

PROFORMA FOR PREPARATION OF ANNUAL REPORT (April-2016-March-2017)

APR SUMMARY

(Note: While preparing summary, please don't add or delete any row or columns)

1. Training Programmes

Clientele	No. of Courses	Male	Female	Total participants
Farmers & farm women	56	1137	193	1330
Rural youths	5	196	1	197
Extension functionaries	14	560	5	565
Sponsored Training	57	2068	1120	3188
Vocational Training	2	59	0	59
Total	134	4020	1319	5339

2. Frontline demonstrations

Enterprise	No. of Farmers	Area (ha)	Units/Animals
Oilseeds	25	10	0
Pulses	95	38	0
Cereals	20	08	0
Vegetables	00	00	0
Other crops	45	18	0
Hybrid crops	0	0	0
Total	0	0	0
Livestock & Fisheries	0	0	0
Other enterprises	0	0	0
Total	0	0	0
Grand Total	185	74	0

3. Technology Assessment & Refinement

Category	No. of Technology Assessed & Refined	No. of Trials	No. of Farmers
Technology Assessed			
Crops	5	15	15
Livestock	-	-	-
Various enterprises	-	-	-
Total	5	15	15
Technology Refined			
Crops	-	-	-
Livestock	-	-	-
Various enterprises	-	-	-
Total	-	-	-
Grand Total	5	15	15

4. Extension Programmes

Category	No. of Programmes	Total Participants
Extension activities	801	35138
Other extension activities	30	11115
Total	831	46253

5. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprise (Plant Protection)	
	Text only	0	1	14	2	2	11	30
	Voice only	0	0	0	0	0	0	0
	Voice & Text both	0	0	0	0	0	0	0
	Total Messages	0	1	14	2	2	11	30
	Total farmers Benefitted	0	44668	625353	89336	89330	491348	1340035

6. Seed & Planting Material Production

	Quintal/Number	Value Rs.
Seed (q)	75.94	-
Planting material (No.)	10,000	-
Bio-Products (kg)	-	-
Livestock Production (No.)	-	-
Fishery production (No.)	-	-

7. Soil, water & plant Analysis

Samples	No. of Beneficiaries	Value Rs.
Soil	673	-
Water	220	-
Plant	-	-
Total	893	-

8. HRD and Publications

Sr. No.	Category	Number
1	Workshops	1
2	Conferences	-
3	Meetings	1
4	Trainings for KVK officials	5
5	Visits of KVK officials	-
6	Book published	-
7	Training Manual	-
8	Book chapters	-
9	Research papers	2
10	Lead papers	-
11	Seminar papers	-
12	Extension folder	14
13	Proceedings	-
14	Award & recognition	-
15	Ongoing research projects	1

DETAIL REPORT OF APR-2016-17

1. GENERAL INFORMATION ABOUT THE KVK

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

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

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

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

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. M. S. Chandawat	--	094275 08708	surendranagar.kvk@gmail.com

1.4. Year of sanction: **October, 2005**

1.5. Staff Position (as on 30th March, 2017)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discip-line	Pay Scale (Rs.)	Present basic (Rs.)	Date of joining	Perman-ent /Temp-orary	Category (SC/ST/OBC/Others)	Mobile no.	Age	Email id
1	Programme Coordinator	Dr. M. S. Chandawat	Sr Scientist and Head	Extension Education	37400-67000 (15600-39100)	22320/-	31-3-2015	Permanent	Others	94275 08708	42	drchandawat@rediffmail.com
2	Subject Matter Specialist	Mr. M. F. Bhorania	Scientist	Plant Protection	15600-39100	24400/-	18-09-2012	Permanent	Others	94282 97863	48	mfboraniya@gmail.com
3	Subject Matter Specialist	Dr. B. C. Bochalya	Scientist	Extension Education	15600-39100	22220/-	23-08-2006	Permanent	Others	94277 13771	42	jat_bcb@yahoo.com
4	Subject Matter Specialist	Dr. R.P.Kalma	Scientist	Vetenairy	15600-39100	15600/-	19-12-2016	Permanent	ST	9586871273	27	kalmarohit@gmail.com
5	Subject Matter Specialist	Mr. D.A.Patel	Scientist	Horticulture	15600-39100	15600/-	20-01-2017	Permanent	ST	7600011793	23	pateldiptadp@gmail.com
6	Subject Matter Specialist	-	-	-	-	-	-	-	-	-	-	-
7	Subject Matter Specialist	-	-	-	--	-	-	-	-	-	-	-
8	Programme Assistant	Mr. M. V. Pokar	Training Assistant	Extension Education	15500 Fix	-	23-02-2012	Temporary (Fix)	Others	94294 20468	33	mvpokar83@gmail.com
9	Computer Programmer											
10	Farm Manager					-						
11	Accountant / Superintendent	Mr. R.P. Vagadiya	O.S. cum Accountant	--	9300-34800	11750/-	01-12-2011	Permanent	Other		35	rpvagadiya@gmail.com
12	Stenographer	Mr. S.H. Shukla	Junior Steno	--	10000 fix	-	19-11-2013	Temporary (Fix)	Other		32	shivamshukla1984@gmail.com
13	Driver	Mr. H. R. Gohil	Jeep Driver	--	5200-20200	11870/-	01-08-2006	Permanent	Other		51	-
14	Driver	Vacant	Tractor Driver	--		-	-	-	-	-	-	-
15	Supporting staff			-								
16	Supporting staff	Mr. A.M. Dhadvi	Peon	--	2550-3200	7580/-	01-10-2015	Permanent	OBC		56	-

1.6. Total land with KVK (in ha) :

S. No.	Item	Area (ha)
1	Under Buildings	4
2.	Under Demonstration Units	16
3.	Under Crops	
4.	Orchard/Agro-forestry	
5.	Others (specify)	20

1.7. Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	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	-	-	-
				158	8,30,750	-	-	-
5	Fencing	RKVY	1/4/10	77	3,00,000	-	-	-
6	Rain Water harvesting system			191	13,94,500	-	-	-
7	Threshing floor			198	15,72,000	-	-	-
8	Farm godown			71	5,00,000	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Jeep (Bolero)	2006-07	4,96,000	-	Working
Splender 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.
Computer-3	2016-17	34115	Working Cond.
Kyan	2016-17	130000	Working Cond.
Copier Machine	2016-17	144391	Working Cond.
RO System	2016-17	79900	Working Cond.

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

The 12th(Twelfth) Scientific Advisory Committee Meeting of Krishi Vigyan Kendra, JAU, Nana-Kandhasar was held at Training Hall, KVK, Nana Kandhasar (Surendranagar) on 24th October, 2016. Following members were remain present in the meeting.

Sr. No.	Name & Designation	Position
1.	Dr. A. R. Pathak Hon'ble Vice Chancellor, JAU, Junagadh	Chairman
2.	Dr. A. M. Parakhia Director of Extension Education, JAU, Junagadh.	Member
3.	Dr. V. N. Patel A.D.R. and Research Scientist Main Dry Farming Research Station, JAU, Targhadia	Member
4.	Dr. Farooq Panj Dy. Director, Department of Horticulture, Surendranagar	Member
5.	Dr. N. S. Joshi Programme Coordinator, KVK, JAU, Amreli	Member
6.	Shri B. M. Agath Project Director, ATMA, Surendranagar	Member
7.	Shri Mahesh. Z. Zid Assistant Director, Department of Agriculture,	Member

	Surendranagar	
8.	Shri R. S. Sarma DDM, NABARD	Member
9.	Shri Maulik M. Joshi Managing Director, Sursagar Dairy, Surendranagar	Member
10.	Shri B. D. Panchal Dy. Manager, Sursagar Dairy, Surendranagar	Invitee
11.	Shri M. J. Chaudhary Dy. Manager, Sursagar Dairy, Surendranagar	Invitee
12.	Shri Ashishkumar Patel Representative, DY Director of A.H., Surendranagar	Member
13.	Shri Arun Bedarkar Director, RSETI, Surendranagar	Member
14.	Shri Nathabhai Somabhai Sanghani At & Post: Motimoldi, Ta. Chotila, Dist. Surendranagar	Member
15.	Smt. Gitaben Pravinbhai Jambukiya At & Post : Magharikheda, Ta. Chotila, Dist. Surendranagar	Farm women Member
16.	Smt. Jashuben D. Meniya ATM (Chotila), ATMA	Member
17.	Smt. Hinaben R. Padaliya ATM(Than), ATMA	Invitee
18.	Shri Pravinbhai Jambukiya At & Post : Magharikheda, Ta. Chotila, Dist. Surendranagar	Invitee farmer
19.	Shri Ranchhodbhai Kamabhai Sambad At & Post: Resamiya, Ta. Chotila, Dist. Surendranagar	Farmer Member
20.	Shri Hamirsinh Parmar Progressive Farmer, Village : Gautamgadh Taluka : Muli, Dist. Surendranagar	Invitee Farmer
21.	Smt. Sonalben Gordhanbhai, At & Post: Nana Kandhasar, Ta. Chotila, Dist. Surendranagar	Farm women Member
22.	Shri Vinubhai J. Kochiyana AKRSP (NGO), Chotila	Invitee member
23.	Shri A. C. Patel Horticulture Officer, Limbadi	Invitee member
24.	Savitaben Laljibhai At & Post: Nana Kandhasar, Ta. Chotila, Dist. Surendranagar	Invitee Member
25.	Dr. B. C. Bochalya Scientist- Extension Education, KVK, JAU, Nana- Kandhasar	Member
26.	Dr. M. S. Chandawat Sr. Scientist and Head, KVK, JAU, Nana-Kandhasar	Member- Secretary

The meeting was chaired by Dr. A. R. Pathak, Hon'ble Vice Chancellor, JAU, Junagadh and chairman of SAC meeting. Dr. M. S. Chandawat, Senior Scientist and Head, KVK, JAU, Nana Kandhasar welcomed honorable Chairman and all the members of the Scientific Advisory Committee. Dr. A. M. Parakhia, Director of Extension Education, JAU, Junagadh gave the introductory speech about KVK activities and wide scope of activities on soil fertility management, organic farming, uses of bio fertilizers in surendranagar district.

Dr. M. S. Chandawat, Senior Scientist and Head, KVK, JAU, Nana Kandhasar presented action taken report of last 11th SAC Meeting and Summerized progress report for the period of April, 2016 to September, 2016 & action plan for the period of April-2017 to March, 2018. Detailed discipline wise progress report for the period of April, 2016 to September, & action plan for the period of April-2017 to March, 2018 presented by Dr. B. C. Bochalya, Scientist(Extension Education), KVK, JAU, Nanakandhasar. House approved the same.

Dr. A. R. Pathak, Hon'ble Vice Chancellor, JAU, Junagadh gave the presidential speech and made valueable suggestions. He emphasizes on promoting organic farming, awareness creating regarding soil health, crop diversification, protected cultivation and potential use of bio fertilizers in agriculture. He also stressed on intercropping in kharif crop production, IPM for control of pink bollworm through mass awareness and promotion of dryland horticulture crops suitable for the area. Hon'ble Vice Chancellor Dr. A. R. Pathak appreciated the over all work performance of KVK.

