

DETAILS OF ACTION PLAN OF KVKs DURING 2016-17

(1st April 2016 to 31st March 2017)

1. GENERAL INFORMATION ABOUT THE KVK

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

Address	Telephone		E mail	Website
	Office	FAX		
Krishi Vigyan Kendra, Junagadh Agricultural University Nana-Kandhasar-363 520 Dist: Surendranagar	(02751) 294120	02751 280121	surendranagar.kvk@gmail.com	-

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

Address	Telephone		E mail	Website
	Office	FAX		
Junagadh Agricultural University, Junagadh – 360 002	0285-2672080-90	0285-2672653	dee@jau.in	-

1.2.b. Status of KVK website : No

1.2.c. No. of Visitors (Hits) to your KVK website (as on today) : NA

1.2.d Status of ICT lab at your KVK : Nil

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

Name	Telephone / Contact		
	Office	Mobile	Email
Dr. M. S. Chandawat	(02751) 294120	094275 08708	surendranagar.kvk@gmail.com

1.4. Year of sanction: October, 2005

1.5. Staff Position (as on 30 Sept. 2015)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale (Rs.)	Grade Pay	Present basic (Rs.)	Date of joining	Permanent /Temporary	Category (SC/ST/OBC/ Others)	Mobile No.	Email id	Please attach recent photograph
1	Programme Coordinator	Dr. M. S. Chandawat	Programme Co-ordinator	Extension Education	37400-67000-39100	8000 for first three years	22320/-	31-3-2015	Permanent	Other	94275 08708	surendranagar.kvk@gmail.com	
2	SMS	Mr. M. F. Bhorania	SMS	Plant Protection	15600-39100	6000	23510/-	18-09-2012	Permanent	Other	94282 97863	mfboraniya@gmail.com	
3		Dr. B. C. Bochalya	SMS	Extension Education	15600-39100	6000	22220/-	23-08-2006	Permanent	Other	94277 13771		

4		-	SMS	Animal Science	15600- 39100	6000	-	-	-	-	-	-	
5		-	SMS	Agron- omy	15600- 39100	6000	-	-	-	-	-	-	
6		-	SMS	Hortic- ulture	15600- 39100	6000	-	-	-	-	-	-	
7		-	SMS	Home Sci	15600- 39100	6000	-	-	-	-	-	-	
8	Progra- mme Assista- nt	Mr. M. V. Pokar	Train- ing Assist- ant	Exten- sion Educ- ation	15500 Fix	-	-	23-02- 2012	Permanent	Other	94294 20468	mvpokar 83@gmai- l.com	
9	2	Mr. M. K. Kanani	Farm Mana- ger	Ento- molog- y	15500 Fix	-	-	01-04- 2015	Permanent	Other	76240 03555		
10	Comput- er Progra- mmer 1	Mr. P. T. Patel	Comp- uter Progr.	B.E. (Comp.)	9300- 34800	4400/-	11750/-	30-12- 2008	Permanent	ST			
11	Account- ant / Superinte- ndent 1	Mr. R.P. Vagadiya	O.S. cum Accou- ntant	--	9300- 34800	4400/-	11750/-	01-12- 2011	Permanent	Other			
12	Stenogr- pher 1	Mr. S.H. Shukla	Junior Steno	--	10000 fix	-	-	19-11- 2013	Permanent	Other			
13	Driver 2	-	Tract- or Driver	--	-	-	-	-	-				
14		Mr. H. R. Gohil	Jeep Driver	--	5200- 20200	2400/-	11870/-	01-08- 2006	Permanent	Other			
15	Support- ing staff 2	Mr. U.A. Vaidh	Peon	--	4440- 7440	1650/-	9760/-	24-04- 2015	Permanent	Other			
16		Mr. A.M. Dhadvi	Peon	--	2550- 3200	1400/-	7580/-	01-10- 2015	Permanent	OBC			

1.6. Total land with KVK (in ha) :

S. No.	Item	Area (ha)
1	Under Buildings	04.00
2.	Under Demonstration Units	16.00
3.	Under Crops	
4.	Horticulture	
5.	Pond	
6.	Others if any	
	Total :-	20.00

1.7. Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Year	Plinth area (Sq.m)	Expenditure (Rs.)	Starting year	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	23/7/09	595	30,20,600	-	-	-
2.	Farmers Hostel			296	20,74,700	-	-	-
3.	Staff Quarters (6)			--	30,55,000	-	-	-
4.	Demonstration Units (2)			78	6,16,000	-	-	-
5.	Rat Proof godown			158	8,30,750	-	-	-
6.	Implement Shed			77	3,00,000	-	-	-
7.	Training Hall	RKVY	1/4/10	191	13,94,500	-	-	-
8.	Pilot Scale Processing Plant			198	15,72,000	-	-	-
	Godown/ store room			71	5,00,000	-	-	-
9.	Implement Shed			77	3,00,000	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Jeep (Bolero)	2006-07	4,96,000	-	Working
Splendor Bike	2010-11	42,980	-	Working

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Computer	2006-07	49968	Working Cond.
Copier Machine	2006-07	49816	Working Cond.
Automatic Seed Drill	2006-07	31500	Working Cond.
Tractor mounted Sprayer (200ltr)	2007-08	43000	Working Cond.
Shredder	2007-08	43000	Working Cond.
Dibbler	2007-08	900	Working Cond.
Cotton stock puller	2007-08	1200	Working Cond.
Digital copier with network	2008-09	115300	Working Cond.
Rain gun	2007-08	19800	Working Cond.
LCD projector	2008-09	89985	Working Cond.

