

# PROGRESS REPORT

## JANUARY -2021 to DECEMBER -2021

### KRISHI VIGYAN KENDRA JUNAGDH AGRICULTURAL UNIVERSITY AMRELI

#### **1. General information about the Krishi Vigyan Kendra:**

The idea of establishment of Krishi Vigyan Kendra (KVK) - Farm Science Center was evolved by the recommendations of the education commission/review by the planning commission and inter-Ministerial Committee, and further recommendation by the committee headed by Dr. Mohan Singh Mehta appointed by ICAR in 1973.

The first KVK was established in 1974 at Pondicherry under the administrative control of the Tamilnadu Agriculture University, Coimbtore. The number of KVKs increased 290 during the V to IX Five Year Plan. The Hon'ble Prime Minister of India announced that by the end of 2007 there should be one KVK in each district of the country.

Total 50 KVKs established during Twelfth Plan. At present there are 686 KVKs in India which include 459 under State Agricultural University (SAU) /CAU-State/ Central Agricultural University (CAU), 67 under ICAR Institutes, 106 under Non-government Organization, 36 under State Governments, 3 under Public Sector Undertakings and the remaining 15 under Central University/Deemed University/Other Educational Institution. Gujarat state is having 30 KVKs of which, 07 KVKs are under Junagadh Agricultural University and Amreli is one of them, established in March, 2005.

#### **The mandates of KVKs as under:**

- (1) Organize short and long term vocational training courses in agricultural and allied Vocations for the farmers and rural youths with emphasis on "Learning by doing" or higher production on farms and generating self employment.
- (2) Organizing training to update the extension personnel with emerging advances in agricultural research on regular basis.
- (3) Organize front-line demonstrations on various crops to generate production data and feedback information.
- (4) Conducting "On farm testing" for identification of technologies in terms of location specific sustainable land use systems

**1.1 Name and Address of KVK with phone, fax and e-mail**

Address	Telephone		E-mail	Web Address
	Office	Fax		
Senior Scientist and Head Krishi Vigyan Kendra, Junagadh Agricultural University, Keriya Road, Model farm, Amreli (Gujarat)-365601	02792 227122	02792 227122	kvkamreli@gmail.com	<a href="http://www.jau.in">www.jau.in</a>

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

Address	Telephone		E-mail	Web Address
	Office	Fax		
Junagadh Agricultural University, Agril. Campus, Motibaugh, Junagadh-362001 (Gujarat)	0285 2672080-90	0285 2672004 2672653	-----	<a href="http://www.jau.in">www.jau.in</a>

**1.3 Name of the Senior Scientist & Head with phone & mobile no**

Name	Telephone/Contact		
	Office	Mobile	E-mail
Dr. N. S. Joshi Ph.D, Horticulture	02792 227122	9428191963	nileshjoshi2207@gmail.com

**1.4 Year of sanction:**

Deputy Secretary, ICAR, New Delhi, Letter No. 13-16/2003/1, Dt. 7.12.2004

**1.5 Total land with KVK: 20 Ha**

Sr. no.	Item	Area (ha)
1	Under Building	3.50
2	Under Demonstration units	1.50
3	Under crops	12.50
4	Orchard / Agro-forestry	0.50
5	Others	2.0
<b>Total</b>		<b>20.00</b>

**1.6 Infrastructure development:**

S. N.	Name of building	Source of funding	Stage		
			Complete		
			Completion Date	Plinth area (Sq. m)	Expenditure (Rs.)
1	Administrative Building	ICAR	2008	500	3190000
2	Farmers Hostel	ICAR	2008	305	2088000

3	Staff Quarters(6)	ICAR	2008	400	3204000
4	Farm Wall	ICAR	2008	-	-
5	RWH system	ICAR	2008	-	960000
6	Threshing yard	ICAR	2009	-	-
7	Godown and processing shed	RKVY	2009	70.62	500000
8	Poly House	RKVY	2010	320	281600
9	Net House	RKVY	2010	150	64450
10	Training hall	RKVY	2010	190.99	1396300
11	Pilot scale Process plant	RKVY	2010	197.31	1536400
12	Implement shed	RKVY	2010	77.33	286300
13	Farm Wall	ICAR	2016	-	497475
14	Goat Shed	ICAR	2016	14.05	69760
15	Vermi-compost unit	ICAR	2016	45	73640
16	Administrative building (Renovation)	ICAR	2017	-	300000

### 1.7 Basic information of agro climatic zone of operational district - Amreli

The district of Amreli falls in North Saurashtra Agro climatic Zone VI. The average rain fall is 580 mm with shallow and medium black as well as saline soil. The district covers geographical area of 736.5 thousand ha. In which cultivable area is 583.8 thousand ha. The major crops are Groundnut, Cotton, Wheat, Sesame, and Bajra (Pearl millet). The Horticultural crops are Mango, Sapota, Citrus, Banana fruit etc. and other crops are Onion, Brinjal, Garlic and Cumin etc.

The main cultivation depends on rainfall however about 18 % area is under irrigation which generally done by wells, bores and canals but this is instability. The average productivity of the district of most of the crop is less than state average. Area under horticultural crop is very poor and high infertility rates and low productivity of milk animal.

1	Total geographical area	7,36,500 ha
2	Total cultivable area	5,83,800 ha
3	Total area under forest	44,200 ha
4	Total irrigated area	110,900 ha
5	Average annual rainfall	580 mm
6	Soil type	Medium black
7	Total no. of villages	615 (8 Urban areas)
9	Total population	15,14,190 (Rural: 11,27,555 Urban: 3,86,635)
10	(a) Male	7,71,049
	(b) Female	7,43,141
11	Literacy percentage	74.25 %
	(a) Male	82.21 %

	(b) Female	66.09 %
12	No. of Talukas	11
13	Major crop grown	Cereals: Wheat, Sorghum and Pearl millet
		Pulses: Green gram, Black gram, chickpea
		Oilseeds: Groundnut, Sesame, Castor, Mustard,
		Commercial: Cotton
14	Live stocks	<b>Total : 809215</b>
	<b>Rank 16</b>	Cows crossbred (In milk) : 2900 (8.659 kg/day)
		Cows crossbred (dry) : 500
		Cows crossbred (milch) : 3400 (7.464 kg/day)
	<b>Rank 5</b>	Cows indigenous (In milk) : 85700 (4.747 kg/day)
		Cows indigenous (dry) : 35600
		Cows indigenous (milch) : 121300 (3.353 kg/day)
	<b>Rank 9</b>	Buffaloes (In milk) : 104700 (5.229 kg/day)
		Buffaloes (dry) : 41500
		Buffaloes (Milch) : 146200 (3.745 kg/day)
	<b>Rank 13</b>	Goat : 163500 (0.535 kg/day)
		Sheep : 130800
		Poultry : 8200

### 1.7.1 Details of Milk Production

Livestock	Milk Production '000 Tonnes	State share (in %)
Crossbred cows	9.22	Rank 20 (0.28 %)
Indigenous cow	148.43	Rank 10 (4.82%)
Buffalo	199.79	Rank 18 (2.88 %)
Goats	11.33	Rank 9 (3.60 %)
<b>Total</b>	<b>368.77</b>	<b>1010 Tonnes/day</b> <b>Rank 18 (2.72 %)</b>

Source: 35<sup>th</sup> issue on estimates of major livestock products for the year 2017-18, Gujarat state.

### 1.7.2 Area, Production and Productivity of major crops cultivated in the district

S. No.	Crop	Area (ha)	Production (M.T.)	Productivity (Kg/ha)
1	Green gram	2702	1372	5.07
2	Tur	742	912	12.28
3	Wheat	7311	22734	31.09
4	Gram	1736	2394	13.79
5	Groundnut	101505	219818	21.65
6	Sesamum	7390	3519	4.76

7	Castor	1283	2235	17.42
8	Irrigated Cotton (Lint)	253961	811755 (bales)	543.38 (lint)
9	UnIrrigated Cotton (Lint)	124796	248417 (bales)	338.40 (lint)
10	Cumin	1234	436	3.53
11	Onion	4328	128928	297.89
12	Garlic	1277	5261	41.19
13	Bajra	2706	6399	23.64
14	Udad	1720	1028	5.97
15	Math	130	62	4.76
16	Soybean	357	275	7.69
17	Sugarcane	57	3928	689.12

Source: District wise Area, Production and Yield of Important Food & Non-food crops in Gujarat State

### 1.7.3 Area and Production Horticultural crops cultivated in the district

S. No.	Crop	Area (ha)	Production (M.T.)	S. No.	Crop	Area (ha)	Production (M.T.)
1	Mango	6965	61918.85	16	Tomato	1091	26642.22
2	Chiku	552	4692	17	Cauliflower	167	2179.35
3	Citrus	719	8016.85	18	Cluster bean	326	2624.30
4	Ber	179	1410.52	19	Cow Pea	532	5910.52
5	Banana	227	8773.55	20	Cucurbits	1193	14435.30
6	Guavava	279	2561.22	21	Cumin	900	765
7	Pomegranate	109	1509.65	22	Chilli-Dry	227	424.49
8	Papaya	46	1955.46	23	Garlic	800	6016
9	Custard Apple	35	31.010	24	Coriander	1300	1664
10	Aonla	56	560.56	25	Ginger	03	53
11	Coconut	151	1283.50	26	Turmeric	13	243.10
12	Onion	3500	87325	27	Fenugreek	108	177.12
13	Brinjal	644	12042.80	28	Ajwain	491	456.63
14	Cabbage	539	10860.85	29	Rose	23	174.80
15	Okra	486	3912.30	30	Marigold	07	58.31

Source: Director of Horticulture, Estimate of the horticulture crops

**1.8 Staff position in K.V.K., J.A.U., Amreli (as on 31<sup>st</sup> January, 2021)**

Sr. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale (Rs.)	Present basic (Rs.)	Date of joining	Permanent /Temporary	Category (SC/ST/OBC/ Others)
1	Senior Scientist & Head	Dr. N. S. Joshi	Senior Scientist and Head	Horticulture	15600-39100 G.P. 8000	24170	24/03/2015	Permanent	General
2	Subject Matter Specialist	Er. P. S. Jayswal	Subject Matter Specialist	Agriculture Engineering	15600-39100 G.P. 6000	24140	10/09/2012	Permanent	General
3	Subject Matter Specialist	Dr. N. Tiwari	Subject Matter Specialist	Home Science	15600-39100 G.P. 6000	19050	01/04/2013	Permanent	General
4	Subject Matter Specialist	Mr. P. J. Prajapati	Subject Matter Specialist	Crop Production	15600-39100 G.P. 6000	16920	31/03/2015	Permanent	OBC
5	Subject Matter Specialist	Mr. V. S. Parmar	Subject Matter Specialist	Extension Education	15600-39100 G.P. 6000	16920	12/05/2016	Permanent	ST
6	Subject Matter Specialist	Mr. N. M. Kachhadiya	Subject Matter Specialist	Plant Protection	15600-39100 G.P. 6000	-	-	Permanent	General
7	Subject Matter Specialist	Vacant	Subject Matter Specialist	Animal Science	-	-	-	-	-
8	Programme Assistant	Ms. K. K Gadhiya	Programme Assistant	Plant pathology	09300-34800	-	30/07/2018	Permanent	General
9	Computer Programmer	Shri S .N. Joshi	Computer Programmer	-	39900-126600	44900	01/07/2010	Permanent	General
10	Farm Manager	Mr. S. G Baria	Farm Manager	Agriculture	09300-34800	-	30/07/2018	Permanent	ST
11	Accountant	Shri H. J. Ravaliya	Accountant	-	39900-126600	44900	01/12/2011	Permanent	SC
12	Stenographer	Vacant	Stenographer	-	-	-	-	-	-
13	Driver	Out sourcing	Driver	-	-	-	-	-	-
14	Driver	Out sourcing	Driver	-	-	-	-	-	-
15	Supporting staff	Out sourcing	Supporting staff	-	-	-	-	-	-
16	Supporting staff	Vacant	Supporting staff	-	-	-	-	-	-

## 2.0 Details of 16<sup>th</sup> SAC meeting conducted on dt. 02/02/2021

The Fourteenth Scientific Advisory Committee meeting of Krishi Vigyan Kendra Junagadh Agricultural University, Amreli was held at Seminar Hall, K.V.K., J.A.U., Amreli on 02<sup>th</sup> February, 2021. Committee made the following recommendations after active interaction.

