DETAILS OF ACTION PLAN OF KVKs DURING 2017-18

(1st April 2017 to 31st March 2018)

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 Ta- Chotila **Dist: Surendranagar** (Gujarat)	02751- 294120		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	www.jau.in

1.2.b. Status of KVK website : Will be prepared

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

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 Dec. 2016)

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 **1**	**Dr. M. S. Chandawat**	Sr. Scientist and Head	Extension Education	37400-67000 (15600 39100)	8000 for first three years	22320/-	31-3-2015	Permanent	Other	94275 08708	surendranagar.kvk@gmail.com	
2	SMS **6**	**Mr. M. F. Bhorania**	Scientist	Plant Protection	15600-39100	6000	23510/-	18-09-2012	Permanent	Other	94282 97863	mfbhoraniya@gmail.com	
3		**Dr. B. C. Bochalya**	Scientist	Extension	15600-	6000	22220/-	23-08-2006	Permanent	Other	94277 13771	-	

				Education	39100								
4		Rohit P. Kalma	Scientist	Animal Science	15600-39100	6000	21600	07-12-2016	Permanent -	ST	9586871273	-	kalmarohit@gmail.com
5		-	Scientist	Agronomy	15600-39100	6000	-	-	-	-	-	-	
6		-	Scientist	Horticulture	15600-39100	6000	-	-	-	-	-	-	
7		-	Scientist	Home Science	15600-39100	6000	-	-	-	-	-	-	
8	*Programme Assistant* ***2***	Mr. M. V. Pokar	Programme Assistant	Extension Education	13700 Fix	-	-	23-02-2012	Permanent	Other	9429420468	mvpokar83@gmail.com	
9		Mr. M. K. Kanani	Farm Manager	Entomology	13700 Fix	-	-	01-04-2015	Permanent	Other	7624003555	kananimayur551@gmail.com	
10	Computer Programmer **1**	Mr. P. T. Patel	Comp uter Prog.	B.E. (Comp.).	9300-34800	4400/-	11750/-	30-12-2008	Permanent	ST			
11	Account / Superintendent 1	Mr. R.P. Vagadiya	O.S. cum Accountant	--	9300-34800	4400/-	11750/-	01-12-2011	Permanent	Other			
12	Stenographer 1	Mr. S.H. Shukla	Junior Steno	--	10000 fix	-	-	19-11-2013	Permanent	Other		shivamshukla1984@gmail.com	
13	Driver 2	-	Tractor Driver	--	-	-	-	-	-				
14		Mr. H. R. Gohil	Jeep Driver	--	5200-20200	2400/-	11870/-	01-08-2006	Permanent	Other			
15	Supporting staff 2	Mr. D V Nakum	Peon	--	2550-3200	1400	9250	01-12-2016	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
12th Scientific Advisory Committee (Next Year)	01-10-2017

2. DETAILS OF DISTRICT

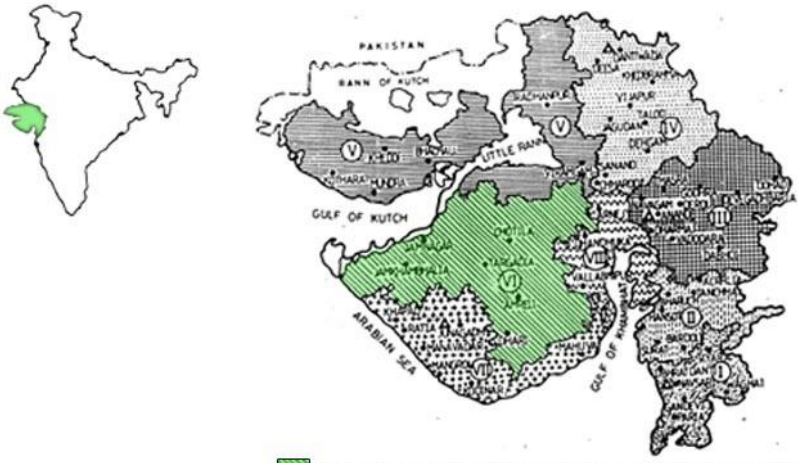
2.1 Major farming systems/enterprises (based on the analysis made by the KVK)

S. No	Farming system/enterprise
1	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. 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.

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



NORTH SAURASTRA AGRO - CLIMATIC ZONE

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 :

Crop		Area (lakh ha.)
Kharif cereals	:	5.58
Khrif pulses	:	0.23
Kharif oil seeds	:	12.14
Cash crops	:	4.00
Rabi cereals	:	1.57
Rabi pulses	:	0.56
Others	:	1.69

14. Major croped area (%)

a) Kharif

Groundnut	:	40
Cotton	:	15
Pearmillet	:	12
Sorghum	:	10
Sesamum	:	3
Others	:	20

b) Rabi

Wheat	:	5
Chickpea	:	2
Cumin	:	3

15. Crop sequence:

Crop
Groundnut - -
Groundnut - Wheat
Groundnut - Mustard
Groundnut - Cumin
Groundnut - Chickpea
Pearl millet - Groundnut
Pearl millet- Green gram
Pearl millet- Cumin
Pearl millet- Mustard
Pearl millet - Garlic
Cotton - -
Cotton - Groundnut
Cotton - Sorghum

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	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 (2014-15)

S. No	Crop	Area (ha)	Production (MT.)	Productivity (Qt./ha)
1	Cumin	86600	93528	1080
2	Funnel	12800	27520	2150
3	Cotton lint	251164	109001	733
4	Sesemum	22983	10819	467
5	Castor	77780	196829	2531
6	Groundnut	8465	22393	2645
7	Gram	172000	168200	978
8	Bajara	7043	6865	909
9	Wheat	30380	88206	2903

Source: District agriculture department.

2.5. Weather data will be taken

Month	Rainfall (mm)	Temperature 0 C		Relative Humidity (%)	
		Maximum	Minimum	Maximum	Minimum

Total					

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

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

*Statistical 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,**	**Uncertain and scattered rainfall, 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,**	**Uncertain and scattered rainfall, infestation of pink boll worm in cotton, sucking pest in vegetables, HS disease**	**Dry farming technology Awareness for vaccination & artificial insemination of animals**
		Rajawad	**Cotton, Cumin, Groundnut, Sesame, Pulses, Vegetables Diary Farming,**	**Lack of irrigation facility, Uncertain and scattered rainfall, Lower milk production, HS disease**	**Dry farming technology, Awareness for vaccination & artificial insemination of animals**
		Sanosara	**Cotton, Bajra, Cumin, Wheat, Sesame, Diary Farming,**	**Uncertain and scattered rainfall, 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, Diary 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, Trypanosomesis 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,I PM etc**	**Irrigated farming technology, Awareness for vaccination & artificial insemination of animals**
		Ramdevgadh	**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, Bajara, Cumin	Dry farming technologies.
Animal Husbandry	Awareness for vaccination & artificial insemination of animals, Feed and fodder management, use of area specific mineral mixtures, Deworming in cattle and buffalo
Crop Management	Adoption of organic farming, Bio-fertilizers & Vermi-compost., promotion of micro irrigation in field crop as well as horticultural crops
Integrated Crop Management	Integrated weed management, IPM, INM and efficient water management.
Home Science	Farm women empowerment., income generation for farm women through IGA
Lemon, Ber	Motivate farmers to grow arid and semi arid horticultural crops.
Fisheries	Aqua culture & inland fisheries

3. TECHNICAL PROGRAMME

3. A. Details of targeted mandatory activities by KVK

OFT		FLD	
(1)		(2)	
Number of OFTs	Number of Farmers	Area (ha)	Number of Farmers
06	20	75	210

Training		Extension Activities	
(3)		(4)	
Number of Courses	Number of Participants	Number of activities	Number of participants
44	1050	20	10000

Seed Production (Qtl.)	Planting material (Nos.)	Fish seed prod. (Nos)	Soil Samples
(5)	(6)	(7)	(8)
60	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.	NRM	Gram	Low yield	--	Varietal evaluation	Improved cultivation practices for gram & mustard		FLD, Field Days, Training	Seed input : Guj.Gram-3/5
2.	NRM	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			
3.	IPM	Groundnut	Low yield	–	IDM	IPM in G'nut		FLD, Field Days, Training	
						Pure seed production technique in Groundnut			
4.	INM	Sesamum	Low yield	Assessment of sulphur in Sesamum	Varietal evaluation	Pure seed production technique in sesamum		FLD, Field Days, Training	GT-4
	IPM			Management of sesame leaf webber under rainfed condition		Pure seed production technique in sesamum			
	NRM			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 sesamum crop			
						Management of pest & disease of sesame			
5.	NRM	Green Gram	Low yield	--	Varietal evaluation	Integrated weed management in green gram		FLD, Field Days, Training	GM-4
						Integrated pest & disease management in green gram			