During discussion Chairmen and members of SAC made various suggestions for improving KVK activities.

COMMITTEE MADE THE FOLLOWING SUGGESTIONS AFTER ACTIVE INTERACTION:

- To collect information regarding registered farmers of organic farming including by private agencies (Area wise).
- Training programme of Animal husbandry and Home science discipline should be organized with the help of nearby KVK /Uni. centre (In case of non appointment of scientists of concerned discipline).
- More no. of soil sample testing and analysis should be undertaken and report of the same should be intimated to the beneficiary farmers in a applicable and simple manners.
- Training programme for dairy farmers organized on Artificial Insemination(AI) in which representative of Sursagar dairy to be invited.
- Training for farmwomen on sewing and embroidery should be organized.
- In ATIC FLDs, use more Bio-Fertilizer and Bio-pesticide in pulses and other crops.
- Organize training on crop diversification, green manuring, animal fodder production technology.
- In each training programme, aspect of low cost technology should be included and discussed and also encourage the use of liquid bio fertilizer in pulses and other crops.
- Include bio fertilizer as input in OFTs.
- Organize demonstration (Jeevamrut) on organic farming at KVK instructional farm.
- Develop website of KVK and keep it updated.
- SMS related to dairy farming and agriculture to be sent to Sursagar Dairy so that they send the same to dairy beneficiaries through their own sms system.
- Motivate the farmers to cultivate off season vegetables and fruits under protected cultivation.

2. DETAILS OF DISTRICT (2016-17)

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

S. No	Farming system/enterprise
	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
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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
Kharif 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 cropped area

14. Major cropped area (%)	
a) Kharif	
Groundnut	: 40
Cotton	: 15
Pearlmillet	: 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

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 type/s

S. No	Soil type	Area in ha
1	Medium black	Vadhvan & Muli

2	Saline & Alkaline soils	Dasada & Lakhatar
3	Shallow calcareous sandy soil	Dhangdhra
4	Red Loamy soil	Halvad, Dhangdhra
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

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	Cotton (Irri)	174200	3361000	19.29
2	Cotton (Rainfed)	194900	1074000	5.51
3	Sesame	27600	72000	2.61
4	Groundnut	12800	207000	16.10
5	Wheat	30400	924000	30.37
6	Cumin	305300	1937000	7.30
7	Gram	12300	91000	7.39
8	Green Gram	1400	4000	2.64
9	Mustard	300	5000	16.95
10	Guar Seed	1100	6000	6.02

2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)	Minimum
		Maximum	Minimum		
April -16	0.0	41.2	20.4	94	13
May-16	0.0	45.4	24.5	89	11
June-16	36.0	42.2	25.7	95	18
July-16	84.50	34.3	24.1	99	46
August-16	93.50	33.3	23.2	99	48
September-16	10.50	34.3	22.5	100	44
October-16	45.1	35.0	21.5	100	25
November-16	-	33.4	15.7	85	17
December-16	-	33.3	12.4	98	14
January-17	-	33.6	9.4	94	17
February-17	-	36.3	7.42	94	9
March-17	-	40.1	15	94	7

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

Category	Population	Production	Productivity
Cattle			
<i>Crossbred</i>	201	54,61,197 lit	-
<i>Indigenous</i>	2,93,557	-	-

Buffalo	2,02,939	-	-
Sheep			
Crossbred			
<i>Indigenous</i>	1,00,589	-	-
Goats	1,79,648	-	-
Pigs	22,948	-	-
<i>Crossbred</i>	-	-	-
<i>Indigenous</i>	-	-	-
Rabbits			
Poultry			
Hens	-	-	-
<i>Desi</i>	-	-	-
<i>Improved</i>	-	-	-
Ducks	-	-	-
Turkey and others	-	-	-

Category	Area	Production	Productivity
Fish	-	-	-
<i>Marine</i>	-	-	-
<i>Inland</i>	-	-	-
Prawn	-	-	-
Scampi	-	-	-
Shrimp	-	-	-

2.7 Details of Operational area / Villages (2016-17)

Taluka	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
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Chotila	Chotila	Lakhchokiya	Cotton, Bajra, Sesame, Pulses, Dairy 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 Dairy 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 Dairy 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, Dairy 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, 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
1	Dry farming technologies.
2	Awareness for vaccination & artificial insemination of animals

Training (including sponsored, vocational and other trainings carried under Rainwater Harvesting Unit)					Extension Activities			
3					4			
Number of Courses			Number of Participants		Number of activities		Number of participants	
Clientele	Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
Farmers	1	1	25	37	-	-	-	-
Rural youth	-	-	-	-	-	-	-	-
Extn. Functionaries	-	-	-	-	-	-	-	-

Seed Production (Qtl.)			Planting material (Nos.)		
5			6		
Target	Achievement	Distributed to no. of farmers	Target	Achievement	Distributed to no. of farmers
Sesame	3.27	17	10000	-	-
Ground nut	46.5	-			
Cumin	1.76	44			
Sorghum	6.0	-			
Sapota	12.46	-			
Khatai Amabali	0.28	-			
Mango	2.71	-			
Gunda	0.36	-			
Sun hemp	1.5	-			
Guar gum	1.1	-			
	75.94				

I.A TECHNOLOGY ASSESSMENT

Summary of technologies assessed under various crops by KVKs

Thematic areas	Crop	Name of the technology assessed	No. of trials	No. of farmers
Integrated Nutrient Management	Sesame	Assessment of sulphur in Sesamum	3	3
Varietal Evaluation	Sesame	Varietal assessment of Sesamum Guj Til-4 in Surendranagar district	3	3
Integrated Pest Management	Cotton	Management of Sucking pests in cotton	3	3
	Sesame	Management of sesame leaf webber under rainfed condition	3	3
Integrated Crop Management				

Integrated Disease Management				
Small Scale Income Generation Enterprises				
Weed Management				
Resource Conservation Technology				
Farm Machineries				
Integrated Farming System				
Seed / Plant production				
Post Harvest Technology / Value addition				
Drudgery Reduction				
Storage Technique				
Others (Pl. specify)	Cotton	Assessment of high density planting in cotton	3	3
Total			15	15

Summary of technologies assessed under livestock by KVKs

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Disease Management	-	-	-	-
Evaluation of Breeds	-	-	-	-
Feed and Fodder management	-	-	-	-
Nutrition Management	-	-	-	-
Production and Management	-	-	-	-
Others (Pl. specify)	-	-	-	-
Total -			-	-

Summary of technologies assessed under various enterprises by KVKs

Thematic areas	Enterprise	Name of the technology assessed	No. of trials	No. of farmers
-	-	-	-	-
	-	-	-	-

Summary of technologies refined under various livestock by KVKs

Thematic areas	Name of the livestock enterprise	Name of the technology refined	No. of trials	No. of farmers
Disease Management	-	-	-	-
Evaluation of Breeds	-	-	-	-
Feed and Fodder management	-	-	-	-
Nutrition Management	-	-	-	-

Production and Management	-	-	-	-
Others (Pl. specify)	-	-	-	-
Total-			-	-

Summary of technologies refined under various enterprises by KVKs

Thematic areas	Enterprise	Name of the technology assessed	No. of trials	No. of farmers
-	-	-	-	-
	-	-	-	-

I.C. TECHNOLOGY ASSESSMENT AND REFINEMENT IN DETAIL

(From each state please include the full details of three OFTs on technology assessment and or refinement under the broad thematic areas such as Integrated Crop Management, weed management, pest and disease management, nutrient management, resource conservation, livestock enterprises, Integrated Nutrient Management)

(The model for preparing the same is furnished below)

INTEGRATED NUTRINENT MANAGEMENT

Problem definition: Assessment of sulphur in cumin

Technology Assessed or Refined (as the case may be) : To increase the yield by different sources of Sulphur

KVK, Surendranagar conducted on-farm trial to assess or refine (Assessment of sulphur in cumin. Recommended dose of fertilizer (50-25-40 N P K kg/ha) through Amonium Sulphate & Single super phosphate (238 kg AS + 166 kg SSP + 66 kg MOP) a net return of Rs. 26,305 /ha as compared to the recommended practice with net returns of Rs. 20960 /ha.

Table Application of sulphur at different level for increasing yield

Technology Option	No.of trials	Yield (t/ha)	Net Returns (Rs. in lakh./ha)
Farmers Practice (Control) (90kg DAP + 90 kg Urea/ha)	3	0.525	0.209
Recommended dose of fertilizer (50-25-40 N P K kg/ha) through DAP & Urea + 20 kg Sulphur through Gypsum (55 g DAP + 55 Kg Urea + 66 kg MOP + 100 kg Gypsum/ha)		0.59	0.249
Recommended dose of fertilizer (50-25-40 N P K kg/ha) through Amonium Sulphate & Single super phosphate (238 kg AS + 166 kg SSP + 66 kg MOP)		0.615	0.269

PEST AND DISEASE MANAGEMENT

Problem definition: Management of sucking pest in cotton

Technology Assessed or Refined (as the case may be): To minimize the incidence of sucking pests in cotton

Cotton is an important commercial crop of Gujarat. However, there is high incidence of mealy bug resulting in yield loss. KVK Surendranagar conducted on-farm trial to assess or refine management of sucking pest in cotton. The refined technology of Recommended practices Application of the pre-sowing application of Acetamiprid: 20 SP @ 2gm/10 liter of water or Imidachloprid: 200 SL @ 4 ml/10 lit of water & Recommended cultural practices and yield was increased by 9.69 per cent.

Table Performance of management of sucking pest in cotton

Technology Option	No. of trials	Population			Yield (kg/ha)	% Increase in yield over farmer's practice
		Jassid/ 3 leaves	White fly/ 3 leaves	Spider/ plant		
Farmers Practice (Control) (Monocrotophos and dimethoate etc)	3	8.81	3.91	0.31	937	0.168
Recommended practices Application of the systematic insecticide will be start at pest infestation occurred. (Acetamiprid: 20 SP @ 2gm/10 liter of water or Imidachloprid: 200 SL @ 4 ml/10 lit of water at the time of infestation.)		7.18	2.92	0.29	1092	0.255
Beauveria bassiana 5 gm/lit as & when required, application of bio-pesticides + Sticker 0.5 ml/lit of water		7.64	3.17	1.29	805	0.119

Problem definition: Management of sesame leaf webber under rainfed condition

Technology Assessed or Refined (as the case may be): To minimize the incidence of leaf webber in sesame

Cotton is an important commercial crop of Gujarat. However, there is high incidence of mealy bug resulting in yield loss. KVK Surendranagar conducted on-farm trial to assess or refine management of mealy bug in Cotton. The refined technology of Recommended practices Application of the pre-sowing application of Cartap hydrochloride: 50 % SP @ 10ml/10 liter, application of insecticides at the time of infestation & Recommended cultural practices and yield was increased by 9.81 per cent.\

Table Performance of management of leaf webber in sesame

Technology Option	No. of trials	Average of 10 plants/treat of three different	Yield (kg/ha)	% Increase in yield over farmer's practice

		<i>date observation</i>		
<i>Farmers Practice (Control) (Monocrotophos and dimethoate after infestation)</i>	3	0.48	275	-
<i>Recommended practices Application of the systematic insecticide will be start at pest infestation occurred. (Cartap hydrochloride: 50 % SP @ 10ml/10 liter of water at the time of infestation.)</i>		0.33	302	9.81
<i>Cartap hydrochloride: 50 % SP @ 5 gm/10 liter + Verticilium lecani @ 50 gm/10lit of water at the time of infestation.</i>		0.21	12.72	0.21

Varietal Evaluation

Problem definition: Varietal assessment of sesamum Guj Til-4 in Surendranagar district

Technology Assessed or Refined (as the case may be) : To increase of sesamum

KVK, Surendranagar conducted on-farm trial to Varietal assessment of Sesamum Guj Til-4 in Surendranagar district. The Guj Til-2 / Local net return of Rs. 22580 /ha as compared to the Gujrat Til-4 with net returns of Rs.30705 /ha (9.81% increase in net return per ha).