Sr. No.	Date	Name and Designation of Participants	Salient Recommendations	Action taken
1.	02/02/2021	Dr. V. P. Chovatia I/c Hon'ble Vice Chancellor, Junagadh Agricultural University, Junagadh	<p>1. To Proceed for GI tag of "Babarkot no Bajro" (Pearl millet).</p> <p>2. To register more varieties under Protection of Plant Varieties and Farmers' Rights Act.</p> <p>3. To make register of uncertain climatic condition under DAMU project.</p> <p>4. To arrange training on market intelligence.</p> <p>5. To arrange bakery training programme for male farmers.</p> <p>6. To arrange soil health training.</p> <p>7. To increase number of popular articles.</p> <p>8. To convert Drudgery reduction OFT of Home Science subject to FLD.</p> <p>9. Accountability of FLDs.</p>	<p>Suggestion accepted and application is prepared. Rs. 90,000/- required for filling application.</p> <p>Suggestion accepted and "Badhada Na Ringna" sample was send for check. Rs. 1,50,000/- required for seed sample check process.</p> <p>Suggestion accepted and Register of uncertain climatic condition under DAMU project is being maintain.</p> <p>Suggestion accepted and Total 2 training programme with no. of participants 68 were organized.</p> <p>Suggestion accepted and It will be schedule to arrange in March month.</p> <p>Suggestion accepted and training were conducted during 10/08/2021, 10/2/2021, 27/07/2021, 22/09/21 with total no. of participants -306</p> <p>Suggestion accepted and total 05 Article were published in different magazine related to agriculture</p> <p>Suggestion accepted OFT of Home Science subject on Drudgery reduction is converted in to FLD</p> <p>Suggestion accepted and accountability of FLDs was done</p>

	02/02/2021	Dr. H. M. Gajipara, Director of Extension Education, JAU, Junagadh	1. To arrange training on IFS.	Suggestion accepted and 4 training programme on IFS were Organized Dated-30/11/2021, 1-2 and 18/12/2021 with total no. of participants 129.
			2. To maintain FLD observations register.	Suggestion accepted and FLD observations register was properly maintained
			3. Documentation of success stories.	Suggestion accepted and 110 success story were prepared and documented by all the SMS of KVK, Amreli
			4. To do pre and post evaluation of training.	Suggestion accepted and pre and post evaluation of training was done after training
			5. To upload all activities of KVK in website and KVK portal.	Suggestion accepted and all activities of KVK were upload regularly in website and KVK portal.
3.	02/02/2021	Dr. V. N Gohil, Research Scientist, Agricultural Research station, JAU, Amreli	1. To take Sesame variety of GT-6 in intercropping	Suggestion accepted and we demanded GT-6 variety for intercropping but mega seed does not allow GT-6 for FLD



**3.0 Adopted village: Details of Operational area /Villages**

Sr. No.	Name of village	Name of Taluka	Name of District	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1	Hathigadh	Liliya	Amreli	Groundnut, Cotton, Sesamum, Wheat, Cumin, Chickpea, Garlic, Onion, Mango, lemon Enterprises are dairy business, vermi composting,	Heavy infestation of sucking pest in cotton, Sesame leaf blight, Stem rot disease in Groundnut, Mango Malformation, Less area under Horticultural crops.	*IPM and INM in major crops of this area, *Motivate the farmers for arid Horticultural Crops. *To create the awareness for grading, processing and marketing (value addition)
2	Jasvantgadh	Amreli	Amreli			
3	Randhiya	Amreli	Amreli			
4	Ingorala	Khambha	Amreli			
5	Devgam	Kukavav	Amreli			
6	Rikadiya	Amreli	Amreli			
7	Kuvargadh	Babra	Amreli			
8	Ramgadh	Savakundla	Amreli			
9	Dhajadi	Savakundla	Amreli			
10	Jambarvada	Babra	Amreli			
11	Khadkhad	Kukavav	Amreli			
12	Rafala	Bagasra	Amreli			
13	Sukhpar	Babara	Amreli			
14	Fachariya	Dhari	Amreli			
15	Sekhipariya	Lathi	Amreli			

**3.1 Priority thrust areas:**

Sr. No.	Crop/ Enterprise	Thrust area
1.	Cotton, Groundnut, Castor, Cumin, Wheat, vegetables, fruits, etc.	Integrated Crop Management in major crops
2.	Farm waste	Recycling of farm waste through composting, vermin compost, green manuring, etc.
3.	Micro irrigation	Efficient use of water by micro irrigation system, water harvesting structure, and water conservation techniques
4.	Soil	Reclamation of saline & alkaline soils
5.	Farm Women	Farm women empowerment by training in value addition, handicrafts, and small scale enterprises
6.	Horticulture	Promotion of arid horticulture fruit crops
7.	Improved Implements	Popularization of the mechanized technological know how

#### 4. Summary of Progress Report

Details of the target and achievements of mandatory activities by KVK (January 2021 to December 2021)

OFT				FLD			
1				2			
Number of OFTs		Number of Farmers		Number of FLDs (Crops/Component)		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
7	7	27	27	26 (FLDs under KVK, ATIC, NFSM, NMOOP)	26	670	670

Trainings (Including sponsored, vocational etc.)					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	63	107	2515	4465	58	1358	500	8814
Rural youth	4	9	125	331				
Ext. Functionaries	2	2	50	90				
Other Scheme Trainings (ATIC, NICRA, NFSM, NMOOP)	ATIC-24 NMOOP-9 NFSM-9 ARYA-11	ATIC-24 NMOOP-9 NFSM-9 ARYA-11	ATIC- 1114 NMOOP-402 NFSM- 277 ARYA-598	ATIC- 1114 NMOOP- 402 NFSM- 277 ARYA-598	ATIC -28 NMOOP-7 NFSM-21	ATIC -28 NMOOP-7 NFSM-21	ATIC -342 NMOOP-135 NFSM-441	ATIC -342 NMOOP-135 NFSM-441

Seed Production (Qt.)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
-	152.25	1500	12160

## **5. ON FARM TRIAL**

### **A. Details of each On Farm Trial to be furnished in the following format**

#### **OFT – 1: Agronomy (Completed)**

**1) Title of technology:** Effect of zinc on growth and yield of wheat

**2) Problem Diagnosed/Defined:** Farmers do not use Zinc

Detail of technologies selected for assessment/refinement:

(1) Crop : Wheat

(2) Season/Year : Rabi 2019-20 to Rabi 2020-21

<b>T1: (Farmers' practices)</b>	1. Use only DAP and Urea in various dose (Farmers Practices)
<b>T2 : (Recommended Practice)</b>	2.120-60-60 NPK kg/ha (Recommended Practices)
<b>T3 : (Intervention )</b>	3.120-60-60 NPK kg/ha+ZnSO <sub>4</sub> @ 20 kg/ha as basal dose and foliar spray of ZnSO <sub>4</sub> @ 0.5% at heading and milking stage (Intervention)

(3) Number of replication

: 05

(4) Source of technology

: Main Dry Farming Research Station, JAU, Targhadia

(5) Production system thematic area

: Irrigated

(6) Thematic area

: Micro nutrient deficiency

(7) Cost

: 3200

(8) Indicator/parameter

: BC ratio, No. of tiller plants

#### **Result:**

<b>Crop/enterprise</b>	<b>Farming situation</b>	<b>Problem Diagnosed</b>	<b>Title of OFT</b>	<b>No. of trials*</b>	<b>Technology Assessed</b>	<b>Yield (q/ha)</b>	<b>Results of assessment</b>	<b>Feedback from the farmer</b>
Wheat	Rabi-2020-21	Farmers do not use Zinc	Effect of zinc on growth and yield of wheat	5	<b>T1</b>	44.03	As compare to treatments T1 and T2 production of cotton higher in treatment T3	Increases production due to number of plants per area is more than treatment T1
					<b>T2</b>	47.43		
					<b>T3</b>	51.08		

Technology Assessed	Production per unit q/ha	Net Return (Profit) in Rs./ ha	BC Ratio
<b>T1:</b> Farmers' practices): 120 X 45-60 cm (18519-13888 plants/ha)	44.03	79223.5	3.76
<b>T2 :</b> Recommended Practice): 90 X 30 cm (37037 plants/ha) (Var. GTHH-49 (BT))	47.43	99288.64	4.73
<b>T3:</b> T2 + De-topping at 75 DAS (Var. GTHH-49 (bt))	51.08	111424.68	4.90

### OFT -2: Agronomy (Ongoing)

**1) Title of technology:** High Density Planting in Cotton

**2) Problem Diagnosed/Defined:** Farmers do not adopt closer planting, there for get low cotton yield due to less soil moisture and incidence of pest and disease.

Detail of technologies selected for assessment/refinement

(1) Crop : Cotton

(2) Season/Year : Kharif 2020-21 to Kharif 2022-23

<b>T1:</b> ( Farmers' practices)	120 X 45-60 cm (18519-13888 plants/ha)
<b>T2 :</b> (Recommended Practice)	90 X 30 cm (37037 plants/ha) (Var. GTHH-49 (bt))
<b>T3:</b> (Intervention)	T2 + De-topping at 75 DAS (Var. GTHH-49 (bt))

(3) Number of replication : 03

(4) Source of technology : Cotton Research Station, JAU, Junagadh

(5) Production system thematic area : Rainfed Farming

(6) Thematic area : Closure Planting method

(7) Cost : Rs 4800

(8) Indicator/parameter : BC ratio, Pest Observation, Crop duration

**Result:**

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Production per unit q/ha	Results of assessment	Feedback from the farmer
Cotton	Rainfed	To increase the yield by high density planting	High Density Planting in cotton	3	T1	17.5	As compare to treatments T1 and T2 production of cotton higher in treatment T3	High density with de-topping gave better yield
					T2	20.5		
					T3	24.5		

Technology Assessed	Production per unit	Net Return (Profit) in Rs./ha	BC Ratio
T1: Farmers' practices): 120 X 45-60 cm (18519-13888 plants/ha)	17.5 q/ha	114350	4.66
T2 :Recommended Practice): 90 X 30 cm (37037 plants/ha) (Var. GTHH-49 (BT)	20.5 q/ha	130740	4.93
T3: T2 + De-topping at 75 DAS (Var. GTHH-49 (bt))	24.5 q/ha	159160	5.32

### OFT - 3: Plant Protection (Ongoing)

**Title:** Management of leaf Webber in Sesame

**Problem Diagnosed / Defined:** Injudicious use of pesticides

Details of technologies selected for assessment/refinement:

- (1) Crop : Sesame  
 (2) Season/ Year : Kharif -2019-20 to Kharif -2021-22  
 (3) Spacing : 120 x 45 cm

T <sub>1</sub>	Farmer practices	Farmers' practices: High dose and Use of conventional Chemical pesticides (Farmers Practices- Monocrotophos 50 ml, fenvalrate 20 to 25 ml and cypermethrin 20 to 25 ml/ 15 lit. of water)
T <sub>2</sub>	Assessment/ refined Practices	Spray of <i>Beuveria bassiana</i> 75gm /10 lit + emamectin benzoate 5 SG 0.0035% (4g/10 lit. water) and 2 <sup>nd</sup> spray at 15 days after 1 <sup>st</sup> spray)

(4) Number of replication : 03

- (5) Source of technology : ARS, Amreli  
 (6) Production system thematic area : Rainfed Farming  
 (7) Thematic area : IPM  
 (8) Total Cost : Rs 4500  
 (9) Indicator : 1. Record No. of Larva per Plant /1mt. row length 2. Yield data

**Result:**

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Sesame	Rainfed	Injudicious use of pesticides	Management of leaf Webber in Sesame	3	T1: Farmers' practices: High dose and Use of conventional Chemical pesticides (Farmers Practices- Monocrotophos 50 ml, fenvalrate 20 to 25 ml and cypermethrin 20 to 25 ml/ 15 lit. of water)	Yield (q/ha)	3.4	As compare to T1 treatment production of higher in treatment T2 (But 60- 70% reduction in production due to heavy Rainfall )	Increase in production in treatment T2 because of judicious use of recommended dose of pesticides compare to treatment T1 (But 80- 90% reduction in production due to heavy Rainfall )
						No. of Larva per Plant /1mt. row length before spray	2.65		
						No. of Larva per Plant /1mt. row length after spray	1.70		
					T2 Spray of <i>Beuveria</i> <i>bassiana</i> 75gm /10 lit + emamectin benzoate 5 SG 0.0035% (4g/10 lit. water) and 2 <sup>nd</sup> spray at	Yield (q/ha)	4.4		
						No. of Larva per Plant /1mt. row length before spray	2.55		

					15 days after 1 <sup>st</sup> spray)	No. of Larva per Plant /1mt. row length after spray	0.30		
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Technology Assessed	Production per unit	Net Return (Profit) in Rs. / ha	BC Ratio
11	12	13	14
T1: Farmers' practices: High dose and Use of conventional Chemical pesticides (Farmers Practices- Monocrotophos 50 ml, fenvalrate 20 to 25 ml and cypermethrin 20 to 25 ml/ 15 lit. of water) pesticides	3.4 q/ha	9912.1	1.5 9
T2: Spray of <i>Beuveria bassiana</i> 75gm /10 lit + emamectin benzoate 5 SG 0.0035% (4g/10 lit. water) and 2 <sup>nd</sup> spray at 15 days after 1 <sup>st</sup> spray)	4.4 q/ha	17769.6	2.0 9

#### OFT -4: Plant Protection (Completed)

Title: Management of white grub in Groundnut

Problem Diagnosed / Defined: No seed treatment & Soil application of bio pesticides

Details of technologies selected for assessment/refinement:

(1) Crop : Groundnut

(2) Season/ Year : Kharif -2019-20 to Kharif -2021-22

(3) Spacing : 45 x 10

T <sub>1</sub>	Farmer practices	Farmers' practices: No Seed treatment and application of chlorpyrifos 4 lit/ha with irrigation water)
T <sub>2</sub>	Assessment/refined Practices	Seed treatment with Chlorpyrifos 20 EC @ 25 ml/kg seed and Soil application of <i>Metarhizium anisopliae</i> 1.15 WP @ 5 kg/ha along with Castor cake (300 kg/ha) before sowing and drenching in plant row after 30 days of germination