						Integrated nutrient management in green gram			
6.	IPM	Cotton	Low yield	Management of sucking pests in Cotton	INM	Improved cultivation practices for cotton and sesamum		OFT, Field Days, Training	FLD : Fertilizer : Posak (Multimicro) OFT : Insecticides : Methyl Parathionn 2 % dust Methyl parathion 50 % Chlorpyriphos 20 % Bio pesticides : *Verticillium lacani*
				Assessment of high density planting in Cotton		IPM in cotton			
						Control of pink bollworm in cotton			
7.	IPM	Bio-agent	Heavy infestation	Application of Tricho derma against stem rot Disease In G'nut	Yield evaluation	Bio control in cotton crop		FLD, Field Days, Training	FLD : Bio-agent : *Trichoderma harzianum* Culture
8.	Fodder Production	Lucerne	Un availability of quality green fodder	Improved Variety	Yield evaluation	Improved cultivation practices for Lucerne		FLDs and Field Day, Training	AL-3
9	Nutrient Management	Buffalo	Low yield of milk		Effect of chelated and area specific mineral mixture in increasing milk production in buffalo	Nutrient management for milch animals		FLD Field Day, Training	40 gm /day for 60 days.
10	LPM	Goat	Poor growth rate		Effect of deworming on growth performance of goat	Improved goat rearing practices		FLD Field Day, Training	Fenbendzole: 7 mg/kg of body weight

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								1
Seed / Plant production										
Weed Management										
Integrated Crop Management				1						1
Integrated Nutrient Management		1								1
Integrated Farming System										
Mushroom cultivation										
Drudgery reduction										
Farm machineries										
Value addition										
Integrated Pest Management		1		1						2
Integrated Disease Management										
Resource conservation technology										
Small Scale income generating enterprises										
TOTAL		**03**		**02**						**05**

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

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

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

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

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

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

B. Details of On Farm Trial

OFT 1: Assessment of sulphur in Sesamum :

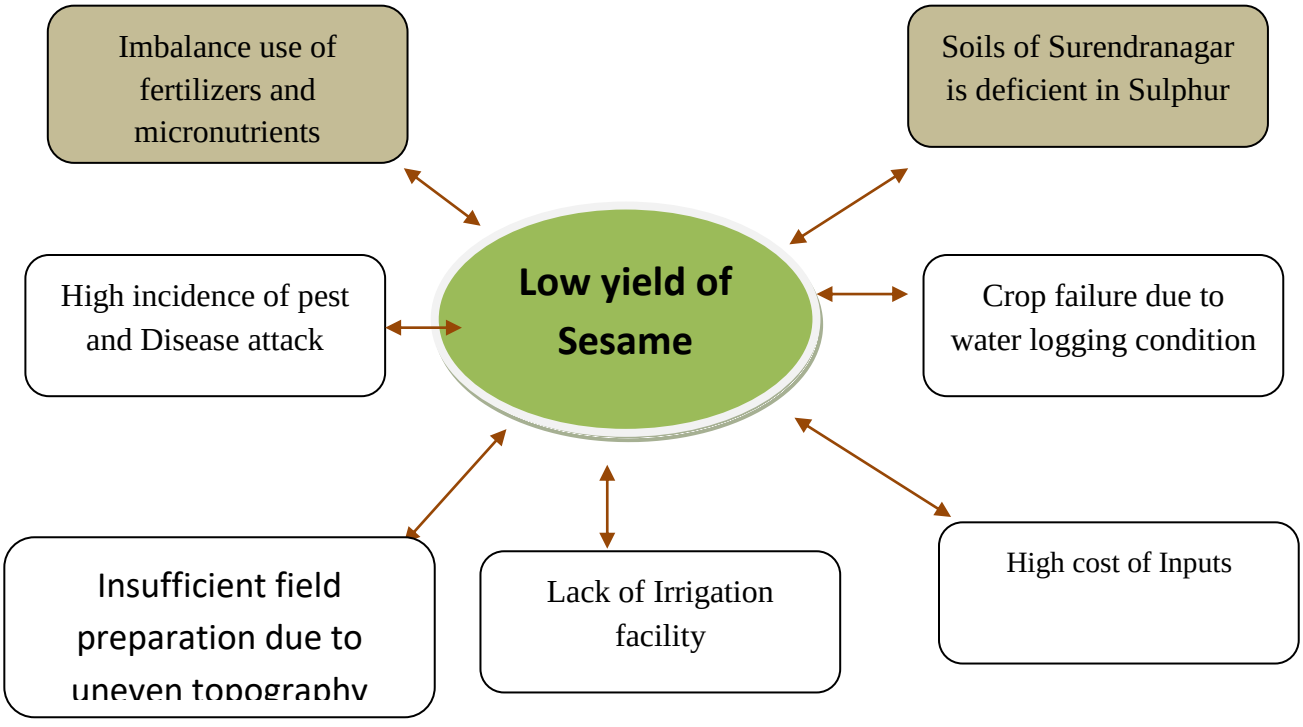
1. **Title of OFT : Assessment of use of sulphur in Sesamum**
2. **Agro Ecological Zone** : North Saurashtra Agroclimatic Zone-VI
3. **Production system** : Rainfed

4. **Problem Definition:**

Sesame (Sesamum indicum,L) is an oilseed crop grown mainly for its seeds that contain approximately 50% oil and 25% protein (Rheenen, 1973). The presence of antioxidants (sesamum, sesiamolin and sesamol) makes the oil to be one of the most stable vegetable oil in the world.

Sesamum cultivation is being practiced in Surendranagar District in Kharif season. This is oilseed crop. Farmers got low yield due to imbalance fertilization. In Surendranagar district, soil sample survey data reveals that there is 60 percent of total cultivable area is deficient in available sulphur nutrient. For oil seed crop, sulphur is essential element for getting optimum production. Farmers are not aware about the importance and role of sulphur in sesamum production. Thus the assessment of sulphur is to be taken.

Problem Cause Diagram



Objective	**To increase the yield by different sources of Sulphur**
Reason for low yield of Sesamum	1. Sulphur deficient soil of district (60% Area) 2. Imbalance use of chemical fertilizers and no use of sulphur in sesamum
Technical Intervention	Management of sulphur application in Sesamum
Treatments	1. **T1:**Farmers practice (Control) (90 kg DAP +90 kg Urea / ha) 2. **T2:**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)
Cost	9500/-
Area	1.2 ha
No. of replication	03
Source of technology	Agricultural Research Station, JAU, Amreli

Technical Indicator:

1. Yield (qui/ha)

Economic Indicator:

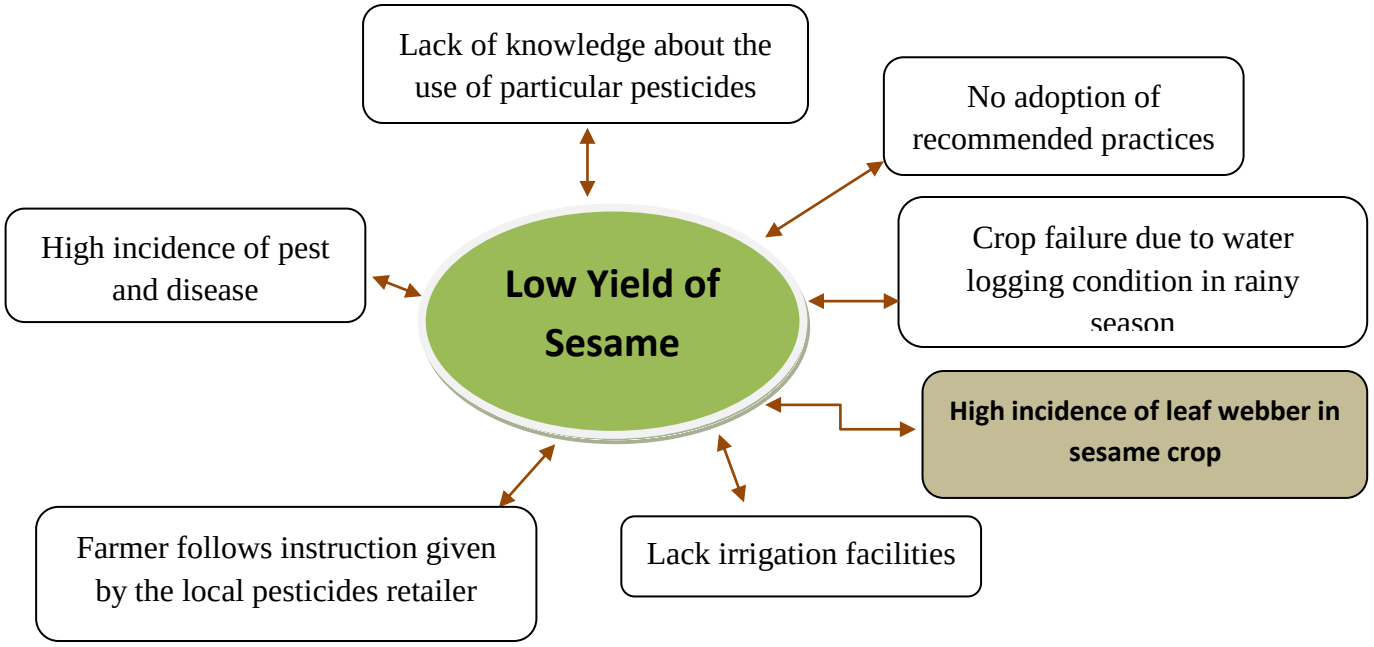
1. Cost of Production (Rs/ha)
2. Gross return: (Rs/ha)
3. Net return: (Rs/ha)
4. B:C Ratio

OFT:2 Assessment of management of sesame leaf webber under rainfed condition

1. **Title of OFT : Management of sesame leaf webber under rainfed condition**
2. **Agro Ecological Zone** : North Saurastra Agroclimatic Zone- VI
3. **Production system** : Rainfed
4. **Problem Definition:**

Sesame (Sesamum indicum,L) is an oil seed crop grown mainly for its seeds that contain approximately 50% oil and 25% protein (Rheenen, 1973). Sesamum cultivation is being practiced in Surendranagar District in *Kharif* season. This is oilseed crop. Leaf webber cause 10-15 % yield loss in crop. Farmers got low yield due to 1. Lack of knowledge about the use of specific pesticide for effective management of leaf webber in sesame. 2. No adoption of recommended practices.