Rotavator	2008-09	96000	Working Cond.
Laptop	2008-09	47500	Working Cond.
Harrow cum cultivator (2)	2008-09	75000	Working Cond.
Groundnut Decorticator	2008-09	96530	Working Cond.
Mobile seed processing unit	2008-09	1685000	Working Cond.
Thresher	2008-09	114000	Working Cond.
Zero till drill	2008-09	66700	Working Cond.
Air assisted blower type sprayer	2008-09	98750	Working Cond.
Digital Camera	2008-09	23600	Working Cond.
Plasma TV	2008-09	73750	Working Cond.
Power Tiller	2010-11	1,15000	Working Cond.
Mini Tractor (Mahindra)	2011-12	1,98,000	Working Cond.
Trinocular Microscope	2012-13	2,90,000	Working Cond.
B.O.D. Incubator	2012-13	1,14,000	Working Cond.
Laminar Air Flow	2012-13	1,99,000	Working Cond.
Batch top centrifuge	2012-13	46,524	Working Cond.
Electronic Balance	2012-13	19,905	Working Cond.
TDS meter	2012-13	6,333	Working Cond.
Temp & humidity indicator & controller	2012-13	33,071	Working Cond.
Digital Hot Air Oven	2012-13	46,333	Working Cond.
Deep Fridge	2012-13	47,571	Working Cond.
Computer -2	2012-13	72,618	Working Cond.
Vertical Autoclave	2012-13	27,900	Working Cond.

1.8. A). Details of SAC meetings to be conducted in the year

Sl.No.	Date
11 th Scientific Advisory Committee	03-02-2016
12 th Scientific Advisory Committee (Next Year)	01-01-2017

2. DETAILS OF DISTRICT

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

S. No	Farming system/enterprise
1	<p>The district Surendranagar mainly falls in north Saurashtra agro-climatic zone. The district located in India at 22.0° to 23.45° North latitude and 69.45° to 72.15° East longitude. Surendranagar district is bounded in north by Gulf of Kutch and Mehasana district, in the south by Bhavnagar and part of Ahmedabad district, on the east by part of Ahmedabad and west by Rajkot district. The average annual rainfall is 400 mm. The average temperature of the district ranges with 41°C maximum to 11°C minimum. The soil is mostly medium black, shallow to moderately deep and calcareous in nature, therefore cotton is the major crop of the district. Some patches of saline soil found in Dasada and Lakhtar talukas, calcareous sandy soil found in some part of Chotila, Sayla & Dhangdhra taluka and loamy soil is found in some part of Halvad and Dhangdhra taluka. The pH of the soil is alkaline and underground water is non saline in nature.</p> <p>The district covers 10.48 lakh ha geographical area out of which 6.90 lakh ha under cultivation, of which only 0.62 lakh ha is irrigated. Major area comes under rainfed farming. The main sources of irrigation are wells, tube wells, ponds and canals. The major crops of this region are cotton, sesame & pearl millet and others are sorghum, wheat, chick pea, groundnut, mustard, cumin, green gram, black gram, onion, garlic and vegetables. The fruit orchard area is very less.</p>

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

Agro-climatic Zone	Characteristics	
PROFILE OF THE NORTH SAURASTRA AGRO - CLIMATIC ZONE VI - GUJARAT		
1. Total geographical area	: 35.02 lakh ha.	
2. Area under forest	: 1.47 lakh ha.	
3. Area under non agricultural use	: 2.10 lakh ha.	
4. Barren and uncultivated land	: 2.52 lakh ha.	
5. Permanent pasture	: 2.45 lakh ha.	
6. Current fallows	: 1.70 lakh ha.	
7. Net sown area	: 22.17 lakh ha.	
8. Total cropped area	: 25.77 lakh ha.	
9. Area sown more than one	: 3.61 lakh ha.	
10. Climate	: Arid and semi arid	
11. Average rainfall	: 542.14 mm	
12. Soil type	: Black to brown & Shallow to moderately deep soil	
13. Cropping pattern :	14. Major cropped area	15. Crop sequence:
Crop	Area (lakh ha.)	Crop
Kharif cereals	: 5.58	Groundnut - -
Kharif pulses	: 0.23	Groundnut - Wheat
Kharif oil seeds	: 12.14	Groundnut - Mustard
Cash crops	: 4.00	Groundnut - Cumin
Rabi cereals	: 1.57	Groundnut - Chickpea
Rabi pulses	: 0.56	Pearl millet - Groundnut
Others	: 1.69	Pearl millet- Green gram
		Pearl millet- Cumin
		Pearl millet- Mustard
		Pearl millet - Garlic
		Cotton - -
		Cotton - Groundnut
		Cotton - Sorghum
	a) Kharif	
	Groundnut : 40	
	Cotton : 15	
	Pearmillet : 12	
	Sorghum : 10	
	Sesamum : 3	
	Others : 20	
	b) Rabi	
	Wheat : 5	
	Chickpea : 2	
	Cumin : 3	

b) Topography

Agro ecological situation

North Saurashtra agro-climatic zone-VI, Gujarat

Eight agro-climatic zones have been identified in Gujarat. The North Saurashtra Agro climatic Zone-VI falls in Saurashtra region. The influence area of North Saurashtra Agro climatic Zone is spread among five districts of Saurashtra region viz., Amreli (9 talukas out of 11), Bhavnagar (6 talukas out of 13), Jamnagar (all the 10 talukas), Rajkot (11 talukas out of 14) and Surendranagar (7 talukas out of 10) covering 43 talukas in all. It is bounded in the north by the gulf of Kutch and parts of Rajkot as well as Surendranagar district, in the east by the Ahmadabad district and coastal part of Bhavnagar district, on the south by the Junagadh district and parts of Amreli as well as Rajkot district, to the west by Arabian sea. The farming situation of the district Surendranagar is rainfed.

2.3 Soil Types

Sr. No.	Soil type	Area
1	Medium black	Vadhvan & Muli
2	Saline & Alkaline soils	Dasada & Lakhatar
3	Shallow calcareous sandy soil	Dhanghdhra
4	Red Loamy soil	Halvad, Dhanghdhra
5	Low land soils	Limbadi, Lakhatar
6	Calcareous Sandy soil	Chotila, Sayla

2.4. Area, Production and Productivity of major crops cultivated in the district (2013-14)

S. No	Crop	Area (ha)	Production (MT.)	Productivity (Qt./ha)
1	Cotton (Irri)	174200	336100	328
2	Cotton (Rainfed)	194900	107400	94
3	Sesame	27600	7200	261
4	Groundnut	12800	20700	1610
5	Wheat	30400	92400	3037
6	Cumin	91200	66500	730
7	Gram	12300	9100	739
8	Green Gram	1300	300	243
9	Mustard	300	500	1695
10	Guar Seed	1100	600	602

Source: District agriculture department.