(4) Number of replication : 03

(5) Source of technology : Dept. of Entomology, COA, JAU, Junagadh

(6) Production system thematic area : Rainfed Farming

(7) Thematic area : IPM

(8) Total Cost : Rs. 6000

(9) Indicator : 1. Record No. of Larva per Plant /1mt. row length 2. Yield data

**Result:**

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Groundnut	Rainfed	No seed treatment & Soil application of bio pesticides	Management of white grub in Groundnut	3	T1: Farmers' practices: No Seed treatment and application of chlorpyrifos 4 lit/ha with irrigation water)	Yield (q/ha)	24.3	As compare to T1 treatment production higher in treatment T2	-
						No. of Larva per Plant /1mt. row length before spray	2.45		
						No. of Larva per Plant /1mt. row length after spray	0.65		
					T2 : Seed treatment with Chlorpyrifos 20 EC @ 25 ml/kg seed and Soil application of Metarhizium anisopliae 1.15 WP @ 5 kg/ha along with Castor cake (300 kg/ha) before sowing and drenching in plant row after 30 days of germination	Yield (q/ha)	27.1		
						No. of Larva per Plant /1mt. row length before spray	---		
						No. of Larva per Plant /1mt. row length after spray	0.20		



<b>Technology Assessed</b>	<b>Production per unit</b>	<b>Net Return (Profit) in Rs. / ha</b>	<b>BC Ratio</b>
11	12	13	14
T1 ⊕ Farmers' practices): No Seed treatment and application of chlorpyrifos 4 lit/ha with irrigation water)	24.3 q/ha	91654.0	3.53
T2 ⊕ Recommended Practice): Seed treatment with Chlorpyrifos 20 EC @ 25 ml/kg seed and Soil application of Metarhizium anisopliae 1.15 WP @ 5 kg/ha along with Castor cake (300 kg/ha) before sowing and drenching in plant row after 30 days of germination	27.1 q/ha	108130.3	4.13

#### OFT -5: Agriculture Engineering (Ongoing)

a	<b>Title</b>	:	Effect of plastic mulch on yield of watermelon.
B	Problem Diagnose	:	Low yield potential of watermelon.
C	Treatments		
	T1- Farmers' practice	:	No mulch
	T2-Recommended Technology	:	Silver Black Plastic Mulch (20 micron) under drip irrigation system
	T3-Technology assessed or Refined	:	Wheat straw mulch
d	Number of replication	:	03
e	Source of Technology	:	Dept. of Renewable Energy and Rural Engg., CAET, JAU, Junagadh
f	Thematic area	:	Plastic in Agriculture
g	Critical Input	:	20µm silver black plastic mulch
h	Unit Cost	:	3000
i	Total Cost	:	Rs. 9000
j	Duration of project	:	3 year
l	Indicator/Parameter	:	Yield, Per fruit weight, C:B ratio

**Result:**

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Watermelon	Irrigated	Low yield potential of watermelon	Effect of plastic mulch on yield of watermelon	3	T1 (Farmers' practices): No mulch	Yield (q/ha)	213.2	Treatment T2 was found better than T1 and T3.	Mulch treatment was found beneficial for insect reduction and fruit disease reduction
						Per fruit weight	2.57		
					T2 (Recommended Practice): Silver Black Plastic Mulch (20 micron) under drip irrigation system	Yield (q/ha)	345.1		
						Per fruit weight	3.61		
					T3 (Technology assessed or Refined): Wheat straw mulch	Yield (q/ha)	220.7		
						Per fruit weight	2.66		

Technology Assessed	Production per unit q/ha	Net Return (Profit) in Rs. / ha	BC Ratio
11	12	13	14
T1 (Farmers' practices): No mulch	213.2	17694	1.39
T2 (Recommended Practice): Silver Black Plastic Mulch (20 micron) under drip irrigation system	345.1	108205	2.68
T3 (Technology assessed or Refined): Wheat straw mulch	220.7	31540	1.63

**OFT -6: Agriculture Engineering (Ongoing)**

a	<b>Title</b>	:	Effect of Packaging material on seed quality of groundnut seeds.
B	Problem Diagnose	:	Farmers do not store groundnut seed properly.
C	Treatments		
	T1- Farmers' practice	:	Loose heap storage (farmer practices)
	T2-Recommended Technology	:	Use of Purdue Improved Crop Storage (PICS) bags for storage
d	Number of replication	:	05
e	Source of Technology	:	JAU Recommendation and interaction with scientists
g	Thematic area	:	Storage techniques
h	Critical Input	:	1 PICS bag
i	Unit Cost	:	500
j	Total Cost	:	2500
k	Duration of project	:	3 year
	Indicator/Parameter	:	Insect Infestation, C:B ratio

**Result: Results awaited.**

**OFT 7: Home Science (Completed)**

1. Title of Technology Assessed: Preservation techniques of different pulses with organic methods

2. Problem Definition: Lack of knowledge

Details of technologies selected for assessment/refinement:

3. Details of technologies selected for assessment

Crop : Pigeon pea and green gram

Season/ Year : Kharif -2021 to Kharif -23

Spacing : -

T1	Farmer practices	T4. Without any treatment
T2	Recommended Technology	T3. Use of plastic bag
T3		T2. Use of Castor oil
T4		T1. Use of Neem leaves

4. Source of technology: IRRI-2011
5. Production system and thematic area: Storage Techniques
6. Performance of the Technology with performance indicators: Infestation percent
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques:-
8. Final recommendation for micro level situation: -
9. Constraints identified and feedback for research:-
10. Process of farmers participation and their reaction: T2 was found more suitable for storage of grains

**Result:**

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials *	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment t	Feedback from the farmer	
1	2	3	4	5	6	7	8	9	10	
Farm woman	Irrigated	Lack of knowledge	Preservation techniques of different pulses with organic methods	5	T1	Pigeon pea	Infestation percent	11	T2 was found more suitable for storage of grains	Quality of stored grain in T2 was found finest as compare to other treatments
						Green gram		9.1		
					T2	Pigeon pea	Infestation percent	2.1		
						Green gram		1.95		
					T3	Pigeon pea	Infestation percent	8.74		
						Green gram		6.8		
					T4	Pigeon pea	Infestation percent	18.6		
						Green gram		23.1		

## 6. Training Achievements (January 2021- December 2021):

### 6.1 On Campus Trainings

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		M	F	Total	M	F	Total	M	F	Total
<b>(A) Farmers &amp; Farm Women</b>										
<b>I Horticulture</b>										
Nursery raising	1	20	00	20	06	00	06	26	00	26
Layout and Management of Orchards	1	42	10	52	04	03	07	45	14	59
<b>Total</b>	<b>2</b>	<b>62</b>	<b>10</b>	<b>72</b>	<b>10</b>	<b>3</b>	<b>13</b>	<b>71</b>	<b>14</b>	<b>85</b>
<b>II Home Science</b>										
Household food security by kitchen gardening and nutrition gardening	01	00	46	46	00	10	10	00	56	56
Design and development of low/minimum cost diet	01	00	25	25	00	00	00	00	25	25
Value addition	03	00	74	74	00	00	00	00	74	74
Location specific drudgery reduction technologies	01	00	52	52	00	08	08	00	60	60
Rural Crafts	00	00	00	00	00	00	00	00	00	00
Women and child care	02	00	43	43	00	00	00	00	43	43
Income generation activities for empowerment of rural women	04	00	112	112	00	00	00	00	112	112
<b>Total</b>	<b>12</b>	<b>0</b>	<b>352</b>	<b>352</b>	<b>0</b>	<b>18</b>	<b>18</b>	<b>0</b>	<b>370</b>	<b>370</b>
<b>III Agril. Engineering</b>										
Farm Machinery and its maintenance	2	27	33	60	7	5	12	34	38	72
Installation and maintenance of micro irrigation systems	1	40	18	58	0	2	2	40	20	60
Use of Plastics in farming practices	1	0	28	28	0	0	0	0	28	28
Small scale processing and value addition	1	0	26	26	0	0	0	0	26	26
Post Harvest Technology	1	0	2	2	0	18	18	0	20	20
Groundwater recharge	1	40	18	58	0	2	2	40	20	60
Soil & Water Conservation	1	25	0	25	0	0	0	25	0	25
Green house & net house	2	61	31	92	3	0	3	64	31	95
Drainage importance	1	0	29	29	0	0	0	0	29	29

<b>Total</b>	<b>11</b>	<b>193</b>	<b>185</b>	<b>378</b>	<b>10</b>	<b>27</b>	<b>37</b>	<b>203</b>	<b>212</b>	<b>415</b>
<b>IV Plant Protection</b>										
Integrated Pest Management	1	26	0	26	3	0	3	29	0	29
Integrated Disease Management	1	22	0	22	0	0	0	22	0	22
Bio-control of pests and diseases	1	50	11	61	0	0	0	50	11	61
Production of bio control agents and bio pesticides	1	55	0	55	0	0	0	55	0	55
<b>Total</b>	<b>4</b>	<b>153</b>	<b>11</b>	<b>164</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>156</b>	<b>11</b>	<b>167</b>
<b>V Crop Production</b>										
Organic farming	2	54	0	54	0	0	0	54	0	54
Balance use of fertilizers	1	21	0	21	0	0	0	21	0	21
Integrated nutrient management	2	120	20	140	12	0	12	132	20	152
Balance use of fertilizers	1	25	5	30	0	0	0	25	5	30
Soil and Water Testing	1	30	8	38	5	0	5	35	8	43
<b>Total</b>	<b>7</b>	<b>250</b>	<b>33</b>	<b>283</b>	<b>17</b>	<b>0</b>	<b>17</b>	<b>267</b>	<b>33</b>	<b>300</b>
<b>VI Extension</b>										
Entrepreneurial development of farmers/youths	2	50	0	50	5	0	5	55	0	55
<b>Total</b>	<b>2</b>	<b>50</b>	<b>0</b>	<b>50</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>55</b>	<b>0</b>	<b>55</b>
<b>B) Rural Youth</b>										
Rainwater harvesting	2	60	4	64	8	3	11	68	7	75
Value addition	4	0	134	134	0	8	8	0	142	142
Integrated farming	1	29	5	34	0	0	0	29	5	34
<b>TOTAL</b>	<b>7</b>	<b>89</b>	<b>143</b>	<b>232</b>	<b>8</b>	<b>11</b>	<b>19</b>	<b>97</b>	<b>154</b>	<b>251</b>
<b>C) Extension functionary</b>										
Micro Irrigation System	1	40	18	58	0	2	2	40	20	60
Rainwater harvesting tech.	1	28	0	28	2	0	2	30	0	30
<b>TOTAL</b>	<b>2</b>	<b>68</b>	<b>18</b>	<b>86</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>70</b>	<b>20</b>	<b>90</b>
<b>GRAND TOTAL</b>	<b>47</b>	<b>865</b>	<b>752</b>	<b>1617</b>	<b>55</b>	<b>61</b>	<b>116</b>	<b>919</b>	<b>814</b>	<b>1733</b>

## 6.2 Off Campus Trainings

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		M	F	Total	M	F	Total	M	F	Total
<b>(A) Farmers &amp; Farm Women</b>										
<b>I Horticulture</b>										
Nursery raising	1	20	00	20	06	00	06	26	00	26
Layout and Management of Orchards	1	42	10	52	04	03	07	45	14	59
<b>Total</b>	<b>2</b>	<b>62</b>	<b>10</b>	<b>72</b>	<b>10</b>	<b>3</b>	<b>13</b>	<b>71</b>	<b>14</b>	<b>85</b>
<b>II Home Science</b>										
Household food security by kitchen gardening and nutrition gardening	02	00	56	56	00	03	03	00	59	59
Design and development of low/minimum cost diet	01	00	25	25	00	00	00	00	25	25
Minimization of nutrient loss in processing	01	06	21	27	00	00	00	06	21	27
Gender mainstreaming through SHGs	02	00	71	71	00	10	10	00	81	81
Value addition	01	00	20	20	00	02	02	00	22	22
Women empowerment	01	00	42	42	00	06	06	00	48	48
Location specific drudgery reduction technologies	02	00	40	40	09	22	31	09	62	71
Women and child care	02	00	43	43	00	00	00	00	43	43
Others (pl specify)	02	00	70	70	00	04	04	00	74	74
<b>Total</b>	<b>14</b>	<b>6</b>	<b>388</b>	<b>394</b>	<b>9</b>	<b>47</b>	<b>56</b>	<b>15</b>	<b>435</b>	<b>450</b>
<b>III Agril. Engineering</b>										
Farm Machinery and its maintenance	1	0	51	51	0	0	0	0	51	51
Installation and maintenance of micro irrigation systems	2	14	61	75	0	0	0	14	61	75
Soil & water conservation	2	4	67	71	0	0	0	4	67	71
Repair and maintenance of farm mach. & impl.	1	2	23	25	0	0	0	2	23	25
Small scale processing and value addition	1	0	22	22	0	0	0	0	22	22
Protected cultivation technology	6	110	59	169	9	18	27	119	77	196
Rainwater harvesting, drainage system	3	6	91	97	0	0	0	6	91	97
Natural Farming and Engg.	1	0	25	25	0	0	0	0	25	25