Problem Cause Diagram



Objective	**To minimize the incidence of leaf webber in sesamum**
Reason for low yield of sesamum	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 sesamum
Treatments	1. **T1**: Farmers practice (Use of conventional insecticides after infestation) 2. **T 2:** Recommended practices Application of the insecticide will be

	start at pest infestation occurred. Cartap hydrochloride 50% S.P. @ 10 ml/10 Litre of water at the time of infestation.
Cost	2580/-
Area	1.2 ha
No. of replication	03
Source of technology	Dry Farming Research Station, JAU, Targhadia

Technical Indicator:

1. Yield (qui/ha)
2. No. of leaf webber/Plant

Economic Indicator:

1. Cost of Production (Rs/ha)
2. Gross return: (Rs/ha)
3. Net return: (Rs/ha)
4. B:C Ratio

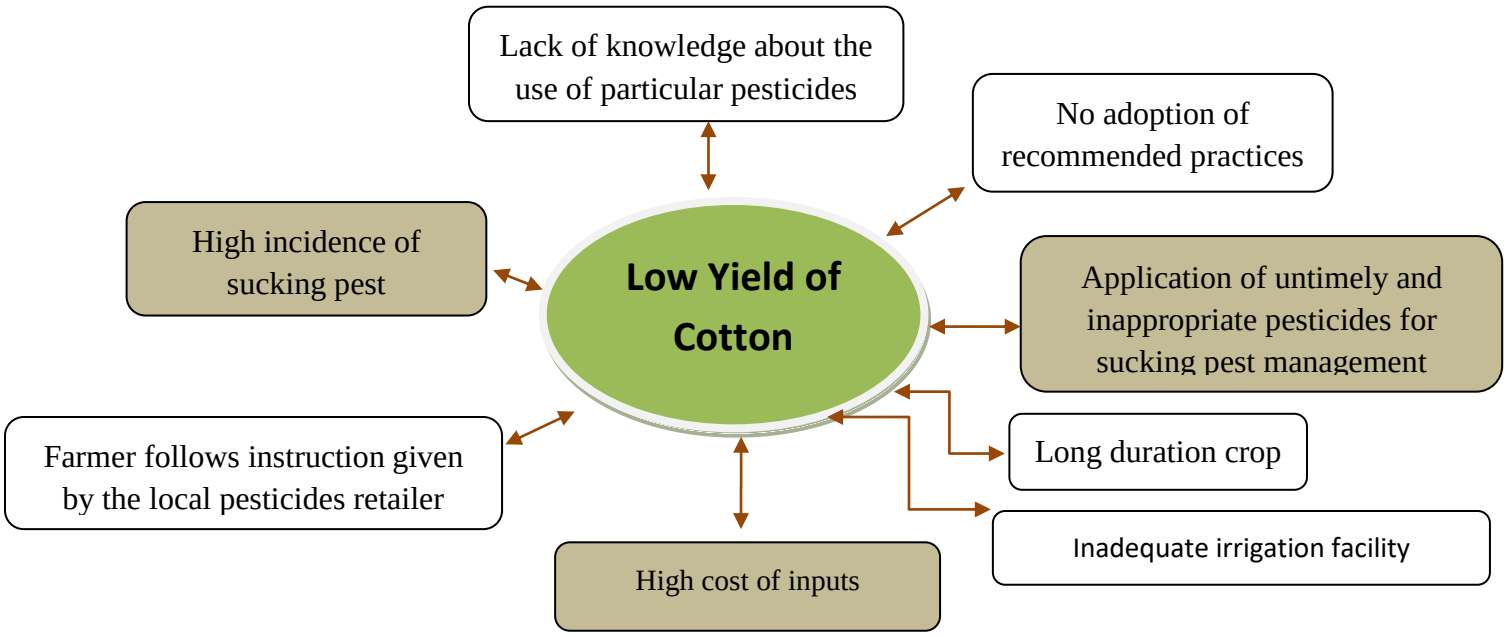
OFT: 3 Management of sucking pests in Cotton

1. **Title of OFT: Management of sucking pests in Cotton**
2. **Agro Ecological Zone** : North Saurastra Agroclimatic Zone- VI
3. **Production system** : Irrigated
4. **Problem Definition:**

Saurashtra account 65 % area of the state and contributes 68 % in the total cotton production of the state. Average lint production of the Saurashtra is 754 kg/ha as against 615 kg/ha of the state (2007-08). Among the different districts of Gujarat, Surendranagar ranks first in total cotton production of the state (22 %), followed by Rajkot (16.6 %), Bhavnagar (15.8 %), Vadodara (7.7 %) and Amreli (7.2 %). Thus cotton is very important crop of the Saurashtra region for sustainable agricultural production. After invention of Bt technology in cotton, sucking pest become major pest of the crop. Farmers are practicing excess use chemical pesticides without following recommended dose as prescribed by concerned scientist. Therefore cost of cultivation inevitably increase and some time crop get failure due to inappropriate and excessive use of chemical pesticides.

The manipulation of different doses in various insecticides for the control of sucking pest in the cotton crop. This OFT traces the transformation in the cotton production through recommended technology in the Surendranagar district.

Problem Cause Diagram



Objective	**To minimize the incidence of sucking pests in cotton**
Reason for low yield of cotton	1. No adoption of recommended practices. 2. Farmers follows instruction given by the local pesticides retailer 3. Lack of knowledge about the required of specific pesticides.
Technical Intervention	Management of sucking pests in cotton
Treatments	1. **T1: Farmers practice** (Use of monocrotophos, diamethoate etc insecticides after infestation occurred) 2. **T2: Recommended practices** Application of the systemic insecticide (Acephate 75 SP @ 20 gm/10 litter of water or Imidachloprid: 200 SL @ 4 ml/10 litter or Thiamethoxam 25 WG 4 gm/10 litter of water) at the time of infestation.
Cost	1950/-
Area	1.2 ha
No. of replication	03
Source of technology	Cotton Research Station, JAU, Junagadh

Technical Indicator:

1. Yield (qui/ha)
2. No. of sucking pest/Plant

Economic Indicator:

5. Cost of Production (Rs/ha)
6. Gross return: (Rs/ha)
7. Net return: (Rs/ha)
8. B:C Ratio

OFT:4 Varietal assessment of Sesamum Guj Til-4 in Surendranagar district

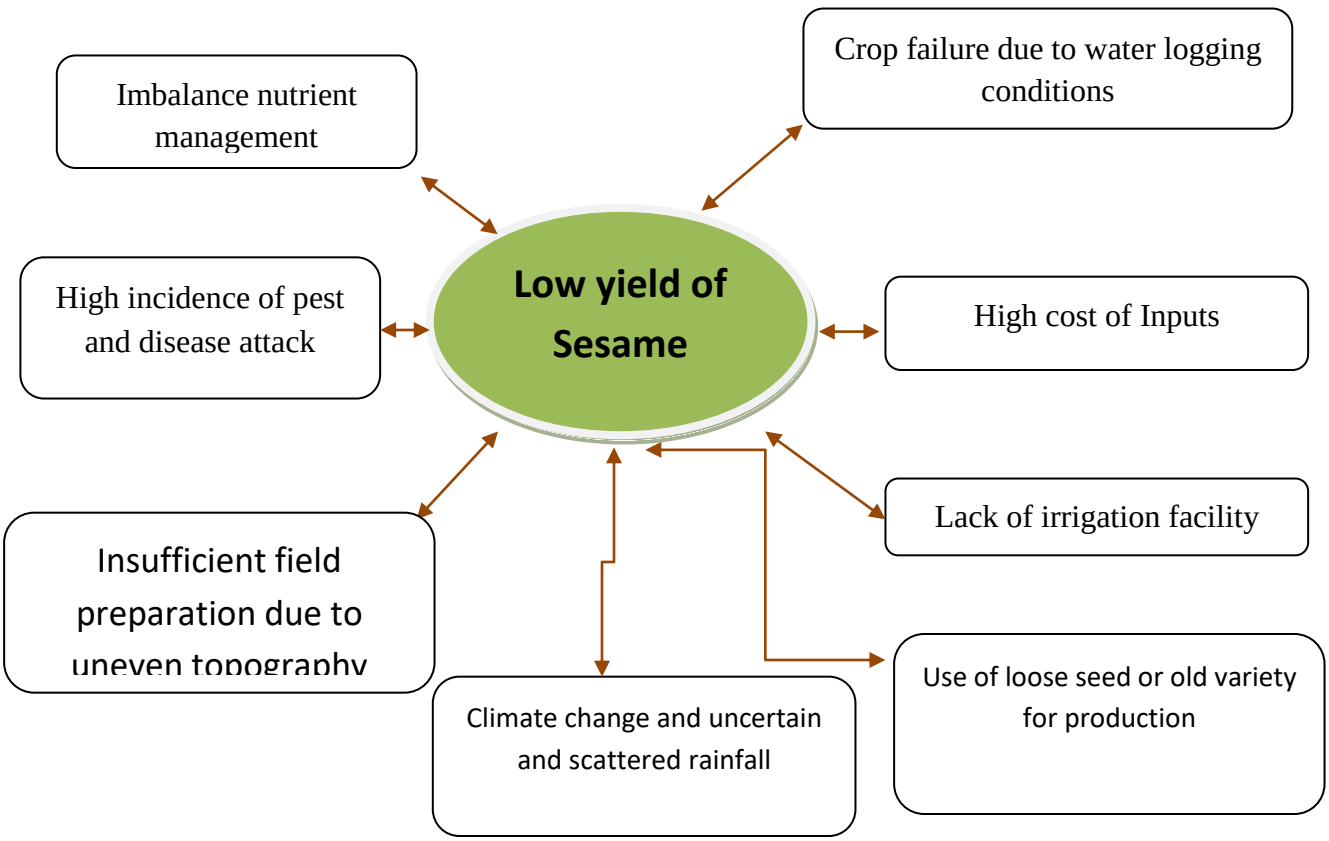
1.Title of OFT: Varietal assessment of Sesamum crop var. Guj Til-4 in Surendranagar district

2.Agro Ecological Zone : North Saurastra Agroclimatic Zone- VI

3. Production system : Irrigated

Among the oilseeds, sesame seeds are a good source of quality oil, i.e. around 50%of its total mass. India occupies first position in both sesame production and sesame export worldwide (Anonymous 2008). Among the sesame growing states, Gujarat contributes 28.6% to total sesame production in the country. The state has a great potential for sesame production for dome stic and export markets but the yield of this valuable crop is relatively low especially in rainy season due to lack of improved varieties as well as resistance to diseases and pests of economic importance and suitability to changing climatic conditions.

White seeded sesame variety G.Til 4 was found suitable for cultivation in North Saurashtra Region of Gujarat. This variety showed yield increment of 18.28% and10.79% over G.Til 2 and G.Til 3, respectively. G.Til 4 is at least 5 days earlier than both the checks.



Objective	**To increase yield of Sesamum**
Source of technology	Agricultural Research Station, JAU, Amreli
Treatments	1. **T1:** Variety: Guj Til-2 OR Local 2. **T2:** Variety: Guj Til-4
Parameters	Yield Kg/ha
Expected Cost	1200
Area	1.2 ha
No. of replication	03

Observation:

Technical Indicator:

1. Yield (q/ha)

Economic Indicator:

1. Cost of Production (Rs/ha)
2. Gross return: (Rs/ha)
3. Net return: (Rs/ha)
4. B:C Ratio

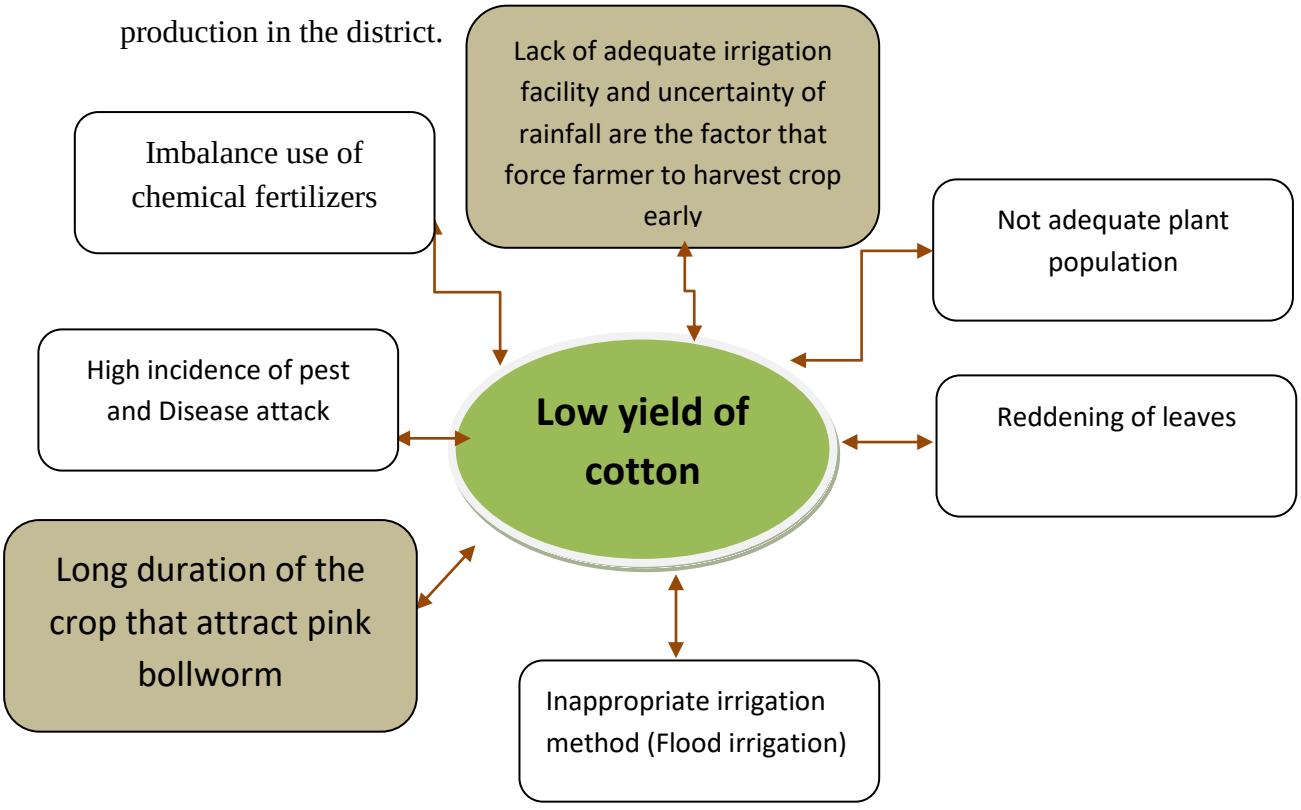
OFT: 5 Assessment of high density planting in Cotton.

1. **Title of OFT: Assessment of high density planting in Cotton**
2. **Agro Ecological Zone** : North Saurastra Agroclimatic Zone- VI
3. **Production system** : Irrigated

Surendranagar district ranks first in total cotton production of the state (22 %), followed by Rajkot (16.6 %), Bhavnagar (15.8 %) respectively. Thus cotton is very important crop of the district for sustainability point of view.

Since last two to three years, infestation of pink bollworm in cotton, uncertainty of rainfall and scattered rain and changing climatic condition, now farmers are forced to harvest crop as against they assumed for 180 to 240 days period. Ultimately this resulted in low production due to inadequate plant population and less no. of bolls per plant and per unit area.

The manipulation of plant density and crop geometry is a time tested agronomic technique for achieving high crop yield. Several leading cotton producing countries like USA, Australia, Brazil, Uzbekistan and China have developed suitable plant types to accumulate plant densities varying from 1 lakh to 2.5 lakh plants/ha with using narrow and ultra narrow row spacing. This OFT traces the transformation in the cotton production in the district.