2.5. Weather data (2015-16)

Month	Rainfall (mm)	Temperature 0 C		Relative Humidity (%)	
		Maximum	Minimum	Maximum	Minimum
April -15	2.0	42.2	20.7	89	11
May-15	0.0	42.2	24.0	94	08
June-15	106.5	40.9	25.1	100	21
July-15	232.0	36.1	23.2	100	37
August-15	0.0	32.9	24.5	95	53
September-15	113.0	36.8	22.1	98	28
October-15	0.0	37.7	23.2	94	22
November-15	0.0	34.9	13.7	78	17
December-15	0.0	34.9	4.2	89	13

January-16	0.0	31.7	16.1	97	29
February-16	-	-	-	-	-
March-16	-	-	-	-	-
Total	453.5				

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

Category	Population	Production	Productivity
Cattle			
<i>Crossbred</i>	201		--
<i>Indigenous</i>	2,93,557	54,61,197 lit	--
Buffalo	2,02,939		--
Sheep	1,00,589	--	--
Goats	1,79,648	--	--
Pigs	22,948	--	--
<i>Crossbred</i>	--	--	--
<i>Indigenous</i>	--	--	--
Rabbits	--	--	--
Poultry			
Hens	-	-	--
<i>Desi</i>	-	-	--
Category		Production (Q.)	Productivity
Fish (Reservoir)	--	--	--

*Statcal report

2.7 Details of Operational area / Villages

Taluka	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
Chotila	Chotila	Lakhchokiya	Cotton, Bajra, Sesame, Pulses, Diary Farming,	Dry farming, pink bollworm in cotton, Reddening in cotton, Wild animals, Lower milk production.	Dry farming technology Awareness for vaccination & artificial insemination of animals
		Bhimora	Cotton, Bajra, Groundnut, Sesame, Pulses Diary Farming,	Dry farming, HS disease	Dry farming technology Awareness for vaccination & artificial insemination of animals
		Rajawad	Cotton, Cumin, Groundnut, Sesame, Pulses, Vegetables Diary Farming,	Dry farming, Lower milk production, HS disease	Dry farming technology, Awareness for vaccination & artificial insemination of animals
		Sanosara	Cotton, Bajra, Cumin, Wheat, Sesame, Diary Farming,	Dry farming, Injudicious use of fertilizers & Pesticides, Black quarter disease	Adoption of organic farming, Bio-fertilizers & Vermi-compost Dry farming technologies Awareness for vaccination & artificial insemination of animals
Sayla	Sayla	Hadala	Cotton, Groundnut, Cumin, Wheat, Sesame, Dairy Farming	Lack of knowledge of modern dry land technologies, lack of Awareness for vaccination & artificial insemination of animals	Awareness for vaccination & artificial insemination of animals
		Chorvira	Cotton, Castor, G'nut, Wheat Dairy Farming,	Lack of knowledge of modern dry land technologies, FMD	Dry farming technologies, Awareness for vaccination & artificial insemination of animals
		Mangalkui	Cotton, Wheat, Cumin, Sesame, Bajra	Lack of knowledge of modern dry land technologies, Injudicious use of fertilizers & Pesticides	Dry farming technologies

		Dharadungari	Cotton, Bajra, Sesame, Wheat, Cumin, Dairy Farming,	Lack of knowledge about weed, pest and diseases & nutrient management HS disease, Trypanosomiasis disease	To motivate farmers to grow arid and semi arid horticultural crops. Awareness for vaccination & artificial insemination of animals
Chuda	Chuda	Karmad	Dairy Farming, Cotton, G'nut, Sesame, Wheat, Cumin, Bajra, Gram	Soil salinity, poor drainage system FMD, Lack of knowledge of modern dry land technologies, INM, IPM etc	Irrigated farming technology, Awareness for vaccination & artificial insemination of animals
		Ramdevgad	Dairy Farming, Cotton, G'nut, Sesame, Wheat, Gram, Cumin, Bajra	Soil salinity, Awareness for vaccination & artificial insemination of animals	Irrigated farming technology, Awareness for vaccination & artificial insemination of animals
		Melapur	Dairy Farming, Cotton, G'nut, Sesame, Gram, Wheat, Cumin, Bajra	Soil salinity, low knowledge of scientific cultivation of crops, HS disease, Injudicious use of fertilizers & Pesticides	Irrigated farming technology, Awareness for vaccination & artificial insemination of animals
		Chhatariyala	Dairy Farming, Cotton, G'nut, Sesame, Gram, Wheat, Cumin, Bajra	Soil salinity, poor water quality for irrigation, low knowledge about INM, IPM, in crops,	Irrigated farming technology, Awareness for vaccination & artificial insemination of animals

2.8 Priority thrust areas

Crop/ Enterprise	Thrust area
Cotton, Sesamum, Groundnut, Bajra	Dry farming technologies.
Animal Husbandry	Awareness for vaccination & artificial insemination of animals, use of area specific mineral mixtures
Crop Management	Adoption of organic farming, Bio-fertilizers & Vermi-compost.
Integrated Crop Management	Integrated weed, pest and diseases & nutrient management and efficient water management.
Home Science	Farm women empowerment.
Lemon, Ber	Motivate farmers to grow arid and semi arid horticultural crops.
Fisheries	Aqua culture & inland fisheries

3. TECHNICAL PROGRAMME

4. A. Details of targeted mandatory activities by KVK

OFT		FLD	
(1)		(2)	
Number of OFTs	Number of Farmers	Area (ha)	Number of Farmers
6	18	84	215

Training		Extension Activities	
(3)		(4)	
Number of Courses	Number of Participants	Number of activities	Number of participants
88	2200	20	10000

Seed Production (Qtl.)	Planting material (Nos.)	Fish seed prod. (Nos)	Soil Samples
(5)	(6)	(7)	(8)
67	10000	-	500