Table Performance To increase yield of Sesamum

<i>Technology Option</i>	<i>No.of trials</i>	<i>Yield (t/ha)</i>	<i>Net Returns (Rs. in lakh./ha)</i>
<i>Variety : Guj Til-2 or local</i>	2	0.55	0.225
<i>Guj-Til 4</i>		0.675	0.307

Planting Distance

Problem definition: Assessment of high density planting in cotton

Technology Assessed or Refined (as the case may be) : To observe the yield of cotton in High Density

KVK, Surendranagar conducted on-farm trial to assess or refine (Assessment of high density planting in cotton. Recommended Intervention: Sowing of cotton at spacing 90 x 30 cm. (37037 plants/) a net return of Rs. 482000 /ha as compared to the recommended practice with net returns of Rs. 38650 /ha).

Table: Take more yield

<i>Technology Option</i>	<i>No.of trials</i>	<i>Yield (t/ha)</i>	<i>Net Returns (Rs. in lakh./ha)</i>
<i>Sowing of cotton at spacing 150 x 45 cm (14875) plants/ha</i>	3	1.18	0.337
<i>Recommendation: sowing of cotton at spacing 120 x 45 cm. (18,518 plants/ha)</i>		1.315	0.386
<i>Intervention: Sowing of cotton at spacing 90 x 30 cm. (37037 plants/)</i>		1.58	0.482

II. FRONTLINE DEMONSTRATION

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

List of technologies demonstrated during previous year and popularized during 2015-16 and recommended for large scale adoption in the district

S. No	Crop/ Enterprise	Thematic Area*	Technology demonstrated	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
1	Wheat	CP	GW – 366	FLD, Field Day & Training	13	2327	471
2	Cumin	PP	G Cumin-4				
3	Gram	CP	GJG. -3				
4	Green gram	CP	GM-4				
5	Sesame	CP	G Til-4				
6	Groundnut	PP	IDM				
7	Groundnut (Bio agent)	PP	GG-20				
8	Cotton	CP	Bt-cotton				

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

b. Details of FLDs implemented during 2016-17 (Information is to be furnished in the following three tables for each category i.e. cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops.)

Sl. No.	Crop	Them atic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achieve ment
					Proposed	Actual	SC/ST	Others	Total	
1	Wheat	CP	GW – 366	Rabi 15-16	08	08	3	17	20	-
2	Cumin	PP	G Cumin-4	Rabi 15-16	08	08	6	14	20	-
3	Gram	CP	G Gram-3	Rabi 15-16	04	04	2	8	10	-
4	Moong	CP	GM-4	Kharif 16-17	04	04	3	7	10	-
5	Sesame	CP	G Til-4	Kharif 16-17	04	04	5	5	10	-
6	G'nut	PP	IDM	Kharif 16-17	04	04	1	9	10	-
7	G'nut- Bio	PP	GG-20	Kharif 16-17	02	02	0	5	05	-
8	Cotton	CP	Bt-cotton	Kharif 16-17	10	10	8	17	25	-
9	Chick pea	CP	GJG-3/GG-5	Kharif 16-17	75	75	6	69	75	

Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P	K					
Wheat	Rabi 15-16	Irrigated	Medium	L	M	H	Juwar	10/11/15	8/3/16	270	14
		Irrigated	black	L	M	H	Juwar	7/11/15	3/3/16		
		Irrigated	--	L	M	H	Bajara	9/11/15	10/3/16		
		Irrigated	--	L	M	H	Sesame	4/11/15	6/3/16		
		Irrigated	--	L	M	H	Juwar	18/11/15	10/3/16		
		Irrigated	--	L	M	H	Greengram	11/11/15	14/3/16		
		Irrigated	--	L	M	H	Juwar	7/11/15	8/3/16		
		Irrigated	--	L	M	H	Sesame	6/11/15	7/3/16		
		Irrigated	--	L	M	H	Sesame	10/11/15	14/3/16		
		Irrigated	--	L	M	H	Juwar	20/11/15	15/3/16		
		Irrigated	--	L	M	H	Juwar	16/11/15	13/3/16		
		Irrigated	--	L	M	H	Greengram	17/11/15	11/3/16		
		Irrigated	--	L	M	H	Juwar	9/11/15	12/3/16		
		Irrigated	--	L	M	H	Sesame	21/11/15	15/3/16		
		Irrigated	--	L	M	H	Cotton	10/11/15	8/3/16		
		Irrigated	--	L	M	H	Juwar	21/11/15	13/3/16		
		Irrigated	--	L	M	H	Juwar	5/11/15	12/3/16		
		Irrigated	--	L	M	H	Bajara	17/11/15	13/3/16		
		Irrigated	--	L	M	H	Juwar	8/11/15	4/3/16		
		Irrigated	--	L	M	H	Juwar	19/11/15	15/3/16		
Cumin	Rabi 15-16	Irrigated	--	L	M	H	Juwar	2/11/15	28/2/16		
		Irrigated	--	L	M	H	Bajara	10/11/15	25/2/16		
		Irrigated	--	L	M	H	Sesame	18/11/15	1/3/16		
		Irrigated	--	L	M	H	Juwar	5/11/15	24/2/16		
		Irrigated	--	L	M	H	Juwar	19/11/15	4/3/16		
		Irrigated	--	L	M	H	Bajara	3/11/15	1/3/16		
		Irrigated	--	L	M	H	Juwar	20/11/15	3/3/16		
		Irrigated	--	L	M	H	Cotton	11/11/15	25/2/16		
		Irrigated	--	L	M	H	Greengram	2/11/15	20/2/16		
		Irrigated	--	L	M	H	Juwar	20/11/15	28/2/16		
		Irrigated	--	L	M	H	Juwar	1/11/15	19/2/16		
		Irrigated	--	L	M	H	Sesame	8/11/15	25/2/16		
		Irrigated	--	L	M	H	Cotton	22/11/15	6/3/16		
		Irrigated	--	L	M	H	G'nut	18/11/15	29/2/16		
		Irrigated	--	L	M	H	Greengram	8/11/15	23/2/16		
		Irrigated	--	L	M	H	Juwar	19/11/15	2/3/16		
		Irrigated	--	L	M	H	G'nut	3/11/15	22/2/16		
		Irrigated	--	L	M	H	Sesame	5/11/14	27/2/16		
		Irrigated	--	L	M	H	Juwar	17/11/15	1/3/16		
		Irrigated	--	L	M	H	Juwar	19/11/15	3/3/16		
Gram	Rabi 15-16	Irrigated	--	L	M	H	Juwar	26/10/15	19/2/16		
		Irrigated	--	L	M	H	Bajara	3/11/15	22/2/16		
		Irrigated	--	L	M	H	Bajara	29/10/15	25/2/16		
		Irrigated	--	L	M	H	Juwar	5/11/15	25/2/16		
		Irrigated	--	L	M	H	Juwar	1/11/15	22/2/16		

		Irrigated	--	L	M	H	Cotton	30/10/15	19/2/16		
		Irrigated	--	L	M	H	Juwar	2/11/15	28/2/16		
		Irrigated	--	L	M	H	Cotton	2/11/15	25/2/16		
		Irrigated	--	L	M	H	Cotton	26/10/15	15/2/16		
		Irrigated	--	L	M	H	Juwar	2/11/15	19/2/16		
Green Gram	Kharif 16-17	Rainfed	--	L	M	H	G'nut	3/7/16	12/9/16		
		Rainfed	--	L	M	H	Gram	4/7/16	10/9/16		
		Rainfed	--	L	M	H	Cotton	3/7/16	16/9/16		
		Rainfed	--	L	M	H	Gram	5/7/16	18/9/16		
		Rainfed	--	L	M	H	Gram	4/7/16	10/9/16		
		Rainfed	--	L	M	H	Cotton	4/7/16	8/9/16		
		Rainfed	--	L	M	H	Cumin	3/7/16	26/9/16		
		Rainfed	--	L	M	H	Cotton	5/7/16	12/9/16		
		Rainfed	--	L	M	H	Gram	5/7/16	10/9/16		
		Rainfed	--	L	M	H	Cotton	4/7/16	27/9/16		
Sesame	Kharif 16-17	Rainfed	--	L	M	H	Wheat	5/7/16	30/9/16		
		Rainfed	--	L	M	H	Cumin	3/7/16	4/10/16		
		Rainfed	--	L	M	H	Cotton	3/7/16	26/9/16		
		Rainfed	--	L	M	H	Gram	4/7/16	3/10/16		
		Rainfed	--	L	M	H	Cotton	3/7/16	28/9/16		
		Rainfed	--	L	M	H	Wheat	4/7/16	6/10/16		
		Rainfed	--	L	M	H	G'nut	3/7/16	8/10/16		
		Rainfed	--	L	M	H	Cotton	4/7/16	1/10/16		
		Rainfed	--	L	M	H	Wheat	5/7/16	4/10/16		
		Rainfed	--	L	M	H	Cumin	3/7/16	29/9/16		
G'nut	Kharif 16-17	Rainfed	Medium black	L	M	H	Gram	5/7/16	7/11/16		
		Rainfed	black	L	M	H	Cotton	4/7/16	27/10/16		
		Rainfed	--	L	M	H	Cumin	4/7/16	03/11/16		
		Rainfed	--	L	M	H	Cotton	5/7/16	29/10/16		
		Rainfed	--	L	M	H	Gram	3/7/16	26/10/16		
		Rainfed	--	L	M	H	Cumin	4/7/16	28/10/16		
		Rainfed	--	L	M	H	Gram	3/7/16	5/11/16		
		Rainfed	--	L	M	H	Cumin	4/7/16	6/11/16		
		Rainfed	--	L	M	H	Wheat	5/7/16	3/11/16		
		Rainfed	--	L	M	H	Gram	3/7/16	25/10/16		
Bio-agen	Kharif 16-17	Rainfed	Medium black	L	M	H	Gram	5/7/16	4/11/16		
		Rainfed	black	L	M	H	Cotton	4/7/16	28/10/16		
		Rainfed	--	L	M	H	Cumin	4/7/16	8/11/16		
		Rainfed	--	L	M	H	Cotton	5/7/16	7/11/16		
		Rainfed	--	L	M	H	G'nut	3/7/16	10/11/16		
Cotton	Kharif 16-17	Irrigated	Medium black	L	M	H	Green gram	20/6/16	26/1/17		
		Irrigated	black	L	M	H	Cumin	15/6/16	22/1/17		
		Irrigated	--	L	M	H	Cotton	24/6/16	23/1/17		
		Irrigated	--	L	M	H	Wheat	18/6/16	25/12/16		
		Irrigated	--	L	M	H	Cumin	23/6/16	5/1/17		
		Irrigated	--	L	M	H	Cotton	20/6/16	25/1/17		
		Irrigated	--	L	M	H	Wheat	26/6/16	15/1/17		
		Irrigated	--	L	M	H	Cotton	22/6/16	5/1/17		
		Irrigated	--	L	M	H	Cumin	25/6/16	19/1/17		
		Irrigated	--	L	M	H	Gram	20/6/16	8/1/17		
		Irrigated	--	L	M	H	Wheat	15/6/16	23/1/17		
		Irrigated	--	L	M	H	Cotton	13/6/16	18/1/17		
		Irrigated	--	L	M	H	Gram	19/6/16	24/1/17		