Objective	**To observe the yield of cotton in High density plantation.**
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. **T1:** Farmer practice : Sowing of cotton at spacing 150 x 45 cm (14814 plants / ha) 2. **T2:** Intervention: Sowing of cotton at spacing 90 x 30 cm. (37037 plants / ha)
Area	1.2 ha
No. of farmers	03
Cost	Rs 3300

Observation:

Technical Indicator:

1. Yield (qtl/ha)
2. Lint production/boll (gm)
3. No. of Bolls / Plant

Economic Indicator:

1. Cost of Production (Rs/ha)
2. Gross return: (Rs/ha)
3. Net return: (Rs/ha)
4. B:C Ratio

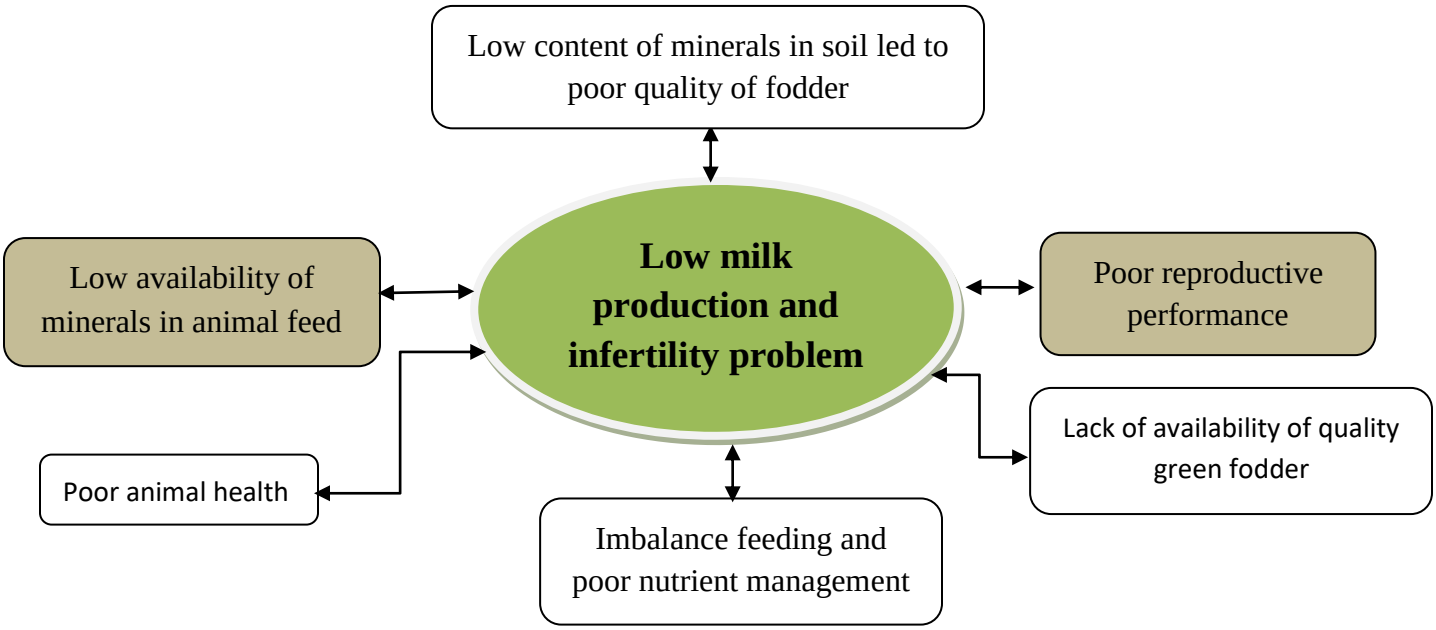
OFT: 6 Assessment of effect of mineral mixture and by pass protein supplement in increasing milk production in buffaloes:

1. **Title of OFT:** Effect of mineral mixture and by pass protein supplement in increasing milk production in buffaloes
2. **Agro Ecological Zone** : North Saurastra Agroclimatic Zone- VI
3. **Production system** : Irrigated

Low availability of required minerals in animal feed causes productive and reproductive problems in animals. Infertility in dairy buffalo is one of the problems in the region. It causes loss in milk production. By supplementation of mineral mixture, deficiency of these minerals can be fulfilled. Mineral mixture is beneficial to improve milk production, fat percentage and reproductive parameters in animals which enhance overall returns to the dairy farmers.

Objective	**To increase milk yield and regularity of heat**
Problem statement	1. Low milk production due to improper nutrient management of milch animals 2. Infertility and reproductive problems in animals.
Reason	Low milk production and infertility problem in dairy buffaloes
Technical Intervention	Enhancement of milk production with improvement in reproductive efficiency
Treatments	**T_1**: Farmer practice (No use of mineral mixture and by pass protein) **T_2**: Mineral mixture 30gm/animal/day + By pass protein supplement 800 gm/animal/day for 60 days
Cost of OFT	Approximate Rs/- 16000.00
Parameter	1. Milk yield (lit/lac) 2. No. of insemination for conception and heat regularity.
No. of farmers	05
No. of Animals	10
Source of technology	AAU, Anand

Problem Cause Diagram



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/ demon.	Parameters identified	Cost of critical input (In Rs.)
1	Wheat	GW – 366	Dry farming	Improve Variety	40.0 kg Seed	Rabi-2017-18	08	20	Yield , B. C. Ratio	28400.00
2	Cumin	GC-4		IDM	Mancozeb : 500 gm Carbendazim:250gm Hexaconazole:100ml *Trichoderma*: 2.0 kg	Rabi-2017-18	08	20	Yield, % disease incidence	6800.00
3	Gram	GJG-3/5		Improve Variety	25 kg Seed	Rabi-2017-18	04	10	Yield, B. C. Ratio	18750.00
	Gram Under (NFSM)	GJG-3/5		Improve Variety	Variety GG-5/3: 25kg Rhizobium -500ml PSB-500 ml Beauveria-1 kg Trichoderma-2 kg	Rabi-2017-18	30	75	Yield, B. C. Ratio	181875.00
4	Green gram	GM-4		Improve Variety	4.0 kg Seed	Kharif-2017-18	04	10	Yield, B. C. Ratio	3400.00
5	Sesame	Guj-Til-4		Improve Variety	1.0 kg Seed	Kharif-2017-18	04	10	Yield, B. C. Ratio	1750.00
6	Groundnut	GG-9		IDM	Mancozeb:500 gm Chlorothalonil:500 gm Carbendazim:250 gm	Kharif-2017-18	04	10	Yield, % disease incidence, B. C. Ratio	7400.00
7	Groundnut	*GG-20*		Bio-agent	Castor cake: 100 kg *Trichoderma*: 2.0 kg	Kharif-2017-18	02	05	Yield, plant damaged, B. C. Ratio	2950.00
8	Cotton	Bt Cotton varieties		INM	*Azotobactor* : 500 ml PSB : 500 ml Micro Mix Grade IV-500 gm	Kharif-2017-18	10	25	Yield, B. C. Ratio	6125.00

9.	Lucerne	Anand Lucerne -3		Improve Variety	1 kg Seed	Rabi 2017-18	1	10	Fodder yield , B. C. Ratio	2000.00
					Total		**75**	**195**		

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-2017-18	10	-	Automatic seed drill	-
Shredder	Cotton	Rabi	10	-	Shredder	-
Seed Dressing Drum	All crop	Kharif/Rabi-2017-18	10	-	Seed Dressing Drum	-

(ii) Livestock Enterprises

Enterprise	Breed	No. of farmers	No. of animals, poultry birds/ha. etc.	Critical inputs	Performance parameters / indicators	Input cost in Rs.
Deworming in Goat	Zalawadi	10	40	Fenbendazole 7 mg/kg body weight of goat	Body weight	4000.00
Buffalo	-	5	5	Mineral mixture:40 gm /day for 60 days.	Milk yield	3000.00

3.3 Training (Including the sponsored and FLD training programmes):

A) ON Campus

Thematic Area	No. of Courses	No. of Participants						
		Others			SC/ST			Grand Total
		Male	Female	Total	Male	Female	Total	
(A) Farmers & Farm Women								
I Crop Production								
Weed Management								
Resource Conservation Technologies								
Cropping Systems								
Crop Diversification	1	23	0	23	2	0	2	25
Integrated Farming								
Water management	1	23	0	23	2	0	2	25
Seed production								
Nursery management								
Integrated Crop Management	1	23	0	23	2	0	2	25
Fodder production								
Production of organic inputs								
Organic farming in cotton and sesame crop and its market management	1	23	0	23	2	0	2	25
II Horticulture								
a) Vegetable Crops								
Production of low volume and high value crops								
Off-season vegetables								
Nursery raising								
Exotic vegetables like Broccoli								
Export potential vegetables								
Grading and standardization								
INM in brinjal, chilly and tomato	1	23	0	23	2	0	2	25
Good agricultural practices in tomato and brinjal crops	1	23	0	23	2	0	2	25
b) Fruits								
Training and Pruning								
Layout and Management of Orchards								
Cultivation of Fruit								
Management of young plants/orchards								
Rejuvenation of old orchards								
Export potential fruits								
Micro irrigation systems of orchards								
Plant propagation techniques								
c) Ornamental Plants								
Nursery Management								
Management of potted plants								
Export potential of ornamental plants								
Propagation techniques of Ornamental Plants								
d) Plantation crops								
Production and Management technology								
Processing and value addition								
e) Tuber crops								
Production and Management technology								
Processing and value addition								
f) Spices								
Production and Management technology								
Processing and value addition								
g) Medicinal and Aromatic Plants								
Nursery management								
Production and management technology								
Post harvest technology and value addition								
III Soil Health and Fertility Management								
Soil fertility management								
Soil and Water Conservation								