3. B. Abstract of interventions to be undertaken

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions					
				Title of OFT if any	Title of FLD if any	Title of Training if any	Title of training for extension personnel if any	Extension activities	Supply of seeds, planting materials etc.
1	-	Gram	Low yield	-	Varietal evaluation	Improved cultivation practices for gram & mustard		FLD, Field Days, Training	Seed input : Guj, Gram-3/5
2		Cumin	Low yield	Assessment of sulphur in cumin	IDM	Plant protection measures for pest & disease in cumin		FLD, Field Days, Training	
						Improved cultivation practices for wheat & cumin			
						Pure seed production technique in Cumin			
						Efficient water management in major rabi field crops			
3		Wheat	Low yield	-	Varietal evaluation	Improved cultivation practices for wheat & cumin		FLD, Field Days, Training	Seed input : GW-366
						Pure seed production technique in Wheat			
						Control measures for pest & disease in cumin & wheat			
4.		Groundnut	Low yield	-	IDM	IPM in G'nut		FLD, Field Days, Training	
						Pure seed production technique in Groundnut			
5.		Sesamum	Low yield	Assessment of sulphur in Sesamum	Varietal evaluation	Pure seed production technique in sesamum		FLD, Field Days, Training	GT-4
				Management of sesame leaf webber under rainfed condition		Pure seed production technique in sesamum			
				Varietal assessment of Sesamum Guj Til-4 in Surendranagar district		Improved cultivation practices for cotton and sesamum			
						Pure seed production technique in sesamum			

						Importance of thinning, gap filling & maintenance of plant populations in major kharif crops			
						Management of pest & disease of sesame			
6.		Green Gram	Low yield	-	Varietal evaluation	Proper use of weedicides in field crops	FLD, Field Days, Training	FLD, Field Days, Training	GM-4
						Control measures for pest & disease of kharif pulses			
						Integrated nutrient management in kharif field crops			
7.		Cotton	Low yield	Management of sucking pests in Cotton	INM	Improved cultivation practices for cotton and sesamum		FLD, Field Days, Training	FLD : Fertilizer : Posak (Multimicro) OFT : Insecticides : Methyl Parathionn 2 % dust Methyl parathion 50 % Chlorpyriphos 20 % Bio pesticides : <i>Verticillium lacani</i>
				Assessment of high density planting in Cotton		IPM in cotton			
						Control of pink bollworm in cotton			
8.		Bio-agent	Heavy infestation	Application of Trichoderma against stem rot Disease In G'nut	Yield evaluation	Importance of IDM		FLD, Field Days, Training	FLD : Bio-agent : <i>Trichoderma harzianum</i> Culture
9		Agro Forestry			Gum Production	Introduction of gum inducing technology in Surendranagar district from acacia Senegal and other trees		FLD, Field Days, Training	Assessment of gum inducing agent

3.1 Technologies to be assessed and refined

A.1 Abstract on the number of technologies to be assessed in respect of crops

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Varietal Evaluation		1								
Seed / Plant production										
Weed Management										
Integrated Crop Management				1						
Integrated Nutrient Management		1		1						

B. Details of On Farm Trial

1. Assessment of sulphur in cumin

Objective	To increase the yield by different sources of Sulphur
Reason for low yield of Cumin	1. Lack of knowledge of Sulphur application. 2. Sulphur deficient soil of district (60% Area) 3. Unbalance fertilization.
Technical Intervention	Management of sulphur application in Cumin
Treatments	1. Farmers practice (Control) (125 kg DAP and 55 kg Urea / ha) 2. Recommended dose of fertilizer (30-16-0 NPK kg/ha) through DAP & Urea (33 kg DAP and 33 kg Urea / ha) 3. T-2 + 16 kg Sulphur through Gypsum (33 kg DAP and 33 kg Urea + 100 kg Gypsum / ha) 4. Recommended dose of fertilizer (30-16-0 NPK kg/ha) through Ammonium Sulphate & Single Super Phosphate. (94 kg SSP and 142 kg AS / ha)

2. Assessment of sulphur in Sesamum

Objective	To increase the yield by different sources of Sulphur
Reason for low yield of Cumin	1. Lack of knowledge of Sulphur application. 2. Sulphur deficient soil of district (60% Area) 3. Unbalance fertilization.
Technical Intervention	Management of sulphur application in Sesamum
Treatments	1. Farmers practice (Control) (90 kg DAP +90 kg Urea / ha) 2. Recommended dose of fertilizer (50-25-40 NPK kg/ha) through DAP & Urea+ 20 kg Sulphur through Gypsum (55 kg DAP + 55 kg Urea +66 kg MOP + 100 kg Gypsum / ha) 3. Recommended dose of fertilizer (50-25-40 NPK kg/ha) through Ammonium Sulphate & Single Super Phosphate. (238 kg AS + 166 kg SSP + 66 kg MOP / ha)

3. Management of sesame leaf webber under rainfed condition.

Objective	To minimize the incidence of leaf webber in sesame.
Reason for low yield of Cotton	1. Lack of knowledge about the use of particular pesticides. 2. No adoption of recommended practices. 3. Farmers follows instruction given by the local pesticides retailer.
Technical Intervention	Management of leaf webber in sesame.
Treatments	1. Farmers practice (Use of conventional insecticides after infestation) 2. Recommended practices Application of the insecticide will be start at pest infestation occurred. Cartap hydrochloride 50% S.P. @ 10ml/10 Litre of water at the time of infestation. 3. Cartap hydrochloride 50% S.P. @ 5gm/10 Litre of water + <i>Verticillium lecani</i> @ 50gm/10 litre of water at the time of infestation.
RESULT	No. of infected plants

4. Management of sucking pests in Cotton.

Objective	To minimize the incidence of sucking pests in cotton.
Reason for low yield of Cotton	1. Lack of knowledge about the use of particular pesticides. 2. No adoption of recommended practices. 3. Farmers follows instruction given by the local pesticides retailer.
Technical Intervention	Management of sucking pests in cotton.
Treatments	1. Farmers practice (Use of conventional insecticides after infestation) 2. Recommended practices Application of the systemic insecticide will be start at pest infestation occurred. (Acetamiprid: 20 SP @ 2 ml/10 litre of water or Imidachloprid: 200 SL @ 4 ml/10 litre or Cartap hydrochloride 50% S.P. @ 10ml/10 Litre of water at the time of infestation.) 3. <i>Beauveria bassiana</i> 5 gm/lit as & when required, application of bio-pesticides + Sticker 0.5 ml/lit of water