<b>Total</b>	<b>17</b>	<b>118</b>	<b>220</b>	<b>338</b>	<b>9</b>	<b>18</b>	<b>27</b>	<b>127</b>	<b>238</b>	<b>365</b>
<b>IV Plant Protection</b>										
Integrated Pest Management	1	29	18	47	0	0	0	29	18	47
Integrated Disease Management	1	55	0	55	0	0	0	55	0	55
Bio-control of pests and diseases	1	57	0	57	0	0	0	57	0	57
Production of bio control agents and bio pesticides	1	70	0	70	0	0	0	70	0	70
Cow based rakrutic shibir on pest management	2	173	0	173	0	0	0	173	0	173
Pest and disease management in oilseed crops	3	150	0	150	0	0	0	150	0	150
<b>Total</b>	<b>9</b>	<b>534</b>	<b>18</b>	<b>552</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>534</b>	<b>18</b>	<b>552</b>
<b>V Crop Production</b>										
Organic farming	3	252	89	341	0	0	0	252	89	341
Soil and Water Testing	1	70	15	85	0	0	0	70	15	85
Integrated nutrient management	2	65	25	90	0	0	0	65	25	90
<b>Total</b>	<b>6</b>	<b>387</b>	<b>129</b>	<b>516</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>387</b>	<b>129</b>	<b>516</b>
<b>VI Extension</b>										
Organic farming	4	161	6	167	0	0	0	161	6	167
Leadership development	1	58	0	58	0	0	0	58	0	58
<b>Total</b>	<b>5</b>	<b>219</b>	<b>6</b>	<b>225</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>219</b>	<b>6</b>	<b>225</b>
<b>B) Rural Youth</b>										
Value addition	2	00	67	67	00	13	13	00	80	80
<b>TOTAL</b>	<b>2</b>	<b>00</b>	<b>67</b>	<b>67</b>	<b>00</b>	<b>13</b>	<b>13</b>	<b>00</b>	<b>80</b>	<b>80</b>
<b>GRAND TOTAL</b>	<b>55</b>	<b>1326</b>	<b>838</b>	<b>2164</b>	<b>28</b>	<b>81</b>	<b>109</b>	<b>1353</b>	<b>920</b>	<b>2273</b>

### 6.3 SUMMARY OF TRAINING:

#### 6.3.1 Training Achievement (On campus):

Sr. No.	Subject	No. of training	No. of Participants		
			Male	Female	Total
1	Horticulture	2	71	14	85
2	Home Science	12	00	370	370
3	Agriculture Engineering	11	203	212	415
4	Plant Protection	4	156	11	167



5	Crop Production	7	267	33	300
6	Extension Education/Capacity building	2	55	00	55
7	Rural Youth	7	97	154	257
8	Extension functionary	2	70	20	90
<b>Total</b>		<b>47</b>	<b>919</b>	<b>814</b>	<b>1733</b>

### 6.3.2 Training Achievement (Off campus):

Sr. No.	Subject	No of training	No of Participants		
			Male	Female	Total
1	Horticulture	2	71	14	85
2	Home Science	14	15	435	450
3	Agriculture Engineering	17	127	238	365
4	Plant Protection	9	534	18	552
5	Crop Production	6	387	129	516
6	Extension Education/capacity building	5	219	6	225
<b>Total</b>		<b>53</b>	<b>1353</b>	<b>840</b>	<b>2193</b>

### 6.4 Sponsored and Collaborative Training Programmes

Sr. No.	Date	Title	Discipline	Thematic area	Duration (days)	Client (PF/RY/EF)	No. of courses	No. of Participants			Sponsoring Agency
								M	F	T	
1	15/01/2021	Integrated crop management	Agriculture Extension	IFS	01	PF	01	34	0	34	State department
2	19/01/2021	Capacity building for ICT application	Agriculture Extension	Income generation	01	RY	01	29	5	34	BCI
3	23/02/2021	Fertilizer Management	Crop production	INM	01	PF	01	35	0	35	GSFC
4	22/03/2021	Micro Irrigation System	Agriculture Engineering	Resource conservation	01	PF&FW	01	40	20	60	GGRC

5	03/04/2021	Quality Seed Production	Crop production	Farming system	01	PF	01	60	0	60	Bij Nigam Amreli
6	12/08/2021	Urban horticulture	Crop production	Farming system	01	RY	01	30	30	60	District Horti. dept, Amreli
7	08/09/2021	Agro forestry	Crop production	Agro forestry	01	EF&FW	01	100	20	120	District Forest Dept., Amreli
8	21 to 22/09/2021	Value Addition of millets	Home Science	Value Addition	02	FW	01	00	30	30	ATMA
9	30/09/2021	Rainwater harvesting methods	Agriculture Engineering	Resource conservation	01	PF&FW	01	00	30	30	ATMA
10	04 to 05/10/2021	Value Addition of fruits and vegetables	Home Science	Value Addition	02	FW	01	00	50	50	District Horti. dept, Amreli
11	01 to 03/12/2021	Bakery products development	Home Science	Income generation activities	03	RY	01	00	29	29	College of Agri., Motabhandariya
12	22 to 23/12/2021	Value Addition of fruits and vegetables	Home Science	Value Addition	02	FW	01	00	50	50	District Horti. dept., Amreli
13	22/12/2021	Fruit Plants	Agriculture Engineering	Preservation & value addition	01	FW	01	0	37	37	District Horti. dept., Amreli
14	27/12/2021	Honeybee farming	Plant protection	Income generation	01	PF&FW	01	106	80	186	Amar Dairy
15	28/12/2021	Value Addition of fruits and vegetables	Home Science	Value Addition	02	FW	01	00	25	25	District Horti. Dept., Amreli
<b>Total</b>								<b>434</b>	<b>406</b>	<b>840</b>	

### 6.5 Vocational training programmes for rural youth

Crop / Enterprise	Training title*	Identified Thrust Area	Duration (days)	No. of Participants			Self-employed after training			Number of persons employed elsewhere
				M	F	Total	Type of units	Number of units	Number of persons employed	
Home Science	Bakery Products Development	women empowerment	04	00	40	40	0	0	0	0

## 7. Achievements of Frontline Demonstrations:

### 7.1 Details of farming situation of FLDs conducted (January 2021- December 2021)

Crop	Season	Farming situation	Type of Soil	Status of Soil			Sowing date	Harvesting Date
				N	P	K		
Sesame	Summer 2021	Irrigated	Medium Black	L	M	H	2 <sup>nd</sup> to 4 <sup>th</sup> week of February-2021	3 <sup>rd</sup> to 4 <sup>th</sup> week of April 2021
Black Gram		Irrigated		L	M	H	2 <sup>nd</sup> to 3 <sup>rd</sup> week of February-2021	2 <sup>nd</sup> to 3 <sup>rd</sup> week of April 2021
Green Gram		Irrigated		L	M	H	2 <sup>nd</sup> to 3 <sup>rd</sup> week of February-2021	2 <sup>nd</sup> to 3 <sup>rd</sup> week of April 2021
Castor	Kharif-21	Rainfed		L	M	H	4 <sup>th</sup> week of July to 2 <sup>nd</sup> week of August-2021	Yield awaited
Cotton		Rainfed		M	M	H	3 <sup>rd</sup> week of June to 1 <sup>st</sup> week of July-2021	4 <sup>th</sup> week of January to 2 <sup>nd</sup> week of February-2022
Wheat	Rabi 21-22	Irrigated		M	L	H	2 <sup>nd</sup> to 3 <sup>rd</sup> Week of November 2021	Yield awaited
Cumin		Irrigated		L	M	H	3 <sup>rd</sup> to 4 <sup>th</sup> Week of November 2021	Yield awaited
Coriander		Irrigated		M	M	H	2 <sup>nd</sup> to 3 <sup>rd</sup> Week of November 2021	Yield awaited
Chick pea		Irrigated		L	M	H	1 <sup>st</sup> to 2 <sup>nd</sup> Week of November 2021	Yield awaited

### 7.2. Performance of Front line demonstrations of crops

Sr. No.	Crop	Season	Component /variety	No. of FLD	Area (ha)	Average yield (q/ha)		% increase in productivity over local check
						Demon.	Local check (Variety)	
1	Sesame	Summer 2021	GT-3	10	4	12.21	10.68	14.33
2	Black Gram	Summer 2021	Guj. Urd-2	10	4	9.736	8.43	15.49
3	Green Gram	Summer 2021	GM-6	10	4	8.58	7.48	14.71
4	Castor	Kharif-21	GCH-9	10	4	Yield awaited		
5	Cotton	Kharif-21	INM	10	4	12.2	11	10.91
6	Wheat	Rabi 21-22	INM	10	4	Yield awaited		
7	Cumin	Rabi 21-22	IDM	10	4			
8	Coriander	Rabi 21-22	GC-2	10	4			
9	Chick pea	Rabi 21-22	Drip irrigation	10	4			

### 7.3 Economic Impact of FLDs

Sr. No.	Crop	Variety/ Component	Season	Average Cost of cultivation (Rs./ha)		Average Gross Return (Rs./ha)		Average Net Return (Profit) (Rs./ha)		Cost Ratio (Gross Return / Gross Cost)	
				Demo	Local Check	Demo	Local Check	Demo	Local Check	Demo.	Local
1	Sesame	GT-3	Summer 2021	22878.4	22175	109890	85440	87011.6	63265	4.80	3.85
2	Black Gram	Guj. Urd-2	Summer 2021	19523	19033	38944	32034	19421	13001	1.99	1.68
3	Green Gram	GM-6	Summer 2021	21198.4	216156	55770	41140	34571.6	19525	2.63	1.90
4	Castor	GCH-9	Kharif-21	Yield awaited							
5	Cotton	INM	Kharif-21	30682	32400	109800	82200	79118	49800	3.58	2.54
6	Wheat	INM	Rabi 21-22	Yield awaited							
7	Cumin	IDM	Rabi 21-22								
8	Coriander	GC-2	Rabi 21-22								
9	Chick pea	Drip irrigation	Rabi 21-22	Yield awaited							

### 7.4 Details of FLD on Enterprises

#### (I) Farm Implements

Name of the implement	Name of technology	Crop	No. of farmers	Area (ha)	Performance parameters
Cotton Shredder	Agril. Machinery	Cotton	10	12	0.20 ha/hr (Field capacity)
Revolving milking stool	Drudgery reduction	-	5	-	Ongoing

## 7.5 Farmers Reaction:

Crop	Variety/Input	Farmers' reaction
Gram	GJG-3	<ul style="list-style-type: none"> <li>▶ High Yield Variety</li> <li>▶ Bold seeded Variety</li> <li>▶ Stunt virus resistant Variety</li> </ul>
Cumin	IDM	<ul style="list-style-type: none"> <li>▶ Less problem of wilt due to application of Trichoderma</li> <li>▶ Less problem of blight and powdery mildew due to spraying of carbendazim and Hexaconazole</li> </ul>
Wheat	GW-173	<ul style="list-style-type: none"> <li>▶ Resistant to Shoot borer</li> <li>▶ High yielding</li> <li>▶ Best for late sowing</li> </ul>
Wheat	GJW-463	<ul style="list-style-type: none"> <li>▶ High Yield Variety</li> <li>▶ Grain quality is good</li> </ul>
Green Gram	GAM-5	<ul style="list-style-type: none"> <li>▶ Highly resistant to Yellow Mosaic Virus (YMV)</li> <li>▶ Bold seed size with attractive shiny grain appearance</li> </ul>
Groundnut	GJG-22	<ul style="list-style-type: none"> <li>▶ Higher production</li> <li>▶ Less stem rot problems</li> <li>▶ Quality of seed is good</li> </ul>
Sesame	GT-4	<ul style="list-style-type: none"> <li>▶ Bold seeded, whiteness more and higher production then other varieties</li> </ul>
Cotton	INM	<ul style="list-style-type: none"> <li>▶ Less reddening of leaves</li> <li>▶ Higher Yield</li> </ul>
Cotton	GTHH-49	<ul style="list-style-type: none"> <li>▶ Higher Yield</li> <li>▶ Suitable for High density planting</li> </ul>
Cotton	IPM	<ul style="list-style-type: none"> <li>▶ Better control of pests</li> <li>▶ Economic to other chemical pesticides</li> </ul>
Castor	GCH-9	<ul style="list-style-type: none"> <li>▶ Resistance to wilt, root rot and tolerant to sucking pests</li> <li>▶ Higher Yield</li> </ul>
Sorghum	GFS-5	<ul style="list-style-type: none"> <li>▶ High yielder</li> <li>▶ Resistance to major pests and diseases and suitable under drought condition</li> </ul>
Pigeon Pea	GJP-1	<ul style="list-style-type: none"> <li>▶ High yielding</li> <li>▶ Bright white colored seed gives good price in market</li> </ul>

## 8. Other Schemes Activities

### 8.1 Agriculture Technology Information Centre Activities (ATIC):

#### I. Trainings:

Sr. No.	Types of training	No. of Training	No. of participants
1	On Campus	9	346
2	Off Campus	15	768
3	Field day	9	160
4	Field visit	19	182
<b>Total</b>		<b>52</b>	<b>1456</b>

Sr. No.	Crop	Season	Component /Variety	No. of FLD	Area (ha)	Average yield (q/ha)		% increase in productivity over local check
						Demo	Local check	
1	Groundnut	Kharif 21	IPM (Metarhizium, Beauveria, Azadirachtin chloropyrifos)	20	5	23.18	21.05	10.14
2	Cotton		MDT tube	10	2.5	21.3	18.1	17.50
3	Cotton		IPM (Cotton Inputs Beauveria, Azadirachtin, Pheromone trap)	20	5	22.24	20.13	10.50
4	Groundnut		GJG-32	20	5	29.54	26.31	12.27
5	Sesame		GT-4	10	4	2.37	2.05	16.09
6	Gram	Rabi 21-22	GJG-6	25	6.25	Crop standing		
7	Gram		IDPM	25	6.25			
8	Onion		IDM	10	2.5			
9	Wheat		GW-463	25	6.25			
<b>Total</b>				<b>165</b>	<b>42.75</b>			