	Irrigated	--	L	M	H	Cotton	18/6/16	19/1/17		
	Irrigated	--	L	M	H	Cumin	23/6/16	29/12/16		
	Irrigated	--	L	M	H	Wheat	25/6/16	4/1/17		
	Irrigated	--	L	M	H	G'nut	17/6/16	17/1/17		
	Irrigated	--	L	M	H	Cumin	22/6/16	27/1/17		
	Irrigated	--	L	M	H	Cotton	21/6/16	13/1/17		
	Irrigated	--	L	M	H	Cumin	21/6/16	19/1/17		
	Irrigated	--	L	M	H	Gram	26/6/16	20/1/17		
	Irrigated	--	L	M	H	Cumin	18/6/16	29/1/17		
	Irrigated	--	L	M	H	Cotton	13/6/16	14/1/17		
	Irrigated	--	L	M	H	Cumin	19/6/16	9/1/17		
	Irrigated	--	L	M	H	Wheat	22/6/16	14/1/17		

Technical Feedback on the demonstrated technologies

S. No	Feed Back
1. Chickpea : -G Gram-3	<ul style="list-style-type: none"> It is good variety over local variety for all parameters. Farmer demanded seeded varieties for vegetable purpose in both irrigated & non irrigated conditions. Farmers demanded adequate seed quantity availability at the time of sowing.
2. Cumin :- GC-4	<ul style="list-style-type: none"> High yielder and wilt resistance but delayed germination observed. Farmer demanded blight resistant variety.
3. Wheat : GW: 366	<ul style="list-style-type: none"> Yield better than Lok-1 and GW-496, baking quality observed good.
4. Sesame	<ul style="list-style-type: none"> Guj. Til-3 gave higher yield as compare to local varieties.
5. Green gram	<ul style="list-style-type: none"> Guj. Green Gram-4 is superior over K-851, It is also suitable for late monsoon condition.
6. Cotton	<ul style="list-style-type: none"> Farmer demanded sucking pest tolerant variety. Location specific varieties should be developed Bt. cotton requires more water and nutrient, do not withstand in moisture and nutrient stress conditions. So drought tolerant variety should supply. Later stage of crop infected by pink boll worm so required tolerant Bt cotton varieties.

Farmers' reactions on specific technologies

S. No	Feed Back
1. Green gram	Guj. Green gram-4 is superior over K-851, it mature once a time so more picking not required
2. Cotton	Bt- Cotton resistance over larvae but pink bollworm incidence was observed, it is require the sucking pest and pink bollworm resistance variety
3. Sesame	Gujarat Til-4 is early variety hence suitable for low rainfall area
4. Gram	In nutshell, farmers preferred GJG3 variety due to High Yielding character, bold seeded size and prominent to wilt resistant

Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	1	12/09/16	24	
		1	20/09/16	44	
		1	22/09/16	42	
		1	1/10/16	31	
		1	6/10/16	30	
		1	08/11/15	32	
		1	21/12/16	35	
		1	19/01/17	144	
		1	01/03/17	14	
		1	03/03/17	17	
		1	07/03/17	24	
		1	07/03/17	14	
		1	17/03/17	13	
2	Farmers Training	63		1586	
3	Media coverage	14	--	--	
4	Training for extension functionaries	--	--	--	
		1	13-06-16	24	
		1	26-07-16	30	
		1	29-07-16	34	
		1	04-08-16	48	
		1	04-08-16	29	
		1	05-08-16	38	
		1	05-08-16	38	
		1	06-08-16	31	
		1	08-08-16	151	
		1	09-08-16	49	
		1	09-08-16	27	
		1	10-08-16	18	
		1	09-01-2017	23	
		1	17-01-2017	25	
		14		565	

Performance of Frontline demonstrations

Frontline demonstrations on oilseed crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Groundnut																		
	CP	IDM	GJG-9	10	4	19.5	12.75	16.25	15.58	7.51	19560	62812.5	43252.5	3.21	9870	18840	58425	3.10
	PLP	Bio Agent	--	5	2	9.75	7.25	8.025	7.26	10.54	20590	30093.75	9503.75	1.46	10230	18840	8385	1.45
Sesamum																		
	CP	Improved variety	Guj.Til-3	10	4	6	4.63	5.31	8.37	8.37	13590	37187.5	23597.5	2.74	13515	34300	20785	2.54
Mustard																		
Toria																		
Linseed																		
Sunflower																		
Soybean																		

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

** BCR= GROSS RETURN/GROSS COST

Frontline demonstration on pulse crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Pigeonpea																		
Blackgram																		
Greengram																		
	CP		GM-4	10	4	5.75	4.01	4.9	4.45	10.11	10980	31841.9	20861.9	2.90	10880	28925	18045	2.66
Chickpea																		
	CP	INM	GJG-3	10	4	21.12	14	18.13	17.17	5.59	20680	99728.8	79048.8	4.82	20330	94435	74105	4.65
NFSM	CP	Improved variety	GJG-3/GG-5	75	30	22.5	13.13	18.6	16.95	9.73	21880	102276	80396.4	4.67	20680	93243	72563	4.51
Fieldpea																		
Lentil																		
Horsegram																		

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

** BCR= GROSS RETURN/GROSS COST

Bela																			
Tuberose																			
Gladiolus																			
Fruit crops																			
Mango																			
Strawberry																			
Guava																			
Banana																			
Papaya																			
Muskmelon																			
Watermelon																			
Spices & condiments																			
Cumin																			
GC-4	PLP	IDM	20	8	10.25	6	7.83	7.21	8.60			27225	127156	99931.3	4.67	27005	117081	90076.3	4.34
Garlic																			
Turmeric																			
Commercial Crops																			
Cotton																			
Bt-cotton	CP	INM	25	10	28.5	10.5	18.19	17.09	6.44	--	--	28220	88664.1	60441.1	3.14	28800	83301.6	54501.6	2.89

Potato																			
Medicinal & aromatic plants																			
Mentholment																			
Kalmegh																			
Ashwagandha																			
Fodder Crops																			
Sorghum (F)																			
Cowpea (F)																			
Maize (F)																			
Lucern																			
Berseem																			
Oat (F)																			

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

** BCR= GROSS RETURN/GROSS COST

Note : Remove the Enterprises/crops which have not been shown

g) Medicinal and Aromatic Plants										
Nursery management	0	0	0	0	0	0	0	0	0	0
Production and management technology	0	0	0	0	0	0	0	0	0	0
Post harvest technology and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total (g)	0	0	0	0	0	0	0	0	0	0
GT (a-g)	8	115	175	290	21	27	48	136	202	338
III Soil Health and Fertility Management										
Soil fertility management	16	555	4	559	48	0	48	603	4	607
Integrated water management	0	0	0	0	0	0	0	0	0	0
Integrated Nutrient Management	0	0	0	0	0	0	0	0	0	0
Production and use of organic inputs	5	236	75	311	12	3	15	248	78	326
Management of Problematic soils	0	0	0	0	0	0	0	0	0	0
Micro nutrient deficiency in crops	0	0	0	0	0	0	0	0	0	0
Nutrient Use Efficiency	0	0	0	0	0	0	0	0	0	0
Balance use of fertilizers	0	0	0	0	0	0	0	0	0	0
Soil and Water Testing	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	210	791	79	870	60	3	63	851	82	933
IV Livestock Production and Management										
Dairy Management	0	0	0	0	0	0	0	0	0	0
Poultry Management	0	0	0	0	0	0	0	0	0	0
Piggery Management	0	0	0	0	0	0	0	0	0	0
Rabbit Management	0	0	0	0	0	0	0	0	0	0
Animal Nutrition Management	0	0	0	0	0	0	0	0	0	0
Disease Management	4	1	194	195	0	20	20	1	214	215
Feed & fodder technology	5	201	0	201	26	0	26	227	0	227
Production of quality animal products	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	9	202	194	396	26	20	46	228	214	442
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	0	0	0	0	0	0	0	0	0	0
Design and development of low/minimum cost diet	0	0	0	0	0	0	0	0	0	0
Designing and development for high nutrient efficiency diet	2	0	153	153	0	7	7	0	160	160
Minimization of nutrient loss in processing	0	0	0	0	0	0	0	0	0	0
Processing and cooking	0	0	0	0	0	0	0	0	0	0
Gender mainstreaming through SHGs	0	0	0	0	0	0	0	0	0	0
Storage loss minimization techniques	0	0	0	0	0	0	0	0	0	0
Value addition	0	0	0	0	0	0	0	0	0	0
Women empowerment	2	0	149	149	0	5	5	0	154	154
Location specific drudgery reduction technologies	0	0	0	0	0	0	0	0	0	0
Rural Crafts	1	0	49	49	0	7	7	0	56	56
Women and child care	0	0	0	0	0	0	0	0	0	0
Solar cooker	1	0	19	19	0	5	5	0	24	24
Total	6	0	370	370	0	24	24	0	394	394
VI Agril. Engineering										
Farm Machinery and its maintenance	4	184	0	184	20	0	20	204	0	204
Installation and maintenance of micro irrigation systems	3	170	40	210	11	4	15	181	44	225
Use of Plastics in farming practices	0	0	0	0	0	0	0	0	0	0
Production of small tools and implements	0	0	0	0	0	0	0	0	0	0
Repair and maintenance of farm machinery and implements	1	25	0	25	4	0	4	29	0	29
Small scale processing and value addition	0	0	0	0	0	0	0	0	0	0
Post Harvest Technology	4	0	189	189	0	19	19	0	208	208
Others (pl specify)	1	35	0	35	10	0	10	45	0	45
Total	13	414	229	643	45	23	68	459	252	711
VII Plant Protection										
Integrated Pest Management	1	19	1	20	6	0	6	25	1	26
Integrated Disease Management				0			0	0	0	0
Bio-control of pests and diseases	1	19	0	19	5	0	5	24	0	24
Production of bio control agents and bio pesticides				0			0	0	0	0
Others (pl specify)	1	26	0	26	4	0	4	30	0	30
Total	3	64	1	65	15	0	15	79	1	80