5. Varietal assessment of Sesamum Guj Til-4 in Surendranagar district

Objective	To increase yield of Sesamum
Source of technology	Agricultural Research Station, JAU, Amreli
Treatments	1. Variety: Guj Til-2 OR Local 2. Variety: Guj Til-4
Parameters	Yield

6. Assessment of high density planting in Cotton.

Objective	To observe the yield of cotton in High density.
Reason	1. Low yield of cotton. 2. Less optimum plant population per unit area.
Technical Intervention	Management of spacing between row & between plant.
Treatments	1. Recommendation: Sowing of cotton at spacing 120 x 45 cm. (18,518 plants / ha) 2. Intervention: Sowing of cotton at spacing 60 x 30 cm. (55,555 plants / ha) 3. Intervention: Sowing of cotton at spacing 90 x 30 cm. (24,691 plants / ha)

3.2 Frontline Demonstrations

A. Details of FLDs to be organized -

Sl. No.	Crop	Variety	Thematic area	Technology for demonstration	Critical inputs	Season and year	Area (ha)	No. of farmers/ demonstration.	Parameters identified
1	Wheat	GW – 366	Dry farming	Improve Variety	40.0 kg Seed	Rabi-2016-17	08	20	--
2	Cumin	GC-4		IDM	Mancozeb : 500 gm Carbendazim:250gm Hexaconazole:100ml <i>Trichoderma</i> : 2.0 kg	Rabi-2016-17	08	20	--
3	Gram	GJG-3/5		Improve Variety	25 kg Seed	Rabi-2016-17	04	10	--
	Gram	GJG-3/5		Improve Variety	Variety GG-5/3: 25kg	Rabi-2016-17	20	50	--

	Under (NFSM)			Rhizobium -500ml PSB-500 ml Beauveria-1 kg Trichoderma-2 kg				
4	Green gram	GM-4	Improve Variety	4.0 kg Seed	Kharif-2016-17	04	10	--
5	Sesame	Guj-Til-4	Improve Variety	1.0 kg Seed	Kharif-2016-17	04	10	--
6	Groundnut	GG-9	IDM	Mancozeb:500 gm Chlorothalonil:500 gm Carbendazim:250 gm	Kharif-2016-17	04	10	--
	Groundnut (NFSM)	GG-9/22	Improve Variety	GJG-9/22-30 kg Rhizobium -500ml PSB-500 ml Beauveria-1 kg Trichoderma-2 kg	Kharif-2016-17	20	50	--
7	Groundnut	GG-20	Bio-agent	Castor cake: 100 kg Trichoderma: 2.0 kg	Kharif-2016-17	02	05	--
8	Cotton	Bt Cotton varieties	INM	Azotobactor : 500 ml PSB : 500 ml Micro Mix Grade IV-500 gm	Kharif-2016-17	10	25	--
9.	Tree plants (Acacia spcs, drum stick,)	Gum production technology	Gum inducing technology	Gum inducing chemical	Rabi 16-17	-	5	
				Total		84	215	

Sponsored Demonstration

Crop	Area (ha)	No. of farmers
--	--	--

B. Extension and Training activities under FLDs

S. No.	Activity	No. of activities	Month	Number of participants
1	Field days	10	Aug-Sept Feb-March	--
2	Farmers Training	As per action plan	--	
3	Media coverage	As and when published	--	
4	Training for extension functionaries	5	--	

C. Details of FLD on Enterprises

(i) Farm Implements

Name of the implement	Crop	Season and year	No. of farmers	Area (ha)	Critical inputs	Performance parameters / indicators
Automatic seed drill	Groundnut/ Wheat	Kharif/Rabi-2016-17	10	-	Automatic seed drill	-
Shredder	Cotton	Rabi	10	-	Shredder	-
Seed Dressing Drum	All crop	Kharif/Rabi-2016-17	10	-	Seed Dressing Drum	-

Production of organic inputs	-	-	-	-	-	-	-	-
Integrated Farming	-	-	-	-	-	-	-	-
Planting material production	-	-	-	-	-	-	-	-
Vermi-culture	-	-	-	-	-	-	-	-
Sericulture	-	-	-	-	-	-	-	-
Protected cultivation of vegetable crops	-	-	-	-	-	-	-	-
Commercial fruit production	-	-	-	-	-	-	-	-
Repair and maintenance of farm machinery and implements	-	-	-	-	-	-	-	-
Nursery Management of Horticulture crops	-	-	-	-	-	-	-	-
Training and pruning of orchards	-	-	-	-	-	-	-	-
Value addition	-	-	-	-	-	-	-	-
Production of quality animal products	-	-	-	-	-	-	-	-
Dairying	-	-	-	-	-	-	-	-
Sheep and goat rearing	-	-	-	-	-	-	-	-
Quail farming	-	-	-	-	-	-	-	-
Piggery	-	-	-	-	-	-	-	-
Rabbit farming	-	-	-	-	-	-	-	-
Poultry production	-	-	-	-	-	-	-	-
Ornamental fisheries	-	-	-	-	-	-	-	-
Para vets	-	-	-	-	-	-	-	-
Para extension workers	-	-	-	-	-	-	-	-
Composite fish culture	-	-	-	-	-	-	-	-
Freshwater prawn culture	-	-	-	-	-	-	-	-
Shrimp farming	-	-	-	-	-	-	-	-
Pearl culture	-	-	-	-	-	-	-	-
Cold water fisheries	-	-	-	-	-	-	-	-
Fish harvest and processing technology	-	-	-	-	-	-	-	-
Fry and fingerling rearing	-	-	-	-	-	-	-	-
Small scale processing	-	-	-	-	-	-	-	-
Post Harvest Technology	-	-	-	-	-	-	-	-
Tailoring and Stitching	-	-	-	-	-	-	-	-
Rural Crafts	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	-
(C) Extension Personnel	-	-	-	-	-	-	-	-
Productivity enhancement in field crops	-	-	-	-	-	-	-	-
Integrated Pest Management	-	-	-	-	-	-	-	-
Integrated Nutrient management	-	-	-	-	-	-	-	-
Rejuvenation of old orchards	-	-	-	-	-	-	-	-
Protected cultivation technology	-	-	-	-	-	-	-	-
Formation and Management of SHGs	1	-	-	-	-	-	-	25
Group Dynamics and farmers organization	1	-	-	-	-	-	-	25
Information networking among farmers	-	-	-	-	-	-	-	-
Capacity building for ICT application	1	-	-	-	-	-	-	25
Care and maintenance of farm machinery and implements	-	-	-	-	-	-	-	-
WTO and IPR issues	-	-	-	-	-	-	-	-
Management in farm animals	-	-	-	-	-	-	-	-
Livestock feed and fodder production	-	-	-	-	-	-	-	-
Household food security	-	-	-	-	-	-	-	-
Women and Child care	-	-	-	-	-	-	-	-
Low cost and nutrient efficient diet designing	-	-	-	-	-	-	-	-
Production and use of organic inputs	1	-	-	-	-	-	-	25
Gender mainstreaming through SHGs	-	-	-	-	-	-	-	-
Any other (Pl. Specify) Global Warming and Climate change	1	-	-	-	-	-	-	25
Total	88							2200
G. TOTAL	88							2200