### III. Economic Impact of FLDs (ATIC)

Crop	Average Cost of cultivation (Rs./ha)		Average Gross Return (Rs./ha)		Average Net Return (Profit) (Rs./ha)		Cost Ratio (Gross Return / Gross Cost)	
	Demo	Local Check	Demo	Local Check	Demo	Local Check	Demo	Local Check
Groundnut	31944	34282	120709	109486	88765	75204	3.78	3.20
Cotton	40063.8	41293.4	182348.3	149983.3	142284.5	108689.9	4.57	3.64
Cotton	38621	41029	190777	168962	152156	127933	4.97	4.16
Groundnut	30238	32926	151646	134957	121409	102031	5.08	4.15
Sesame	10227	11202	19702	16933	9474	5731	1.91	1.51
Gram	Yield awaited							
Gram								
Onion								
Wheat								

### 8.2. I. Activities-Cluster base Front Line Demonstrations of Rabi and Summer Pulses under NFSM:

Sr. No.	Types of training	No. of training	No. of participants
1	On campus	4	125
2	Off campus	3	80
3	Field Day	6	210
4	Field visit	15	231
5	Sponsored training	2	72
<b>Total</b>		<b>30</b>	<b>718</b>

### II. Cluster Front Line Demonstrations of Rabi Pulses under NFSM:

Sr. No.	Crop	Season	Component /Variety	No. of FLD	Area (ha)	Average yield (q/ha)		% increase in productivity over local check
						Demo	Local check	
1	Pigeon pea	Kharif 21	GJP-1, Trichoderma, Rhizobium, Beuvaria, PSB	50	20	Standing		
2	Gram	Rabi-2021-22	GJG-6, Trichoderma, HNPV, Beuvaria, pheromen trap	50	20	Standing		
<b>Total</b>				<b>100</b>	<b>40</b>			

### 8.3. I. ACTIVITIES-CLUSTER BASE FRONT LINE DEMONSTRATIONS OF OILSEED UNDER NMOOP:

Sr. No.	Types of training	No. of training	No. of participants
1	On/Off campus	8	364
2	Field Day	7	135
3	Sponsored training	1	38
<b>Total</b>		<b>16</b>	<b>537</b>

### II. CLUSTER FRONT LINE DEMONSTRATIONS OF OILSEED UNDER NMOOP:

Sr. No.	Crop	Season	Component /Variety	No. of FLD	Area (ha)	Average yield (q/ha)		% increase in productivity over local check
						De mo	Local heck	
1	Groundnut	Kharif-2021	GJG-22, Metarhizium, Rhizobium and PSB	50	20	27.8	26.23	5.99
2	Sesame	Kharif-2021	GT-4 and Beauria, Trichoderma, Azadirectine, Pendimethalin	50	20	2.11	1.91	10.33
<b>Total</b>				<b>100</b>	<b>40</b>			

**8.4 Activities under ARYA:****I. Enterprise established:**

<b>Enterprise</b>				
<b>Sr. No.</b>	<b>Indicators</b>	<b>Name of Enterprise 1: Dal mill (02)</b>	<b>Name of Enterprise 2: Masala making (02)</b>	<b>Name of Enterprise 3: Mava making (02)</b>
1.	Year of establishment	Feb, 2022	Feb, 2022	Feb, 2022
2.	No. of Training Programs Conducted (Number)	03	02	02
3.	No. of Rural youth trained (Number)	96	70	181

**II. Training programme:-**

<b>Sr. No.</b>	<b>Title</b>	<b>No. participate</b>
1.	Awareness training on ARYA	150
2.	Value addition of milk	25
3.	Marketing opportunity for value added product of spices	37
4.	Value addition of milk	39
<b>Total</b>		<b>251</b>

**8.5 Activities under MGMG:****I. Detailed Progress:**

<b>No. of Team formed</b>	<b>No. of Scientists</b>	<b>No. of Villages selected</b>	<b>No. of Blocks</b>	<b>No. of Districts</b>	<b>Bench Mark Survey conducted (No. of villages)</b>
02	08	10	03	01	10

**II. Activities undertaken****Activities undertaken by ICAR Institutes under MGMG**

<b>S. No.</b>	<b>Name of activity</b>	<b>No. of activities conducted</b>	<b>No. of farmers benefitted</b>
1	Awareness created	03	300
2	Demonstrations conducted	06	15
3	Interface meeting/ <i>Goshthies</i>	05	95
4	Literature support provided	06	1345
5	Training organized	01	35
6	Visit to village by teams	05	120
7	Mobile based advisories	32	4521
<b>Total</b>		<b>58</b>	<b>6431</b>



**III. Other activities organized by ICAR Institutes/ SAUs under MGMG****Table -2: Other activities organized by ICAR Institutes under MGMG:**

S. No.	Activity	Particulars	
1	Linkages developed with other agencies	No of Agency (No)	03
		Farmers Benefitted (No)	310

**8.6 Front Line Demonstration on Kitchen gardening:**

Sr. No.	Name of vegetables			Seasons	No. of participants
	Crop	Varieties	Qty. (Gram)		
1	Bottle guard	Pusa Navin	15	Kharif	100
	Brinjal	GJB-3	7		
		GRB-7	7		
	Cucumber	Gujarat Kakadi 1	7		
	Ladies finger	GO-6	25		
Beans	AVC-1	30			
2	Onion	ALR	10	Rabi	100
	Coriander	GDLC-1	10		
	Methi	RMT-305	10		
	Cowpea	CP-6	10		
	Carrot	P. Rudhira	10		
	Radish	P. Chetki	10		
	Chilli	K-2	5		
	Brinjal	P. Uttam	5		
	Tomato	PKM-1/S-22	5		
	Pea	P. Pragati	5		
	Drumstick	PKM-1	5		
	Palak	All Green	5		

**8.7 Activities under DAMU:****I Number of Weather Bulletin prepared from January - December, 2021**

District Name	No. of Bulletins
Amreli	104

Block name	No. of Bulletins
Amreli	104
Babra	104
Bagasara	104
Dhari	104
Jafrabad	104
Khambha	104
Kunkavav Vadiya	104
Lathi	104
Liliya	104
Rajula	104
Savarkundla	104
<b>Total No. of Block wise Weather Bulletin</b>	<b>1144</b>

**II Number of farmers connected**

Particular	No. of farmers
Whatsapp Group- 17	2356
Telegram Group - 1	194 Subscribers
Facebook page	1880 followers

**III Detail of farmers connected through WhatsApp**

Name of the Block	Total Village in Block	No. of WhatsApp Group	No. of Farmers Covered	No. of Villages Covered	No. of Extension Workers at panchayat / village level
Amreli	71	4	694	59	10
Babra	57	2	335	48	7
Bagasara	34	2	286	29	4
Dhari	75	1	162	42	8
Jafrabad	42	1	51	20	5
Khambha	57	1	127	45	3
Kunkavav-Vadia	45	2	261	41	5
Lathi	49	1	100	28	8
Lilia	37	1	78	38	6
Rajula	72	1	120	25	4
Savarkundla	80	2	276	51	15
<b>Total</b>	<b>619</b>	<b>18</b>	<b>2490</b>	<b>426</b>	<b>75</b>

**IV Farmer Awareness Program (FAP) organized by KVK, JAU, Amreli under DAMU**

S. No.	FAP/ Farmers meet /Meghdoot Popularization activities	Date	Location		Approx. No. of Farmers attended the Program
			Village	Block	
1	FAP, App.Popularization,	16-01-21	Lilia	Lilia	25
2	FAP, Meghdoot App.Popularization	18-01-21	Halriya	Bagasara	24
3	FAP, Meghdoot App.Popularization,Field visit	20-01-21	Sukhpur	Babra	12
4	FAP, Meghdoot App.Popularization	15/07/2021	Amreli	Amreli	29
5	FAP, Meghdoot App.Popularization	14/09/2021	Mangvapal	Amreli	47
6	FAP, Meghdoot App.Popularization	23/09/2021	Pithadiya	Bagasara	61
<b>Total</b>					<b>198</b>

## 9. Celebration of Special Events –

- ❖ **International Women Day-** On 09/03/2021, International women day was organized for 60 women. The objective and agenda of this international women day was to give women equity, empowerment and entrepreneurship. Looking to the objective all programme was based on same agenda.
- ❖ **World Water Day-** On 22/03/2021 World Water Day was celebrated in KVK, Amreli with total number of participants 60. During the event different lecture on water saving method and techniques in agriculture and allied sectors was given by the scientist of KVK and line department members.
- ❖ **World Milk Day-** On 01/06/2021 World Milk Day was celebrated in KVK, Amreli by organizing online training programme with total number of participants 70. During the event different lecture on world milk day was delivered by the scientist of KVK and other related department members.
- ❖ **Fertilizer awareness programme-** On 18/06/2021 Fertilizer awareness programme was celebrated in KVK, Amreli by organizing online webinar with total number of participants 49. During the event different lecture was delivered by the scientist of KVK.
- ❖ **Parthenium Awareness week-** As it is known to everyone that ‘Parthenium Awareness week’ was organized every year since 2004 to make farmers and general public aware about the menace of parthenium, so like every year this year KVK, Amreli also organized several activities from 16/08/2021 to 21/08/2021. Here is the list of activities with photographs.

Date	Name of Activity	Location	No. of Participants
16/08/2021	Lecture delivered on Parthenium uprooting, releasing Mexican beetles	Motabhandariya, College of Agriculture , JAU, Amreli	42
16/08/2021	Awareness programme on composting of uprooted biomass	Motabhandariya, College of Agriculture , JAU, Amreli	42
17/08/2021	Parthenium uprooting in public place	Amreli	10
18/08/2021	Training programme organized on spraying herbicides and composting of uprooted biomass	Village- Mangawapal, Amreli	20
18/08/2021	Training programme on releasing Mexican beetles and Parthenium uprooting	Village-Kachardi, Amreli	25
21/08/2021	Parthenium uprooting in campus	KVK, Amreli	14

- ❖ **Technology week celebration-** Technology week has been celebrated from 14/09/2021 to 18/09/2021 at Krishi Vigyan Kendra, Amreli, with a view to create mass

awareness among the farmers about the location specific advanced technologies for the sustainable agricultural production. Seminars and demonstrations on advanced technologies in agriculture and allied discipline such as Horticulture, Plant protection, Crop Production, Agriculture engineering, Agriculture extension and Home science have been conducted during the week. Total 291 participants including 57 farm-women and 234 farmers from about 07 villages of Amreli District were benefitted.

#### Details of Participants:

Date	Taluka wise Village		No. of participants		
			M	F	T
14/09/2021	Amreli	Mangvapal	2	46	48
15/09/2021	Kukavav	Pithadia	50	11	61
16/09/2021	Amreli	Amreli	55	00	55
17/09/2021	Amreli	Amreli	100	00	100
18/09/2021	Amreli	Varasda, Keriyaganas, Giriya	27	00	27
<b>Total</b>			<b>234</b>	<b>57</b>	<b>291</b>

- ❖ **PM Varieties release-** On 28/09/2021 PM Varieties release programme was organized by KVK, Amreli with Online mode. In this programme 65 participants including 14 KVK staff take part.
- ❖ **Millet Awareness day and tree plantation-** On 17/09/2021 Millet Awareness day and tree plantation was celebrated by KVK, Amreli with number of participants 52.
- ❖ **World Food Day:** World Food Day was celebrated on dt.: 16/10/2021. It was organized for 50 students, in this programme different information and lecture was delivered by KVK, scientist.
- ❖ **Minister visit:** On dated 11/11/2021 Honorable Agriculture Minister of Animal Husbandry and Cow breeding Shri Raghavji Patel Sir and Member of Parliament Shri Narayanbhai Kachhadiya sir visited KVK, Amreli and appreciated all the work done by KVK, Amrel. In this programme Dr. N. K. Gontia Hon'ble Vice Chancellor, JAU, Junagadh, Dr. H. M. Gajipara, DEE, JAU, Junagadh and other line dept officers, KVK, JAU, Amreli staff and progressive farmers of Amreli district were remained present.
- ❖ **Swacchta Hi Sewa fortnight:** On 16/12/2021 to 31/12/2021 Swacchta Hi Sewa fortnight was celebrated in KVK, by organizing different events as per guideline of ICAR.

