

Technology Inventory and Activity Chart - III

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

Sl. No	Technology	Crop/enterprise	Year of release or recommendation of technology	Source of technology	Reference/citation
1.	Cv. GG-3	Chick pea	2007	Pulse research station JAU, Junagadh	-
2.	To increase the organic matter in soil by use of cotton stock shredder	Cotton, Castor, sesame and pigeon pea	2012	DFRS-Targhadia (JAU, Junagadh)	-

3. Activity Chart

Crop/Animal/ Enterprise	Problem	Cause	Solution	Activity	Reference of Technology
Cotton	1)Reddening of Cotton 2) Sucking pest in cotton	1) Imbalance fertilizer application and Pest and disease occurrence 2) improper use of nitrogenous fertilizers, insecticide and mono cropping of cotton	1) Application of recommend dose of Nutrients 2) Integrated Pest management for sucking pest 3) Irrigation managament	1. Single component FLD to demonstrate effect of recommended dose of nutrients 2. Training and FLD programme on integrated pest management of cotton pest 3. OFT on management of cotton reddening	Recommendations of JAU, Junagadh
Groundnut	Stem rot	1) Mono cropping of Groundnut 2) Frequent inter culturing	1) Crop rotation 2) Need base inter culturing 3) Use of Trichoderma	1) Training 2) Training and FLD 3) FLD and OFT	Recommendations of JAU, Junagadh
Animal Husbandry	Long inter calving period	1) Improper feeding 2) Imbalance of nutrition	1) Proper feeding 2) Balanced use of nutrition	1) Training 2) Training and FLD 3) FLD and OFT	Recommendations of JAU, Junagadh
Water management	Water scarcity for agriculture	Improper and haphazard use of water	Use of MIS	1) Training 2) Training and FLD	Recommendations of JAU, Junagadh

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

Sr. No.	Crop	Variety	Characters
1	Groundnut	GG-5	Short duration and drought resistance
2	Chick pea	GJG-3	High yielding and suitable for irrigation and un-irrigated condition, moderate wilt resistance
3	Cumin	GC-4	High yielding and wilt resistance
4	Wheat	GW-496	Good grain quality and high yielding variety
5	Sesame	GT-4	High yielding variety
6	Green gram	GM-4	High yielding variety

Sr. No.	OFT/FLD	Crop	Recommended technology	Year & Centre
1	*2*	*3*	*4*	*5*
OFT				
1.	Low yield of cotton	Cotton	Recommended dose of fertilizer 240 – 50 – 150 + 50 ZnSO4 and three spray of KNO3 (i) 240 Kg N in four equal split first as a basal second, third and fourth at 30, 60 and 90 days after sowing. (ii) 50 Kg P2O5 as basal dose. (iii) 150 Kg K2O as basal or in two equal split.(iv) Three spraying of KNO3 at 15 days interval starting from flowering.	2012, DFRS, JAU, Targhadia
2.	Management of sucking pests in cotton.	Cotton	IPM : alternate spraying of chemical and bio pesticide and intercropping of maize / cow pea with cotton 1:10 Row	2009, Dept. of Agril. Entomology JAU, Junagadh
3.	Soil moisture conservation through deep plowing up to 20 cm depth	Groundnut	Deep ploughing with 2-3 inter culturing	2008, DFRS, JAU,Targhadia
4.	Assessment of Fertility improvement in Buffalo	Buffalo	Treated by “OVSYNCH” protocol as per NDRI Karnal	NDRI Karnal
5.	Comparison of solar cooker with traditional cooking system	solar cooker	preparation by solar cooker	-
6.	Integrated Nutrient Management in Onion Crop	Onion	Use of NPK as a 125 kg N/ha, 50kg P/ha, and 50kg K/ha with 20 kg S/ha	Vegetable Research Station, JAU, Junagadh
7.	Use of Trichoderma for wilt disease management in cumin	Cumin	Application of Trichoderma @ 2.5 kg /ha with castor cake @ 500 kg / ha at the time of sowing with the help of multipurpose seed drill.	-
8.	Effect of different type of mulching materials for water management in Cotton	Cotton	Black plastic mulch (50 micron) under drip irrigation system	SAU,Gujarat
9.	Effect of salt & oil on spoilage of mango pickles	Mango pickles	Salt 15% (150 gm) + Oil 250ml/ kg mango	-
10.	To assess the effect of probiotic and prebiotic on milk production	Livestock	Use of Probiotic & prebiotic in animal feed (Sacchromyses cerevisiae + Lactobacillus sporogenes+ Aspergillus oryzae+ Fructo oligosaccharide+ Biotin+ DL Methionine + Zinc Sulphate + Cobalt Sulphate Copper Sulphate) two bolus per day for 6o days	SAU,Gujarat