VIII Fisheries										
Integrated fish farming	0	0	0	0	0	0	0	0	0	0
Carp breeding and hatchery management	0	0	0	0	0	0	0	0	0	0
Carp fry and fingerling rearing	0	0	0	0	0	0	0	0	0	0
Composite fish culture	0	0	0	0	0	0	0	0	0	0
Hatchery management and culture of freshwater prawn	0	0	0	0	0	0	0	0	0	0
Breeding and culture of ornamental fishes	0	0	0	0	0	0	0	0	0	0
Portable plastic carp hatchery	0	0	0	0	0	0	0	0	0	0
Pen culture of fish and prawn	0	0	0	0	0	0	0	0	0	0
Shrimp farming	0	0	0	0	0	0	0	0	0	0
Edible oyster farming	0	0	0	0	0	0	0	0	0	0
Pearl culture	0	0	0	0	0	0	0	0	0	0
Fish processing and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
IX Production of Inputs at site										
Seed Production	0	0	0	0	0	0	0	0	0	0
Planting material production	0	0	0	0	0	0	0	0	0	0
Bio-agents production	0	0	0	0	0	0	0	0	0	0
Bio-pesticides production	0	0	0	0	0	0	0	0	0	0
Bio-fertilizer production	0	0	0	0	0	0	0	0	0	0
Vermi-compost production	1	27	0	27	3	0	3	30	0	30
Organic manures production	0	0	0	0	0	0	0	0	0	0
Production of fry and fingerlings	0	0	0	0	0	0	0	0	0	0
Production of Bee-colonies and wax sheets	0	0	0	0	0	0	0	0	0	0
Small tools and implements	0	0	0	0	0	0	0	0	0	0
Production of livestock feed and fodder	0	0	0	0	0	0	0	0	0	0
Production of Fish feed	0	0	0	0	0	0	0	0	0	0
Mushroom Production	0	0	0	0	0	0	0	0	0	0
Apiculture	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	1	27	0	27	3	0	3	30	0	30
X Capacity Building and Group Dynamics										
Leadership development	0	0	0	0	0	0	0	0	0	0
Group dynamics	0	0	0	0	0	0	0	0	0	0
Formation and Management of SHGs	1	18	0	18	4	0	4	22	0	22
Mobilization of social capital	0	0	0	0	0	0	0	0	0	0
Entrepreneurial development of farmers/youths	1	17	0	17	3	0	3	20	0	20
WTO and IPR issues	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	1	27	0	27	8	0	8	35	0	35
Total	3	62	0	62	15	0	15	77	0	77
XI Agro-forestry										
Production technologies	0	0	0	0	0	0	0	0	0	0
Nursery management	0	0	0	0	0	0	0	0	0	0
Integrated Farming Systems	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	74	1992	1094	3086	240	106	346	2232	1200	3432

Composite fish culture	0	0	0	0	0	0	0	0	0	0
Hatchery management and culture of freshwater prawn	0	0	0	0	0	0	0	0	0	0
Breeding and culture of ornamental fishes	0	0	0	0	0	0	0	0	0	0
Portable plastic carp hatchery	0	0	0	0	0	0	0	0	0	0
Pen culture of fish and prawn	0	0	0	0	0	0	0	0	0	0
Shrimp farming	0	0	0	0	0	0	0	0	0	0
Edible oyster farming	0	0	0	0	0	0	0	0	0	0
Pearl culture	0	0	0	0	0	0	0	0	0	0
Fish processing and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
IX Production of Inputs at site										
Seed Production	0	0	0	0	0	0	0	0	0	0
Planting material production	0	0	0	0	0	0	0	0	0	0
Bio-agents production	0	0	0	0	0	0	0	0	0	0
Bio-pesticides production	0	0	0	0	0	0	0	0	0	0
Bio-fertilizer production	0	0	0	0	0	0	0	0	0	0
Vermi-compost production	0	0	0	0	0	0	0	0	0	0
Organic manures production	0	0	0	0	0	0	0	0	0	0
Production of fry and fingerlings	0	0	0	0	0	0	0	0	0	0
Production of Bee-colonies and wax sheets	0	0	0	0	0	0	0	0	0	0
Small tools and implements	0	0	0	0	0	0	0	0	0	0
Production of livestock feed and fodder	0	0	0	0	0	0	0	0	0	0
Production of Fish feed	0	0	0	0	0	0	0	0	0	0
Mushroom Production	0	0	0	0	0	0	0	0	0	0
Apiculture	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
X Capacity Building and Group Dynamics										
Leadership development	1	24	0	24	0	7	7	24	7	31
Group dynamics	1	26	0	26	0	4	4	26	4	30
Formation and Management of SHGs	0	0	0	0	0	0	0	0	0	0
Mobilization of social capital	0	0	0	0	0	0	0	0	0	0
Entrepreneurial development of farmers/youths	1	16	0	16	4	0	4	20	0	20
WTO and IPR issues	1	17	0	17	1	0	1	18	0	18
Others (pl specify)	2	47	0	47	5	0	5	52	0	52
Total	6	130	0	130	10	11	21	140	11	151
XI Agro-forestry										
Production technologies	0	0	0	0	0	0	0	0	0	0
Nursery management	0	0	0	0	0	0	0	0	0	0
Integrated Farming Systems	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	41	886	90	976	146	23	169	1032	113	1145

Composite fish culture	0	0	0	0	0	0	0	0	0	0
Hatchery management and culture of freshwater prawn	0	0	0	0	0	0	0	0	0	0
Breeding and culture of ornamental fishes	0	0	0	0	0	0	0	0	0	0
Portable plastic carp hatchery	0	0	0	0	0	0	0	0	0	0
Pen culture of fish and prawn	0	0	0	0	0	0	0	0	0	0
Shrimp farming	0	0	0	0	0	0	0	0	0	0
Edible oyster farming	0	0	0	0	0	0	0	0	0	0
Pearl culture	0	0	0	0	0	0	0	0	0	0
Fish processing and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
IX Production of Inputs at site										
Seed Production	0	0	0	0	0	0	0	0	0	0
Planting material production	0	0	0	0	0	0	0	0	0	0
Bio-agents production	0	0	0	0	0	0	0	0	0	0
Bio-pesticides production	0	0	0	0	0	0	0	0	0	0
Bio-fertilizer production	0	0	0	0	0	0	0	0	0	0
Vermi-compost production	1	27	0	27	3	0	3	30	0	30
Organic manures production	0	0	0	0	0	0	0	0	0	0
Production of fry and fingerlings	0	0	0	0	0	0	0	0	0	0
Production of Bee-colonies and wax sheets	0	0	0	0	0	0	0	0	0	0
Small tools and implements	0	0	0	0	0	0	0	0	0	0
Production of livestock feed and fodder	0	0	0	0	0	0	0	0	0	0
Production of Fish feed	0	0	0	0	0	0	0	0	0	0
Mushroom Production	0	0	0	0	0	0	0	0	0	0
Apiculture	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	1	27	0	27	3	0	3	30	0	30
X Capacity Building and Group Dynamics										
Leadership development	1	24	0	24	0	7	7	24	7	31
Group dynamics	1	26	0	26	0	4	4	26	4	30
Formation and Management of SHGs	1	18	0	18	4	0	4	22	0	22
Mobilization of social capital	0	0	0	0	0	0	0	0	0	0
Entrepreneurial development of farmers/youths	2	33	0	33	7	0	7	40	0	40
WTO and IPR issues	1	17	0	17	1	0	1	18	0	18
Others (pl specify)	3	74	0	74	13	0	13	87	0	87
Total	9	192	0	192	25	11	36	217	11	228
XI Agro-forestry										
Production technologies	0	0	0	0	0	0	0	0	0	0
Nursery management	0	0	0	0	0	0	0	0	0	0
Integrated Farming Systems	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	115	2878	1184	4062	386	129	515	3264	1313	4577

Training for Rural Youths including sponsored training programmes (On campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	0	0	0	0	0	0	0	0	0	0
Training and pruning of orchards	0	0	0	0	0	0	0	0	0	0
Protected cultivation of vegetable crops	0	0	0	0	0	0	0	0	0	0
Commercial fruit production	0	0	0	0	0	0	0	0	0	0
Integrated farming	0	0	0	0	0	0	0	0	0	0
Seed production	0	0	0	0	0	0	0	0	0	0
Production of organic inputs	0	0	0	0	0	0	0	0	0	0
Planting material production	0	0	0	0	0	0	0	0	0	0
Vermi-culture	0	0	0	0	0	0	0	0	0	0
Mushroom Production	0	0	0	0	0	0	0	0	0	0
Bee-keeping	0	0	0	0	0	0	0	0	0	0
Sericulture	0	0	0	0	0	0	0	0	0	0
Repair and maintenance of farm machinery and implements	1	14	1	15	5	0	5	19	1	20
Value addition	0	0	0	0	0	0	0	0	0	0
Small scale processing	0	0	0	0	0	0	0	0	0	0
Post Harvest Technology	0	0	0	0	0	0	0	0	0	0
Tailoring and Stitching	0	0	0	0	0	0	0	0	0	0
Rural Crafts	0	0	0	0	0	0	0	0	0	0
Production of quality animal products	0	0	0	0	0	0	0	0	0	0
Dairying	0	0	0	0	0	0	0	0	0	0
Sheep and goat rearing	0	0	0	0	0	0	0	0	0	0
Quail farming	0	0	0	0	0	0	0	0	0	0
Piggery	0	0	0	0	0	0	0	0	0	0
Rabbit farming	0	0	0	0	0	0	0	0	0	0
Poultry production	0	0	0	0	0	0	0	0	0	0
Ornamental fisheries	0	0	0	0	0	0	0	0	0	0
Composite fish culture	0	0	0	0	0	0	0	0	0	0
Freshwater prawn culture	0	0	0	0	0	0	0	0	0	0
Shrimp farming	0	0	0	0	0	0	0	0	0	0
Pearl culture	0	0	0	0	0	0	0	0	0	0
Cold water fisheries	0	0	0	0	0	0	0	0	0	0
Fish harvest and processing technology	0	0	0	0	0	0	0	0	0	0
Fry and fingerling rearing				0			0	0	0	0
ICT in Agriculture	1	16	0	16	5	0	5	21	0	21
TOTAL	2	30	1	31	10	0	10	40	1	41