The schedule of the whole month programme that was completed in Dec 2021 under SWS was as follows:-

Date	Activities	Palce	Particip ants
16-Dec-21	Plantation of trees	Amreli	34

17-Dec-21	Cleaning of offices, corridors and premises	KVK, Amreli	22
18-Dec-21	Cleanliness and sanitation drive in the villages adopted under the Mera Gaon Mera Gaurav	Liliya	22
19-Dec-21	Cleanliness and sanitation drive within campuses and surroundings	KVK, amreli	44
20-Dec-21	Utilization of organic wastes/ generation of wealth from waste, polythene free status	KVK, amreli	32
22-Dec-21	Technology demonstrations on agricultural technologies for conversion of waste to wealth, safe disposal of all kinds of wastes	KVK, amreli	49
23-Dec-21	Celebration of <u>Special Day</u> - KisanDiwas (Farmer's Day)-23 December inviting farmers.	KVK, amreli	52
25-Dec-21	Cleaning of public places	Keriya road, Amreli	28
27-Dec-21	Awareness on waste management	FTC, Amreli	31
28-Dec-21	awareness on recycling of waste water, water harvesting for agriculture	KVK, amreli	55

- ❖ **Hon'ble Prime Minister Talk:** On 16/12/2021 The hon'ble Prime Minister of India had addressed the farmers on Natural farming for this event KVK, Amreli organized one programme for 62 farmers and 86 farm women.
- ❖ **Celebration of Farmers day:** During 23 to 25 December 2021, Farmers day was celebrated by KVK, Amreli During this programme 144 farmers and 136 farm women take a part. Different training programme and lecture was organized for the same occasion.
- ❖ **Jal Shakti Abhiyan:** Jal Shakti Abhiyan was celebrated by KVK, JAU, Amreli from April to November 2021. Various online, on campus and off training programmes and various awareness programmes were organized about efficient water utilization in agriculture, micro irrigation system, rainwater harvesting, soil and water conservation, groundwater recharge etc.

Training Programs		No. Seed Packets distributed	No. Saplings distributed	Awareness Programs	
Number	Total Participants			Number	Participants
14	518	199	210	30	1109

**10. Extension Activities**

Activities	No. of programmes	No. of farmers	No. of Ext. Personnel	TOTAL
Advisory Services	1512	1512	23	1535
Whatsapp group	05	320	1	321
Diagnostic visits	10	52	2	54
Field Day	10	167	15	175
Group discussions	03	201	0	201
Film Show	28	1471	05	1476
Scientists' visit to farmers field	55	549	7	768
Ex-trainees Sammelan	2	125	05	130
Farmers' seminar/workshop	3	73	00	73
Method Demonstrations	25	1119	0	1119
Celebration of important days	4	196	5	201
Special day celebration	6	366	4	370
Exposure visits	6	184	0	184
Others (pl.specify) Lecture Delivered	119	2637	08	2637
<b>Total</b>	<b>1358</b>	<b>8542</b>	<b>75</b>	<b>8814</b>

**10.1 Online activities during year 2021**

Sr. No.	Activity Type	Mode of implementation	Title of Program	No. of Programmes	No. of Participant s/ Views
A	Farmers training				
1	World Milk Day Celebration	ZOOM App	World Milk Day Celebration	1	43
2	World bee Day Celebration	Google meet	World bee Day Celebration	1	30
3	Farm women training	Whatsapp video conferencing	MIS and Water conservation	1	25
4	Farmers' and Farm women training	YouTube Live	Cotton crop planning, seed selection, natural farming & rainwater harvesting	1	31
5	Farmers' and Farm women training and awareness	Google meet	Rainwater harvesting & Groundwater recharge	1	27
6		ZOOM App		2	75
7		Google meet		1	25
8	Farmers' and Farm women training	Google meet	Efficient use of fertilizer	1	61
	<b>Total</b>			<b>9</b>	<b>317</b>

## 11. Performance of demonstration units

### 11.1. Nursery raising at KVK:

We also developed one small scale nursery in net house, raising the different seedlings like Brinjal, tomato and chili for selling to farmers at nominal price.

Crop	Name of the crop	Name of the variety	Name of the hybrid	Number	Value (Rs.)	Number of farmers
Vegetable seedlings	Brinjal	Gujarat Junagadh Round Brinjal-6	-	5000	2500	65
	Tomato	Gujarat Tomato-6	-	3560	1780	48
	Chilli	Gondal patto (local)	-	3600	1800	55
<b>Total</b>				<b>12,160</b>	<b>6,080</b>	<b>168</b>

### 11.2 Horticultural Demonstration Units

Sl. No.	Demo Unit	Area ha	Details of production
			Variety/No. of various plants
1	Herbal garden	0.1	Medicinal plant
2	Orchards unit	0.5	Guava-45 Kg Sapota- 72 Kg Custard apple- 12 Kg Mango- 22 Kg

### 11.4 Soil/Water testing sample analysis

Sr. No.	Type of Sample	Numbers of sample	Income (Rs.)
1	Soil	18	5,400
2	Water	21	1680
<b>Total</b>		<b>39</b>	<b>7080</b>

## 12. Performance of instructional farm including seed Production

S N	Name of crop	Date of Sowing	Date of Harvesting	Area (ha)	Details of production		
					Variety	Type of produce	Qty. (Kg)
1	Wheat	09/11/2020	08-10/03/2021	1	GJW-463	Truthful	4780 kg
2	Groundnut	21 & 29-30/06/2021	25-29/10/2021	11	GJG-22	Foundation	10445 kg
3	Chickpea	20/11/2021	-	1.0	GJG-6	Truthful	Standing

### 13. LINKAGES

#### Functional linkage with different organizations

Sr. No.	Name of linkages
1.	Dy. Director of Agriculture.
2.	Dy. Director of Agril. Extension (FTC)
3.	Dy. Director of Horticulture
4.	Dy. Director of Animal Husbandry
5.	Dy. Director of Soil Conservation
6.	Dy. Director of Social Forestry
7.	Amreli Jilla Madhya Sahakari Bank
8.	Milk Co-Operative Society
9.	State Bank of India
10.	National Bank for Agriculture & Rural Development (NABARD)
11.	NHRDF
12.	Doordarshan Kendra
13.	All India Radio
14.	District Rural Development Agency
15.	ATMA
16.	Mahindra & Mahindra Co. Ltd.

#### List of Projects on going under the KVK, which have been financed by State Govt. /Other Agencies

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Agricultural Technology Information Centre (ATIC)	2005-06	State Government	850000
Cluster base FLD of Rabi Pulses under NFSM	2015-16	ICAR, New Delhi	780896
National Mission on Oilseeds and Oil Palm (NMOOP)	2015-16		137204
Attracting and Retaining Youth in Agriculture (ARYA)	2019-20		1506628
DAMU	2019-20		621057



## 14. FINANCIAL PERFORMANCE

### 14.1 Details of KVK Bank accounts

Bank account	Name of the bank	Location	Account Number
A. With Host Institute	State Bank of India	Agril campus, Junagadh	-----
B. With KVK	State Bank of India	Amreli (Current A/C)	10837874780
		Amreli (Saving A/C)	10837877690

### 14.2 Utilization of KVK funds during the year (April 2021 to December 2021)

Sr. No.	Particulars	Sanctioned	Released	Expenditure
<b>A. Recurring Contingencies</b>				
1	Pay & Allowances	95.00	78.47	68.40
2	Traveling allowance	1.00	8.68	0.24
3	Contingencies	12.00		9.64
<b>Total (A)</b>		<b>108.00</b>	<b>87.15</b>	<b>78.28</b>
<b>B. Non-Recurring Contingencies</b>				
1	Equipments including SWTL & Furniture/Vehicle/Library	00	00	00
<b>Total (B)</b>		<b>00</b>	<b>00</b>	<b>00</b>
<b>C.</b>	<b>Revolving fund</b>	00	00	9.56
<b>GRAND TOTAL (A+B+C)</b>		<b>108.00</b>	<b>87.15</b>	<b>87.84</b>

### 15. Status of revolving fund (Rs.) for the last three years

Year	Opening balance as on	Income during the year	Expenditure during the year	Net balance in hand as on
April 2019 to March 2020	54,42,575	21,30,032	19,80,100	55,92,507
April 2020 to March 2021	55,92,507	11,59,196	1,01,4207	57,37,496
April 2021 to December, 2021	57,37,496	8,44,517	9,56,494	56,25,519

**16. Workshop/Seminar/Conference/Meeting etc attended.**

Name of the staff	Designation	Title of the training programme	Institute where attended	Mode (Online/Offline)	Dates
Dr. N.S. Joshi	Senior Scientist and head	Annual Action Plan of KVK, Amreli	ICAR	Online	18/02/2021
		Useful for extension activities	JAU	Online	9 to 10/03/2021
		Zonal workshop	ICAR	Online	4 to 6/08/2021
Dr. P. S Jaysawal	Scientist (Agril. Engg.)	Aquifer Mapping and Groundwater Management	CGWB New Delhi, India	Online	28/12/2021
		Presentation skills for professional excellence	DEE, JAU, Junagadh	Offline	1 to 03/12/2021
		Use of mass media for transfer of technology	EEI, AAU, Anand, JAU, Junagadh	Online	1 to 03-09-2021
		Participatory Programme Planning, Monitoring and Evaluation	EEI, AAU, Anand, JAU, Junagadh	Online	9 to 10/03/2021
		IT Applications in Precision Irrigation	Mahatma Phule Krishi Vidyapeeth (Agricultural University), Rahuri (Online training programme)	Online	26/04/2021 to 16/05/2021
Dr. Neha Tiwari	Scientist (Home Science)	Participatory prog. Planning monitoring and evaluation	EEI Anand, JAU, Junagadh	Online	09/03/2021 to 10/03/2021
		Uses of mass media for transfer of Technology	EEI Anand, JAU, Junagadh	Online	01-09-2021 to 03-09-2021
		Online Orientation programme of newly recruited SMS of KVKs	EEI Anand, JAU, Junagadh	Online	03/05/2021 to 05/05/2021
Mr. N.M. Kachhadiya	Scientist (Plant Protection)	International webinar on Desert locust Schistocera Gregaria (Forsk.) International Scenario and a potential threat to India	NIPHM, Hyderabad	Online	02-07-2021

		Uses of mass media for transfer of Technology	EEl Anand, JAU, Junagadh	Online	01-09-2021 to 03-09-2021
		PPAG seminar on maintenance of quality and safety of horticultural and food crops through biological control of pests and disease	NAU, Navasari	Offline	30-12-2021
Mr. P. J. Prajapati	Scientist (Agronomy)	Integrated nutrient management	Dept. of Agronomy, JAU, Junagadh	Online	08 to 12/02/2021
		Participatory Programme Planning, Monitoring and Evaluation	EEl, AAU, Anand	Online	09/03/2021 to 10/03/2021
		Presentation skills for professional excellence	DEE, JAU, Junagadh	Online	01/12/2021 to 03/12/2021
Mr. V. S Parmar	Scientist (Agril. Ext.)	Reorienting Extension Education and Advisory Services for Sustainable Development of Farming Community	KVAFSU & NADCL, Jammu Kashmir	Online	08 to 28/07/2021
		Use of mass media for transfer of technology	EEl, AAU, Anand	Online	01 to 03-09-2021
		Online orientation programme on newly required SMS	EEl Anand, JAU, Junagadh	Online	03/05/2021 to 05/05/2021

**17. Literature Developed/Published.**

Item	Title	Authors name	Number
Research papers	A study of attitude of parents regarding gender discrimination	N. Tiwari	01
	To study opinion regarding necessity of marriage among female of the Mehsana and Ahmadabad	N. Tiwari and J. N. Vyas	01
	To study the knowledge of adolescences girls regarding iron deficiency anemia in Amreli city	N. Tiwari and J. N. Vyas	01
	Opinion of parents regarding the need to provide sex education to adolescents of Mehsana city	N. Tiwari and J. N. Vyas	01
	To study the attitude on marital adjustment of selected respondents from Mehsana and Ahmadabad city	J. N. Vyas and N. Tiwari and N. Chaudhari	01
	Adoption of selected drudgery reduction technologies related to agriculture by the farm women	N. Tiwari and J. N. Vyas	01
	An analytical study of food and nutritional values amongst urban and rural people in Ahmedabad district: A comparative evaluation	J. N. Vyas and N. Tiwari	01
	Morphometric Study of Dhatarwadi River Basin Using RS and GIS Techniques	P.S. Jayswal, N. K. Gontia and K. N. Sondarva	01
Book	Achievements and Endeavours of KVK, Amreli Since Year 2005-06 to 2020-21	N. S. Joshi, N. Tiwari., P. S. Jayswal, P. J. Prajapati, V. S. Parmar, N. M. Kachhadiya, S. G. Baria, K. J. Gadhiya, N. J. Hadiya, N. B. Ghoniya	01
	Family resource management	J. N. Vyas and N. Tiwari	01
Technical reports	Monthly (Gujarati, English)		24
	Quarterly (Gujarati, English)		8
	Six monthly (Gujarati, English)		4
	Nine monthly (Gujarati, English)		2
	Annual report (Gujarati, English)		2
	ZREAC Rabi 2021-22 Summer 2021		1
	ZREAC Kharif 2021-22		1
	AGRESKO		1
	Combined AGRESKO		1
SAC 2022		1	

News letters	JAU, News Letter		4
Popular articles	Bajarana mulayavaradhan thee banatee vishisht vaanageeo	N. Tiwari, P. S. Jayswal & N. S. Joshi	01
	Indigenous Technical Knowledge (ITK) in Organically Grown Vegetable Crops	P. J. Prajapati, Dr. N. S. Joshi, N. M. Kachhadiya and V. S. Parmar	01
	Agricultural Importance of Entomopathogenic Fungi (ENPF)	N. M. Kachhadiya, V.S. Parmar, P. J. Prajapati, N. S. Joshi	01
	Vitamin B <sub>12</sub> shu che?	M. K. Bariya, H. S. patel and V. S. Parmar	01
	Shuksh pradesh mate ashirvadrup fal: dragon fruit	N. J. Hadiya, M. L. Patel, N. S. Joshi, V. S. Parmar, P. J. Prajapati	01
Extension literature (FOLDER)	બાજરાના મૂલ્યવર્ધનથી બનતી વિશિષ્ટ વાનગીઓ	N. Tiwari, P. S. Jayswal, N. S. Joshi, P. J. Prajapati, V. S. Parmar, N. M. Kachhadiya, S. G. Baria, K. J. Gadhiya, N. J. Hadiya, N. B. Ghoniya	1000
	પાંડુરોગ નિવરણ માટે ઓછા ખર્ચમાં તૈયાર થતી વાનગીઓ		1000
<b>TOTAL</b>			<b>2062</b>

## 18. Success Stories:

### Success Story-1: Muskmelon with Mulching and crop cover

<b>Name</b>	: Khunt Ankit Rameshbhai
<b>Address</b>	: At- Hirana Ta- Lathi Di-Amreli
<b>Age</b>	: 30
<b>Contact No.</b>	: 9904333038
<b>Land</b>	: 1.68 ha
<b>Live Stock</b>	: 1 buffalo
<b>Interventions</b>	Ankitbhai Growing Cotton crops during last 10 year. Due to the Pink bollworm attack they changed their cropping pattern and Growing Groundnut (GJG-32) Crops During the Kharif Season and in Winter Season He has Grown Muskmelon (Madhuraja) variety with plastic mulch and Crop cover.