Details of training programmes attached in **Annexure -I**

3.5 Target for Production and supply of Technological products

SEED MATERIALS

Sl. No.	Crop	Variety	Quantity (qtl.)
CEREALS	--	--	--
OILSEEDS	Groundnut	GJG-31. GJG-9	60.0
	Sesame	GT-4/3	5.0
PULSES			
VEGETABLES			
OTHERS (Specify)			
Spices	Cumin	GC-4	2.0

PLANTING MATERIALS

Sl. No.	Crop	Variety	Quantity (Nos.)
FRUITS			-
			-
			-
SPICES			-
VEGETABLES	Brinjal	GJB-3	4000
	Tomato	GT-3	4000
	Chilli	Private Hybrid/GI(Wadhavani)	2000
			-
FOREST SPECIES			-
ORNAMENTAL CROPS			
	-	Total	10000

Bio-products

Sl. No.	Product Name	Species	Quantity	
			No	(kg)
BIO PESTICIDES				
1	Savaj	Azotobector		
2	Savaj	Phosphate Culture		
3	Savaj	Beauveria		
4	Savaj	Trichodema		

LIVESTOCK

Sl. No.	Type	Breed	Quantity	
			(Nos)	Unit
Cattle	Bull	Gir	2	1
GOAT	Goat and Buck	Zalawadi	2	1
SHEEP	-	-	-	-
POULTRY	-	-	-	-
Pig farming	-	-	-	-
FISHERIES	-	-	-	-

4.6. Literature to be Developed/Published

(A) KVK News Letter

Date of start : To be start from April 2016 (e News Letter)

Number of copies to be published :-

(B) Literature developed/published

S.No.	Topic	Number
1	Research paper each scientist	1
2	Technical reports	5
3	News letters	4
4	Training manual all discipline	4
5	Popular article	10
6	Extension literature	15
Total		39

(C) Details of Electronic Media to be Produced

S. No.	Type of media (CD / VCD / DVD / Audio-Cassette)	Title of the programme	Number
1	Film Show	Crop production Technologies	40

3.7. Success stories/Case studies identified for development as a case. -

- a. Brief introduction
- b. Interventions
- c. Output
- d. Outcomes
- e. Impact
 - i) Social economic
 - ii) Bio-Physical
- f. Good Action Photographs

3.8 Indicate the specific training need analysis tools/methodology followed for Practicing Farmers

❖ Identification of courses for farmers/farm women:

- a) Training for value addition in wheat, groundnut and pulse
- b) Awareness for legal procedure for malpractices in seeds, fertilizers & quality aspects.
- c) Seeds production in Cotton, cumin and groundnut crop
- d) Micro irrigation system
- e) Goat rearing

❖ Rural Youth:

- a) Care and maintenance of farm implements.
- b) Safe use of agro chemicals.
- c) Organic farming.

- d) Seeds production in Cotton, cumin and groundnut

❖ **Inservice personnel:**

- a) Pre seasonal training on kharif and rabi crops management
b) Use of ICT in agriculture

3.9 Indicate the methodology for identifying OFTs/FLDs

For OFT :

- i) PRA
ii) Problem identified from Matrix
iii) Field level observations
iv) Farmer group discussions

For FLD :

- i) New variety/technology
ii) Poor yield at farmers level
iii) Existing cropping system
iv) Others if any

3.10 Field activities

- i. Name of villages identified/adopted with block name (from which year) -
ii. No. of farm families selected per village : 300+450
iii. No. of survey/PRA conducted : 3 PRA, 5 Bench Mark Survey
iv. No. of technologies taken to the adopted villages
v. Name of the technologies found suitable by the farmers of the adopted villages:
vi. Impact (production, income, employment, area/technological– horizontal/vertical)
vii. Constraints if any in the continued application of these improved technologies

3.11. Activities of Soil and Water Testing Laboratory

Status of establishment of Lab:

1. **Year of establishment** :

2. **List of equipments purchase with amount**

Sl. No.	Name of the equipment	Quantity	Cost (Rs)
1	Digital PH Meter	02	7600 /-
2	Conductive bridge	01	9450 /-
3	Spectro Photometer	01	39480 /-
4	Flam photometer	01	44887 /-
5	Hot air Oven	01	15215 /-
6	Double Pan balance	02	6616 /-
7	Chemical Balance	01	45066 /-
8	Rotary Shaker	02	36000 /-
9	Hot Plate	02	9450 /-
10	Water Distillation Unit	01	157500 /-

3. Targets of samples for analysis:

Details	No. of Samples	No. of Farmers	No. of Villages	Amount to be realized
Soil Samples	500	500	12	--
Water	100	100	20	--
Plant	50	50	15	--
Total	650	650	47	--

4.0 LINKAGES

4.1 Functional linkage with different organizations

Sl.No.	Name of organization	Nature of Linkage
1.	State department of Agriculture - Dy. Director of Agriculture (Extension) - Dy. Director of Horticulture - Dy. Director of Animal husbandry - Dy. Director of Soil Conservation - Dy. Director of Social Forestry -Dy. Director of Fisheries	The head of all the organizations are members of Scientific Advisory Committee of KVK and have linkage with different activities of KVK viz., training programmes, farmers day, field days, etc.
2.	NABARD	
3.	Jilla Udyog Kendra	
4.	Milk Co-operative Society	
5.	State bank of India	
6.	Doordarshan Kendra	
7.	All India Radio	
8.	ATMA, Surendranagar	
9.	AKRSP, Sayala	
10.	NHRDF	
	Farmers Training Centre	
	ATMA	