Training for Rural Youths including sponsored training programmes (Off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	0	0	0	0	0	0	0	0	0	0
Training and pruning of orchards	0	0	0	0	0	0	0	0	0	0
Protected cultivation of vegetable crops	0	0	0	0	0	0	0	0	0	0
Commercial fruit production	0	0	0	0	0	0	0	0	0	0
Integrated farming	0	0	0	0	0	0	0	0	0	0
Seed production	0	0	0	0	0	0	0	0	0	0
Production of organic inputs	0	0	0	0	0	0	0	0	0	0
Planting material production	0	0	0	0	0	0	0	0	0	0
Vermi-culture	0	0	0	0	0	0	0	0	0	0
Mushroom Production	0	0	0	0	0	0	0	0	0	0
Bee-keeping	0	0	0	0	0	0	0	0	0	0
Sericulture	0	0	0	0	0	0	0	0	0	0
Repair and maintenance of farm machinery and implements	3	149	0	149	7	0	7	156	0	156
Value addition	0	0	0	0	0	0	0	0	0	0
Small scale processing	0	0	0	0	0	0	0	0	0	0
Post Harvest Technology	0	0	0	0	0	0	0	0	0	0
Tailoring and Stitching	0	0	0	0	0	0	0	0	0	0
Rural Crafts	0	0	0	0	0	0	0	0	0	0
Production of quality animal products	0	0	0	0	0	0	0	0	0	0
Dairying	0	0	0	0	0	0	0	0	0	0
Sheep and goat rearing	0	0	0	0	0	0	0	0	0	0
Quail farming	0	0	0	0	0	0	0	0	0	0
Piggery	0	0	0	0	0	0	0	0	0	0
Rabbit farming	0	0	0	0	0	0	0	0	0	0
Poultry production	0	0	0	0	0	0	0	0	0	0
Ornamental fisheries	0	0	0	0	0	0	0	0	0	0
Composite fish culture	0	0	0	0	0	0	0	0	0	0
Freshwater prawn culture	0	0	0	0	0	0	0	0	0	0
Shrimp farming	0	0	0	0	0	0	0	0	0	0
Pearl culture	0	0	0	0	0	0	0	0	0	0
Cold water fisheries	0	0	0	0	0	0	0	0	0	0
Fish harvest and processing technology	0	0	0	0	0	0	0	0	0	0
Fry and fingerling rearing	0	0	0	0	0	0	0	0	0	0
Any other (pl.specify)	0	0	0	0	0	0	0	0	0	0
TOTAL	3	149	0	149	7	0	7	156	0	156

Training for Rural Youths including sponsored training programmes – CONSOLIDATED (On + Off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	0	0	0	0	0	0	0	0	0	0
Training and pruning of orchards	0	0	0	0	0	0	0	0	0	0
Protected cultivation of vegetable crops	0	0	0	0	0	0	0	0	0	0
Commercial fruit production	0	0	0	0	0	0	0	0	0	0
Integrated farming	0	0	0	0	0	0	0	0	0	0
Seed production	0	0	0	0	0	0	0	0	0	0
Production of organic inputs	0	0	0	0	0	0	0	0	0	0
Planting material production	0	0	0	0	0	0	0	0	0	0
Vermi-culture	0	0	0	0	0	0	0	0	0	0
Mushroom Production	0	0	0	0	0	0	0	0	0	0
Bee-keeping	0	0	0	0	0	0	0	0	0	0
Sericulture	0	0	0	0	0	0	0	0	0	0
Repair and maintenance of farm machinery and implements	4	163	1	164	12	0	12	175	1	176
Value addition	0	0	0	0	0	0	0	0	0	0
Small scale processing	0	0	0	0	0	0	0	0	0	0
Post Harvest Technology	0	0	0	0	0	0	0	0	0	0
Tailoring and Stitching	0	0	0	0	0	0	0	0	0	0
Rural Crafts	0	0	0	0	0	0	0	0	0	0
Production of quality animal products	0	0	0	0	0	0	0	0	0	0
Dairying	0	0	0	0	0	0	0	0	0	0
Sheep and goat rearing	0	0	0	0	0	0	0	0	0	0
Quail farming	0	0	0	0	0	0	0	0	0	0
Piggery	0	0	0	0	0	0	0	0	0	0
Rabbit farming	0	0	0	0	0	0	0	0	0	0
Poultry production	0	0	0	0	0	0	0	0	0	0
Ornamental fisheries	0	0	0	0	0	0	0	0	0	0
Composite fish culture	0	0	0	0	0	0	0	0	0	0
Freshwater prawn culture	0	0	0	0	0	0	0	0	0	0
Shrimp farming	0	0	0	0	0	0	0	0	0	0
Pearl culture	0	0	0	0	0	0	0	0	0	0
Cold water fisheries	0	0	0	0	0	0	0	0	0	0
Fish harvest and processing technology	0	0	0	0	0	0	0	0	0	0
Fry and fingerling rearing	0	0	0	0	0	0	0	0	0	0
Any other (pl.specify)	1	16	0	16	5	0	5	21	0	21
TOTAL	5	179	1	180	17	0	17	196	1	197

Training programmes for Extension Personnel including sponsored training programmes (on campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	0	0	0	0	0	0	0	0	0	0
Integrated Pest Management	1	21	0	21	3	0	3	24	0	24
Integrated Nutrient management	0	0	0	0	0	0	0	0	0	0
Rejuvenation of old orchards	0	0	0	0	0	0	0	0	0	0
Protected cultivation technology	0	0	0	0	0	0	0	0	0	0
Production and use of organic inputs	0	0	0	0	0	0	0	0	0	0
Care and maintenance of farm machinery and implements	1	20	0	20	3	0	3	23	0	23
Gender mainstreaming through SHGs	0	0	0	0	0	0	0	0	0	0
Formation and Management of SHGs	0	0	0	0	0	0	0	0	0	0
Women and Child care	0	0	0	0	0	0	0	0	0	0
Low cost and nutrient efficient diet designing	0	0	0	0	0	0	0	0	0	0
Group Dynamics and farmers organization	0	0	0	0	0	0	0	0	0	0
Information networking among farmers	0	0	0	0	0	0	0	0	0	0
Capacity building for ICT application	0	0	0	0	0	0	0	0	0	0
Management in farm animals	0	0	0	0	0	0	0	0	0	0
Livestock feed and fodder production	0	0	0	0	0	0	0	0	0	0
Household food security	0	0	0	0	0	0	0	0	0	0
Organic Farming	1	21	0	21	4	0	4	25	0	25
TOTAL	3	62	0	62	10	0	10	72	0	72

Training programmes for Extension Personnel including sponsored training programmes (off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	0	0	0	0	0	0	0	0	0	0
Integrated Pest Management	11	488	5	493	0	0	0	488	5	493
Integrated Nutrient management	0	0	0	0	0	0	0	0	0	0
Rejuvenation of old orchards	0	0	0	0	0	0	0	0	0	0
Protected cultivation technology	0	0	0	0	0	0	0	0	0	0
Production and use of organic inputs	0	0	0	0	0	0	0	0	0	0
Care and maintenance of farm machinery and implements	0	0	0	0	0	0	0	0	0	0
Gender mainstreaming through SHGs	0	0	0	0	0	0	0	0	0	0
Formation and Management of SHGs	0	0	0	0	0	0	0	0	0	0
Women and Child care	0	0	0	0	0	0	0	0	0	0
Low cost and nutrient efficient diet designing	0	0	0	0	0	0	0	0	0	0
Group Dynamics and farmers organization	0	0	0	0	0	0	0	0	0	0
Information networking among farmers	0	0	0	0	0	0	0	0	0	0
Capacity building for ICT application	0	0	0	0	0	0	0	0	0	0
Management in farm animals	0	0	0	0	0	0	0	0	0	0
Livestock feed and fodder production	0	0	0	0	0	0	0	0	0	0
Household food security	0	0	0	0	0	0	0	0	0	0
Any other (pl.specify)	0	0	0	0	0	0	0	0	0	0
TOTAL	11	488	5	493	0	0	0	488	5	493

Training programmes for Extension Personnel including sponsored training programmes – CONSOLIDATED (On + Off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	0	0	0	0	0	0	0	0	0	0
Integrated Pest Management	12	509	5	514	3	0	3	512	5	517
Integrated Nutrient management	0	0	0	0	0	0	0	0	0	0
Rejuvenation of old orchards	0	0	0	0	0	0	0	0	0	0
Protected cultivation technology	0	0	0	0	0	0	0	0	0	0
Production and use of organic inputs	0	0	0	0	0	0	0	0	0	0
Care and maintenance of farm machinery and implements	1	20	0	20	3	0	3	23	0	23
Gender mainstreaming through SHGs	0	0	0	0	0	0	0	0	0	0
Formation and Management of SHGs	0	0	0	0	0	0	0	0	0	0
Women and Child care	0	0	0	0	0	0	0	0	0	0
Low cost and nutrient efficient diet designing	0	0	0	0	0	0	0	0	0	0
Group Dynamics and farmers organization	0	0	0	0	0	0	0	0	0	0
Information networking among farmers	0	0	0	0	0	0	0	0	0	0
Capacity building for ICT application	0	0	0	0	0	0	0	0	0	0
Management in farm animals	0	0	0	0	0	0	0	0	0	0
Livestock feed and fodder production	0	0	0	0	0	0	0	0	0	0
Household food security	0	0	0	0	0	0	0	0	0	0
Any other (pl.specify)	1	21	0	21	4	0	4	25	0	25
TOTAL	14	550	5	555	10	0	10	560	5	565

Table. Sponsored training programmes

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop production and management										
Increasing production and productivity of crops	9	442	161	603	25	16	41	467	177	644
Commercial production of vegetables	2	74	0	74	14	5	19	88	5	93
Production and value addition	0	0	0	0	0	0	0	0	0	0
Fruit Plants	4	7	175	182	0	22	22	7	197	204
Ornamental plants	0	0	0	0	0	0	0	0	0	0
Spices crops	0	0	0	0	0	0	0	0	0	0
Soil health and fertility management	15	526	4	530	41	0	41	567	4	571
Production of Inputs at site	0	0	0	0	0	0	0	0	0	0
Methods of protective cultivation	0	0	0	0	0	0	0	0	0	0
Others (pl. specify)	0	0	0	0	0	0	0	0	0	0
Total	30	1049	340	1389	80	43	123	1129	383	1512
Post harvest technology and value addition										
Processing and value addition	4	0	189	189	0	19	19	0	208	208
Others (pl. specify)	0	0	0	0	0	0	0	0	0	0
Total	4	0	189	189	0	19	19	0	208	208
Farm machinery										
Farm machinery, tools and implements	3	149	0	149	13	0	13	162	0	162
Others (pl. specify)	5	224	0	224	23	0	23	247	0	247
Total	8	373	0	373	36	0	36	409	0	409
Livestock and fisheries										
Livestock production and management	5	201	0	201	26	0	26	227	0	227
Animal Nutrition Management	0	0	0	0	0	0	0	0	0	0
Animal Disease Management	4	1	194	195	0	20	20	1	214	215
Fisheries Nutrition	0	0	0	0	0	0	0	0	0	0
Fisheries Management	0	0	0	0	0	0	0	0	0	0
Others (pl. specify)	0	0	0	0	0	0	0	0	0	0
Total	9	202	194	396	26	20	46	228	214	442
Home Science										
Household nutritional security	2	0	153	153	0	7	7	0	160	160
Economic empowerment of women	1	0	149	149	0	5	5	0	154	154
Drudgery reduction of women	0	0	0	0	0	0	0	0	0	0
Others (pl. specify)	0	0	0	0	0	0	0	0	0	0
Total	3	0	302	302	0	12	12	0	314	314
Agricultural Extension										
Capacity Building and Group Dynamics	0	0	0	0	0	0	0	0	0	0
Others (pl. specify)	3	294	1	295	8	0	8	302	1	303
Total	3	294	1	295	8	0	8	302	1	303
GRAND TOTAL	57	1918	1026	2944	150	94	244	2068	1120	3188