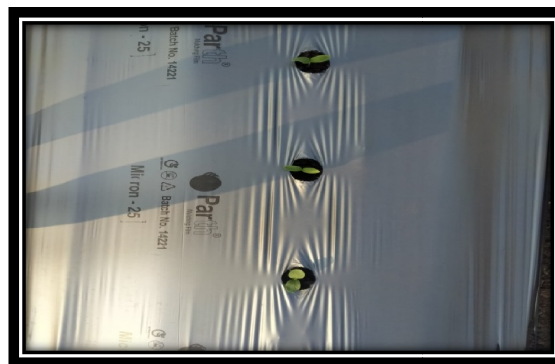
### Economics Gain Before Intervention

Crop	Yield (Q)	Cost of cultivation (Rs.)	Gross return (Rs.)	Net profit (Rs.)	Cost ratio
Cotton	35	85000	210000	125000	1:2.47

### After intervention

Crop	Yield (Q)	Cost of cultivation (Rs.)	Gross return (Rs.)	Net profit (Rs.)	Cost ratio
Groundnut (GJG-32)	68	90000	374000	154000	1:4.15
Muskmelon (Madhuraja)	250	220000	750000	530000	1:3.40
<b>Total</b>	<b>930</b>	<b>310000</b>	<b>1124000</b>	<b>684000</b>	

- The farmer used to get annual income of Rs. 210000/- from cotton (BG-II). He faced problems like Pink boll worm. With DFI interventions Groundnut GJG-32 and musk melon (Madhuraja) get annual income Rs.1124000/- .





### Success Story-2: Processing and value addition

**Name** : Arvindbhai Dhirubhai Dudhat  
**Address** : At- Chakargadh, Ta- Amreli, Di-Amreli  
**Age** : 46  
**Contact No.** : 9879572849  
**Land** : 5.28 ha  
**Live Stock** : 2 Cow  
**Interventions** Arvindbhai growing cotton crops during last 10 year. Due to the Pink bollworm attack they changed their cropping pattern and growing groundnut crops during the kharif season and in winter season he has grown coriander and wheat. He has purchased Grading machine for the cleaning and grading of the produce and selling to the customer directly and also use this Grading machine on rent basis.

#### Economics Gain:

##### Before Intervention

Crop	Area (ha)	Yield (Q)	Cost of cultivation (Rs.)	Gross return (Rs.)	Net profit (Rs.)	Cost ratio
Cotton	5.28	112.20	290400	476850	286110	1:1.64

##### After intervention

Crop	Area (ha)	Yield (Q)	Cost of cultivation (Rs.)	Gross return (Rs.)	Net profit (Rs.)	Cost ratio
Cotton (BG-II)	3.6	94.50	198000	519750	337838	1:2.62
Groundnut (GJG-1)	1.68	54.60	85600	273000	163800	1:3.18
Coriander (GC-2)	0.48	10.20	12000	66300	39780	1:5.52
Wheat (GW-463)	0.4	25.00	10000	52500	31500	1:5.25
Grading machine			80000	300000	220000	1:3.75
<b>Total</b>	<b>6.16</b>	<b>184.3</b>	<b>385600</b>	<b>911550</b>	<b>792918</b>	

- The farmer used to get annual income of Rs. 286110/- from cotton (BG-II). He faced problems like Pink boll worm. With DFI interventions groundnut (GJG-22), cotton (BG-II), coriander (GC-2), wheat (GW-463) and from Grading machine and oil mill get annual income Rs. 911550/-.



### Success Story-3: Mulching in vegetable crops

- Name** : Chiragbhai Mansukhbhai Sakhreliya  
**Address** : At- Medi, Taluka- Amreli, Dist.-Amreli  
**Age** : 35  
**Contact No.** : 9426199649  
**Land** : 1.29 ha  
**Interventions** : The farmer and his brother Jagdishbhai Sarkheliya were cultivating cotton crop. Due to pink boll worm infestation and Covid situation they have decided to shift cotton cultivation to chilli, musk melon and tomato cultivation with plastic mulch and drip irrigation system.  
**Economics Gain** : Chiragbhai was selling cotton at low price due to low quality material. After he has started chilli (Dry), tomato and musk melon cultivation with plastic mulch and drip irrigation, he got Rs. 3,67,000/- gross outcome and Rs. 2,51,000/- net-income, due to good quality production and nearby market availability.





# ACTION PLAN

## (January - 2022 to December -2022)

### K.V.K., JAU, AMRELI

The KVK is an Innovative technological information centre for the development of farming community. The KVK carry out various activities as per objectives and mandates i.e. organizing on campus and off campus short and long term vocational training programmes in agriculture and allied vocational for the farmers, rural youth and farm women with emphasis on "Learning by doing". Organize training to update the extension personal with emerging advances in agricultural research. Gaps to generate production data and feedback will be conducting OFT for identification of specific location technologies. The below activities of KVKs will be organized in details for January 2022 to December 2022.

#### 2. Training programmes:

The training programmes on various aspects related to Agricultural technology based on thrust areas will be organized during the quarter wise January 2022 to December 2022. Details of training programmes are as under.

#### A. On campus Training Courses:

Subject	Title of training	Duration (days)	No. of participants	Type of participants
<b>I Quarter January 2022 to March 2022</b>				
Home Science	Household food security by kitchen gardening and nutrition gardening	1	35	FW
	Design and development of low/minimum cost diet	1	35	FW
Horticulture	Nursery raising	1	35	PF
Crop Production	Fertilizers recommendation based on soil analysis	1	35	PF
	Scientific cultivation of summer crops	1	35	PF
Plant Protection	Integrated approach for management to control of fall army worm in maize	1	35	PF
Extension Education	Awareness regarding organic farming	1	35	PF
Agriculture Engineering	Installation and maintenance of micro irrigation systems	1	35	FW-PF

<b>II. Quarter April 2022 to June 2022</b>				
Home Science	Minimization of nutrient loss in processing	1	35	FW
Horticulture	Cultivation of Fruit	1	35	PF
Crop Production	Cow based organic fertilizers preparation	1	35	PF
Plant Protection	Importance of organic pesticides	1	35	PF
Extension Education	Upgrade the knowledge of farmers about ICT	1	35	PF
Agriculture Engineering	Soil & Water Conservation technologies	1	35	FW-PF
<b>III. Quarter July 2022 to September 2022</b>				
Home Science	Women and Child Care	1	35	FW
Crop Production	Organic farming	1	35	PF
	Use and Importance of Bio fertilizers	1	35	PF
Horticulture	Nursery Management	1	35	PF
Plant Protection	Integrated Disease Management of <i>rabi</i> crops	1	35	PF
Extension Education	Upgrade the knowledge about new varieties of <i>rabi</i> crops and its cultivation practices	1	35	PF
Agriculture Engineering	Importance of drainage in agricultural field	1	35	FW-PF
	Farm machineries for farm women	1	35	FW-PF
<b>IV. Quarter October 2022 to December 2022</b>				
Home Science	Value addition	1	35	FW
	Location specific drudgery reduction technologies	1	35	FW
Horticulture	Post harvest technology and value addition	1	35	PF
	Production and Management technology	1	35	PF
Crop Production	Scientific cultivation of <i>rabi</i> crops	1	35	PF
Plant Protection	Botanical pesticides	1	35	PF
Extension Education	Entrepreneurship development	1	35	PF

Agriculture Engineering	Post harvest technology and small scale value addition	1	35	FW-PF
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**PF: Practicing farmer, FW: Farm women**

**B. ON/OFF Campus Training Programme for Rural youth**

Subject	Title of training	Duration (days)	No. of participants	Type of participants
Crop Production	Natural Farming	1	25	RY
Plant Protection	Plant Protection Appliances/ Equipments and Natural Farming	1	25	RY
Agricultural Engineering	Value addition	1	25	RY
Extension Education	Vermi -composting	1	25	RY
Home science	women empowerment	2	50	RY
<b>Total</b>		<b>6</b>	<b>150</b>	

RY: Rural Youth

**C. OFF Campus Training Programme Courses**

Subject	Title of training	Duration (days)	No. of participants	Type of participants
<b>I. Quarter January 2022 to March 2022</b>				
Home Science	Household food security by kitchen gardening and nutrition gardening	1	45	FW
	Designing and development for high nutrient efficiency diet	1	45	FW
Horticulture	Nursery raising	1	45	PF
	Natural farming	1	45	FW-PF
Crop Production	Soil and water analysis	1	45	PF
	Integrated Nutrient Management in summer crops	1	45	PF
Plant Protection	Advance techniques of pest management	1	45	PF
	Natural farming	1	45	FW-PF
Extension Education	Upgrade knowledge on seed treatment	1	45	PF
	Natural farming	1	45	FW-PF
Agriculture Engineering	Installation and maintenance of micro irrigation systems	1	45	FW-PF
	Rain water harvesting	1	45	FW-PF

<b>II. Quarter April-2022 to June- 2022</b>				
Home Science	Gender mainstreaming through SHGs	1	45	FW
	Location specific drudgery reduction technologies	1	45	FW
Horticulture	Layout and Management of Orchards	1	45	PF
Crop Production	Preparation procedure of liquid organic fertilizer	1	45	PF
	Organic farming certification procedure	1	45	PF
Plant Protection	Method demonstration of organic product	1	45	PF
Extension Education	Market intelligence	1	45	FW
Agriculture Engineering	Repair and maintenance of farm machinery and implements	1	45	FW-PF
<b>III. Quarter July- 2022 to September - 2022</b>				
Home Science	Value addition	1	45	FW
	Women and child care	1	45	FW
Crop Production	Package of practices of rabi crops	1	45	PF
	Natural farming	1	45	PF
Plant Protection	Bio -Pesticides	1	45	PF
Extension Education	Awareness about FPO & it's formation	1	45	PF
Agriculture Engineering	Small scale processing and value addition	1	45	FW-PF
	Use of Plastics in farming practices	1	45	FW-PF
<b>IV. Quarter October- 2022 to December -2022</b>				
Home Science	Design and development of low/minimum cost diet	1	45	FW
	Women empowerment	1	45	FW
Crop Production	INM in rabi crops	1	45	PF
Plant Protection	Sucking pest management in Rabi crops	1	45	PF
Extension Education	Entrepreneurship Development	1	45	PF
Agriculture Engineering	Post Harvest Technology	1	45	FW-PF
	Renewable energy source utilization on farm	1	45	FW-PF

**PF: Practicing farmer, FW: Farm women**

**D. Training Programme (Quarter wise summary):**

S.N.	Subject	On campus					Off campus					G.T
		I	II	III	IV	T	I	II	III	IV	T	
1	Home Science	2	1	1	2	6	2	2	2	2	8	14
2	Horticulture	1	1	1	2	5	2	1	0	0	3	8
3	Crop production	2	1	2	1	6	2	2	2	1	7	13
4	Plant Protection	1	1	1	1	4	2	1	1	1	5	9
5	Extension Education	1	1	1	1	4	2	1	1	1	5	9
6	Agriculture Engineering	1	1	2	1	5	2	1	2	2	7	12
<b>Total</b>		<b>8</b>	<b>6</b>	<b>8</b>	<b>8</b>	<b>30</b>	<b>12</b>	<b>8</b>	<b>8</b>	<b>6</b>	<b>35</b>	<b>65</b>

**E. Vocational Training:**

S. N.	Title of training	Duration (days)	No of Participants	Type of Participant
1	Mushroom cultivation	4	35	PF
2.	Beauty parlor and stitching	20	25	FW
3.	Bakery training	4	25	FW
<b>Total</b>		<b>28</b>	<b>75</b>	

**F. In Service Training:**

S. N.	Title of training	Duration (days)	No of Participant	Type of Participant
1	Communication skill and use of ICT equipment	1	35	Extn. functionaries
2	Rainwater harvesting techniques	1	50	
3	Renewable energy use on farm	1	50	
4	Income generation activities	2	35	Anganwadi workers/ Mahila mandal/ sakhi mandal
<b>Total</b>		<b>07</b>	<b>170</b>	

**G. Sponsored Training:**

S.N.	Title of training	No. of Training	No. of Participant	Type of participant
1	Integrated management of fall army worm in maize	1	45	PF
2	Role of Trichoderma, Beauveria, bossiana and metarhium anisoplie and its uses	1	55	PF
3	Scientific production of kharif crops	1	60	PF
4	Use of mass media	1	35	PF
5	Organic farming	1	35	PF
6	Entrepreneurship development	1	35	FW
7	Use of soil health card	1	35	PF

8	Value addition	1	50	FW
9	Micro Irrigation System Maintenance	1	45	PF
10	Value addition of fruits and vegetables	2	90	FW
11	Natural Farming	4	125	PF/FW
<b>Total</b>		<b>15</b>	<b>610</b>	

The 15 training courses will be organizing with the 610 participant's by the collaboration with the different agency like NGO and Agro dealer in different subjects.