Integrated Nutrient Management								
Production and use of organic inputs								
Management of Problematic soils								
Micro nutrient deficiency in crops								
Nutrient Use Efficiency								
Soil and Water Testing								
IV Livestock Production and Management								
Dairy Management	1	0	23	23	0	2	2	25
Poultry Management								
Piggery Management								
Rabbit Management/goat								
Animal Nutrition Management								
Disease Management	1	23	0	23	2	0	2	25
Feed and fodder management	1	23	0	23	2	0	2	25
Production of quality animal products	1	23	0	23	2	0	2	25
V Home Science/Women empowerment								
Household food security by kitchen gardening and nutrition gardening								
Design and development of low/minimum cost diet								
Designing and development for high nutrient efficiency diet								
Minimization of nutrient loss in processing								
Processing and Cooking								
Gender mainstreaming through SHGs								
Storage loss minimization techniques								
Value addition	1	0	23	23	0	2	2	25
Income generation activities for empowerment of rural Women (Sewing and embroidery work)	1	0	23	23	0	2	2	25
Location specific drudgery reduction technologies								
Rural Crafts								
Women and child care								
VI Agril. Engineering								
Farm Machinery and its maintenance								
Installation and maintenance of micro irrigation systems								
Use of Plastics in farming practices								
Production of small tools and implements								
Repair and maintenance of farm machinery and implements								
Small scale processing and value addition								
Post Harvest Technology								
VII Plant Protection								
Integrated Pest Management	2	46	0	46	4	0	4	50
Integrated Disease Management	1	23	0	23	2	0	2	25
Bio-control of pests and diseases								
Production of bio control agents and bio pesticides								
VIII Fisheries								
Integrated fish farming								
Carp breeding and hatchery management								
Carp fry and fingerling rearing								
Composite fish culture								
Hatchery management and culture of freshwater prawn								
Breeding and culture of ornamental fishes								
Portable plastic carp hatchery								
Pen culture of fish and prawn								
Shrimp farming								
Edible oyster farming								
Pearl culture								
Fish processing and value addition								
IX Production of Inputs at site								
Seed Production								
Planting material production								
Bio-agents production								
Bio-pesticides production								
Bio-fertilizer production								
Vermi-compost production								
Organic manures production								

Production of fry and fingerlings								
Production of Bee-colonies and wax sheets								
Small tools and implements								
Production of livestock feed and fodder								
Production of Fish feed								
X Capacity Building and Group Dynamics								
Leadership development								
Group dynamics								
Formation and Management of SHGs								
Mobilization of social capital								
Entrepreneurial development of farmers/youths								
WTO and IPR issues								
ICT Use in Agriculture	1	23	0	23	2	0	2	25
XI Agro-forestry								
Production technologies								
Nursery management								
Integrated Farming Systems								
XII Others (Pl. Specify)								
TOTAL	**16**	**299**	**69**	**368**	**26**	**6**	**32**	**400**
(B) RURAL YOUTH								
Mushroom Production								
Bee-keeping								
Integrated farming								
Seed production								
Production of organic inputs								
Integrated Farming (Medicinal)								
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	1	00	23	23	0	2	2	25
TOTAL	**1**	**00**	**23**	**23**	**0**	**2**	**2**	**25**
(C) Extension Personnel								
Productivity enhancement in field crops	2	40	0	40	0	0	0	40
Integrated Pest Management	1	20	0	20	0	0	0	20
Integrated Nutrient management								
Rejuvenation of old orchards								
Protected cultivation technology	1	20	0	20	0	0	0	20

Formation and Management of SHGs								
Group Dynamics and farmers organization								
Information networking among farmers								
Capacity building for ICT application								
Care and maintenance of farm machinery and implements								
WTO and IPR issues								
Management in farm animals	1	20	0	20	0	0	0	20
Livestock feed and fodder production								
Household food security								
Women and Child care								
Low cost and nutrient efficient diet designing								
Production and use of organic inputs								
Gender mainstreaming through SHGs								
Any other (Pl. Specify)								
TOTAL	**5**	**100**	**00**	**100**	**00**	**00**	**00**	**100**
G. Total	**22**	**399**	**92**	**491**	**26**	**8**	**34**	**525**

B) OFF Campus

Thematic Area	No. of Courses	No. of Participants						
		Others			SC/ST			Grand Total
		Male	Female	Total	Male	Female	Total	
(A) Farmers & Farm Women								
I Crop Production								
Weed Management	1	23	0	23	2	0	2	25
Resource Conservation Technologies								
Cropping Systems								
Crop Diversification								
Integrated Farming								
Water management	2	46	0	46	4	0	4	50
Seed production								
Nursery management								
Integrated Crop Management	2	46	0	46	4	0	4	50
Integrated nutrient management	1	23	0	23	2	0	2	25
Fodder production								
Production of organic inputs								
II Horticulture								
a) Vegetable Crops								
Production of low volume and high value crops								
Off-season vegetables	1	23	0	23	2	0	2	25
Nursery raising	1	0	23	23	0	2	2	25
Exotic vegetables like Broccoli								
Export potential vegetables								
Grading and standardization								
Protective cultivation (Green Houses, Shade Net etc.)	1	23	0	23	2	0	2	25
Micro Irrigation in vegetable and fruit crops	1	23	0	23	2	0	2	25
b) Fruits								
Training and Pruning								
Layout and Management of Orchards								
Cultivation of Fruit								
Management of young plants/orchards								
Rejuvenation of old orchards								
Export potential fruits								
Micro irrigation systems of orchards								
Plant propagation techniques								
c) Ornamental Plants								
Nursery Management								
Management of potted plants								
Export potential of ornamental plants								
Propagation techniques of Ornamental Plants								
d) Plantation crops								
Production and Management technology								
Processing and value addition								
e) Tuber crops								
Production and Management technology								
Processing and value addition								
f) Spices								
Production and Management technology								
Processing and value addition								
g) Medicinal and Aromatic Plants								
Nursery management								
Production and management technology								
Post harvest technology and value addition								
III Soil Health and Fertility Management								
Soil fertility management								
Soil and Water Conservation								
Integrated Nutrient Management								
Production and use of organic inputs								

Management of Problematic soils								
Micro nutrient deficiency in crops								
Nutrient Use Efficiency								
Soil and Water Testing								
IV Livestock Production and Management								
Dairy Management								
Poultry Management								
Piggery Management								
Rabbit Management /goat								
Animal Nutrition Management	1	23	0	23	2	0	2	25
Disease Management	2	46	0	46	4	0	4	50
Feed and Fodder management	2	46	0	46	4	0	4	50
Production of quality animal products	1	23	0	23	1	0	1	25
V Home Science/Women empowerment								
Household food security by kitchen gardening and nutrition gardening								
Design and development of low/minimum cost diet								
Designing and development for high nutrient efficiency diet								
Minimization of nutrient loss in processing								
Processing and cooking								
Gender mainstreaming through SHGs								
Storage loss minimization techniques								
Value addition	1	0	23	23	0	2	2	25
Income generation activities for empowerment of rural Women								
Location specific drudgery reduction technologies								
Rural Crafts								
Women and child care								
VI Agril. Engineering								
Farm Machinery and its maintenance								
Installation and maintenance of micro irrigation systems								
Use of Plastics in farming practices								
Production of small tools and implements								
Repair and maintenance of farm machinery and implements								
Small scale processing and value addition								
Post Harvest Technology								
Water harvest technology								
VII Plant Protection								
Integrated Pest Management	2	46	0	46	4	0	6	50
Integrated Disease Management	1	23	0	23	2	0	2	25
Bio-control of pests and diseases	1	23	0	23	2	0	2	25
Production of bio control agents and bio pesticides								
Important of Natural enemies								
VIII Fisheries								
Integrated fish farming								
Carp breeding and hatchery management								
Carp fry and fingerling rearing								
Composite fish culture								
Hatchery management and culture of freshwater prawn								
Breeding and culture of ornamental fishes								
Portable plastic carp hatchery								
Pen culture of fish and prawn								
Shrimp farming								
Edible oyster farming								
Pearl culture								
Fish processing and value addition								

IX Production of Inputs at site								
Seed Production								
Planting material production (Horti.)								
Bio-agents production								
Bio-pesticides production								
Bio-fertilizer production								
Vermi-compost production (Horti.)								
Organic manures production (A.S.)								
Production of fry and fingerlings								
Production of Bee-colonies and wax sheets								
Small tools and implements								
Production of livestock feed and fodder								
Production of Fish feed								
X Capacity Building and Group Dynamics								
Leadership development								
Group dynamics								
Formation and Management of SHGs(HS)								
Mobilization of social capital								
Entrepreneurial development of farmers/youths (Agro.)								
WTO and IPR issues								
Organic farming and its certification process	1	23	0	23	2	0	2	25
XI Agro-forestry								
Production technologies								
Nursery management								
Integrated Farming Systems (Agro)								
XII Others (Pl. Specify)								
TOTAL								
(B) RURAL YOUTH								
Mushroom Production								
Bee-keeping								
Integrated farming								
Seed production								
Production of organic inputs								
Integrated Farming (Medicinal)								
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								
Use of lazer land leveler and rotavator								
TOTAL								
(C) Extension Personnel								
Productivity enhancement in field crops								
Integrated Pest Management								
Integrated Nutrient management								
Rejuvenation of old orchards								
Protected cultivation technology								
Formation and Management of SHGs								
Group Dynamics and farmers organization								
Information networking among farmers								
Capacity building for ICT application								
Care and maintenance of farm machinery and implements								
WTO and IPR issues								
Management in farm animals								
Livestock feed and fodder production								
Household food security								
Women and Child care								
Low cost and nutrient efficient diet designing								
Production and use of organic inputs								
Gender mainstreaming through SHGs								
Any other (Pl. Specify)								
TOTAL	**22**	**460**	**44**	**504**	**40**	**4**	**44**	**550**
G. Total								