1	*2*	*3*	*4*	*5*
FLD:				
11.	Management of major disease of groundnut	Groundnut (GG-20)	High yielding variety	Dept. of Agril. Pathology JAU, Junagadh
12.	To test yield potentiality of newly released sesamum varieties	Sesamum (GT-4)	High yielding variety, Good grain quality	ARS, JAU, Amreli
13.	To test yield potentiality of newly released Chickpea variety	Chickpea (GJG-3)	High yielding and suitable for irrigation and un-irrigated condition, moderate wilt resistance	Pulse Research station, JAU, Junagadh
14.	Quality production of wheat through spraying of fungicide at milking stage.	Wheat GW-366)	High yielding variety, Good grain quality	Pulse Research station, JAU, Junagadh
15.	Management of wilt through bio agent	Cumin (GC-4)	High yielding and wilt resistance	SAU, Gujarat

Annexure III

Details of Training programme

Date	Clientele	Title of the training programme	Discipline	Duration in days	Venue (Off/On Campus	Number of other participants			Number of SC/ST			Total number of participants		
						M.	F.	T.	M.	F.	T.	M.	F.	T.
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*
20/5/13	FW	Proper methods for cooking	H.S.	1	Off		25	**25**			**0**	0	25	**25**
31-5-13	PF	Quality improvement of roughages by Urea treatment	A.S.	1	On	2	16	**18**		1	**1**	2	17	**19**
1/6/13	PF	Seed treatment for insect pests and diseases management.	P.P.	1	On	17		**17**	6		**6**	23	0	**23**
3/6/13	F	Method of soil sample	C.P.	1	On	19		**19**	1		**1**	20	0	**20**
4/6/13	F	Rain water harvesting and their efficient use for crop production	Agri. Eng.	1	On	23		**23**	3		**3**	26	0	**26**
25/6/13	F	Seed treatment for insect pest & disease management.	P.P.	1	Off	39		**39**	5		**5**	44	0	**44**
25/6/13	F	Rain water harvesting and their efficient use in crop production	Agri. Eng.	1	Off	23		**23**	4		**4**	27	0	**27**
25/6/13	FW	Importance of drip irrigation in horticultural crops.	Horti.	1	Off	4	13	**17**			**0**	4	13	**17**
28/6/13	F	Selection, maintenance and use of improved farm implements and machinery	Agri. Eng.	1	Off	29		**29**	2		**2**	31	0	**31**
28/6/13	F	Importance of primary tillage	C.P.	1	Off	22		**22**	2		**2**	24	0	**24**
29/6/13	F	Safe food and seed storage	P.P.	1	Off	25		**25**	3		**3**	28	0	**28**

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*
29/6/13	F	Importance of fertilizer management in cotton and groundnut crops	C.P.	1	Off	23		**23**	1		**1**	24	0	**24**
3/7/13	F	Management of reproductive and metabolic disorders in animals	A.S.	1	On			**0**	29		**29**	0	29	**29**
11/7/13	F	Emerging insect pests & disease of Bt.cotton & their management	P.P.	1	Off	21		**21**			**0**	21	0	**21**
11/7/13	F	Cultivation of vegetable & flower in green house.	Horti.	1	Off	24		**24**			**0**	24	0	**24**
12/7/13	PF	Integrated insect pests and diseases management in *kharif* crops	P.P.	1	On	29		**29**			**0**	29	0	**29**
15/7/13	PF	Production technologies for major *kharif* crops	C.P.	1	On	30		**30**			**0**	30	0	**30**
16/7/13	F	Role of botanical and bio pesticides for insect pest management	P.P.	1	Off	32		**32**			**0**	32	0	**32**
16/7/13	F	Selection and use of inter culturing operational tools	Agri. Eng.	1	Off	25		**25**			**0**	25	0	**25**
17/7/13	PF	Insitu moisture conservation practices in dry land agriculture	Agri. Eng.	1	On	42		**42**	6		**6**	48	0	**48**
20/7/13	PF	Importance of bio fertilizers in Agriculture	C.P.	1	On	16		**16**	2		**2**	18	0	**18**
22/7/13	F	Vaccination schedule against contagious diseases in animals and poultry	A.S.	1	Off	14	36	**50**	4		**4**	18	36	**54**
22/7/13	FW	Different methods of tie and dye work	H.S.	1	Off		19	**19**			**0**	0	19	**19**
26/7/13	F	Fertilizer management in *Kharif* crops.	C.P.	1	Off	35	14	**49**	4		**4**	39	14	**53**