4.2 Details of linkage with ATMA

a) Is ATMA implemented in your district Yes

S. No.	Programme	Nature of linkage
1	Training	Collaborative
2	FFS	Collaborative
3	Joint Field visit	Collaborative

4.3 Give details of programmes under National Horticultural Mission

S. No.	Programme	Nature of linkage
1	--	--
2	--	--

4.4 Nature of linkage with National Fisheries Development Board

S. No.	Programme	Nature of linkage
1	--	--
2	--	--

5.0 Utilization of hostel facilities

S. No.	Programme	No. of days
1	Training	--
2	Exposure visit	--
	Total	

6.0 Convergence with departments : ATMA and line departments of state as and when required

7.0 Feedback of the farmers about the technologies demonstrated and assessed :

8.0 Feedback from the KVK Scientists (Subject wise) to the research institutions/universities :

Annexure - I

Training Programme

i) Farmers & Farm women (On Campus)

Date	Clientele	Title of the training programme	Duration in days	Number of participants			Number of SC/ST			G. Total
				M	F	T	M	F	T	
Crop Production										
21/04/16	PF	Improved cultivation practices for Cotton and Sesame	2	20	5	25	3	2	5	25
22/5/16	PF	Climate smart agriculture and climate change	1	20	5	25	3	2	5	25
22/07/16	PF	Castor production technology	1	20	5	25	3	2	5	25
07/10/16	PF	Improved cultivation practices for wheat & Gram	1	20	5	25	3	2	5	25
12/01/17	PF	Improved cultivation practices for Summer groundnut and Sesame	1	20	5	25	3	2	5	25
Horticulture										
11/04/16	PF	Cultivation of capsicum and Tomato in Poly house	2	20	5	25	3	2	5	25
19/07/16	PF	Micro irrigation in fruit crops and vegetable crop	1	20	5	25	3	2	5	25
Livestock prod.										
20/06/16	PF/FW	Care and management of livestock during summer	1	20	5	25	3	2	5	25
25/07/16	PF	Importance and use of green fodder in milk production	1	20	5	25	3	2	5	25
01/10/16	PF/FW	Importance of Artificial Insemination	1	20	5	25	3	2	5	25
22/12/16	PF/FW	Foot & Mouth disease and its control	1	20	5	25	3	2	5	25
02/02/17		Balanced feeding of pregnant animal	1	20	5	25	3	2	5	25
Agril. Engg.										
26/05/16	PF	Use of Laser land leveler & Rotavator	1	20	5	25	3	2	5	25
13/07/16	PF	Micro irrigation systems	2	20	5	25	3	2	5	25
18/07/16	PF	Practices for Soil moisture conservation	1	20	5	25	3	2	5	25
26/10/16		Use of improved farm implements	2	20	5	25	3	2	5	25
18/02/17		Introduction and use of Chaff-Cutter	1	20	5	25	3	2	5	25
Home Sc.										
-	PF	Detergent powder, soap making and phenyl making at household level	2	20	5	25	3	2	5	25
-	PF	Solar Cooker: Uses & Advantages	1	20	5	25	3	2	5	25
-	PF	Value addition in fruits and vegetables	2	20	5	25	3	2	5	25
-	PF	Rural craft for income generation	1	20	5	25	3	2	5	25
Plan prot.										
25/05/16	PF	Control of pink boll worm in cotton	1	20	5	25	3	2	5	25
04/07/16	PF	Biological & Chemical Control measures for pest and disease of Cotton & Sesamum	1	20	5	25	3	2	5	25
10/10/16	PF	Control measures for pest and disease in Cumin	1	20	5	25	3	2	5	25

09/01/17		Precaution while handling pesticides.	1	20	5	25	3	2	5	25
Fisheries										
	PF									
	PF									
Soil Health										
02/07/16	PF	Balance fertilization & INM in Cotton	1	20	5	25	3	2	5	25
02/03/17		Preparation of enriched compost	1	20	5	25	3	2	5	25
Seed Production										
09/05/16	PF	Seeds production technique in Groundnut and cotton crop	1	20	5	25	3	2	5	25
17/06/16	PF	Seeds production technique in Sesamum	1	20	5	25	3	2	5	25
05/11/16	PF	Seeds production technique in Cumin	1	20	5	25	3	2	5	25
11/11/16	PF	Seeds production technique in Wheat	1	20	5	25	3	2	5	25
10/02/17	PF	Seeds production technique in Summer Groundnut	1	20	5	25	3	2	5	25
Agril. Extension										
30/05/16	PF	ICT in agriculture	1	20	5	25	3	2	5	25
03/06/16	PF	Organic farming practices and certification process for organic farming	2	20	5	25	3	2	5	25
02/07/16	PF	Group dynamics for farmers interest group	1	20	5	25	3	2	5	25
15/10/16	PF	Effect of global warming and climatic changes in Agriculture	1	20	5	25	3	2	5	25
02/12/16	PF	Formation & Management of SHGs	1	20	5	25	3	2	5	25
07/01/17	PF	Entrepreneurial developments for rural youth	2	20	5	25	3	2	5	25

i) Farmers & Farm women (Off Campus)