C) Consolidated table (ON and OFF Campus)

Thematic Area	No. of Courses	No. of Participants						Grand Total
		Others			SC/ST			
		Male	Female	Total	Male	Female	Total	
(A) Farmers & Farm Women								
I Crop Production								
Weed Management	1	23	0	23	2	0	2	25
Resource Conservation Technologies								
Cropping Systems								
Crop Diversification	1	23	0	23	2	0	2	25
Integrated Farming								
Water management	3	69	0	69	6	0	6	75
Seed production								
Nursery management								
Integrated Crop Management	3	69	0	69	6	0	6	75
Fodder production								
Integrated nutrient management	1	23	0	23	2	0	2	25
Organic farming in cotton and sesame and its market management	1	23	0	23	2	0	2	25
II Horticulture								
a) Vegetable Crops								
Production of low volume and high value crops								
Off-season vegetables	1	23	0	23	2	0	2	25
Nursery raising	1	0	23	23	0	2	2	25
Exotic vegetables like Broccoli								
Export potential vegetables								
Grading and standardization								
Protective cultivation (Green Houses, Shade Net etc.)	1	23	0	23	2	0	2	25
Micro Irrigation in Vegetable and Fruit crops								
INM in brinjal, chilly and tomato	1	23	0	23	2	0	2	25
Good agricultural practices in tomato and brinjal crops	1	23	0	23	2	0	2	25
b) Fruits								
Training and Pruning								
Layout and Management of Orchards								
Cultivation of Fruit								
Management of young plants/orchards								
Rejuvenation of old orchards								
Export potential fruits								
Micro irrigation systems of orchards	1	23	0	23	2	0	2	25
Plant propagation techniques								
c) Ornamental Plants								
Nursery Management								
Management of potted plants								
Export potential of ornamental plants								
Propagation techniques of Ornamental Plants								
d) Plantation crops								
Production and Management technology								
Processing and value addition								
e) Tuber crops								
Production and Management technology								
Processing and value addition								
f) Spices								
Production and Management technology								
Processing and value addition								
g) Medicinal and Aromatic Plants								
Nursery management								
Production and management technology								
Post harvest technology and value addition								
III Soil Health and Fertility Management								
Soil fertility management								
Soil and Water Conservation								
Integrated Nutrient Management								
Production and use of organic inputs								

Management of Problematic soils								
Micro nutrient deficiency in crops								
Nutrient Use Efficiency								
Soil and Water Testing								
IV Livestock Production and Management								
Dairy Management	1	0	23	23	0	2	2	25
Poultry Management								
Piggery Management								
Rabbit Management/goat								
Animal Nutrition Management	1	23	0	23	2	0	2	25
Disease Management	3	69	0	69	6	0	6	75
Feed and Fodder management	3	69	0	69	6	0	6	75
Production of quality animal products	2	46	0	46	4	0	4	50
V Home Science/Women empowerment								
Household food security by kitchen gardening and nutrition gardening								
Design and development of low/minimum cost diet								
Designing and development for high nutrient efficiency diet								
Minimization of nutrient loss in processing								
Processing and cooking								
Gender mainstreaming through SHGs								
Storage loss minimization techniques								
Value addition	2	0	46	46	0	4	4	50
Income generation activities for empowerment of rural Women (sewing and embroidery)	1	0	23	23	0	2	2	25
Location specific drudgery reduction technologies								
Rural Crafts								
Women and child care								
VI Agril. Engineering								
Farm Machinary and its maintenance								
Installation and maintenance of micro irrigation systems								
Use of Plastics in farming practices								
Production of small tools and implements								
Repair and maintenance of farm machinery and implements								
Small scale processing and value addition								
Post Harvest Technology								
Water harvest technology	1	23	0	23	2	0	2	25
VII Plant Protection								
Integrated Pest Management	4	69	21	90	8	2	10	100
Integrated Disease Management	1	23	0	23	2	0	2	25
Bio-control of pests and diseases	2	46	0	46	4	0	4	50
Production of bio control agents and bio pesticides								
Importance of Natural enemies								
VIII Fisheries								
Integrated fish farming								
Carp breeding and hatchery management								
Carp fry and fingerling rearing								
Composite fish culture								
Hatchery management and culture of freshwater prawn								
Breeding and culture of ornamental fishes								
Portable plastic carp hatchery								
Pen culture of fish and prawn								
Shrimp farming								
Edible oyster farming								
Pearl culture								
Fish processing and value addition								
IX Production of Inputs at site								
Seed Production								
Planting material production								
Bio-agents production								
Bio-pesticides production								

Bio-fertilizer production								
Vermi-compost production								
Organic manures production								
Production of fry and fingerlings								
Production of Bee-colonies and wax sheets								
Small tools and implements								
Production of livestock feed and fodder								
Production of Fish feed								
X Capacity Building and Group Dynamics								
Leadership development								
Group dynamics								
Formation and Management of SHGs								
Mobilization of social capital								
Entrepreneurial development of farmers/youths								
WTO and IPR issues								
Government subsidy scheme for farmers								
Use of ICT in agriculture	1	23	0	23	2	0	2	25
Organic farming and its certification process	1	23	0	23	2	0	2	25
XI Agro-forestry								
Production technologies								
Nursery management								
Integrated Farming Systems								
Sponsored training								
TOTAL	**38**	**759**	**115**	**874**	**66**	**10**	**76**	**950**
(B) RURAL YOUTH								
Mushroom Production								
Bee-keeping								
Integrated farming								
Seed production								
Production of organic inputs								
Integrated Farming								
Planting material production								
Vermi-culture								
Sericulture								
Protected cultivation of vegetable crops								
Commercial fruit production								
Repair and maintenance of farm machinery and implements								
Nursery Management of Horticulture crops								
Training and pruning of orchards								
Value addition								
Production of quality animal products								
Dairying								
Sheep and goat rearing								
Quail farming								
Piggery								
Rabbit farming								
Poultry production								
Ornamental fisheries								
Para vets								
Para extension workers								
Composite fish culture								
Freshwater prawn culture								
Shrimp farming								
Pearl culture								
Cold water fisheries								
Fish harvest and processing technology								
Fry and fingerling rearing								
Small scale processing								
Post Harvest Technology								
Tailoring and Stitching								
Rural Crafts								
Use of lazer land leveler and rotavator								

TOTAL	**1**	**00**	**23**	**23**	**0**	**2**	**2**	**25**
(C) Extension Personnel								
Productivity enhancement in field crops	2	40	0	40	0	0	0	40
Integrated Pest Management	1	20	0	20	0	0	0	20
Integrated Nutrient management								
Rejuvenation of old orchards								
Protected cultivation technology	1	20	0	20	0	0	0	20
Formation and Management of SHGs								
Group Dynamics and farmers organization								
Information networking among farmers								
Capacity building for ICT application								
Care and maintenance of farm machinery and implements								
WTO and IPR issues								
Management in farm animals	1	20	0	20	0	0	0	20
Livestock feed and fodder production								
Household food security								
Women and Child care								
Low cost and nutrient efficient diet designing								
Production and use of organic inputs								
Gender mainstreaming through SHGs								
Any other (Pl. Specify)								
Total	**5**	**100**	**00**	**100**	**0**	**0**	**0**	**100**
G. TOTAL	**44**	**859**	**115**	**974**	**66**	**10**	**76**	**1050**

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

3.4. Extension Activities (including activities of FLD programmes)

Nature of Extension Activity	No. of activities	Farmers			Extension Officials			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Field Day	10	350	0	350	0	0	0	350	0	350
Kisan Mela	1	2500	0	2500	12	0	12	2512	0	2515
Kisan Ghosthi	10	300	0	300	0	0	0	300	0	300
Exhibition	2	2000	0	2000	10	0	10	2010	0	2010
Film Show	30	650	0	650	0	0	0	650	0	650
Farmers Seminar	0	0	0	0	0	0	0	0	0	0
Workshop	0	0	0	0	0	0	0	0	0	0
Group meetings	0	0	0	0	0	0	0	0	0	0
Lectures delivered as resource persons	0	0	0	0	0	0	0	0	0	0
Newspaper coverage	6	0	0	0	0	0	0	0	0	0
Radio talks	1	0	0	0	0	0	0	0	0	0
TV talks	1	0	0	0	0	0	0	0	0	0
Popular articles	10	0	0	0	0	0	0	0	0	0
Extension Literature	10	0	0	0	0	0	0	0	0	0
Advisory Services	25	20	0	20	4	0	4	24	0	24
Scientific visit to farmers field	25	70	0	70	0	0	0	70	0	70
Farmers visit to KVK	150	3000	0	3000	0	0	0	3000	0	3000
Diagnostic visits	10	10	0	10	0	0	0	10	0	10
Exposure visits	0	0	0	0	0	0	0	0	0	0
Ex-trainees Sammelan	0	0	0	0	0	0	0	0	0	0
Soil health Camp	1	250	0	250	0	0	0	250	0	250