Name of sponsoring agencies involved

Details of vocational training programmes carried out by KVKs for rural youth

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop production and management										
Commercial floriculture	0	0	0	0	0	0	0	0	0	0
Commercial fruit production	0	0	0	0	0	0	0	0	0	0
Commercial vegetable production	0	0	0	0	0	0	0	0	0	0
Integrated crop management	0	0	0	0	0	0	0	0	0	0
Organic farming	0	0	0	0	0	0	0	0	0	0
Others (pl. specify)	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Post harvest technology and value addition										
Value addition	0	0	0	0	0	0	0	0	0	0
Others (pl. specify)	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Livestock and fisheries										
Dairy farming	0	0	0	0	0	0	0	0	0	0
Composite fish culture	0	0	0	0	0	0	0	0	0	0
Sheep and goat rearing	0	0	0	0	0	0	0	0	0	0
Piggery	0	0	0	0	0	0	0	0	0	0
Poultry farming	0	0	0	0	0	0	0	0	0	0
Others (pl. specify)	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Income generation activities										
Vermicomposting	0	0	0	0	0	0	0	0	0	0
Production of bio-agents, bio-pesticides, bio-fertilizers etc.	0	0	0	0	0	0	0	0	0	0
Repair and maintenance of farm machinery and implements	1	25	0	25	4	0	4	29	0	29
Rural Crafts	0	0	0	0	0	0	0	0	0	0
Seed production	0	0	0	0	0	0	0	0	0	0
Sericulture	0	0	0	0	0	0	0	0	0	0
Mushroom cultivation	0	0	0	0	0	0	0	0	0	0
Nursery, grafting etc.	0	0	0	0	0	0	0	0	0	0
Tailoring, stitching, embroidery, dyeing etc.	0	0	0	0	0	0	0	0	0	0
Agril. para-workers, para-vet training	0	0	0	0	0	0	0	0	0	0
Others (pl. specify)	0	0	0	0	0	0	0	0	0	0
Total	1	25	0	25	4	0	4	29	0	29
Agricultural Extension										
Capacity building and group dynamics	0	0	0	0	0	0	0	0	0	0
PP (Honey bee rearing)	1	26	0	26	4	0	4	30	0	30
Total	1	26	0	26	4	0	4	30	0	30
Grand Total	2	51	0	51	8	0	8	59	0	59

IV. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	13	8386		8386
Diagnostic visits	85	598		598
Field Day	13	491		491
Group discussions	16	583		583
Kisan Ghosthi	13	801		801
Film Show	35	1234		1234
Self -help groups	-	-		-
Kisan Mela	6	8125		8125
Exhibition	13	8646		8646
Scientists' visit to farmers field	81	561		561
Plant/animal health camps	-	-		-
Farm Science Club	-	-		-
Ex-trainees Sammelan	-	-		-
Farmers' seminar/workshop	-	-		-
Method Demonstrations	-	-		-
Celebration of important days	-	-		-
Special day celebration				
Exposure visits	2	80		80
Farmers visit to KVK	521	5275		5275
Total	801	35138		35138

Details of other extension programmes

Particulars	Number
Electronic Media (CD./DVD)	-
Extension Literature	11048
News paper coverage	14
Popular articles	23
Radio Talks	-
TV Talks	-
Animal health camps (Number of animals treated)	-
SMS	30
Total	11115

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprise (Plant Protection)	
	Text only	0	1	14	2	2	11	30
	Voice only	0	0	0	0	0	0	0
	Voice & Text both	0	0	0	0	0	0	0
	Total Messages	0	1	14	2	2	11	30
	Total farmers Benefitted	0	44668	625352	89336	89330	491348	1340035

V. DETAILS OF TECHNOLOGY WEEK CELEBRATIONS

Number of KVKs organised Technology Week	Types of Activities	No. of Activities	Number of Participants	Related crop/livestock technology
	Gosthies	5	297	Cultivation of Kharif and Rabi crops and their scientific management
	Lectures organized	20	297	and seed production technologies of different crops,
	Exhibition	5	297	organic farming, integrated farming system
	Film show	5	297	cultivation practices for rainfed farming, agricultural entrepreneurship,
	Fair	0	0	women empowerment etc.
	Farm Visit	5	297	Visit of farm's kharif crop farm field and crop cafeteria, integrated farming system demo unit,
	Diagnostic Practicals	4	249	fodder demo unit, vermicompost demo unit, Agril. Demo unit, mother orchard demo unit, KVK Museum, Renewable energy
	Distribution of Literature (No.)	2000	297	demo unit, solar water lifting devices demo unit.
	Distribution of Seed (q)	0	0	
	Distribution of Planting materials (No.)	6000	274	
	Bio Product distribution (Kg)	550	74	
	Bio Fertilizers (q)	0	0	
	Distribution of fingerlings	0	0	
	Distribution of Livestock specimen (No.)	0	0	
	Total number of farmers visited the technology week			

VI. PRODUCTION OF SEED/PLANTING MATERIAL AND BIO-PRODUCTS

Production of seeds by the KVKs

Crop	Name of the crop	Name of the variety	Name of the hybrid	Quantity of seed (q)	Value (Rs)	Number of farmers
Cereals						
Oilseeds	Sesame	Guj. Sesame-3 Breeder		0.41		
		Guj. Sesame-4 Breeder		1.18		
		Guj. Sesame-3 Mega		1.68	14375	17
	Ground nut	GJG-31 Mega		15.6	62400	
		GJG-31 Breeder		9.3		
		GG-2 Breeder		6.0		
		GG-9 Breeder		15.6		
Pulses						
Commercial crops						
Vegetables		Vegetable seed packets		639 No.	6390	315
Flower crops						
Spices	Cumin	Guj. Cumin-4 Mega		1.76	39600	44

Fodder crop seeds	Sorghum	Local		6.0		
Fiber crops						
Forest Species						
Fruit	Sapota			12.46	12460	
	Khatai Amabali			0.28	420	
	Mango			2.71	5420	
	Gunda			0.36	540	
Others	Sun hemp			1.5		
	Guar gum	Guj. Guar 1		1.1		
Total						

Production of planting materials by the KVKs

Crop	Name of the crop	Name of the variety	Name of the hybrid	Number	Value (Rs.)	Number of farmers
Commercial						
Vegetable seedlings	Tomato	GJT-3		5350		210
	Brinjal	GOB-3		4650		175
Fruits						
Ornamental plants						
Medicinal and Aromatic						
Plantation						
Spices						
Tuber						
Fodder crop saplings						
Forest Species						
Others						
Total						

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity	Value (Rs.)	No. of Farmers
		Kg		
Bio Fertilisers				
Bio-pesticide				
Bio-fungicide				
Bio Agents				
Others				
Total				

Table: Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers
Dairy animals				
Cow	Male	2		Gir bull's free natural service for breed improvement (10 No. of farmer from 04 villages)
Buffaloes				
Calves				
Goat (Zalavadi)	Male	1		
	Female	1		
Poultry				
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl. specify)				
Fisheries				
Indian carp				
Exotic carp				
Others (Pl. specify)				
Total				

VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS

Samples	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)	No. of soil health cards distributed
Soil	673	893	27	-	-
Water	220			-	-
Plant	-	-	-	-	-
Manure	-	-	-	-	-
Total	893	893	27	-	-

VIII. SCIENTIFIC ADVISORY COMMITTEE

Name of KVK	Date of SAC Meeting	Participants
	24/10/2016	26

IX. NEWSLETTER/MAGAZINE

Name of News letter/Magazine	No. of Copies printed for distribution
April – June	1
July- Sept	1
Oct-Dec	1
Jan-March	1

X. PUBLICATIONS

Category	Number
Research Paper	2
Technical bulletins	0
Technical reports	6
Abstract	3
Popular article	23
Leaflet/folder	17
Press release	13

XI. DETAILS ON RAIN WATER HARVESTING STRUCTURE AND MICRO-IRRIGATION SYSTEM

Activities conducted				
No. of Training programmes	No. of Demonstration s	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)
7	-	-	247	
1 (Rain Water)	-	-	37	

XII. INTERVENTIONS ON DISASTER MANAGEMENT/UNSEASONAL RAINFALL/HAILSTORM/COLD WAVES ETC

Introduction of alternate crops/varieties

Crops/cultivars	Area (ha)	Extent of damage	Recovery of damage through KVK initiatives if any
-	-	-	Benefit in term of good production realized by farmers as forecasting of deficient rainfall was already been popularized among farmers through KVK
-	-	-	-
Total	-	-	-

Major area coverage under alternate crops/varieties

Crops	Area (ha)	Number of beneficiaries
Oilseeds	-	-
Pulses	-	-
Cereals	-	-
Vegetable crops	-	-
Tuber crops	-	-
Total		

Farmers-scientists interaction on livestock management

Livestock components	Number of interactions	No. of participants
-	-	-
-	-	-
Total	-	-

Animal health camps organised

Number of camps	No. of animals	No. of farmers
-	-	-
-	-	-
Total	-	-

Seed distribution in drought hit states

Crops	Quantity (qtl)	Coverage of area (ha)	Number of farmers
-	-	-	-
-	-	-	-
Total	-	-	-

Large scale adoption of resource conservation technologies

Crops/cultivars and gist of resource conservation technologies introduced	Provide to farmers bio Product at KVK (Kg)	Area (ha)	Number of farmers
Adoption of <i>Trichoderma</i> for cotton and groundnut crop in approximately 2500 ha.	6288 kg	2500	1288
Application of <i>Beuveria</i> in 4500 ha area.	11582 kg	4500	3300
Phosphate Culture	150 lit	75	50
Azotobacter	162 lit	90	68
Rhizobium	84 lit	40	90
Pheromone Traps	5542 no.	275	250
Lure of Pink boll worm	6067 no.	225	175
Total	--	7705	5221

Awareness campaign

	Meetings		Gosthies		Field days		Farmers fair		Exhibition		Film show	
	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers
	29	1396										
Total	29	1396										

XIII. DETAILS ON HRD ACTIVITIES

A. HRD activities organized in identified areas for KVK staff by the Directorate of Extension

Name of the SAU	Title of the training programmes	No of programmes	No. of Participants	No. of KVKs involved
ATARI-Jodhapur	Sensitization workshop-Cum-Training programme on Pulses Production technology"	01	68	68
Saurashtra University	Orientation Programme-114	01	46	02
Ananad Agricultural University	To participate in training on "Research Extension Approach for Effective Transfer of Technology" at Junagadh Agricultural University, Junagadh during 16 - 18 November,2016 sponsored by AAU, Ananad	01	32	5
Junagadh Agricultural University	To attend training programme on "Training Programme on Advances in Horticulture, Animal Health and Value Addition" to be organized by DEE office from 20 to 22 February, 2017	01	25	8
Total	3	4	171	83

B. HRD activities organized in identified areas for KVK staff by ATARI

Title of the training programmes	No of programmes	No. of Participants	No. of KVKs involved
--	--	--	--
Total	--	--	--