Date	Clientele	Title of the training programme	Duration in days	No. of participants			Number of SC/ST			G. Total
				M	F	T	M	F	T	
Crop Production										
13/05/16	PF	Crop Production technology in kharif pulses & Gum guar	1	20	5	25	3	2	5	25
07/06/16	PF	Integrated Nutrient Management in Cotton	1	20	5	25	3	2	5	25
23/09/16	PF	Improved cultivation practices for Cumin & Fennel	1	20	5	25	3	2	5	25
28/9/16	PF	Micro irrigation system in field crops	1	20	5	25	3	2	5	25
04/10/16	PF	Integrated weed management & water management in major rabi field crops	1	20	5	25	3	2	5	25
19/10/16	PF	Importance & use of bio fertilizers	1	20	5	25	3	2	5	25
09/02/17	PF	Efficient water management in summer field crops	1	20	5	25	3	2	5	25
Horticulture										
16/07/16	PF	Cultivation of tomato & capsicum in poly house	1	20	5	25	3	2	5	25
01/08/16	PF	Raising of Seedlings of Vegetable crops	1	20	5	25	3	2	5	25
21/01/17	PF	Protected Cultivation	1	20	5	25	3	2	5	25
02/2/17	PF	Micro irrigation system and fertigation in fruit and vegetable crops	1	20	5	25	3	2	5	25
Live Stock Production										
02/06/16	PF	Hemorrhagic Septicemia and its control	1	20	5	25	3	2	5	25
16/06/16	PF	Importance of colostrums feeding in new born calves	1	20	5	25	3	2	5	25
02/07/16	PF	Awareness about control of Mastitis in animal by audio visual aid	1	20	5	25	3	2	5	25
12/08/16	PF	Infertility of cow & buffalo by infectious disease & its prevention	1	20	5	25	3	2	5	25
15/10/16	PF	Clean milk production by proper milking, watering & washing	1	20	5	25	3	2	5	25
22/12/16	PF	Fodder crop production technology	1	20	5	25	3	2	5	25

12/01/17	PF	Nutritive deficiency in Infertility problem of Cow & Buffalo	1	20	5	25	3	2	5	25
16/02/17	PF	Zoonotic disease & its preventive measure	1	20	5	25	3	2	5	25
Agril. Engg.										
20/06/16	PF	Rain water harvesting technology	1	20	5	25	3	2	5	25
28/06/16	PF	Use of Laser land leveler & Rotavator	1	20	5	25	3	2	5	25
07/01/17	PF	Uses of Improved farm implements	1	20	5	25	3	2	5	25
Home Sc.										
-	PF	Preparation of Mango pickles, potato and banana wafers	1	20	5	25	3	2	5	25
-	PF	Awareness about vaccination in children & Nutrition education	1	20	5	25	3	2	5	25
-	PF	Use of sprouted pulses and protein rich diet for low cost nutrition as well as supplementation	1	20	5	25	3	2	5	25
-	PF	Value addition in Ber & lemon	1	20	5	25	3	2	5	25
Plant Protection										
08/06/16	PF	Control of pink boll worm in cotton	1	20	5	25	3	2	5	25
22/06/16	PF	Importance & uses of bio agents & bio pesticides	1	20	5	25	3	2	5	25
11/07/16	PF	Control of pink boll worm in cotton	1	20	5	25	3	2	5	25
24/08/16	PF	Management of pest & diseases of Vegetables	1	20	5	25	3	2	5	25
05/10/16	PF	IPM in Rabi crops	1	20	5	25	3	2	5	25
07/12/16	PF	Control measures for pest and disease in Rabi crops	1	20	5	25	3	2	5	25
20/01/17	PF	Disease management in cumin	1	20	5	25	3	2	5	25
08/02/17	PF	Importance of Natural enemies	1	20	5	25	3	2	5	25
Fisheries										
	PF									
	PF									
Soil health										
06/04/16	PF	Soil Sampling procedure	1	20	5	25	3	2	5	25
02/07/16	PF	Soil reclamation	1	20	5	25	3	2	5	25
10/03/17	PF	Preparation of vermi compost & vermi wash	1	20	5	25	3	2	5	25
Seed Production										
03/06/16	PF	Seeds production technique in Sesamum	1	20	5	25	3	2	5	25
10/06/16	PF	Seeds production technique in Groundnut	1	20	5	25	3	2	5	25
02/11/16	PF	Seeds production technique in Cumin	1	20	5	25	3	2	5	25
11/11/16	PF	Seeds production technique in Wheat	1	20	5	25	3	2	5	25
04/02/17	PF	Seeds production technique in Summer Groundnut & summer sesame	1	20	5	25	3	2	5	25
Agril. Extension										
02/06/16	PF	Govt. subsidy schemes for farmers	1	20	5	25	3	2	5	25
29/06/16	PF	Entrepreneurial development of farmers	1	20	5	25	3	2	5	25
01/07/16	PF	Income generation activities for farmers through secondary agri.	1	20	5	25	3	2	5	25
10/08/16	PF	Leadership development	1	20	5	25	3	2	5	25
13/09/16	PF	WTO & IPR issues	1	20	5	25	3	2	5	25
18/10/16	PF	Group dynamics & mobilization to FIGs	1	20	5	25	3	2	5	25
02/01/17	PF	Government subsidy schemes for farmers	1	20	5	25	3	2	5	25

ii) Vocational training programmes for Rural Youth

Crop / Enterprise	Identified Thrust Area	Training title*	Month	Duration (days)	No. of Participants			SC/ST participants			G.Total
					M	F	T	M	F	T	
	Organic Farming	Organic farming, its market management and certification process		4							20
	Dairy Farming	Model dairy farming practices Goat Rearing		4							20

	Farm Implements	Repair & Maintenance of Improved Farm Implements	4							20
	Bee keeping	Honey Bee Rearing	4							20
	Value addition	Value addition in vegetables, bet and lemon	4							20

iii) Training programme for extension functionaries

Date	Clientele	Title of the training programme	Duration in days	No. of participants			Number of SC/ST			G. Total
				M	F	T	M	F	T	
On Campus										
1	Ext Workers	Protected cultivation	1							20
2	Ext Workers	Pre-seasonal training on <i>Kharif</i> crops	1							20
3	Ext Workers	Pre-seasonal training on <i>Rabi</i> crops	1							20
4	Ext Workers	Preventive measure and first aid treatment of important disease in dairy animals	1							20
5	Ext Workers	Cotton production technology	1							20

iv) Sponsored programme

Discipline	Sponsoring agency	Clientele	Title of the training programme	No. of course	No. of participants			Number of SC/ST			G. Total
					M	F	T	M	F	T	
a) Sponsored training programme											
	ATMA			20						20	
	NGOs			5						20	
			Total	25						40	
b) Sponsored research programme											
			--								
			--								
			Total								
c) Any special programmes											
			--								
			--								
			--								
			Total								