#### H. Summary of Training Programmes:

S. N.	Subject	On campus	Off Campus	Total
1	Home Science	06	8	14
2	Horticulture	05	3	8
3	Crop Production	06	7	13
4	Plant Protection	04	5	9
5	Extension Education	04	5	9
6	Agriculture Engineering	05	7	12
7	Rural Youth training	3	2	5
8	Vocational training	3	0	3
9	In service Training	04	0	4
10	Sponsored Training	12	03	15
<b>Total</b>		<b>52</b>	<b>40</b>	<b>92</b>

During the year January 2022- December 2022, 52 on campus and 40 off campus training programmes will be organized in different subjects for the Farming community by the KVK, Amreli.

#### 2. Extension activity:

S. N.	Activity	Proposed No.
1	Field day	30
2	Kisan Gosthi	16
3	Radio talk	As maximum and required
4	TV show	As maximum and required
5	Khedut shibir	15
6	News paper coverage	As maximum and required
7	Diagnostic service	As maximum and required
8	Advisory service	As maximum and required
9	Popular articles	9
10	Extension Literature	6
11	Celebration of Important day	8

**3. Front Line Demonstration (Proposed)**

Sr. No	Crop/Input	Variety/Technology	Title	No of Demons.	Area (ha)
<b>Kharif-2022</b>					
1	Castor	GCH-7/9	Varietal Evaluation	10	4
2	Cotton	Gujarat Cotton Hybride-24 (BG-II)	Varietal Evaluation	10	4
<b>Total</b>				<b>20</b>	<b>8</b>
<b>Rabi - 2022-23</b>					
1	Wheat	GADW-3	Varietal Evaluation	10	4
2	Coriander	GC-1/2/3	Varietal Evaluation	10	4
3	Isabgol	Gujarat isabgol-3/4	Varietal Evaluation	5	2
4	Cucumber / sweet melon/ chilli/tomato	Plastic mulch	Resource conservation	10	4
<b>Total</b>				<b>35</b>	<b>14</b>
<b>Summer-2022</b>					
1	Sesame	GT-3/ GJT-5	Varietal Evaluation	10	4
2	Black gram	Guj. Urd-2	Varietal Evaluation	10	4
3	Green gram	GM-4/ GAM-5	Varietal Evaluation	10	4
<b>Total</b>				<b>30</b>	<b>12</b>
<b>Farm implements/Enterprises</b>					
1	Agricultural Engineering (Farm Machinery)	Reaper	Farm Mechanization	10	4
2	Agricultural Engineering (Renewable Energy)	Biomass Briquette	Renewable Energy	5	-
<b>Total</b>				<b>15</b>	<b>4</b>
<b>GT</b>				<b>100</b>	<b>38</b>

During the year 2021-22, 120 FLD are planned to organized covering 48 hectare area for the Farming community by the KVK, Amreli.

**4. ON FARM TESTING:****OFT - 1: Agronomy (New)**

1) **Title of technology:** Effect of nano urea on growth and yield of wheat

2) **Problem Diagnosed/Defined:** Farmers use more nitrogen, So the price of nitrogen increases. Nano urea is the best option to reduce the cost.

**Detail of technologies selected for assessment**

(1) Crop : Wheat

(2) Season/Year : Rabi 2022-23 to Rabi 2024-25

<b>T1:(Farmers' practices)</b>	1. Use only DAP and Urea in various dose (Farmers Practices)
<b>T2 :(Recommended Practice)</b>	2.120-60-60 NPK kg/ha (Recommended Practices)
<b>T3 :(Intervention )</b>	3.60-60-60 NPK kg/ha+ Nanourea @ 0.5% at 1st spray at active tillering / branching stageand 2nd spray 20-25 days after 1st spray (Intervention) <b>Note</b> –Basal dose as per fertilizer recommendation. Reduced only top-dressed Urea applied in 2-3 splits.

- (3) Number of replication/farmers : 05  
 (4) Source of technology : IFFCO  
 (5) Production system thematic area : Irrigated  
 (6) Thematic area : Nutrient Management  
 (7) Cost : 2400  
 (8) Indicator/parameter : BC ratio

### OFT -2: Agronomy (Ongoing)

- 1) Title of technology: High Density Planting in Cotton  
 2) Problem Diagnosed/Defined: Farmers do not adopt closer planting, there for get low cotton yield due to less soil moisture and incidence of pest and disease.

Detail of technologies selected for assessment/refinement

- (1) Crop : Cotton  
 (2) Season/Year : Kharif 2020-21 to 2022-2023

<b>T1: ( Farmers' practices)</b>	120 X 45-60 cm (18519-13888 plants/ha)
<b>T2 : (Recommended Practice)</b>	90 X 30 cm (37037 plants/ha) (Var. GTHH-49 (bt))
<b>T3: (Intervention)</b>	T2 + De-topping at 75 DAS (Var. GTHH-49 (bt))

- (3) Number of replication : 03  
 (5) Source of technology : Cotton Research Station, JAU, Junagadh  
 (6) Production system thematic area : Rainfed Farming  
 (7) Thematic area : Closure Planting method  
 (9) Cost : 4800

### OFT – 3: Plant Protection (Ongoing)

**Title:** Management of leaf Webber in Sesame

**Problem Diagnosed / Defined:** Injudicious use of pesticides

Details of technologies selected for assessment/refinement:

- (1) Crop : Sesame  
 (2) Season/ Year : Kharif -2019-20 to Kharif –2021-22  
 (3) Spacing : 120 x 45 cm

T <sub>1</sub>	Farmer practices	1.High dose and Use of conventional Chemical pesticides (Farmers Practices)
T <sub>2</sub>	Assessment/ refined	2. Two sprays of lamda cyhalothrin 5 EC 0.005% (10 ml/10 lit.



Practices	water) or emamectin benzoate 5 SG 0.0035% (7g/10 lit. water) and 2nd spray at 15 days after 1st spray)
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- (4) Number of replication : 03  
 (5) Source of technology : ARS, Amreli  
 (6) Production system thematic area : Rainfed Farming  
 (7) Thematic area : IPM  
 (8) Total Cost : Rs 4500  
 (9) Indicator : 1. Record No. of Larva per Plant /1mt. row length  
 2. Yield data

#### OFT -4: Plant Protection (Ongoing)

**Title:** Management of white grub in Groundnut

**Problem Diagnosed / Defined:** No seed treatment & Soil application of bio pesticides

Details of technologies selected for assessment/refinement:

- (1) Crop : Groundnut  
 (2) Season/ Year : Kharif -2019-20 to Kharif -2021-22  
 (3) Spacing : 45 x 10

T <sub>1</sub>	Farmer practices	No seed treatment & Soil application of bio pesticides
T <sub>2</sub>	Assessment/refined Practices	Seed treatment with Chlorpyrifos 20 EC @ 25 ml/kg seed and Soil application of Metarhizium anisopliae 1.15 WP @ 5 kg/ha along with Castor cake (300 kg/ha) before sowing and drenching in plant row after 30 days of germination

- (4) Number of replication : 03  
 (5) Source of technology : Dept. of Entomology, COA, JAU, Junagadh  
 (6) Production system thematic area : Rainfed Farming  
 (7) Thematic area : IPM  
 (8) Total Cost : Rs. 6000  
 (9) Indicator : 1. Record No. of Larva per Plant /1mt. row length  
 2. Yield data

#### OFT -5: Agricultural Engineering (Ongoing)

- a **Title** : Effect of Packaging material on seed quality of groundnut seeds.  
 b **Problem Diagnose** : Farmers do not store groundnut seed properly.  
 c **Treatments**  
 T1- Farmers' practice : Loose heap storage (farmer practices)  
 T2-Recommended Technology : Use of Purdue Improved Crop Storage (PICS) bags for storage (Recommended Practices)  
 d **Number of replication** : 05  
 e **Source of Technology** : JAU Recommendation and interaction with scientists  
 g **Thematic area** : Storage techniques  
 h **Critical Input** : 1 PICS bag  
 i **Unit Cost** : 500  
 j **Total Cost** : 2500

- k Duration of project : 3 year  
 Indicator/Parameter : Insect Infestation, C:B ratio

#### OFT -6: Agricultural Engineering (Ongoing)

- a **Title** : Effect of plastic mulch on yield of watermelon.  
 b Problem Diagnose : Low yield potential of watermelon.  
 c Treatments  
 T1- Farmers' practice : No mulch  
 T2-Recommended Technology : Silver Black Plastic Mulch (20 micron) under drip irrigation system  
 T3-Technology assessed or Refined : Wheat straw mulch  
 d Number of replication : 03  
 e Source of Technology : Dept. of Renewable Energy and Rural Engg., CAET, JAU, Junagadh  
 f Thematic area : Plastic in Agriculture  
 g Critical Input : 20µm silver black plastic mulch  
 h Unit Cost : 7000  
 i Total Cost : Rs. 21000  
 j Duration of project : 3 year  
 l Indicator/Parameter : Yield, Per fruit weight, C:B ratio

#### OFT -7: Home Science (New)

- a Title : Preservation techniques of different pulses with organic methods  
 b Problem Diagnose : Lack of knowledge  
 c Treatments  
 T1- : Use of Neem leaves  
 T2- : Use of Castor oil  
 T3- : Use of airtight bag  
 d Number of replication : 10  
 e Source of Technology : IRRI-2011  
 f Thematic area : Preservation techniques  
 g Critical Input : Neem leaves  
 Castor oil  
 Airtight bag  
 h. Qty per trial  
 Neem leaves 50 gm. dry leaves 1 gm food grain  
 Castor oil 1kg. castor oil/1 Kg food grain  
 Airtight bag 2 kg. bag/1 Kg food grain  
 i Unit Cost : Rs. 1000  
 j Total Cost : Rs. 10,000  
 k Duration of project : 6 month  
 l Indicator/Parameter : Quality of stored grain, damage percentages

#### OFT 8: Home Science (New)

- a Title : Nutritional deficiency and poor health status of child
- b Problem Diagnose : Assessment of Drum stick leaves powder as nutritional supplement in 6 month-5 years old child
- c Treatments  
 T1- : Daily existing normal food  
 T2- : Moringa pods as vegetable and leaf powder/ 5gm/ day and fruits / 50gm/ day as supplement
- d Number of replication : 10
- e Source of Technology : Local  
 Dept. of Health, Govt. of Gujarat
- f Thematic area : Nutritional Security and malnutrition
- g Critical Input : Leaf powder and fruits
- i Unit Cost : Rs. 1200
- h Total Cost : Rs. 10,000
- j Duration of project : 6 month  
 Qty per trial : 900 gm & 9 kg/ child
- k Indicator/Parameter : Body weight, Height and HB Level

#### 5. Seeds to be produced:

S. No.	Name of crop	Season	Area (ha)	Variety	Type of Produce
1	Groundnut	Kharif (2022)	12	GJG-22	Foundation
2	Wheat	Rabi (2022-23)	1	GW-463	TF
3	Gram	Rabi (2022-23)	0.5	GG-5	TF

#### 6. Additional Activities Planned including sponsored projects schemes during 2022-23

S.N	Name of the agency / scheme	Name of activity	Technical programme with quantification				Financial outlay (Rs.)	Names of the team members involved
			Name of crop	Variety	Area (ha)	No. of FLD		
1	Agricultural Technology Information Centre (ATIC)	FLD, Trainings	Gram	GJG-5	25	6.25	850000	Senior Scientist and all discipline Scientists
			Gram	IDPM	25	6.25		
			Onion	IDM	10	2.5		
			Wheat	GW-463	25	6.25		
			Groundnut	IPM (Metarhizium, Beauveria ,	20	5		

				Azadirecht in chloropyri phos				
			Cotton	IPM (Cotton Inputs Beauveria , Azadirecht in, Pheromone trap)	20	5		
			Cotton	MDT tube	10	2.5		
			Groundnut	GJG-32/22	20	5		
			Sesame	GT-4/GT-6	10	2.5		
			<b>Total</b>		<b>165</b>	<b>41.25</b>		
2	Cluster base FLD of Rabi Pulses under NFSM	FLD, Trainings, Field day	Pigeon pea	GJP-1	20	50	283610	Senior Scientist and all discipline Scientists
			Gram	GJG-6	20	50		
			<b>Total</b>		<b>40</b>	<b>100</b>		
3	National Mission on Oilseeds and Oil Palm (NMOOP)	FLD, Trainings, Field day	Groundnut	GJG- 22/32	20	50	370000	
			<b>Total</b>		<b>40</b>	<b>100</b>		
4	Kitchen Gardening (Home Science)	FLD Training Field day	Vegetable kit	Vegetable kit	00	200	40000	Senior Scientist and all discipline Scientists