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*
28/7/13	PF	Different formulation of pesticides and their application	P.P.	1	On	26		**26**			**0**	26	0	**26**
2/8/13	F	Importance of organic farming	C.P.	1	Off	22		**22**			**0**	22	0	**22**
3/8/13	FW	Fodder management in animal round the year.	A.S.	1	On		20	**20**			**0**	0	20	**20**
12/8/13	F	Importance of mineral mixture in feeding for cattle and buffaloes	A.S.	1	Off	21		**21**			**0**	21	0	**21**
13/8/13	F	Deworming and vaccination in live stock	A.S.	1	Off	36		**36**			**0**	36	0	**36**
14/8/13	EF	Integrated pest management in Bt. Cotton	P.P.	1	On	43		**43**	2		**2**	45	0	**45**
16/8/13	F	Enrichment of low grade dry fodder for cattle	A.S.	1	Off	36		**36**			**0**	36	0	**36**
17/8/13	F	Control of common diseases in livestock & vaccination scheduling	A.S.	1	Off	12		**12**			**0**	12	0	**12**
21/8/13	R.Y.	Vermi-compost production	C.P.	1	Off	22		**22**	3		**3**	25	0	**25**
11/9/13	F	Production technology of pomegranate	Horti.	1	Off	24		**24**			**0**	24	0	**24**
24/9/13	F	Minimizing the mortality of buffalo calves during winter season	A.S.	1	Off	45		**45**			**0**	45	0	**45**
26/9/13	R.Y.	Seed production technology of *Rabi* crops	C.P.	1	Off	25		**25**	2		**2**	27	0	**27**
27/9/13	PF	Different propagation methods for fruit crops suitable for arid and semi arid region	Horti.	1	On	28	7	**35**			**0**	28	7	**35**
4/10/13	FW	Preparation of milk products	H.S.	1	Off		26	**26**			**0**	0	26	**26**
7/10/13	F	Irrigation management in cotton crop.	C.P.	1	Off	17		**17**			**0**	17	0	**17**

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*
7/10/13	F	Different formulation of pesticides and their applications	P.P.	1	Off	29		**29**			**0**	29	0	**29**
15/10/13	PF	Operational and maintenance of micro irrigation system	Agri. Eng.	1	On	20		**20**			**0**	20	0	**20**
17/10/13	PF	Control of ecto and endo parasites in cattles	A.S.	1	On	24		**24**			**0**	24	0	**24**
19/10/13	PF	Integrated insect pests & disease management in *Rabi* crops	P.P.	1	On	17		**17**			**0**	17	0	**17**
21/10/13	PF	Production technologies for *rabi* vegetables	Horti.	1	On	18		**18**			**0**	18	0	**18**
25/10/13	PF	Seed production of onion & garlic	Horti.	1	On	12		**12**			**0**	12	0	**12**
29/10/13	F	Production technologies for major *Rabi* crops	C.P.	1	On	24		**24**			**0**	24	0	**24**
1/11/13	PF	Selection, repair and maintenance of plant protection equipments	Agri. Eng.	1	On	27		**27**			**0**	27	0	**27**
19/11/13	F	Veterinary first aid & control of infectious diseases	A.S.	1	On	18		**18**			**0**	18	0	**18**
26/11/13	F	Insect pest management in storage of farm produces.	P.P.	1	On	15		**15**			**0**	15	0	**15**
29/11/13	F	Ecofriendly management of insect pests & disease in vegetable crops	P.P.	1	Off	34		**34**			**0**	34	0	**34**
12/12/13	F	Cultivation practices for onion & garlic	Horti.	1	Off	34		**34**			**0**	34	0	**34**
19/12/13	FW	Value addition in anola.	H.S.	1	Off		21	**21**			**0**	0	21	**21**
20/12/13	F	Management of salt affected soil	Agri. Eng.	1	Off	46		**46**			**0**	46	0	**46**
20/12/13	FW	Home level processing of tomato	H.S.	1	Off		26	**26**			**0**	0	26	**26**

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*
21/12/13	F	Irrigation management in *Rabi* crops	C.P.	1	Off	30		**30**			**0**	30	0	**30**
21/12/13	FW	Preparation of handicraft items for rural girls	H.S.	1	Off		23	**23**			**0**	0	23	**23**
22/12/13	FW	Importance of green leafly vegetables in diet and preparing recipes from vegetables	H.S.	1	On		29	**29**			**0**	0	29	**29**
23/12/13	FW	Use of sprouted pulses in preparation of low cost nutrition diet	H.S.	1	On		25	**25**			**0**	0	25	**25**
23/12/13	F	Post harvest technology of different field crops	Agri. Eng.	1	Off	26		**26**			**0**	26	0	**26**
23/12/13	F	Minimizing the mortality of buffalo calves during winter season	A.S.	**1**	Off	26		**26**			**0**	26	0	**26**
24/12/13	F	Importance of non-conventional source of energy in agriculture	Agri. Eng.	1	Off	28		**28**			**0**	28	0	**28**
27/12/13	FW	Women and child care	H.S.	1	On		20	**20**		9	**9**	0	29	**29**
1/1/14	F	Organic farming need in current scenario	C.P.	1	On	27		**27**			**0**	27	0	**27**
10/1/14	F	Importance of secondary agriculture	Agri. Eng.	1	Off	70		**70**			**0**	70	0	**70**
10/1/14	F	Intigrated management of non insect pests (Rat and Termite) in field condition.	P.P.	1	Off	26		**26**			**0**	26	0	**26**
15/2/14	EF	Livestock feed and fodder production	A.S.	1	On	45		**45**	4		**4**	49	0	**49**
23/2/14	F	Management of insect pest & disease in summer crops	P.P.	1	Off	28		**28**			**0**	28	0	**28**
24/2/14	F	Value addition in wheat & cumin	C.P.	1	Off	21		**21**			**0**	21	0	**21**
		TOTAL		**68**		**1488**	**357**	**1845**	**52**	**10**	**62**	**1540**	**367**	**1907**