IV. CASE STUDIES (CASE STUDIES MAY BE GIVEN IN DETAIL AS PER THE FOLLOWING FORMAT)

Each Zone should propose a minimum of three case studies with good action photographs (with captions on the backside of the hard copy of the photos) on the following topics

- Effective popularization on a larger scale of any one FLD technology and its role in transformation of district agriculture with respect to that particular crop or enterprise*
 - Performance of the end results of any one technology assessed, its refinement if any and its impact in district agriculture with respect to that crop or enterprise*
 - Effect of production and supply of seeds and planting material / animal breed / or bio-product and its impact on district agriculture with respect to that crop/ enterprise/ bio-product*
- The general format for preparing the above case studies are furnished below*

1. Thematic Area: Seed Production

High income by producing chickpea crop seed

Village : Karmad
Taluka : Chuda
District : Surendranagar (Gujarat)

Total Area under chickpea cultivation (2015-16) : 65 ha

Total Area under chickpea cultivation (2016-17) : 175 ha

Description of Intervention :

In Karmad village, major crops grown in Kharif are cotton, sesamum and bajara and in rabi season, wheat, cumin and chickpea crops. Farmer generally sows chickpea crop by using loose seed (indigenous). In the year 2015-16, KVK, JAU, Surendranagar has been provided chick pea,s improved crop variety GJG - 3 under NFSM cluster FLD for 20 ha area and covered 50 farmers. Performance of this variety was likened by the farmers. Farmer other than FLD beneficiaries also visited FLD site during the standing crop period and field day, farmer meeting at FLD field site and were impressed with the performance of this improved variety. After seeing the performance of this variety many farmers of this village and from neighboring villages sought the seed demand from FLD beneficiaries' farmers for next coming season as seed(for the rabi 2016 - 17). Looking to this, farmers stored properly this seed variety for selling as seed for next season and provided it to the needy farmers as seed input. This action not only fetched good price for them but it also ensure the availability of good quality seed at their locality with less price as compare to market. They sold their chickpea seed @Rs. 11000/- to 13000/- per quintal. While In this process both the seller and buyer farmers got benefited. Approximately 6000 kg seed material was sold by the 143 of farmers. Details are given below:

Sr. No.	Name of Village & Address	Name of Crop	Crop Variety	Quantity sold as seed (in qtl.)	Price fetched (In Rs./qtl)	Market price of local chickpea at that time	Total difference in term of profit fetched by intervention	Net profit realized by farmers
1	Village : Karmad Taluka : Chuda, Surendranagar(Guj.)	Chickpea	GJG-3	60qtl	11000	8000	3000	180000

2. Thematic Area: Dairy Farming
Value addition and product processing fetched attractive income

Sr. No.	Particulars	Details
1.	Name	Khodabhai J. Sabhani
2.	Father's name	Jivabhai Sabhani
3.	Date of birth	28-09-1954 (62 years)
4.	Full address	Village & Post: Vakhatpar, Taluka: Sayala District: Surendranagar (Gujarat) -363430 Mobile No. : 9725455112
5.	Educational qualification	B. Tech (Mechanical Engineering)
6.	Experience in brief	7 Years
7.	Present position	Progressive Farmers and opinion leader of district, Promoter of pure Gir cow breed,
8	Land possession	24 Acre (In 3 Acre, he established Gaushala, fruit and other plantation, bio gas plant, godown)
9	Animals	46
10.	Outstanding contribution in the field of agriculture and award received, if any	He is progressive dairy farmer who is doing dairy farming in scientific way. He possesses 48 Gir cow and doing business of butter milk, milk and Ghee. He branded his product name of Ghee as Khyatee Ghee and selling cow ghee at Rs. 1200/kg. He is prepared fenile by using cow urine. He now initiated Cow urine extraction plants and earned approximately Rs. 18500/- per month from alone cow urine extract selling. He also undertook plantation of fruits crop like lemon, teak, bamboo, eucalyptus, pomegranate custard apple and guava plantation on his farm. In nut shell he is promoting integrated farming system and earns approximately Rs. 8.00 Lakh net profit from these sources.

Sr. No.	Source	Gross cost (Rs.)	Gross Income (Rs.)	Net Profit (Rs.)
1.	Dairy product, Cow urine and other dairy product	18,50,000.00 Includes labour, interest, feed & fodder, ads, transport, electricity cost etc	26,02,000.00	7,52,000.00
2.	Agriculture	40,000	70,000.00	30,000.00
Total				7,82,000.00

11. Other Details He is earning approximately Rs. 18500.00 from cow urine extract exclusively. He also promoting pure Gir cow breed.

12. Utilization of Govt Subsidy

1. Gramin Godown
2. Bio gas plant
3. Drip Irrigation

13. Adoption Under his guidance 4 new Gaushala has been implemented:

Sr. No.	Name	Implementer
1	Axar Gir Gaushala, Kharva	Dr. Ghanshyambhai
2	Vishalbhai's Gaushala, Kanpar	Shri Vishalbhai
3	Sadguru Gaushala, Chuli, Halvad	Shri Jaisukh Patel
	Vipul Gaushala, Kherva, Patadi	Shri Vipul Patel



4. KRISHI VIGYAN KENDRA, JAU, SURENDRANAGAR

Case Study: Use of *Beauveria bassiana* provides economical and effective control of pest of cotton crop to the farmers of Kothariya village.

Introduction of village:

Kothariya village is located in Wadhwan Tehsil of Surendranagar district in Gujarat, India. It is situated 7km away from sub-district headquarter Wadhwan and 14km away from district headquarter Surendranagar. As per 2009 stats, Kothariya village is itself a gram panchayat.

According to Census 2011, The total geographical area of village is 1158.5 hectares. Kothariya has a total population of 3,568 peoples. There are about 719 houses in Kothariya village. Wadhwan is nearest town to Kothariya which is approximately 7km away. Total cultivable land of village is 1010 ha is cultivable land. Kothariya village has 268 farmers out of which 199 male farmers and 69 farmers are female. On an average, farmers of this village possess 2 to 3 ha.

In Kothariya village, major crop in kharif season, cotton crop is sown in almost 80 % area of total cultivable area. Bt. cotton varieties are being sown by farmers. In rest of the area, Sorghum, pigeon pea, green gram, bajara and other crop are grown.

In the kharif season 2016, more than 80 % cultivable area, Bt cotton cultivated. This year, apart from infestation of sucking pest, infestation of pinkboll worm has been observed early and awareness campaign was initiated by KVK, JAU, Nana Kandhasar on control of pink bollworm in cotton crop. During this awareness campaign, thorough discussion made on pink bollworm life cycle, its identification, nature of damage, IPM, use of bio pesticide for effective control with low cost of inputs eg. use of beauveria bassiana, pheromone traps etc.

Initially Shri Shamjibhai, Shri Haribhai and Shri Ajmalbhai of Kothariya village who are the progressive farmers and always take initiative almost ahead of any others, they were among the first who used *Beauveria bassiana* in their cotton crop field to control sucking pest and pink bollworm. They purchased it from Krishi Vigyan Kendra, JAU, Nana Kandhasar and found good result with less input cost/ha. Thereafter, other farmers visited their field and influenced due to good result, lesser input cost and its cost effectiveness. Horizontal spread of this created the massive demands of beauveria bassiana for control of pink bollworm as well sucking pest in cotton crop. In nutshell, 2215 kg *Beauveria bassiana* was purchased by more than 81 farmers. In initial stage of crop, farmers used 1.5 kg quantity of *Beauveria bassiana*/ha and it cost them only Rs. 225.00 (cost of *Beauveria bassiana* is Rs. 150.00 per kg). As a result,

hundreds of the farmers were attracted and got interested to utilize this product. Till date, more than 80 farmers used the same and found good result.

Observation of Pest Incidence:

Sr. No.	Name Insect	In the field where <i>Beauveria bassiana</i> used	In the field where chemical pesticides
1.	Pink Bollworm larvae /20 plant	1	1
2.	White fly/3 Leaf	6	4
3.	Jassid/3 Leaf	8	5
4.	Thrips/3 Leaf	19	16

Details of Utilization of *Beauveria bassiana* by cotton growers of Kothariya village of Wadhawan taluka of Surendranagar district:

Sr. No.	Number of farmers used <i>Beauveria bassiana</i>	Quantity of <i>Beauveria bassiana</i> purchased by farmers of Kothariya
1.	81+	2215 kg

Economy of cost of inputs use for pest in cotton crop:

Sr. No.	Spray	Average cost of input incurred farmers/ha/spray (In Rs.)		Approximately cost saving due to use of <i>B. bassiana</i> over chemical pesticide/ha/spray	Per cent saving cost <i>B. bassiana</i> over chemical pesticide/ha/spray
		<i>Beauveria bassiana</i>	Chemical pesticides		
1.	I- Spray	225*	540* (Monocrotophos + Acephate)	315	58
2.	II-Spray	300*	660* (Profenophos + Imidachloprid)	360	55
3.	III-Spray	300*	720* (Fipronil+ Diamethoate)	420	58
Total		825	1920	1095	

Note: *This includes only cost of particular input used for spray. This not included labour cost and other cost are static in both the cases.

In Kothariya village, approximately 2215 kg *Beauveria bassiana* was purchased from KVK during this season. If above three spray was assumed to be done with *Beauveria bassiana* in comparison with chemical spray, Rs. 440986.00 net saving was observed.

Farmers of Kothariya village are satisfied with the result they got from use of *Beauveria bassiana*. Most of the farmers said if they are able to get same result by using *Beauveria bassiana* is lesser cost then why should they go for costly chemical pesticides. Most of the farmers opined that this not only provided them good result but also saved their valuable money. And further more they insisted on continue use of this environment friendly bio agent. Villagers popularly known this Sawaj *Beauveria bassiana* as "Nana Kandhasar no powder"



XIII. STATUS REVOLVING FUNDS

Year	Opening balance as on 1 st April	Income during the year	Expenditure during the year	Net balance in hand as on 1 st April of each year
April 2014 to March 2015	2321940	733361	544037	2511264
April 2015 to March 2016	2511264	1573458	631127	3453595
April 2016 to March 2017	3453595	3291526	2746295.45	3998825.55

Note :

Themes of livestock FLDs and OFTs for Annual Progress Report 2016-17

The FLDs and OFTs under livestock may be classified as per themes given below for APR

SN	Theme	Different aspects to be covered
01	Animal Breeding Management	Evaluation or introduction of any livestock breed i.e. cattle, buffalo, sheep, goat, poultry etc. Improvement in fertility, reproductive traits i.e. Age at first calving, service period and calving interval etc
02	Animal Nutrition Management	Feed and fodder trials including feed additives, bypass fat and protein, colostrum feeding, mineral mixture, chelated mineral mixture, azolla, microbial feeds (probiotics etc), urea treated straws and UMMB or feed supplements etc
03	Animal Production Management	Type of housing provided, manger or water trough etc to the livestock for improving animal comfort and measures followed for clean milk production etc
04	Health and Disease	Deworming of all categories of livestock for control of

	Management	endo-worms and ecto-parasites, vaccination and to reduce the calf mortality, mastitis incidence in livestock etc
05	Others, if any	Any other aspect which is not covered under above 4 themes mentioned can be put in this category.