Animal Health Camp	3	100	0	100	0	0	0	100	0	100
Agri mobile clinic	0	0	0	0	0	0	0	0	0	0
Soil test campaigns	1	250	0	250	0	0	0	250	0	250
Farm Science Club Conveners meet	0	0	0	0	0	0	0	0	0	0
Self Help Group Conveners meetings	0	0	0	0	0	0	0	0	0	0
Mahila Mandals Conveners meetings	1	0	50	50	0	0	0	0	50	50
Celebration of important days (specify)	4	1400	200	1600	0	0	0	1400	200	1600
Krishi Mohostva	2	15000	500	15500	30	10	40	15030	510	15540
Krishi Rath	0	0	0	0	0	0	0	0	0	0
Pre Kharif workshop	1	50	10	60	0	0	0	50	10	60
Pre Rabi workshop	1	50	10	60	0	0	0	50	10	60
PPVFRA workshop	0	0	0	0	0	0	0	0	0	0
Any Other (Specify)	0	0	0	0	0	0	0	0	0	0
Total	**305**	**25900**	**770**	**26670**	**56**	**10**	**66**	**25956**	**780**	**26739**

3.5 Target for Production and supply of Technological products

SEED MATERIALS

Sl. No.	Crop	Variety	Quantity (qtl.)
CEREALS			
OILSEEDS			
	Groundnut	GJG-09, 31, 02	50.00
	Sesamum	GT-3,4	2.00
PULSES			
VEGETABLES			
OTHERS (Specify)			

PLANTING MATERIALS

Sl. No.	Crop	Variety	Quantity (Nos.)
FRUITS			
SPICES	Cumin	GC-4	3.00

VEGETABLES			
	Brinjal	GJHB-4	5000
FOREST SPECIES			
ORNAMENTAL CROPS			
		Total	

Bio-products

Sl. No.	Product Name	Species	Quantity	
			No	(kg)
BIO PESTICIDES				
1	Trichoderma			5000.00
2	*Beauveria bassiana*			10000.00

LIVESTOCK

Sl. No.	Type	Breed	Quantity	
			(Nos)	Unit
Cattle	-	-	-	-
	-	-	-	-
GOAT	-	-	-	-
SHEEP	-	-	-	-
POULTRY	-	-	-	-
Pig farming	-	-	-	-
FISHERIES	-	-	-	-
	-	-	-	-

3.6. Literature to be Developed/Published

(A) KVK News Letter

Date of start : April 2016

Number of copies to be published : 04

(B) Literature developed/published

S.No.	Topic	Number
1	Research paper each scientist	02
2	Technical reports	04
3	News letters	04
4	Training manual all discipline	02
5	Popular article	10
6	Extension literature	08
	Total	**30**

(C) Details of Electronic Media to be Produced

S. No.	Type of media (CD / VCD / DVD / Audio-Cassette)	Title of the programme	Number
1	-	-	-

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

a)
b)
c)

Rural Youth

a)
b)
c**)**
d)

In-service personnel

a)
b)
c)

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
v) Others if any

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 :
iii. No. of survey/PRA conducted :
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			

3. Targets of samples for analysis:

Details	No. of Samples	No. of Farmers	No. of Villages	Amount to be realized
Soil Samples	500	500	10	As per university norms
Water	100	100	10	- do -
Plant	-	-	-	-
Total	**600**	**600**	**20**	**-**

4.0 LINKAGES

4.1 Functional linkage with different organizations

Sl.No.	Name of organization	Nature of Linkage
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

4.2 Details of linkage with ATMA

a) Is ATMA implemented in your district Yes/No

S. No.	Programme	Nature of linkage
1	Trainings	Collaborative
2	Farmer field visit	Collaborative
3	Diagnostic 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	--
3		
4		
	Total	

6.0 Convergence with departments :

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	
21/04/17	PF	Improved cultivation practices for groundnut and cotton Crops	4	23	0	23	2	0	2	25
22/07/17	PF	Irrigation methods in cotton crop	4	23	0	23	2	0	2	25
13/09/17	PF	Organic farming in field cotton and sesamum and its market management	4	23	0	23	2	0	2	25
12/01/18	PF	Improved cultivation practices for Summer groundnut and Sesame	4	23	0	23	2	0	2	25
Horticulture			4							
11/04/17	PF	Good agricultural practices in tomato and brinjal production	4	23	0	23	2	0	2	25
19/07/17	PF	INM in brinjal, chilly and tomato	4	23	0	23	2	0	2	25
Livestock prod.										
20/06/17	FW	Care and management of milch animals	4	0	23	23	0	2	2	25
25/07/17	PF	Fodder production technology of sorghum and fodder bajara	4	23	0	23	2	0	2	25
01/10/17	PF/FW	Clean milk production technology	4	23	0	23	2	0	2	25
20/01/18	PF	Good animal health management practices	4	23	0	23	2	0	2	25
Home Sc.										
-	FW	Value addition in fruits and vegetables	4	0	23	23	0	2	2	25
-	FW	Income generation through Sewing and embroidery	4	0	23	23	0	2	2	25
Plan Protection										
25/05/17	FW	IPM in cotton and groundnut crop	4	0	23	23	0	2	2	25
04/07/17	PF	Biological & Chemical Control measures for pest and disease of Cotton & Sesamum	4	23	0	23	2	0	2	25
10/10/17	PF	Management of pest and disease in Cumin	4	23	0	23	2	0	2	25
Agril. Extension										
30/05/17	PF	Use of ICT in agriculture	4	23	0	23	2	0	2	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										
13/05/17	PF	Crop Production technology in green gram and gum guar	4	23	0	23	2	0	2	25
07/06/17	PF	Integrated Nutrient Management in Cotton	4	23	0	23	2	0	2	25
23/09/17	PF	Improved cultivation practices for Cumin & Fennel	4	23	0	23	2	0	2	25
28/9/17	PF	Micro irrigation system in cotton crop	4	23	0	23	2	0	2	25
04/10/17	PF	Integrated weed management in cumin and chickpea crops	4	23	0	23	2	0	2	25
09/01/18	PF	Efficient water management in summer ground nut and sesamum crops	4	23	0	23	2	0	2	25
Horticulture										
16/07/17	PF	Improved cultivation practices of tomato , brinjal & capsicum	4	23	0	23	2	0	2	25
01/08/17	FW	Raising of Seedlings of Vegetable crops and nursery management	4	0	23	23	0	2	2	25
21/01/18	PF	Protected Cultivation	4	23	0	23	2	0	2	25
02/02/18	PF	Micro irrigation system and fertigation in fruit and vegetable crops	4	23	0	23	2	0	2	25

Live Stock Production.										
02/05/17	PF	Feeding management of new born calves and milch animals	4	23	0	23	2	0	2	25
16/06/17	PF	Awareness about control of Mastitis, FMD, HS and BQ in animal	4	23	0	23	2	0	2	25
02/07/17	PF	Infertility management in cow & buffalo	4	23	0	23	2	0	2	25
12/09/17	PF	Clean milk production management	4	23	0	23	2	0	2	25
15/10/17	FW	Fodder crop production technologies for Lucerne and sorghum	4	0	23	23	0	2	2	25
16/02/18	PF	Health management in cattle and use of traditional treatments	4	23	0	23	2	0	2	25
Home Sc.										
-	FW	Value addition in Aonla & Preparation of different bakery items	4	0	23	23	0	2	2	25
Plant Protection										
08/05/17	PF	IPM in Cotton & Sesame	4	23	0	23	2	0	2	25
22/06/17	PF	Importance & uses of bio agents & bio pesticides	4	23	0	23	2	0	2	25
11/07/17	PF	Management of pink boll worm in cotton	4	23	0	23	2	0	2	25
07/12/17	PF	IPM in chickpea, cumin crops	4	23	0	23	2	0	2	25
Agril. Extension										
02/01/18	PF	Organic farming practices and certification process for organic farming	4	23	0	23	2	0	2	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	
	Crop Production	Hand stitching and embroidery for income generation	December	21	20	0	20	2	0	2	22

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										
	Ext Workers	Protected cultivation	1	18	0	18	1	1	2	20
	Ext Workers	Pre-seasonal training on Kharif crops	1	18	0	18	1	1	2	20
	Ext Workers	Pre-seasonal training on Rabi crops	1	20	0	20	0	0	0	20
	Ext Workers	Preventive measure and first aid treatment of important disease in dairy animals	1	20	0	20	0	0	0	20
	Ext. Workers	Control of Pink bollworm and sucking pest in cotton crop	1	20	0	20	0	0	0	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 progdramme											
Agronomy	Any sponsored agency	PF	Improved crop production techno logy for cotton and groundnut crops	3	60	0	60	0	0	0	60
Home science		Farm women	Value addition in fruit and vegetable crops	1							
Plant Protection		PF	IPM in groundnut	2	40	0	40	0	0	0	40
Horticulture		PF	Vegetable nursery production technology	1	20	0	20	0	0	0	20
Animal Science		PF /FW	Clean milk production and Animal health management	3	60	0	60	0	0	0	60
			Total								
b) Sponsored research programme: As and when required											
			Total								
c) Any special programmes: NA											
			Total								